

SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

AMENDMENT NO. 3  
TO  
FORM SB-2

REGISTRATION STATEMENT  
UNDER THE SECURITIES ACT OF 1933

ANTIVIRALS INC.

(Name of small business issuer as specified in its charter)

OREGON (State or other jurisdiction of incorporation or organization)	2834 (Primary Standard Industrial Classification Code Number)	93-0797222 (IRS Employer Identification Number)
--	---	--

ONE SW COLUMBIA, SUITE 1105  
PORTLAND, OREGON 97201  
(503) 227-0554  
(Address, including zip code, and telephone number, including area code, of  
registrant's principal executive offices)

DENIS R. BURGER, PH.D.  
CHIEF EXECUTIVE OFFICER  
ANTIVIRALS INC.  
ONE S.W. COLUMBIA, SUITE 1105  
PORTLAND, OREGON 97258  
(503) 227-0554  
(Name, address, including zip code, and telephone number, including area code,  
of agent for service)

COPIES TO:

JACK W. SCHIFFERDECKER, JR., ESQ. BYRON W. MILSTEAD, ESQ. ATER WYNNE HEWITT DODSON & SKERRITT LLP 222 SW COLUMBIA, SUITE 1800 PORTLAND, OREGON 97201 TELEPHONE: (503) 226-1191	MARK A. VON BERGEN, ESQ. SUSAN L. PRESTON, ESQ. WEISS, JENSEN, ELLIS & HOWARD 2300 U.S. BANCORP TOWER PORTLAND, OREGON 97204 TELEPHONE: (503) 243-2300
--	---

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC:  
As soon as practicable after this Registration Statement becomes effective.

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

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

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act, check the following. /X/

CALCULATION OF REGISTRATION FEE

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	AMOUNT TO BE REGISTERED(1)	PROPOSED MAXIMUM OFFERING PRICE PER UNIT(1)
(a) Units (2) each consisting of:.....	2,300,000	\$10.00
(i) One share of Common Stock, \$.0001 par value, and		
(ii) Warrant to Purchase One Share of Common Stock		
(b) Units (3) each consisting of:.....	200,000	12.00
(i) One share of Common Stock, \$.0001 par value, and		
(ii) Warrant to Purchase One Share of Common Stock		
(c) Common Stock, \$.0001 par value (4).....	2,300,000	15.00
(d) Common Stock, \$.0001 par value (5).....	200,000	15.00
Total.....		

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	PROPOSED MAXIMUM AGGREGATE OFFERING PRICE(1)	AMOUNT OF REGISTRATION FEE
(a) Units (2) each consisting of:..... (i) One share of Common Stock, \$.0001 par value, and (ii) Warrant to Purchase One Share of Common Stock	\$23,000,000	\$7,820
(b) Units (3) each consisting of:..... (i) One share of Common Stock, \$.0001 par value, and (ii) Warrant to Purchase One Share of Common Stock	2,400,000	816
(c) Common Stock, \$.0001 par value (4).....	34,500,000	11,730
(d) Common Stock, \$.0001 par value (5).....	3,000,000	1,020
Total.....	\$65,900,000	\$21,386

- (1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457.
- (2) Includes 225,000 Units that the Underwriters have the option to purchase to cover overallocments, if any.
- (3) Issuable upon exercise of a warrant to be granted to the representatives of the Underwriters to purchase up to 10% of the Units sold in the Offering, excluding any overallocments, at 120% of the Unit Offering Price.
- (4) Issuable upon exercise of the Common Stock Purchase Warrants registered hereby at 150% of the Unit Offering Price. The exercise price of such Common Stock Warrants is estimated solely for the purpose of determining the registration fee. An indeterminate number of additional shares of Common Stock are registered hereunder that may be issued, as provided in the Common Stock Purchase Warrants, if provisions in such warrants against dilution become operative. No additional registration fee is included for such shares.
- (5) Issuable upon exercise of the Common Stock Purchase Warrants which are issuable upon exercise of the warrant to be granted to the representatives of the Underwriters to purchase up to 10% of the Units sold in the Offering, excluding any overallocments, at 120% of the Unit Offering Price.

-----

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT THAT SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL HEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

-----

-----

ANTIVIRALS INC.

-----  
 CROSS REFERENCE SHEET  
 SHOWING LOCATION IN PROSPECTUS OF INFORMATION  
 REQUIRED BY ITEMS OF FORM SB-2  
 -----

FORM SB-2 ITEM NUMBER AND CAPTION

PROSPECTUS CAPTION

FORM SB-2 ITEM NUMBER AND CAPTION	PROSPECTUS CAPTION
1. Front of Registration Statement and Outside Front Cover of Prospectus.....	Outside Front Cover Page of Prospectus
2. Inside Front and Outside Back Cover Page of Prospectus.....	Inside Front Cover Page of Prospectus; Outside Back Cover Page of Prospectus; Additional Information
3. Summary Information and Risk Factors.....	Prospectus Summary; Risk Factors
4. Use of Proceeds.....	Prospectus Summary; Use of Proceeds
5. Determination of Offering Price.....	Risk Factors; Underwriting
6. Dilution.....	Dilution
7. Selling Security Holders.....	Not Applicable
8. Plan of Distribution.....	Outside Front Cover Page of Prospectus; Underwriting
9. Legal Proceedings.....	Not Applicable
10. Directors, Executive Officers, Promoters and Control Persons.....	Management
11. Security Ownership of Certain Beneficial Owners and Management.....	Principal Shareholders
12. Description of Securities.....	Prospectus Summary; Dividend Policy; Capitalization; Description of Securities
13. Interest of Named Experts and Counsel.....	Not Applicable
14. Disclosure of Commission Position on Indemnification for Securities Act Liabilities.....	Management
15. Organization Within Last Five Years.....	Certain Transactions
16. Description of Business.....	Prospectus Summary; Risk Factors; Management's Discussion and Analysis of Financial Condition and Results of Operations; Business
17. Management's Discussion and Analysis or Plan of Operations.....	Management's Discussion and Analysis of Financial Condition and Results of Operations
18. Description of Property.....	Business
19. Certain Relationships and Related Transactions.....	Certain Transactions
20. Market for Common Equity and Related Stockholder Matters.....	Risk Factors; Underwriting; Description of Securities; Shares Eligible for Future Sale
21. Executive Compensation.....	Management
22. Financial Statements.....	Financial Statements
23. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.....	Not Applicable

INFORMATION CONTAINED HEREIN IS SUBJECT TO COMPLETION OR AMENDMENT. A REGISTRATION STATEMENT RELATING TO THESE SECURITIES HAS BEEN FILED WITH THE SECURITIES AND EXCHANGE COMMISSION. THESE SECURITIES MAY NOT BE SOLD NOR MAY OFFERS TO BUY BE ACCEPTED PRIOR TO THE TIME THE REGISTRATION STATEMENT BECOMES EFFECTIVE. THIS PROSPECTUS SHALL NOT CONSTITUTE AN OFFER TO SELL OR THE SOLICITATION OF AN OFFER TO BUY NOR SHALL THERE BE ANY SALE OF THESE SECURITIES IN ANY STATE IN WHICH SUCH OFFER, SOLICITATION OR SALE WOULD BE UNLAWFUL PRIOR TO REGISTRATION OR QUALIFICATION UNDER THE SECURITIES LAWS OF ANY SUCH STATE.

PROSPECTUS

2,000,000 UNITS

[LOGO]

EACH UNIT CONSISTING OF ONE SHARE OF COMMON STOCK AND ONE COMMON STOCK PURCHASE WARRANT

ANTIVIRALS INC. ("ANTIVIRALS" or the "Company") is hereby offering 2,000,000 units ("Units"), each Unit consisting of one share (the "Shares") of the Company's common stock, \$.0001 par value (the "Common Stock"), and one warrant to purchase one share of Common Stock (the "Warrants").

Prior to this offering, there has been no public market for the Units, Common Stock or Warrants, and there can be no assurance that an active trading market will develop or be maintained following the offering.

Application has been made to have the Common Stock and Warrants approved for quotation on the Nasdaq National Market under the symbols "AVII" and "AVIIW," respectively.

THE SECURITIES OFFERED HEREBY INVOLVE A HIGH DEGREE OF RISK. SEE "RISK FACTORS" BEGINNING AT PAGE 7.

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION NOR HAS THE COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS.

Table with 4 columns: Description, PRICE TO PUBLIC, UNDERWRITING DISCOUNT (1), PROCEEDS TO COMPANY (2). Rows include Per Unit and Total (3).

(SEE ACCOMPANYING FOOTNOTES ON NEXT PAGE)

The Units offered by this Prospectus are offered by the several Underwriters subject to prior sale, when and if delivered to and accepted by the Underwriters, and subject to the right to reject any order in whole or in part and to certain other conditions.

PAULSON INVESTMENT COMPANY, INC. MILLENNIUM FINANCIAL GROUP, INC. FIRST COLONIAL SECURITIES GROUP, INC.

- (1) Excludes a non-accountable expense allowance equal to 2% of the gross proceeds of this offering payable to the Representatives, and the value of the five-year warrant (the "Representatives' Warrants") entitling the Representatives to purchase up to 200,000 Units at a price of \$ per Unit (120% of the initial public offering price of the Units). The Company has agreed to indemnify the Underwriters against certain liabilities, including liabilities under the Securities Act of 1933, as amended (the "Securities Act"). See "Underwriting."
- (2) Before deducting estimated expenses payable by the Company estimated at \$855,000, including the Representatives' non-accountable expense allowance.
- (3) The Company has granted the Underwriters a 45-day option (the "Overallotment Option") to purchase up to 300,000 additional Units on the same terms as set forth above to cover overallotments, if any. If the Underwriters exercise such option in full, the total Price to Public, Underwriting Discount and Proceeds to Company will be \$ , \$ and \$ , respectively. See "Underwriting."

The Company has not previously been subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The Company intends to furnish its shareholders with annual reports containing financial statements audited by its independent auditors and quarterly reports containing unaudited financial information for each of the first three quarters of each fiscal year.

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVER-ALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF THE COMMON STOCK OR WARRANTS AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH TRANSACTIONS MAY BE EFFECTED ON THE NASDAQ NATIONAL MARKET OR OTHERWISE. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

-----

This prospectus includes trademarks and registered trademarks of the Company, including NEU-GENE-REGISTERED TRADEMARK- and CYTOPORTER-TM-, and trademarks and registered trademarks of other companies.

## PROSPECTUS SUMMARY

THE FOLLOWING SUMMARY IS QUALIFIED IN ITS ENTIRETY BY, AND SHOULD BE READ IN CONJUNCTION WITH THE MORE DETAILED INFORMATION AND THE FINANCIAL STATEMENTS AND NOTES THERETO APPEARING ELSEWHERE IN THIS PROSPECTUS. EXCEPT AS OTHERWISE NOTED, ALL INFORMATION IN THIS PROSPECTUS ASSUMES (I) NO EXERCISE OF THE OVERALLOTMENT OPTION, THE WARRANTS OR THE REPRESENTATIVES' WARRANTS, (II) A 1-FOR-3 REVERSE SPLIT OF THE COMMON STOCK WHICH WAS COMPLETED ON NOVEMBER 4, 1996 AND (III) EXCEPT AS OTHERWISE INDICATED, NO SHARES OF COMMON STOCK WILL BE TENDERED TO THE COMPANY IN CONNECTION WITH THE RESCISSION OFFERING TO BE UNDERTAKEN IMMEDIATELY PRIOR TO THE DATE OF THIS PROSPECTUS AND COMPLETED BY THE COMPANY AFTER THE CLOSING OF THIS OFFERING. SEE "RISK FACTORS-- POTENTIAL LIABILITY ARISING FROM RESCISSION RIGHTS OF CERTAIN SHAREHOLDERS," "DESCRIPTION OF SECURITIES" AND "UNDERWRITING."

THIS PROSPECTUS CONTAINS, IN ADDITION TO HISTORICAL INFORMATION, FORWARD-LOOKING STATEMENTS THAT INVOLVE RISKS AND UNCERTAINTIES. THE COMPANY'S ACTUAL RESULTS OR EXPERIENCE COULD DIFFER SIGNIFICANTLY FROM THOSE DISCUSSED IN THE FORWARD-LOOKING STATEMENTS. FACTORS THAT COULD CAUSE OR CONTRIBUTE TO SUCH DIFFERENCES INCLUDE, BUT ARE NOT LIMITED TO, THOSE DISCUSSED IN "RISK FACTORS" AS WELL AS THOSE ELSEWHERE IN THIS PROSPECTUS.

### THE COMPANY

ANTIVIRALS is a pioneer company in the field of gene-inactivating technology referred to as antisense and has developed a patented class of antisense compounds which may be useful in the treatment of a wide range of human diseases. The Company also has developed new drug delivery technology which may be useful with many FDA-approved drugs as well as with its antisense compounds. The Company's drug development program has two areas of near-term focus:

- NEU-GENE antisense compounds for selected applications, and
- CYTOPORTER drug delivery engines for enhanced delivery of FDA-approved drugs with delivery problems.

The Company's long-term product development program combines its NEU-GENE and CYTOPORTER technologies to produce combination drugs with potential applications for many human diseases. The Company has 20 issued patents and several patent applications covering the basic compositions of matter, methods of synthesis, and medical uses of NEU-GENE and CYTOPORTER compounds.

Antisense technology has the potential to provide safe and effective treatment for a broad range of diseases that previously have been difficult to address, including viral and host diseases. The Company's new approach uses synthetic compounds designed to inactivate selected genetic sequences that underlie the disease process and thereby halt the disease. Targeting genetic sequences with antisense compounds provides the selectivity that is not available in conventional drug development which typically targets proteins directly. The antisense approach specifically inhibits the mechanisms which underlie the production of disease-producing proteins.

To reach their therapeutic targets, many drugs must cross tissue and cellular barriers. Drugs that have an intracellular site of action must cross the lipid (fat-like) barrier of cellular membranes to move from the aqueous environment in blood into the interior of target cells. Therefore, these drugs must achieve solubility in both water and lipids. Since few compounds have these solubility characteristics, many drug candidates are a compromise between inherent solubility and effective delivery. This trade-off reduces efficacy and may significantly heighten toxicity of many drug candidates, as well as many FDA-approved drugs.

The Company has developed two distinct technologies to address the critical issues in drug development: selectivity for the target and delivery to the target. The Company's NEU-GENE antisense technology addresses the issue of drug selectivity and its CYTOPORTER drug delivery technology addresses delivery problems with FDA-approved drugs and antisense compounds. The patented structure of the Company's

NEU-GENE compounds distinguishes its antisense technology from competing technologies and provides the selectivity for a single disease target that is the hallmark of antisense drug development. The Company's molecular engine, CYTOPORTER, is designed to transport drugs with delivery problems across the lipid barrier of cellular membranes into the interior of cells to reach their targets.

The first application of the Company's NEU-GENE antisense technology is designed to treat restenosis, a cardiovascular disease. The Company is currently in pre-clinical development with this compound and expects to file an IND to begin clinical trials in 1998. The Company's first planned drug delivery products combine its CYTOPORTER delivery engine with two FDA-approved drugs that have delivery problems. These drugs, cyclosporin and paclitaxel (Taxol), will both be off patent by late 1997 and could have much broader usage if their delivery problems were reduced. The Company expects to file an IND to begin clinical trials with its enhanced form of cyclosporin and to initiate pre-clinical studies with its enhanced form of paclitaxel in 1998.

The Company plans to market its initial products through marketing agreements or other licensing arrangements with large pharmaceutical companies. The Company intends to retain manufacturing rights to all products incorporating its technology, whether such products are marketed directly by the Company or through collaborative agreements with industry partners.

The Company is a developmental stage biotechnology company which must achieve additional significant milestones before it can commercialize either NEU-GENE-REGISTERED TRADEMARK- antisense compounds or its CYTOPORTER-TM- drug delivery engines. Successful commercialization of these potential products also is dependent on the Company's successful testing of and obtaining regulatory approval of the potential products. This testing and regulatory approval process, if successful, will not be completed for several years. The Company will require substantial funds for further development of its potential products and to commercialize the products that may be developed. There can be no assurance that the Company will achieve the necessary milestones, successfully test its proposed products, obtain necessary regulatory approvals, or obtain necessary financing to successfully commercialize its proposed products.

Prior to the closing of this offering, as a condition to this offering, the Company will offer to certain holders of 1,292,973 shares of its Common Stock the right to rescind the holder's purchase of shares of the Company's Common Stock (the "Rescission Offer"). The Rescission Offer will remain open for 30 days and the Company anticipates that it will close after the closing of this offering. If all such offerees elect to rescind their purchases, the Company will be required to pay these holders \$3,121,965 and 568.67 units of limited partnership interest in the Anti-Gene Development Group, a research and development limited partnership from which the Company acquired certain technologies, plus approximately \$2,129,000 in statutory interest. Although the Company believes that its potential liability to shareholders who receive the Rescission Offer for violations of state securities laws will be effectively eliminated as a result of the Rescission Offer and the running of applicable statutes of limitations, the Securities and Exchange Commission takes the position that liabilities under the federal securities laws are not terminated by the making of a rescission offer. If this offering does not close prior to the closing of the Rescission Offer, the Company will issue promissory notes in lieu of cash to rescinding shareholders residing in Oregon and Colorado if the total rescission price exceeds \$1,500,000. The fact that the Company will issue promissory notes in lieu of cash to rescinding shareholders residing in Oregon and Colorado if the total rescission price exceeds \$1,500,000 may limit the preclusive effect of the Rescission Offer in those states.

The Company's principal executive office is located at One S.W. Columbia, Suite 1105, Portland, Oregon 97258, where the telephone number is (503) 227-0554.



THE OFFERING

Securities offered..... 2,000,000 Units, each consisting of one share of Common Stock and one Warrant to purchase one share of Common Stock. The Common Stock and Warrants will be separately tradeable immediately following this offering. See "Description of Securities."

Common Stock to be outstanding after this offering..... 10,779,763 shares(1)

Use of proceeds..... To fund research and development, and for working capital, and other general corporate purposes. See "Use of Proceeds."

Proposed Nasdaq National Market symbols..... Common Stock--AVII  
Warrants--AVIIW

- -----

(1) Excludes an aggregate of 1,123,827 shares of Common Stock issuable upon exercise of stock options outstanding at March 31, 1997, and an aggregate of 427,434 shares of Common Stock issuable upon exercise of outstanding warrants as of March 31, 1997. An additional 209,506 shares are reserved for issuance under the Company's Stock Incentive Plan. See "Capitalization and Management--Stock Incentive Plan."

SUMMARY FINANCIAL DATA

	YEAR ENDED DECEMBER 31,		PERIOD FROM JULY 22, 1980 (INCEPTION) THROUGH DECEMBER 31, 1996	THREE-MONTH PERIOD ENDED MARCH 31,		PERIOD FROM JULY 22, 1980 (INCEPTION) THROUGH MARCH 31, 1997
	1995	1996	1996	1996	1997	(UNAUDITED)
<b>STATEMENTS OF OPERATIONS DATA:</b>						
Revenues, from grants and research contracts.....	\$ 82,500	\$ 27,227	\$ 689,497	\$ --	\$ --	\$ 689,497
Operating expenses:						
Research and development.....	2,097,796	1,729,554	9,011,574	349,565	451,723	9,463,297
General and administrative.....	609,723	613,811	4,549,582	75,321	170,028	4,719,610
Total operating expenses.....	2,707,519	2,343,365	13,561,156	424,886	621,751	14,182,907
Other income.....	68,133	228,776	446,176	170,639	29,055	475,231
Net loss.....	\$(2,556,886)	\$(2,087,362)	\$(12,425,483)	\$(254,247)	\$(592,696)	\$(13,018,179)
Net loss per share(1).....	\$ (0.37)	\$ (0.25)		\$ (0.04)	\$ (0.07)	
Shares used in per share calculation(1).....	6,982,459	8,233,548		7,109,810	8,233,548	

	DECEMBER 31, 1996	MARCH 31, 1997			
	ACTUAL (UNAUDITED)	AS ADJUSTED(2)	AS ADJUSTED(3)	AS ADJUSTED(4)	
<b>BALANCE SHEET DATA:</b>					
Working capital.....	\$2,738,677	\$ 1,959,519	\$ 18,774,519	\$ 17,274,519	\$ 13,527,896
Total assets.....	4,248,899	3,699,483	20,514,483	19,014,483	15,267,860
Common stock subject to rescission.....	3,121,965	3,121,965	3,121,965	2,229,401	--
Deficit accumulated during the development stage.....	(12,425,483)	(13,018,179)	(13,018,179)	(13,625,615)	(15,142,837)
Total shareholders' equity (deficit).....	796,127	203,431	17,018,431	16,410,995	14,893,773

(1) See Note 2 of Notes to Financial Statements for an explanation of the determination of the number of shares used in computing net loss per share.

(2) Adjusted to give effect to the application of the estimated net proceeds of the proposed offering of 2,000,000 Units by the Company based upon an assumed initial public offering price of \$9.50 per Unit. See "Management's Discussion and Analysis of Financial Condition and Results of Operations."

(3) Assumes that shares with an aggregate rescission price of \$1.5 million are tendered for rescission, which represents the cash portion of the Company's potential payments under the Rescission Offer if this offering has not closed prior to the closing of the Rescission Offer.

(4) Assumes that shares with an aggregate rescission price of \$5,246,623 are tendered for rescission, and that this offering is closed prior to the closing of the Rescission Offer.

## RISK FACTORS

IN EVALUATING THE COMPANY AND ITS BUSINESS, PROSPECTIVE INVESTORS SHOULD CAREFULLY CONSIDER THE FOLLOWING RISKS IN ADDITION TO THE OTHER INFORMATION CONTAINED ELSEWHERE HEREIN. BECAUSE ANY INVESTMENT IN THE COMPANY'S CAPITAL STOCK INVOLVES A HIGH DEGREE OF RISK, ONLY INVESTORS WHO CAN ACCOMMODATE SUCH RISKS, INCLUDING A COMPLETE LOSS OF THEIR INVESTMENT, SHOULD PURCHASE THE UNITS.

**DEVELOPMENT STAGE COMPANY; HISTORY OF OPERATING LOSSES.** The Company is a development stage biotechnology company. Since its inception in 1980 through March 31, 1997, the Company had incurred losses of \$13,018,179, substantially all of which resulted from expenditures related to research and development and general and administrative expenses. The Company has not generated any material revenues from product sales to date, and there can be no assurance that material revenues from product sales will ever be achieved. Moreover, even if the Company does realize revenues from product sales, the Company nevertheless expects to incur significant operating losses over the next several years. The financial statements accompanying this Prospectus have been prepared assuming that the Company will continue as a going concern. The Company's ability to achieve a profitable level of operations in the future will depend in large part on the completion of product development of its antisense and/or drug delivery products, obtaining regulatory approvals for such products and bringing several of these products to market. The likelihood of the long-term success of the Company must be considered in light of the expenses, difficulties and delays frequently encountered in the development and commercialization of new pharmaceutical products, competitive factors in the marketplace as well as the burdensome regulatory environment in which the Company operates. There can be no assurance that the Company will ever achieve significant revenues or profitable operations. See "Selected Financial Data" and "Management's Discussion and Analysis of Results of Operations and Financial Condition."

**TECHNOLOGICAL UNCERTAINTY; EARLY STAGE OF PRODUCT DEVELOPMENT; NO ASSURANCE OF REGULATORY APPROVALS.** The Company's proposed products are in the pre-clinical stage of development and will require significant further research, development, clinical testing and regulatory clearances. The Company has no products available for sale other than research reagents and does not expect to have any products resulting from its research efforts commercially available for at least several years. None of the Company's proposed products has been tested in humans, nor has the Company filed an Investigational New Drug Application ("IND") with the United States Food and Drug Administration ("FDA") on any of its products currently under research and development. The Company's proposed products are subject to the risks of failure inherent in the development of products based on innovative technologies. These risks include the possibilities that some or all of the proposed products could be found to be ineffective or toxic, or otherwise fail to receive necessary regulatory clearances; that the proposed products, although effective, will be uneconomical to manufacture or market; that third parties may now or in the future hold proprietary rights that preclude the Company from marketing its products; or that third parties will develop and market a superior or equivalent products. Accordingly, the Company is unable to predict whether its research and development activities will result in any commercially viable products or applications. Furthermore, due to the extended testing and regulatory review process required before marketing clearance can be obtained, the Company does not expect to be able to commercialize any therapeutic drug for at least several years, either directly or through any potential corporate partners or licensees. Although the Company and others have demonstrated the effectiveness of antisense compounds in living cells and, in some cases, in animal models, none of the Company's proposed products has been tested in humans and there can be no assurance that the Company's proposed products will prove to be safe or effective in humans or will receive the regulatory approvals that are required for commercial sale.

**NEED FOR ADDITIONAL FUNDING; UNCERTAINTY OF ACCESS TO CAPITAL.** The Company will require substantial funds for further development of its potential products and to commercialize any products that may be developed. The Company's capital requirements depend on numerous factors, including the progress of its research and development programs, the progress of pre-clinical and clinical testing, the time and cost involved in obtaining regulatory approvals, the cost of filing, prosecuting, defending and enforcing patent

claims and other intellectual property rights, competing technological and market developments and the ability of the Company to establish collaborative arrangements. The Company has no current anticipated sources of funding beyond the proceeds from this offering. The Company believes that its existing capital resources, including the estimated net proceeds of this offering, will be sufficient to satisfy its current and projected funding requirements for at least 24 months from the date of this Prospectus. The Company anticipates that after 24 months, it will require substantial additional capital. Moreover, if the Company experiences unanticipated cash requirements during the next 24 months, the Company could require additional capital to fund its operations, to continue research and development programs, to continue the pre-clinical and clinical testing of its potential products and to commercialize any products that may be developed. The Company may seek such additional funding through public or private financings, collaborative arrangements, or other arrangements with third parties. There can be no assurance that additional funds will be available on acceptable terms, if at all. The Company may receive additional funds upon the exercise from time to time of the Warrants and other outstanding warrants and stock options, but there can be no assurance that any such warrants or stock options will be exercised or that the amounts received will be sufficient for the Company's purposes. If additional funds are raised by issuing equity securities, further substantial dilution to existing shareholders, including purchasers of the Units offered hereby, may result. If adequate funds are not available, the Company may be required to delay, scale back or eliminate one or more of its development programs, or to obtain funds by entering into arrangements with collaborative partners or others that may require the Company to relinquish rights to certain of its products or technologies that the Company would not otherwise relinquish. See "Use of Proceeds" and "Management's Discussion and Analysis of Financial Condition and Results of Operations."

**POTENTIAL LIABILITY ARISING FROM RESCISSION RIGHTS OF CERTAIN SHAREHOLDERS.** Throughout its existence, the Company has financed its activities through periodic offerings of equity securities. During 1992, the Company's management conducted a review of its past operations, including capital-raising activities. At that time, although management did not identify any specific, material failures to comply with obligations imposed on the Company by applicable federal and state securities laws, management concluded that the record with respect to such activities was sufficiently incomplete that a conclusion could not be drawn with substantial certainty that such obligations were complied with in all material respects. Although the Company believes that, as of the date of this Prospectus, any potential rescission liability to shareholders for failure to comply with these obligations has been effectively eliminated by the running of applicable statutes of limitation, a review of the Company's securities offering documents prepared in connection with certain sales of Common Stock during 1991, 1992, 1993 and 1994 and an exchange offering during 1993 indicated that the Company had omitted to disclose or provided only limited disclosure with respect to its then potential rescission liability to prospective purchasers of its Common Stock. As a result of this omission or limited disclosure, the Company has been unable to conclude that sales of the Company's Common Stock made in accordance with those offering documents complied in all material respects with federal and state securities laws.

Prior to the date of this Prospectus, as a condition to this offering, the Company is offering to each holder of 1,292,973 shares of its Common Stock and who reside in the states of Alabama, Colorado, Illinois, Massachusetts, Montana, New Jersey, Ohio, Oregon, Texas, Utah, Washington and Wisconsin the right to rescind the holder's purchase of shares of the Company's Common Stock (the "Rescission Offer"). If all such offerees elect to rescind their purchases, the Company will be required to pay these holders \$3,121,965 and 568.67 units of limited partnership interest in the Anti-Gene Development Group, plus approximately \$2,129,000 in statutory interest. The Rescission Offer will remain open for 30 days and the Company anticipates that it will close after the closing of this offering. The Company has reserved up to \$1,500,000 for payment to offerees. If this offering does not close prior to the closing of the Rescission Offer and if shares are tendered to the Company requiring payments in excess of \$1,500,000, rescinding Oregon and Colorado shareholders will receive cash and interest-bearing promissory notes of the Company in payment of the rescission liability. If this offering closes prior to the close of the Rescission Offer,

no promissory notes will be issued and all eligible offerees who accept the Rescission Offer will be paid in cash and units of the Anti-Gene Development Group, as applicable.

The Company believes that its potential liability to shareholders who receive the Rescission Offer for possible violations of the laws of the states of Alabama, Colorado, Illinois, Massachusetts, Montana, New Jersey, Ohio, Oregon, Texas, Utah, Washington and Wisconsin will be effectively eliminated as a result of the Rescission Offer or the running of applicable statutes of limitations. The Securities and Exchange Commission, however, takes the position that liabilities under federal securities laws are not terminated by the making of a rescission offer. The Company believes that its potential liability to shareholders who receive the Rescission Offer for possible violations of federal securities laws has been effectively eliminated as a result of the running of applicable statutes of limitations.

The fact that the Company may issue promissory notes in lieu of cash to rescinding shareholders residing in Oregon and Colorado if the aggregate rescission price exceeds \$1,500,000 and this offering does not close prior to the closing of the Rescission Offer may limit the preclusive effect of the Rescission Offer in Oregon and Colorado. If all Oregon and Colorado holders of the 1,072,252 shares successfully asserted claims against the Company, the Company would be required to pay these holders approximately \$2,674,613, plus approximately 472.67 units of limited partnership interest in Anti-Gene Development Group, plus statutory interest. Even if the Company were successful in defending any securities law claims, the assertion of such claims against the Company additionally would result in costly litigation and significant diversions of effort by the Company's management.

The Securities and Exchange Commission takes the position that liabilities under the federal securities laws are not terminated by making a rescission offer. To the extent that eligible offerees affirmatively reject or fail to respond to the Company's rescission offer, potential liability of the Company under the 1933 Act may not be completely extinguished. Nevertheless, under those circumstances, the Company will assert that an eligible offeree who affirmatively rejects or fails to respond to the Company's Rescission Offer has released his claims to recover the purchase price of the securities and that such claims further are barred by applicable statutes of limitation. If the affirmative rejection or failure to respond to the Rescission Offer does not act as a release of claims, each eligible offeree who affirmatively rejects or fails to respond to the Rescission Offer would retain any rights or claims such eligible offeree may have under the federal securities laws, subject to the statute of limitations with respect to such rights and claims. In general, for a claim based on violations of the registration provisions of the federal securities laws, such a claim must be brought within one year after discovery of the violation upon which the claim is based, provided that, in no event may such claims be brought more than three years after the occurrence of the violation. The Company accordingly believes that the applicable statute of limitations has run with respect to such claims. Notwithstanding the foregoing, if all holders of the 1,292,973 shares subject to the Rescission Offer successfully asserted claims against the Company, the Company would be required to pay these holders approximately \$3,121,965, plus approximately 568.67 units of limited partnership interest in the Anti-Gene Development Group, plus statutory interest. Even if the Company were successful in defending any securities law claims, the assertion of such claims against the Company additionally could result in costly litigation and diversions of effort by the Company's management. In addition, the rescission offer will not prevent the Securities and Exchange Commission from pursuing enforcement action against the Company with respect to any violations of the federal securities laws that may have occurred.

In addition, the Rescission Offer is not being made to holders of 22,021 shares of the Company's Common Stock who reside in Florida, the laws of which do not permit rescission offerings to cure omissions in securities offering documents. These holders of 22,021 shares of Common Stock originally purchased such shares from the Company at prices ranging from \$4.56 to \$4.95 per share or through the exchange of one unit of limited partnership interest in the Anti-Gene Development Group. There can be no assurance that claims asserting violations of federal or state securities laws will not be asserted by any of these shareholders against the Company or that certain holders will not prevail against the Company in the assertion of such claims, thereby compelling the Company to repurchase their shares. If all of the holders

of the 22,021 shares successfully asserted claims against the Company, the Company would be required to pay these holders \$100,000, plus one unit of limited partnership interest in Anti-Gene Development Group, plus approximately \$44,000 in statutory interest. The Rescission Offer also is not being made to holders of 192,603 shares of the Company's Common Stock who reside in the states of California and Nevada because the Company believes that its potential liability to these shareholders has been eliminated by the running of applicable statutes of limitation. There can be no assurance, however, that claims asserting violations of federal or state securities laws will not be asserted by any of those shareholders or that certain holders will not prevail against the Company in the assertion of such claims, compelling the Company to repurchase their shares. If all of the holders of the 192,603 shares successfully asserted claims against the Company, the Company would be required to pay these holders \$218,450, plus 54 units of limited partnership interest in the Anti-Gene Development Group, plus approximately \$193,000 in statutory interest. Even if the Company were successful in defending any securities laws claims, the assertion of such claims against the Company additionally could result in costly litigation and significant diversions of effort by the Company's management.

The Company will satisfy the cash requirements with respect to the Rescission Offer from existing cash and cash equivalents. If shares with an aggregate rescission price greater than \$1,500,000 are tendered to the Company, this offering has not closed prior to the closing of the Rescission Offer and the Company is required to issue promissory notes, the Company could require additional capital to fund operations, continue research and development programs, perform pre-clinical and clinical testing of its potential antisense and drug delivery compounds, commercialize any products that may be developed and satisfy its obligations under the terms of the promissory notes. In addition, if the Rescission Offer is not deemed to have a preclusive effect and securities laws claims are successfully asserted against the Company, the Company may be required to seek additional funds to satisfy the liabilities arising from such claims and to fund operations, continue research and development programs, perform pre-clinical and clinical testing of its potential antisense and drug delivery compounds, commercialize any products that may be developed and satisfy its obligations under the terms of the promissory notes. There can be no assurance that additional funds will be available on acceptable terms, if at all. If adequate funds are not available, the Company may be required to delay, scale back or eliminate one or more of its development programs, or to obtain funds by entering into arrangements with collaborative partners or others that may require the Company to relinquish rights to certain of its products or technologies that the Company would not otherwise relinquish.

**SECURITIES LITIGATION.** Although the Company believes that its potential liability under state securities laws for the sale of securities with inadequate disclosure will be effectively eliminated by the Rescission Offer and the running of applicable statutes of limitations, and that its potential liability under federal securities laws has been effectively eliminated by the running of applicable statutes of limitations, there can be no assurance that claims asserting violations of state or federal securities laws based on the facts underlying the Rescission Offer will not be asserted. A successful claim brought against the Company could have a material adverse effect on the Company's business, financial condition and results of operations. Even unsuccessful claims could result in costly litigation and significant diversions of effort by the Company's management.

**LACK OF OPERATING EXPERIENCE.** To date, the Company has engaged exclusively in the development of pharmaceutical technology. Although members of the Company's management have experience in biotechnology company operations, the Company has no experience in manufacturing or procuring products in commercial quantities or selling pharmaceutical products and has only limited experience in negotiating, setting up and maintaining strategic relationships, conducting clinical trials and other later-stage phases of the regulatory approval process. There can be no assurance that the Company will successfully engage in any of these activities. See "Management."

MANUFACTURING. The Company intends to undertake the manufacture of its products through the clinical development phase. The Company has not previously manufactured pharmaceutical products of any kind, nor has it manufactured antisense or drug delivery compounds in commercial quantities. Establishing manufacturing facilities will require the retention of experienced personnel and compliance with complex regulations relating to the manufacture of pharmaceutical products. There is no assurance that the Company will be successful in establishing and operating a manufacturing facility. See "Business-- Manufacturing."

DEPENDENCE ON THIRD PARTIES FOR CLINICAL TESTING, MANUFACTURING AND MARKETING. The Company does not have the resources and does not currently intend to conduct later-stage human clinical trials itself or to manufacture all of its proposed products for commercial sale. The Company therefore intends to seek larger pharmaceutical company partners to conduct such activities for most or all of its proposed products and to contract with third parties for the manufacture of its proposed products for commercial sale. In connection with its efforts to secure corporate partners, the Company will seek to retain certain co-marketing rights to certain of its proposed products, so that it may promote such products to selected medical specialists while its corporate partner promotes these products to the general medical market. There can be no assurance that the Company will be able to enter into any such partnering arrangements on this or any other basis. In addition, there can be no assurance that either the Company or its prospective corporate partners can successfully introduce its proposed products, that they will achieve acceptance by patients, health care providers and insurance companies, or that they can be manufactured and marketed at prices that would permit the Company to operate profitably. With respect to the Company's products, the Company may seek to enter into joint venture, sublicense or other marketing arrangements with another party that has an established marketing capability. There can be no assurance that the Company will be able to enter into any such marketing arrangements with third parties, or that such marketing arrangements would be successful. Failure to market its products successfully would have a material adverse effect on the Company's business and results of operations. In addition, the Company has no current joint venture, strategic partnering or other similar agreements with pharmaceutical companies, and there can be no assurance that the Company could negotiate any such arrangements, on an acceptable basis or at all, if it chose to do so. Accordingly, the commercial viability of the Company's proposed products has not been independently evaluated by any independent pharmaceutical company. See "Business--Manufacturing" and "--Marketing Strategy."

NEED TO COMPLY WITH GOVERNMENTAL REGULATION AND TO OBTAIN PRODUCT APPROVALS. The testing, manufacturing, labeling, distribution, marketing and advertising of products such as the Company's proposed products and its ongoing research and development activities are subject to extensive regulation by governmental regulatory authorities in the United States and other countries. The FDA and comparable agencies in foreign countries impose substantial requirements on the introduction of new pharmaceutical products through lengthy and detailed clinical testing procedures and other costly and time-consuming compliance procedures. The Company's compounds require substantial clinical trials and FDA review as new drugs. The Company cannot predict with certainty when it might submit its products currently under development for regulatory review. Once the Company submits its potential products for review, there can be no assurance that FDA or other regulatory approvals for any pharmaceutical products developed by the Company will be granted on a timely basis or at all. A delay in obtaining or failure to obtain such approvals would have a material adverse effect on the Company's business and results of operations. Failure to comply with regulatory requirements could subject the Company to regulatory or judicial enforcement actions, including, but not limited to, product recalls or seizures, injunctions, civil penalties, criminal prosecution, refusals to approve new products and withdrawal of existing approvals, as well as potentially enhanced product liability exposure. Sales of the Company's products outside the United States will be subject to regulatory requirements governing clinical trials and marketing approval. These requirements vary widely from country to country and could delay introduction of the Company's products in those countries. See "Business--Drug Approval Process and Other Government Regulation."

**DEPENDENCE ON KEY PERSONNEL.** The success of the Company's business will depend to a large extent on the abilities and continued participation of certain key employees, including Drs. Denis Burger, James Summerton, and Dwight Weller, upon whom the Company holds key man life insurance in the face amounts of \$500,000, \$1,000,000 and \$500,000, respectively. The Company has entered into employment agreements with each of the key employees, which agreements restrict their ability to compete with the Company for a period of two years following termination of their employment. The loss of any of these persons or of other key employees could significantly delay the achievement of the Company's planned development objectives. Competition for qualified personnel among pharmaceutical companies is intense, and the loss of key personnel, or the inability to attract and retain the additional, highly skilled personnel required for the expansion of the Company's activities, could have a material adverse effect on the Company's business and results of operations. See "Management."

**COMPETITION.** Competition in the area of pharmaceutical products is intense. There are many companies, both public and private, including well-known pharmaceutical companies, that are engaged in the development of products for certain of the applications being pursued by the Company. The Company's probable competitors in the antisense and drug delivery fields include Glaxo Ltd. ("Glaxo"), Boehringer Ingelheim Inc. ("Boehringer Ingelheim"), Gilead Sciences Inc. ("Gilead"), Hybridon Inc. ("Hybridon"), ISIS Pharmaceuticals, Inc. ("ISIS"), Lynx Therapeutics Inc. ("Lynx"), Cygnus, Inc. ("Cygnus"), Biovail Corporation International ("Biovail"), and Noven Pharmaceuticals, Inc. ("Noven"), among others. Most of these companies have substantially greater financial, research and development, manufacturing and marketing experience, and resources than the Company does and represent substantial long-term competition for the Company. Such companies may succeed in developing pharmaceutical products that are more effective or less costly than any that may be developed by the Company.

Factors affecting competition in the pharmaceutical industry vary depending on the extent to which the competitor is able to achieve a competitive advantage based on patented or proprietary technology. If the Company is able to establish and maintain a significant patent position with respect to its antisense compounds and drug delivery technology, its competition will likely depend primarily on the effectiveness of the products and the number, gravity and severity of unwanted side effects, if any, with its products as compared with alternative products.

The industry in which the Company competes is characterized by extensive research and development efforts and rapid technological progress. Although the Company believes that its patent position may give it a competitive advantage with respect to its proposed antisense compounds and drug delivery products, new developments are expected to continue and there can be no assurance that discoveries by others will not render the Company's potential products noncompetitive. The Company's competitive position also depends on its ability to attract and retain qualified scientific and other personnel, develop effective products, implement development and marketing plans, obtain patent protection, and secure adequate capital resources. See "Business--Competition."

**PATENTS AND PROPRIETARY RIGHTS.** The Company believes that its ultimate success will depend in part on the strength of its existing patents and additional patents that it files in the future. Patent applications have been filed covering the basic compositions of matter, methods of synthesis and medical uses of NEU-GENES. These applications were filed in the United States, Canada, Europe, Australia, and Japan. Certain of the Company's patents were issued in the United States from 1991 through the present. Additionally, patents on NEU-GENE chemistry and CYTOPORTER drug delivery systems have recently been filed or are near filing. There can be no assurance, however, that any additional patents will ultimately issue. Although the Company believes that its technology is adequately protected, there is no assurance that any existing or future patents will survive a challenge or will otherwise provide meaningful protection from competition. There is also no assurance that the Company will have the financial resources to provide a vigorous defense of its patent position, if challenged, or that the practice of its patented and proprietary technology will not infringe third-party patents. If an actual infringement action were instituted against the Company, there can be no assurance that the Company would have the financial ability to defend the action or that



the action would not have an adverse effect on the Company. The Company's success will also depend on its ability to avoid infringement of patent or other proprietary rights of others or its ability to obtain any technology licenses it may require in the future. See "Business--Patents and Proprietary Rights."

**RISK OF PRODUCT LIABILITY.** Clinical trials or marketing of any of the Company's potential pharmaceutical products may expose the Company to liability claims from the use of these products. The Company currently intends to obtain product liability insurance at the appropriate time; however, there can be no assurance that the Company will be able to obtain or maintain insurance on acceptable terms for its clinical and commercial activities or that such insurance would be sufficient to cover any potential product liability claim or recall. Failure to have sufficient coverage could have a material adverse effect on the Company's business and results of operations.

**BROAD DISCRETION OF MANAGEMENT TO ALLOCATE OFFERING PROCEEDS.** The Company expects that the proceeds of this offering will be used for the pre-clinical and clinical phases of the Company's near-term therapeutic programs, for working capital and general corporate purposes. The Company is not currently able to estimate precisely the allocation of the proceeds among such uses, and the timing and amount of expenditures will vary, depending upon numerous factors. The Company's management will have broad discretion to allocate the proceeds of this offering and to determine the timing of expenditures. See "Use of Proceeds."

**CONTROL BY EXISTING SHAREHOLDERS.** Upon the closing of this offering, the Company's officers, directors and 5% shareholders and their affiliates will beneficially own approximately 38% of the Company's outstanding shares of Common Stock. The Company's existing shareholders will own approximately 85% of the Company's outstanding shares of Common Stock. Accordingly, these shareholders, if they were to act as a group, may be able to elect all of the Company's directors and otherwise control matters requiring approval by the shareholders of the Company, including approval of significant corporate transactions. Such concentration of ownership may also have the effect of delaying or preventing a change in control of the Company. See "Principal Shareholders."

**NO PRIOR PUBLIC MARKET; POSSIBLE VOLATILITY OF COMMON STOCK PRICE.** Prior to this offering, there has been no public market for the Company's Common Stock or Warrants. There can be no assurance that an active public market for the Common Stock or Warrants will develop or be sustained after this offering. The initial public offering price of the Units has been determined by negotiations between the Company and the Representatives and may not be indicative of future market prices. The trading price of the Company's Common Stock and Warrants could be subject to significant fluctuations in response to such factors as variations in the Company's anticipated or actual results of operations, announcements of new products or technological innovations by the Company or its competitors, FDA and foreign regulatory actions, developments with respect to patents and proprietary rights, public concern as to the safety of products developed by the Company or others, changes in health care policy in the United States and in foreign countries, changes in stock market analyst recommendations regarding the Company, the pharmaceutical industry in general and overall market conditions. Moreover, the stock market has from time to time experienced extreme price and volume fluctuations which have particularly affected the market prices for emerging growth companies and which have often been unrelated to the operating performance of such companies. These broad market fluctuations may adversely affect the market price of the Company's Common Stock and Warrants. In the past, following periods of volatility in the market price of a company's common stock, securities class action litigations have occurred against the issuing company. There can be no assurance that such litigation will not occur in the future with respect to the Company. Such litigation could result in substantial costs and a diversion of management's attention and resources, which could have a material adverse effect on the Company's business and results of operations. Any adverse determination in such litigation could also subject the Company to significant liabilities. See "Management--Stock Incentive Plan" and "Underwriting."

**ADVERSE EFFECT ON MARKET PRICE DUE TO SHARES ELIGIBLE FOR FUTURE SALE.** Sales of a substantial number of shares of the Common Stock in the public market following this offering could adversely affect the market price of the Common Stock and the Company's ability to raise capital in the future in the equity markets. Upon completion of this offering, there will be 10,779,763 shares of Common Stock outstanding, assuming no exercise of the Overallotment Option, of outstanding warrants, outstanding options under the Company's Stock Incentive Plan, the warrants or the Representatives' Warrants after the date of this Prospectus. In addition to the 2,000,000 shares of Common Stock sold in this offering, approximately 1,358,055 shares not subject to lock-up agreements will be eligible for immediate resale without restriction under Rule 144(k) of the Securities Act. An additional 19,000 shares held for more than one but less than two years by shareholders who are not affiliates of the Company and who are not subject to lock-up agreements are eligible for sale under Rule 144 of the Securities Act, subject to the volume and other limitations thereunder. Upon expiration of lock-up agreements three months after the date of this Prospectus (or earlier with the consent of Paulson Investment Company, Inc. ("Paulson"), approximately 56,000 shares will be eligible for immediate resale subject to the limitations of Rule 144 and approximately 1,492,035 shares will be eligible for resale immediately without restriction pursuant to Rule 144(k). Upon expiration of lock-up agreements six months after the date of this Prospectus (or earlier with the consent of Paulson), approximately 952,500 shares will be eligible for immediate resale subject to the limitations of Rule 144 and approximately 1,826,924 shares will be eligible for resale immediately without restriction pursuant to Rule 144(k). Upon expiration of lock-up agreements nine months after the date of this Prospectus (or earlier with the consent of Paulson), approximately 1,199,000 shares will be eligible for immediate resale subject to the limitations of Rule 144 and approximately 2,402,933 shares will be eligible for resale immediately without restriction pursuant to Rule 144(k). Upon expiration of lock-up agreements one year after the date of this Prospectus (or earlier with the consent of Paulson), approximately 5,943,911 shares will be eligible for immediate resale subject to the limitations of Rule 144 and approximately 2,835,852 shares will be eligible for resale immediately without restriction pursuant to Rule 144(k). As of the date of this Prospectus, options to purchase 1,126,886 shares of Common Stock have been granted under the Stock Incentive Plan, which shares, if acquired pursuant to the exercise of options, are subject to lock-up agreements which expire one year after the date of this Prospectus (or earlier with the consent of the Paulson). See "Management--Stock Incentive Plan," "Underwriting," "Description of Securities" and "Shares Eligible for Future Sale."

**REDEMPTION OF WARRANTS.** The outstanding Warrants are subject to redemption at \$.25 per Warrant on 30 days written notice provided that the closing bid price of the Common Stock for each of the 20 consecutive trading days immediately preceding the date of the notice of redemption equals or exceeds 200% of the then-current warrant exercise price. If the Company exercises the right to redeem the outstanding Warrants, a holder would be forced either to exercise the Warrant or accept the redemption price. See "Description of Securities--Warrants."

**CURRENT PROSPECTUS AND STATE BLUE SKY REGISTRATION REQUIRED TO EXERCISE THE WARRANTS.** Holders will be able to exercise the Warrants only if a current prospectus relating to the Common Stock underlying the Warrants is then in effect, and only if the Common Stock is qualified for sale or exempt from qualification under applicable state securities law of the state in which such holders of the Warrants reside. Although the Company has undertaken to maintain the effectiveness of a current prospectus covering the Common Stock underlying the Warrants, there can be no assurance that the Company will be able to do so. The value of the Warrants may be impaired if a current prospectus covering the Common Stock issuable upon exercise of the Warrants is not kept effective, or if such Common Stock is not qualified or exempt from qualification in the states in which the holders of Warrants reside.

The Warrants are separately transferable immediately upon issuance. Although the Units will not knowingly be sold to purchasers in jurisdictions in which the Units are not registered or otherwise qualified for sale, purchasers may buy Warrants in the after market in, or may move to, jurisdictions in which the shares underlying the Warrants are not so registered or qualified during the period that the Warrants are

exercisable. In this event, the Company would be unable to issue shares to those persons desiring to exercise their warrants, and holders of Warrants would have no choice but to attempt to sell the Warrants in a jurisdiction where such sale is permissible or allow them to expire unexercised. See "Description of Securities--Warrants."

**DILUTION.** Investors acquiring shares of Common Stock included in the Units offered hereby will incur immediate and substantial net tangible value dilution of \$7.68 per share, assuming no value is attributed to the Warrant included in a Unit. To the extent that currently outstanding options and warrants to purchase the Company's Common Stock are exercised, there will be further dilution. See "Dilution."

**ABSENCE OF DIVIDENDS.** The Company has never paid cash dividends on its Common Stock and does not anticipate paying cash dividends in the foreseeable future. See "Dividend Policy."

**ANTI-TAKEOVER EFFECTS OF CERTAIN CHARTER PROVISIONS AND OREGON LAW.** Certain provisions of the Company's Third Restated Articles of Incorporation and Bylaws could discourage potential acquisition proposals, could delay or prevent a change in control of the Company and could make removal of management more difficult. Such provisions could diminish the opportunities for a shareholder to participate in tender offers, including tender offers that are priced above the then-current market value of the Common Stock. The provisions may also inhibit increases in the market price of the Common Stock and Warrants that could result from takeover attempts. For example, the Board of Directors of the Company, without further shareholder approval, may issue up to 2,000,000 shares of Preferred Stock, in one or more series, with such terms as the Board of Directors may determine, including rights such as voting, dividend and conversion rights which could adversely affect the voting power and other rights of the holders of Common Stock. Preferred Stock thus may be issued quickly with terms calculated to delay or prevent a change in control of the Company or make removal of management more difficult. Additionally, the issuance of Preferred Stock may have the effect of decreasing the market price of the Common Stock. The Oregon Control Share Act and Business Combination Act limit the ability of parties who acquire a significant amount of voting stock to exercise control over the Company. These provisions may have the effect of lengthening the time required for a person to acquire control of the Company through a proxy contest or the election of a majority of the Board of Directors and may deter efforts to obtain control of the Company. Finally, the Company's Board of Directors is divided into two classes, each of which serves for a staggered two-year term, which may make it more difficult for a third party to gain control of the Company's Board of Directors. See "Description of Securities."

## USE OF PROCEEDS

The net proceeds to the Company from the sale of the Units offered hereby, based on an assumed initial public offering price of \$9.50 per Unit, are estimated to be \$16,815,000 (\$19,408,500 if the Overallotment Option is exercised in full) after deducting the estimated underwriting discount and offering expenses and assuming no exercise of the Warrants.

The Company expects to use up to \$5 million of the net proceeds of this offering for the pre-clinical and the clinical trial phases of the Company's near term therapeutic programs. The Company expects to use approximately \$5 million to fund future research and development. The balance of the net proceeds of this offering will be used for working capital and general corporate purposes. Where appropriate, proceeds of this offering also may be used to acquire products or technologies that complement the Company's business, although there are no present understandings, agreements or commitments with respect to any such acquisitions. The cost, timing and amount of funds required for such uses by the Company will be based on the timing of regulatory approvals, the results of clinical testing and trials, and the results of the Company's research and development programs. The amounts actually expended on any particular project may vary significantly from the Company's current plans, particularly given the Company's early stage of development and the uncertainty of the drug development process. If the Company's Rescission Offer closes prior to the closing of this offering, the Company intends that the cash requirements with respect to the Rescission Offer will be satisfied from existing cash and cash equivalents. If shares with an aggregate rescission price greater than \$1,500,000 are tendered to the Company and the Company is required to issue promissory notes, the Company's management retains broad discretion to use the remaining proceeds for payment of the note obligations. If this offering closes prior to the close of the Rescission Offer, no promissory notes will be issued and all eligible offerees who accept the Rescission Offer will be paid in cash and units of the Anti-Gene Development Group, as applicable. If all such offerees elect to rescind their purchases, the Company will be required to pay these holders \$3,121,965 and 568.67 units of limited partnership interest in the Anti-Gene Development Group, plus approximately \$2,129,000 in statutory interest.

Pending application of the net proceeds as described above, the Company intends to invest the net proceeds in short-term, interest-bearing securities, including government obligations and money market instruments.

## DIVIDEND POLICY

The Company has not declared or paid cash dividends on its Common Stock. The Company currently intends to retain all future earnings to fund the operation of its business and, therefore, does not anticipate paying dividends in the foreseeable future. Future cash dividends, if any, will be determined by the Board of Directors.

CAPITALIZATION

The following table sets forth the capitalization of the Company as of March 31, 1997 (i) on an actual basis and (ii) as adjusted to reflect the receipt and application of the estimated net proceeds from the sale of the 2,000,000 Units offered hereby at an assumed initial offering price of \$9.50 per Unit.

	MARCH 31, 1997			
	ACTUAL	AS ADJUSTED(2)	AS ADJUSTED(3)	AS ADJUSTED(4)
	(UNAUDITED)			
Common Stock subject to rescission, \$.0001 par value:				
1,292,973 shares issued and outstanding.....	\$ 3,121,965	\$ 3,121,965	\$ 2,229,401	\$ --
Shareholders' equity:				
Preferred Stock, \$.0001 par value: 2,000,000 shares authorized; no shares issued and outstanding, actual and as adjusted(1).....	--	--	--	--
Common Stock, \$.0001 par value: 50,000,000 shares authorized; 7,486,790 shares issued and outstanding, actual; 9,486,790 shares issued and outstanding, as adjusted(2).....	749	949	949	949
Additional paid-in capital.....	13,220,861	30,035,661	30,035,661	30,035,661
Deficit accumulated during the development stage.....	(13,018,179)	(13,018,179)	(13,625,615)	(15,142,837)
Total shareholders' equity.....	203,431	17,018,431	16,410,995	14,893,773
Total capitalization.....	\$ 3,325,396	\$ 20,140,396	\$ 18,640,396	\$ 14,893,773

- (1) Reflects an amendment to the Company's Articles of Incorporation that was effective November 4, 1996, authorizing the issuance of up to 2,000,000 shares of Preferred Stock.
- (2) Excludes 1,551,261 shares of Common Stock issuable upon exercise of stock options and warrants outstanding as of December 31, 1996, at a weighted average exercise price of \$4.66 per share. Also excludes 209,506 shares reserved for future issuance pursuant to the Company's Stock Incentive Plan. See "Management--Stock Incentive Plan" and Note 3 of Notes to Financial Statements.
- (3) Assumes that shares with an aggregate rescission price of \$1.5 million are tendered for rescission, which represents the cash portion of the Company's potential payments under the Rescission Offer if this offering has not closed prior to the closing of the Rescission Offer.
- (4) Assumes that shares with an aggregate rescission price of \$5,246,623 are tendered for rescission and that this offering is closed prior to the closing of the Rescission Offer.

DILUTION

The net tangible book value of the Company as of March 31, 1997, was \$2,837,271 or \$0.32 per share of Common Stock. Net tangible book value per share is determined by dividing the net tangible book value of the Company (total tangible assets less total liabilities) by the total number of outstanding shares of Common Stock. After giving effect to the sale of the 2,000,000 Units offered by the Company hereby and the receipt of the estimated net proceeds therefrom (after deducting the estimated underwriting discount and other estimated expenses of this offering and attributing no portion of the value of a Unit to the Warrant), the net tangible book value of the Company at March 31, 1997, would have been \$19,652,271 or

\$1.82 per share. This represents an immediate increase in the net tangible book value of \$16,815,000 or \$1.52 per share to existing holders of Common Stock and an immediate dilution (i.e., the difference between the initial public offering price and the net tangible book value after this offering) to new investors purchasing Units in this offering of \$7.68 per share. The following table illustrates the per share dilution to new investors purchasing Units in this offering:

Initial public offering price per share.....		\$	9.50
Net tangible book value per share at December 31, 1996.....	\$	0.32	
Increase per share attributable to new investors.....		1.50	
Pro forma net tangible book value per share after this offering.....			1.82
		-----	
Net tangible book value dilution per share to new investors...	\$	7.68	
		-----	
		-----	

The following table summarizes on a pro forma basis as of December 31, 1996, the number of shares of Common Stock purchased, the percentage of total cash consideration paid, and the average price per share (i) paid by present shareholders and (ii) paid by investors purchasing Units in this offering. The calculation in this table with respect to shares of Common Stock to be purchased by new investors in this offering excludes shares of Common Stock issuable upon exercise of the Warrants (after deducting the estimated underwriting discount and other estimated expenses of this offering and attributing no portion of the value of a Unit to the Warrant).

	SHARES PURCHASED		TOTAL CONSIDERATION		AVERAGE PRICE PER SHARE
	NUMBER	PERCENT	AMOUNT	PERCENT	
Existing Shareholders.....	8,779,763	81%	16,343,575	46%	\$ 1.86
New Investors.....	2,000,000	19%	19,000,000	54%	\$ 9.50
	-----	-----	-----	-----	
Total.....	10,779,763	100%	35,343,575	100%	
	-----	-----	-----	-----	

The above computations assume no exercise of outstanding options or warrants. As of December 31, 1996, there were options and warrants outstanding to purchase a total of 1,551,261 shares of Common Stock at a weighted average exercise price of \$4.66 per share. The exercise of such options or warrants will result in further dilution to new investors. See "Capitalization."

SELECTED FINANCIAL DATA

The Selected Financial Data set forth below for the years ended December 31, 1995 and 1996 and with respect to the Balance Sheet Data at December 31, 1995 and 1996 are derived from, and are qualified by reference to, the audited Financial Statements and related Notes thereto included elsewhere in this Prospectus and should be read in conjunction with those audited Financial Statements and Notes thereto. The Statements of Operations Data for the three month periods ended March 31, 1996 and 1997 and for the period from July 22, 1980 (inception) through March 31, 1997, and the Balance Sheet Data at March 31, 1997 have been derived from unaudited financial statements included elsewhere herein, and reflect in management's opinion, all adjustments, consisting only of normal recurring adjustments necessary for a fair presentation of the results of operations for such periods. Results of operations for any interim period are not necessarily indicative of results to be expected for the full fiscal year. The Selected Financial Data set forth below are qualified by reference to, and should be read in conjunction with, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the Financial Statements and Notes thereto included elsewhere in this Prospectus.

	YEAR ENDED DECEMBER 31,		PERIOD FROM JULY 22, 1980 (INCEPTION) THROUGH DECEMBER 31, 1996	THREE-MONTH PERIOD ENDED MARCH 31,		PERIOD FROM JULY 22, 1980 (INCEPTION) THROUGH MARCH 31, 1997
	1995	1996		1996	1997	
				(UNAUDITED)	(UNAUDITED)	(UNAUDITED)
<b>STATEMENTS OF OPERATIONS DATA:</b>						
Revenues, from grants and research contracts.....	\$ 82,500	\$ 27,227	\$ 689,497	\$ --	\$ --	\$ 689,497
Operating expenses:						
Research and development.....	2,097,796	1,729,554	9,011,574	349,565	451,723	9,463,297
General and administrative.....	609,723	613,811	4,549,582	75,321	170,028	4,719,610
Total operating expenses.....	2,707,519	2,343,365	13,561,156	424,886	621,751	14,182,907
Other income.....	68,133	228,776	446,176	170,639	29,055	475,231
Net loss.....	\$ (2,556,886)	\$ (2,087,362)	\$ (12,425,483)	\$ (254,247)	\$ (592,696)	\$ (13,018,179)
Net loss per share(1).....	\$ (0.37)	\$ (0.25)		\$ (0.04)	\$ (0.07)	
Shares used in per share calculation(1).....	6,982,459	8,233,548		7,109,810	8,233,548	

	DECEMBER 31, 1996	MARCH 31, 1997		
		ACTUAL	AS ADJUSTED(2)	AS ADJUSTED(3)
		(UNAUDITED)		
<b>BALANCE SHEET DATA:</b>				
Working capital.....	\$2,738,677	\$1,959,519	18\$,774,519	17\$,274,519
Total assets.....	4,248,899	3,699,483	20,514,483	19,014,483
Common Stock subject to rescission.....	3,121,965	3,121,965	3,121,965	2,229,401
Deficit accumulated during the development stage.....	(12,425,483)	(13,018,179)	(13,018,179)	(13,625,615)
Total shareholders' equity (deficit).....	796,127	203,431	17,018,431	16,410,995

	AS ADJUSTED(4)
	(UNAUDITED)
<b>BALANCE SHEET DATA:</b>	
Working capital.....	13\$,527,896
Total assets.....	15,267,860
Common Stock subject to rescission.....	--
Deficit accumulated during the development stage.....	(15,142,837)
Total shareholders' equity (deficit).....	14,893,773

(1) See Note 2 of Notes to Financial Statements for an explanation of the determination of the number of shares used in computing net loss per share.

(2) Adjusted to give effect to the application of the estimated net proceeds of the proposed offering of 2,000,000 Units by the Company based upon an assumed initial public offering price of \$9.50 per Unit. See "Use of Proceeds" and "Management's Discussion and Analysis of Financial Condition and Results of Operations."



- (3) Assumes that shares with an aggregate rescission price of \$1.5 million are tendered for rescission, which represents the cash portion of the Company's potential payments under the Rescission Offer if this offering has not closed prior to the closing of the Rescission Offer.
  
- (4) Assumes that shares with an aggregate rescission price of \$5,246,623 are tendered for rescission and that this offering is closed prior to the closing of the Rescission Offer.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF  
FINANCIAL CONDITION AND RESULTS OF OPERATIONS

OVERVIEW

From its inception in July 1980, the Company has devoted its resources primarily to fund its research and development efforts. The Company has been unprofitable since inception and, other than limited interest and grant revenue, has had no material revenues from the sale of products or other sources, and does not expect material revenues for at least the next 12 months. The Company expects to continue to incur losses for the foreseeable future as it expands its research and development efforts. As of March 31, 1997, the Company's accumulated deficit was \$13,018,179.

The Company expects to use approximately \$5 million the net proceeds of this offering for the pre-clinical development and the clinical trial phases of the Company's near-term therapeutic programs. See "Use of Proceeds." The Company intends to increase its research staff as it prepares to initiate pre-clinical studies and file INDs for Resten-NG and Cyclosporin-CP. The Company's administrative staff will be supplemented as needed to support the research and development activities, to assure compliance with governmental regulatory requirements, and to develop and establish strategic pharmaceutical alliances.

RESULTS OF OPERATIONS

THREE MONTHS ENDED MARCH 31, 1996 COMPARED WITH THREE MONTHS ENDED MARCH 31, 1997. Operating expenses increased from \$424,886 for the three-month period ended March 31, 1996 to \$621,751 for the three-month period ended March 31, 1997 due to increases in research and development staffing and expenses associated with outside collaborations and pre-clinical testing of the Company's technologies. Other income decreased from \$170,639 for the three-month period ended March 31, 1996 to \$29,055 for the three-month period ended March 31, 1997 due primarily to the sale of short-term investments in the first quarter of 1996.

YEAR ENDED DECEMBER 31, 1995 COMPARED WITH YEAR ENDED DECEMBER 31, 1996. The Company had revenues from research contracts of \$82,500 and \$27,227 for the years ended December 31, 1995 and 1996, respectively. Revenues for both time periods were derived from research collaborations with outside organizations, and the decrease between the current and prior year periods was due primarily to the completion of a collaborative research program in 1996. Operating expenses were \$2,707,519 in 1995 and \$2,343,365 in 1996. The decrease in operating expenses was due to a reduction in staff and other efficiencies that resulted from a shift in focus of the Company's research to pre-clinical development. General and administrative expenses, however, remained relatively constant, with \$609,723 in 1995 and \$613,811 in 1996. Other income increased from \$68,133 in 1995 to \$228,776 in 1996, primarily due to the sale of short-term investments and increased interest income in 1996.

LIQUIDITY AND CAPITAL RESOURCES

The Company has financed its operations since inception primarily through private equity sales totaling \$16,343,575 and grants and contract research funding of \$689,497 from various sources. The Company's cash and cash equivalents were \$2,305,351 at March 31, 1997, compared with \$544,962 at March 31, 1996. The increase of \$1,760,389 was due to net proceeds from the sale of the Company's Common Stock of approximately \$4,031,532 in late 1996 offset by the use of approximately \$2,271,143 for operations in late 1996 and early 1997.

The Company's future expenditures and capital requirements will depend on numerous factors, including without limitation, the progress of its research and development programs, the progress of its pre-clinical and clinical trials, the time and costs involved in obtaining regulatory approvals, the cost of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights, competing technological and market developments, the ability of the Company to establish collaborative

arrangements and the terms of any such arrangements, and the costs associated with commercialization of its products. The Company's cash requirements are expected to continue to increase significantly each year as it expands its activities and operations. There can be no assurance, however, that the Company will ever be able to generate product revenues or achieve or sustain profitability. See "Risk Factors."

The proceeds of this offering are the only source of capital currently available to the Company, other than existing cash and cash equivalents. See "Use of Proceeds." The Company believes that the estimated net proceeds from this offering and existing cash and cash equivalents will satisfy its budgeted cash requirements for at least the next 24 months based upon the Company's current operating plan. This plan shows that at the end of the 24-month period, the Company will require substantial additional capital. Moreover, if the Company experiences unanticipated cash requirements during the 24-month period, including without limitation, cash required to pay the holders of a significant number of shares of Common Stock in connection with the Company's Rescission Offer, the Company could require additional capital to fund operations, continue research and development programs and pre-clinical and clinical testing of its potential antisense and drug delivery products and commercialize any products that may be developed. See "Risk Factors--Potential Liability Arising from Rescission Rights of Certain Shareholders." The Company may seek such additional funding through public or private financings or collaborative or other arrangements with third parties. There can be no assurance, however, that additional funds will be available on acceptable terms, if at all. See "Risk Factors--Additional Financing Requirements."

The Company anticipates that it will satisfy the cash requirements of the Rescission Offer from current cash and cash equivalents or, if this offering has closed prior to the closing of the Rescission Offer, from the proceeds of this offering. If this offering does not close prior to the closing of the Rescission Offer and promissory notes are issued in connection with the Rescission Offer, potential continuing liability from the issuance of notes could result in substantial ongoing interest expense and adversely affect the Company's access to capital markets. For example, the Company's issuance of notes would result in additional annual interest expense of approximately \$90,000 for each \$1,000,000 of notes payable, up to a maximum of approximately \$300,000 if all eligible offerees exercise their right to rescind. All such potential increases in annual interest expense could have the effect of increasing the Company's net loss. Additionally, the potential additional debt would make it more difficult for the Company to satisfy minimum net worth standards required to maintain the Company's Common Stock listing on the Nasdaq National Market System. Finally, the potential additional debt could adversely affect the Company's creditworthiness in the view of potential lenders and investors, making it more difficult and expensive for the Company to obtain needed financing.

## GENERAL OVERVIEW

ANTIVIRALS is a pioneer in the field of the gene-inactivating technology referred to as ANTISENSE and has developed a patented class of antisense compounds which may be useful in the treatment of a wide range of human diseases. The Company also has developed new drug delivery technology which may be useful with many FDA-approved drugs as well as with its antisense compounds. The Company's drug development program has two areas of near-term focus:

- NEU-GENE antisense compounds for selected applications, and
- CYTOPORTER drug delivery engines for enhanced delivery of FDA-approved drugs with delivery problems.

The Company's long-term product development program combines its NEU-GENE and CYTOPORTER technologies to produce combination drugs with potential applications for many diseases. The Company has filed patent applications covering the basic compositions of matter, methods of synthesis and therapeutic uses of NEU-GENES in the United States, Canada, Europe, Australia and Japan. Eleven patents have issued in the United States and nine others have been granted by the European Patent Office and in Japan, Canada and Australia. Additional patent applications, covering the Company's basic compositions of matter, methods of synthesis and medical uses of CYTOPORTER compounds have been filed.

The first application of the Company's antisense technology is designed to treat restenosis, a cardiovascular disease. The Company is currently in pre-clinical development with this compound and expects to file an IND to begin clinical trials in 1998. The Company's first planned drug delivery products combine its CYTOPORTER delivery engine with two FDA-approved drugs that have delivery problems. These drugs, cyclosporin and paclitaxel (Taxol), will both be off patent by late 1997 and could have much wider use if their delivery problems are reduced. The Company expects to file an IND to begin clinical trials with its enhanced form of cyclosporin and to initiate pre-clinical studies with its enhanced form of paclitaxel in 1998. See "Drug Approval Process and Other Government Regulations."

**DRUG DESIGN AND DEVELOPMENT.** Most conventional drugs are chemicals designed to induce or inhibit the function of a target protein molecule with as few side effects as possible. Conventional drugs are not available for many diseases due to their low level of selectivity for the specific disease target or because they are difficult to deliver to their targets. These two issues, lack of selectivity and poor delivery, may contribute to poor efficacy, unwanted side effects or high toxicity, even at suboptimal dosages. Moreover, the development of conventional drugs is usually time consuming and expensive, since thousands of compounds must be produced and analyzed to find one with an acceptable balance between efficacy and toxicity. Safe and effective therapeutics for viral and host diseases have been particularly difficult to develop because these diseases use the patient's own cellular machinery and therefore provide few specific targets for therapeutic intervention that will not prove toxic to the patient.

Antisense technology has the potential to provide safe and effective treatment for a wide range of diseases, including viral and host diseases. This new approach uses synthetic compounds, or polymers, designed to inactivate selected genetic sequences, thereby halting the disease process. Targeting these genetic sequences provides the selectivity that is not available in conventional drug development which typically targets proteins directly. The antisense approach inhibits at the genetic level the mechanisms which underlie the production of disease-producing proteins.

To reach their therapeutic targets, many drugs must cross tissue and cellular barriers. Drugs that have an intracellular site of action must cross the lipid barrier of cellular membranes to move from the aqueous environment in blood into the interior of target cells. Therefore, these drugs must achieve solubility in both water and lipids. Since few compounds have these solubility characteristics, many drug candidates are a compromise between inherent solubility and effective delivery. This trade-off greatly reduces efficacy and may significantly heighten toxicity of many drug candidates as well as many FDA-approved drugs.

The Company has developed two distinct technologies designed to address the critical issues in drug development. The Company's NEU-GENE antisense technology addresses the issue of drug selectivity, and its CYTOPORTER drug delivery technology addresses delivery problems with both FDA-approved drugs and antisense compounds. The characteristics of the patented structure of the Company's NEU-GENE compounds distinguish its antisense technology from competing technologies and provide the selectivity for a single disease target that is the hallmark of all antisense technology. The Company's molecular engine, CYTOPORTER, is designed to transport certain drugs with poor delivery characteristics across the lipid barrier of cellular membranes into the interior of cells to reach their targets.

NEAR-TERM PRODUCT DEVELOPMENT SUMMARY

The first application of the Company's antisense technology is designed to treat restenosis. The Company's first planned drug delivery products combine its CYTOPORTER delivery engine with two FDA-approved drugs, paclitaxel (Taxol) and cyclosporin, each of which the Company believes could have much broader usage if its delivery problems were reduced.

COMPOUND	DRUG	POTENTIAL INDICATION	DEVELOPMENT STATUS
AVI-2221 NEU-GENE.....	Resten-NG	Restenosis	Pre-clinical studies in 1997 and IND filing expected in 1998
AVI-2401 CYTOPORTER.....	Cyclosporin-CP	Transplantation	Pre-clinical studies in 1997 and IND filing expected in 1998
AVI-2301 CYTOPORTER.....	Paclitaxel-CP	Cancer	Pre-clinical studies expected in 1998

ANTISENSE--NEU-GENE

TECHNICAL OVERVIEW

GENETIC STRUCTURE AND FUNCTION. All life forms contain genetic information in molecules called DNA and RNA which comprise the operating instructions for all life processes. The specific instructions are called genes, which are long chains or strands of the four genetic bases: adenine, cytosine, guanine and thymine, represented by the letters, A, C, G, and T, respectively. The molecular structures of these letters are complementary, such that A pairs with T, and C pairs with G. Consequently, each genetic strand has the unique ability to bind specifically to its complementary strand to form a duplex.

The information encoded in the DNA by its sequence of genetic letters is used to make proteins. To accomplish this, one strand (called the template strand) of the duplex DNA is copied to make a new complementary strand, referred to as messenger RNA. This messenger RNA is referred to as the SENSE strand because it carries the information used to assemble a specific protein. See "Figure 1" below. An ANTISENSE compound is a synthetic strand that is complementary to a small portion of the messenger RNA. Antisense compounds pair with their complementary messenger RNA sense strand to form a duplex, preventing the message from initiating protein assembly. See "Figure 2" below.

FIGURE 1--GENETIC FUNCTION

[Genetic Function Diagram]

GENE-TARGETED THERAPEUTICS. Most human diseases arise from the function or dysfunction of genes within the body, either those of pathogens, such as viruses, or of one's own genes. New techniques in molecular biology have led to the identification of the genes associated with most of the major human diseases and to the determination of the sequence of their genetic letters. Using modern methods of chemical synthesis, a genetic compound can be prepared that is complementary to a critical SENSE sequence in a pathogen or pathogenic process. When this complementary ANTISENSE compound binds tightly to the disease-causing sequence, the selected protein is inhibited, and thus the pathogen or pathogenic process is disabled. See "Figure 2" below.

FIGURE 2--ANTISENSE INHIBITION OF GENETIC FUNCTION

[Antisense Inhibition Diagram]

Antisense compounds are composed of repeating structures or subunits that are linked together forming a polymer, referred to as the antisense BACKBONE. Each subunit carries a genetic letter (A, C, G, or T) that pairs with its corresponding letter in the genetic target. Although the genetic letters are a feature common to all antisense compounds, the structure of the subunits and the linkage groups that string them together may differ greatly. These differences in the subunits and the linkages define the different types of antisense backbones and their corresponding physical and biological properties. The Company is distinguished from all other antisense companies by the characteristics of its patented antisense backbone. The subunits which carry the genetic letters on the Company's backbone are synthetic products rather than modified natural materials. In addition, the linkages used to string the subunits together carry no charge in the Company's backbone. The Company believes these differences may provide pharmaceutical advantages that are critical for antisense drug development to meet the challenges of broad clinical utility.

**FIRST-GENERATION COMPOUNDS.** The first gene-inactivating compounds had backbones composed of natural genetic materials and linkages. Development of these compounds began in the late 1960s. As work continued in this new field, it became increasingly clear that there were significant problems with these structures. These natural compounds were degraded or broken down by enzymes in the blood and within cells and had difficulty crossing cellular membranes to enter the cells that contained their genetic target.

**SECOND-GENERATION COMPOUNDS.** To overcome these problems of degradation and permeability, several research groups developed modified backbones in the late 1970s which were designed to resist degradation by enzymes and to enter tissues and cells more efficiently. The most common of these types, the phosphorothioate backbones used by ISIS Pharmaceuticals and Hybridon, use natural DNA subunits linked together by a sulfur-containing, charged linkage. The Company was also extensively involved in developing second-generation backbones through the mid-1980s. After extensive investigation, however, the Company concluded that even after optimization, these second-generation compounds might lack the combination of properties desirable for broad clinical utility. For this reason, the Company abandoned development of second-generation backbones in the mid-1980s and started development of third-generation backbones designed to address these drawbacks. Today, in spite of extensive progress in the field, the Company believes that there remain serious limitations to second-generation compounds due to problems with the stability, specificity, cost effectiveness, and delivery of these compounds.

**NEU-GENE THIRD-GENERATION TECHNOLOGY.** By the mid-1980s, the limitations of the second-generation compounds led the Company to pursue the development of antisense technology with improved pharmaceutical properties which could be produced in a cost-effective manner. This effort culminated in the Company's development of a new class of compounds having a backbone of synthetic subunits carrying each genetic letter, with each subunit linked together by a patented uncharged linkage group. The synthetic subunits and linkages are not found in nature, but rather were designed and synthesized to meet specific pharmaceutical parameters. These patented third-generation agents, known as NEU-GENE compounds, display advantageous pharmaceutical properties (stability, neutral charge, high binding affinity and specificity). Moreover, they are made from less expensive, more abundant materials, and the Company believes that they will cost significantly less to produce than second-generation compounds.

The Company and others have shown in cell culture and animal studies that NEU-GENE compounds inhibit targeted genetic sequences. With these scientific benchmarks in place, the Company's objective is to develop its third-generation antisense compounds into effective and affordable therapeutics for major infectious and host diseases.

**PHARMACEUTICAL PROPERTIES OF ANTISENSE COMPOUNDS.** If antisense compounds are to become widely applicable pharmaceutical compounds, the following challenges must be addressed.

- Stability: resistance to enzymatic degradation both in blood and inside cells
- Efficacy: ability to inhibit expression of the target gene
- Specificity: binding restricted to the selected target, reducing toxicity

- Cost effectiveness: manufacturing efficiency which allows a broad range of applications
- Delivery: ability to cross tissue and cellular barriers in order to reach targeted genetic sequences

The Company's core technology differentiates it from others developing gene-inactivating compounds. The Company believes its principal competitive advantage in the antisense area is the chemical structure of the NEU-GENE backbone which was developed to address all of the above parameters.

**STABILITY.** Biological stability is principally determined by the degree of resistance to enzymatic degradation. Because the NEU-GENE backbone is a unique synthetic structure, the Company believes that there are no enzymes found in man to degrade it. The Company has conducted studies indicating that these agents are stable in blood and are stable to a broad range of degradative enzymes.

**EFFICACY AND SPECIFICITY.** Efficacy refers to the efficiency with which the antisense compounds block selected protein production. In a direct comparison with second-generation compounds conducted by the Company, its NEU-GENE compounds exhibited significantly better binding to both RNA and DNA, as well as substantially greater inhibition of the activity of targeted genetic sequences. Specificity can be assessed by comparing target inactivation of perfectly paired sequences and mispaired sequences. In the Company's direct comparison studies, NEU-GENE compounds exhibited substantially greater specificity than all other backbone types tested.

**COST EFFECTIVENESS.** The difficulty of synthesizing antisense compounds has been a concern in the field since its inception. The cost of producing gene-inactivating polymers depends to a considerable extent on the cost of the subunits from which they are constructed. The Company believes that because of abundant, low-cost materials, simpler production techniques and higher yields, the subunits used for NEU-GENE synthesis will cost substantially less than those used in the synthesis of second-generation backbones. After the genetic subunits are prepared, they must be assembled in a defined order to form the desired gene-inactivating polymer. The Company believes that the total cost of production of commercial quantities of NEU-GENES will be significantly less than that of gene-inactivating compounds prepared from natural or modified subunits by competitors.

**DELIVERY.** To reach their targets, antisense compounds must cross tissue and cellular barriers, including cellular and nuclear membranes. Preliminary research indicates that antisense compounds, including those of the Company, may face delivery problems when addressing many diseases. Accordingly, the Company has devoted substantial research effort to develop technology for delivering NEU-GENES to the interior of the cell. See "Drug Delivery--CYTOPORTER."

#### NEAR-TERM ANTISENSE PRODUCT DEVELOPMENT--RESTENOSIS

The first application of the Company's antisense technology is designed to treat restenosis, a cardiovascular disease. Restenosis results from the failure of balloon angioplasty due to a rapid growth of smooth muscle cells leading to a second blockage of a coronary artery. There are approximately 500,000 balloon angioplasties done in the United States each year with a failure rate of approximately 30% - 40%. During angioplasty, small metal supports, known as stents, may be placed at the site of blockage to keep the artery open. Recent studies suggest that stent placement may reduce the incidence of restenosis to approximately 20%. Although balloon angioplasty may avoid expensive bypass surgery if successful, restenosis may ultimately require the patient to undergo bypass surgery. The Company has selected restenosis as its first antisense product opportunity because the Company believes that delivery of NEU-GENE compounds is achievable in this disease setting, NEU-GENE compounds have the combination of properties to address this disease, and because the restenosis market is estimated at more than \$1 billion annually in the United States.

When a patient has a blocked coronary artery, a procedure called balloon angioplasty is frequently used to remove the blockage. In this procedure, a balloon catheter is inserted in the artery up to the blockage and the balloon is inflated to open the artery. The balloon increases the diameter of the channel



through the blocked portion of the artery. During this process, vascular cells, including smooth muscle cells which underlie the blockage, may be damaged. This process may result in rapid cell division leading to closure of the artery a second time. Restenosis occurs in approximately 30% - 40% of these procedures when stents are not placed and cannot be predicted from patient to patient. Even when stents are placed, the incidence of restenosis is significant. The precise mechanisms which cause this reaction are not known. However, scientific evidence suggests that, if the smooth muscle cells can be prevented from dividing for a few days until the integrity of the artery is reestablished, restenosis could be prevented in a significant number of cases. Although there are a few new clinical approaches that attempt to prevent restenosis, none is very effective and all have significant risks associated with them.

There is scientific evidence that antisense compounds readily enter scrape-damaged artery cells, and the Company has demonstrated that its NEU-GENE antisense compounds readily enter and function in scraped cells in the laboratory. The Company has selected target genetic sequences, has produced drug candidates, and has demonstrated that its NEU-GENE compounds inhibit cell division in laboratory models for this disease. Compound AVI-2221, Resten-NG, is now in pre-clinical development for restenosis, and the Company expects to file an IND to begin clinical trials in 1998. See "Drug Approval Process and Other Government Regulations." The Company intends to co-develop its NEU-GENE restenosis compound with a pharmaceutical partner. There can be no assurance, however, that the Company will be able to enter into any partnerships or establish any such relationship on favorable terms, or at all.

#### DRUG DELIVERY--CYTOPORTER

Since NEU-GENES are large molecules that do not readily make their way into cells, the Company has been developing a delivery mechanism that would allow NEU-GENES, as well as other drugs, to be transported directly into their intercellular site of action. The Company has developed and has filed a patent for a molecular engine, called CYTOPORTER, to transport drugs across the lipid layers of cellular and endosomal membranes into the interior of cells. This engine is powered by the acidic differential (pH gradient) across the endosomal membrane, does not disrupt the membrane, and is disassembled into harmless byproducts after carrying out its transport function.

#### TECHNICAL OVERVIEW

The body has protective barriers that shield it from penetration by foreign agents. Two of these barriers, cell membranes and the outermost layer of the skin, are composed of lipid layers (fat-like substances). The lipid composition of these barriers prevents aqueous or water-soluble agents from the environment or in the blood from penetrating into the interior of cells and interfering with critical cellular functions. These lipid layers are the principal barriers to effective drug delivery for many drugs that have an intracellular site of action.

For optimal delivery, a drug should penetrate readily into both the aqueous compartments of the body (body fluids and the interior of cells) and into the lipid layers which enclose those compartments. This is rarely achieved because when lipid solubility is increased, water solubility is decreased, and vice versa. In the past, to achieve delivery, the structure of a selected drug candidate was chemically adjusted to produce a compromise in the solubility profile (e.g., less than ideal water solubility in order to achieve some level of lipid solubility). This trade-off has been successful with many drugs, but markedly less successful for many others. Currently, a significant number of FDA-approved drugs have delivery problems, and many others never make it into clinical development due to delivery problems.

Small substances of low polarity can usually pass directly through the lipid layers of cell membranes. This appears to be the principal route of entry for most drugs without delivery problems. In contrast, substances with greater polarity and/or larger molecular size generally enter cells by being taken up and sequestered in a closed cellular compartment, or endosome, in a process called endocytosis. In this process, the interior of the endosome is acidified and the contents are exposed to degradative enzymes

resulting in their breakdown. This is a natural cellular mechanism that protects the interior of the cell from exposure to foreign material.

Drugs that are polar in nature or are of a larger molecular size must cross the lipid membrane of the endosome before being degraded in order to gain entry into the interior of the cell. Many drugs in this category fail to achieve entry rapidly enough to be practical for pharmaceutical purposes.

CYTOPORTER DRUG DELIVERY SOLUTION. The Company believes it has developed an effective drug delivery engine, called CYTOPORTER, to facilitate the transport of polar and larger size drugs across the lipid barriers of the skin, cell membranes, and endosomes into the interior of cells at a rate that is practical to achieve pharmaceutical results. When drugs in this category are taken up by cells, they are sequestered within an endosome surrounded by a lipid barrier. The Company's CYTOPORTER drug delivery engine is designed to transport these problem drugs from the endosome into the interior of cells without disruption of the lipid membrane that traps them. CYTOPORTER is a synthetic peptide containing specifically positioned acidic groups along its structure. In neutral conditions, CYTOPORTER exists as a water-soluble random form with its acidic groups exposed and hydrated. On acidification in the endosome, CYTOPORTER undergoes a transition to a lipid-soluble, needle-like form where the acidic groups are masked by associating as mated pairs, and other polar groups are shielded from the environment. As the engine becomes lipid soluble, it penetrates across the surrounding lipid membrane. As it enters into the interior of the cell, it encounters a neutral environment which induces a transition back to a water-soluble form resulting in movement of the engine and drug into the interior of the cell. See "Figure 3" below.

FIGURE 3--CYTOPORTER DRUG DELIVERY AT THE CELLULAR LEVEL

[Drug Delivery Diagram]

CYTOPORTER DRUG TRANSPORT MECHANISM. In preparation for enhanced drug delivery, the selected drug is chemically linked to the CYTOPORTER engine. This process will be unique for each drug and must take into account each drug's mode and site of action. Several steps are involved in the transport of the selected drug from the blood or body fluids across lipid barriers into the interior of target cells. After the drug is taken up by endocytosis, the endosome is acidified as the cell attempts to degrade its contents. As this acidification takes place, the engine converts from a water-soluble random form into a lipophilic, needle-like form. As the engine converts to its lipophilic form, it is PUSHED into the lipid membrane. Because the engine is longer than the membrane is thick, continued entry pushes the leading end of the engine into the interior of the cell. As the engine enters the neutral environment of the interior of the cell, it reverts automatically to its random, water-soluble form. This provides the motive force to PULL more of the engine across the membrane. Finally, ionization and solvation of the engine as it enters the interior pull the attached drug into the interior of the cell. The interior of the cell contains enzymes which rapidly break

down the engine into harmless by-products. This is a natural process that results in freeing the drug to react with its intracellular target.

The Company believes that its CYTOPORTER delivery engine can be chemically adjusted to accommodate a range of delivery challenges. The transition from water to lipid solubility can be manipulated to afford a wide range of transitions to accommodate various endosome characteristics. Moreover, the Company believes that its CYTOPORTER can be adjusted to accommodate various drug loads from modest polar drugs to the more challenging large polymers like uncharged antisense compounds.

CYTOPORTER APPLICATIONS. The Company believes its CYTOPORTER molecular engines may provide improved pharmaceutical properties for a wide variety of drugs, including:

- Improved aqueous solubility for lipophilic drugs, such as Taxol.
- Improved transport of peptides from endosomes into the interior of cells (e.g., cyclosporin) and transport of antisense polymers, particularly non-charged types such as NEU-GENES.
- Protection of polymer drugs from degradation by virtue of transport out of endosomes prior to the start of the degradation process.
- Improved transport of drugs into cells of the brain by specialized CYTOPORTER engines designed to provide both transport across the blood/brain barrier and subsequent entry into the interior of the brain.
- Delivery of highly cytotoxic drugs into bacteria living in an acidic environment, specifically H. PYLORI, a major cause of ulcers in the stomach.
- Transdermal delivery of lipophilic drugs.

TRANSDERMAL DRUG DELIVERY. The Company believes that its CYTOPORTER drug delivery engine may have the potential for transdermal delivery of selected substances. Placing an acidic, lipid-soluble form of the engine with an attached drug in contact with the surface of the skin results in the diffusion of the drug-engine through the lipid layers of the outer barrier of the skin (the extracellular matrix of the stratum corneum). Upon contact with the aqueous compartment underlying the stratum corneum, the drug-engine is drawn actively into this compartment through progressive ionization and solvation of the engine in the neutral conditions of this environment. This results in delivery of the attached drug into the underlying tissues, with subsequent distribution throughout the body.

#### NEAR-TERM DRUG DELIVERY PRODUCTS

The Company has selected cyclosporin and paclitaxel (Taxol) as the initial drugs to be combined with its CYTOPORTER delivery engine for its enhanced drug products. Additionally, the Company plans to apply its drug delivery technology to current drugs used to treat inflammation, pain, and infectious diseases. The Company plans to work with pharmaceutical collaborators to bring its drug delivery technology to the market in a timely fashion. The Company has not, however, entered into any arrangements with pharmaceutical collaborators, and there can be no assurance that the Company will be able to do so or that, if entered into, the arrangements will be successful in bringing the technology to the market in a timely fashion.

CYCLOSPORIN-CP. Cyclosporin is a drug marketed by Sandoz AG whose patent life expired in 1996. It is the transplantation anti-rejection drug of choice worldwide, with an estimated market size of \$1 billion. Difficulties with delivery prevent broader systemic use and topical applications.

Cyclosporin is an immunosuppressive drug that inhibits the function of lymphocytes involved in mounting a rejection response in patients undergoing organ transplantation. It has both poor solubility and poor delivery to its site of action. Consequently, larger doses of the drug are required in order to achieve a

clinical level of effectiveness than if the drug readily reached its site of action. These higher dosages lead to renal toxicity and other problems that limit broader use. The Company believes that combining its CYTOPORTER drug delivery engine with cyclosporin (Cyclosporin-CP) potentially would eliminate these delivery difficulties, resulting in lower dosages, fewer side effects, and broader usage.

The Company expects to begin pre-clinical studies with Cyclosporin-CP in 1997 and to file an IND to begin clinical trials with this agent in 1998. There can be no assurance that the Company will be able to file or obtain approval for an IND in 1998 or at all.

PACLITAXEL-CP. Taxol is a Bristol-Myers Squibb drug whose patent life expires in 1997. It is the largest selling cancer therapeutic worldwide, with sales of \$580 million in 1995. However, severe solubility and delivery problems greatly limit its use and effectiveness.

Paclitaxel is indicated to treat ovarian cancer and is being used experimentally to treat numerous cancers including breast cancer. The current paclitaxel formulation is not readily soluble in aqueous solutions, requiring the use of the solvent Cremophor-Registered Trademark-EL. Injection of the drug/solvent combination causes hypersensitivity reactions, leaching of plasticizer from PVC infusion bags, haziness of diluted solutions and the need for in-line filters. The Company believes that combining its CYTOPORTER delivery engine with paclitaxel (Paclitaxel-CP) could eliminate the need for solvent in the formulation, thereby eliminating solvent-associated problems. This development could result in more optimized dosing, a reduction in side effects, and broader usage. The Company expects to begin pre-clinical trials of Paclitaxel-CP in 1998.

LONG-TERM PRODUCT DEVELOPMENT PROGRAM--NEU-GENE/CYTOPORTER DRUG COMBINATIONS

The following table summarizes the Company's broader drug development program. These programs combine the Company's NEU-GENE antisense technology with its CYTOPORTER drug delivery technology. For each indication, NEU-GENES have been designed to target the disease process at the genetic level. The Company has designed CYTOPORTER to deliver the NEU-GENE drugs to their intracellular site of action. Although NEU-GENES may display clinical efficacy on their own, the Company believes that broad use of NEU-GENES and other antisense compounds will require a drug delivery strategy. CYTOPORTER drug delivery engines were developed to facilitate the delivery of the NEU-GENE backbone and are currently being optimized for that purpose.

All of the development programs listed below are in the research or lead compound stage. Disease targets have been identified and NEU-GENE compounds have been produced and tested in laboratory and/ or animal models. In some cases, lead compounds have been produced which are undergoing optimization prior to pre-clinical development. The Company believes that several of these compounds may move into pre-clinical development in the next two years.

INFECTIOUS DISEASE TARGETS		HOST DISEASE TARGETS	
DEVELOPMENT PROGRAM	POTENTIAL INDICATIONS	DEVELOPMENT PROGRAM	POTENTIAL INDICATIONS
HIV	AIDS, HIV-I Infection	TNF Alpha	Inflammation
Hepatitis B, C	Hepatitis, Liver Cancer	ICAM-1	Inflammation
Herpes Simplex Virus	Ocular, Genital Herpes	Telomerase	Cancer
Cytomegalovirus	Retinitis		

INFECTIOUS DISEASE TARGETS

HUMAN IMMUNODEFICIENCY VIRUS ("HIV"). The Company has initiated a program to produce and evaluate NEU-GENE agents directed at HIV targets. The Centers for Disease Control ("CDC") estimated that, by the end of 1995, there were one million HIV-infected persons in the United States and the cumulative number of diagnosed AIDS cases approximated 500,000. The World Health Organization

estimated that worldwide there were approximately 10 million individuals infected with HIV by the end of 1995. Currently, there are few FDA-approved therapies for the treatment of HIV-infected individuals and drugs that are available have significant toxic side effects.

HEPATITIS B ("HBV"). The Company has initiated a program to produce and evaluate NEU-GENE compounds directed at HBV targets. HBV is a major health problem throughout the world, with epidemic infection levels in certain less developed countries. HBV was estimated in 1995 to be the second leading cause of death in the world. There are an estimated 300,000 new hepatitis infections in the United States each year and approximately one million people with chronic infection. Although there are effective vaccines against HBV, there are currently no FDA-approved therapies for the treatment of chronic or acute HBV infection.

HEPATITIS C ("HCV"). The Company has initiated a program to produce and evaluate NEU-GENE compounds directed at HCV targets. HCV is a major health problem in many parts of the world, including the United States where there are approximately 150,000 new infections each year (about 40% of all acute hepatitis cases). The mechanism of transmission may involve the exchange of blood, although the route of transmission in many cases is obscure. There are no FDA-approved vaccines or therapeutic drugs for the treatment of HCV.

HERPES SIMPLEX VIRUS ("HSV"). The Company is developing HSV NEU-GENE compounds for the treatment of HSV type I and type II. Primary herpes infections are usually severe and may involve skin, mucous membranes, conjunctivae or the central nervous system. After remission of the initial infection, the virus establishes a latent phase which is interrupted periodically by outbreaks or herpetic lesions. Newborns can be infected at birth, which results in 50% mortality, and survivors may suffer from permanent neurological damage. Approximately 500,000 new cases each of genital herpes and oral herpes infection occur annually in the United States. It is estimated that approximately 10 million Americans suffer from some form of primary or recurrent herpes infection each year.

CYTOMEGALOVIRUS ("CMV"). The Company is developing NEU-GENE compounds for the treatment of CMV infections. CMV is a member of the herpes family of viruses and is the most common cause of intrauterine and congenital infections in newborns of infected mothers. CMV retinitis is a severe problem in transplant patients and patients with immunosuppression (e.g., AIDS), often leading to blindness and pneumonitis, one of the most lethal viral syndromes. Current FDA-approved treatments for CMV retinitis suffer from dose-limiting side effects and have been associated with the emergence of drug-resistant CMV strains.

#### HOST DISEASE TARGETS

The Company is evaluating NEU-GENES for the treatment of inflammatory diseases and cancer, two major host diseases. Inflammation is a crucial component of a number of acute and chronic diseases. Although inflammation is a key part of the normal physiological response to injury, alterations to the normal inflammatory process often lead to inflammatory diseases. These inflammatory disorders can affect practically every organ system in the body. The interactions at the molecular level that cause inflammation are becoming better understood and provide targets for intervention by antisense approaches. Two families of potential targets include cellular mediators (TNF alpha) and cellular adhesion molecules (ICAM-1), which are proteins involved in various stages of the inflammatory process. The Company believes that by targeting messenger RNA with NEU-GENE compounds, control of these mediators of inflammation may be possible.

TNF ALPHA. TNF alpha has been implicated as a significant factor in psoriasis, arthritis and other inflammatory disorders. Psoriasis is a serious chronic, recurring skin disease that involves proliferation of keratinocytes within the epidermal layer of the skin. Approximately six million individuals in the United States are afflicted by psoriasis and approximately 200,000 new cases are diagnosed annually. Current

psoriasis therapies are varied but offer limited results. The Company has demonstrated that its NEU-GENE compounds are effective in inhibiting TNF alpha in laboratory and animal models of inflammation.

ICAM-1. ICAM-1 facilitates the migration of immune cells involved in both acute and chronic inflammation. Over-production of ICAM-1 is specifically implicated in a wide variety of inflammatory disorders, such as rheumatoid arthritis, asthma, psoriasis, organ transplant rejection, and inflammatory bowel disease. The Company has targeted NEU-GENES against the adhesion molecule ICAM-1 and is testing these compounds in models of inflammation.

TELOMERASE. Telomerase is an enzyme found in cancer cells but rarely in normal cells and the Company believes that inhibiting it may provide a broad general approach to treat most cancers. There are approximately one million new cases of cancer of all types reported in the United States annually. This leads to about 500,000 deaths in the United States attributed to cancer each year, making it the country's second leading cause of death. The Company has developed NEU-GENE compounds that block telomerase activity in model systems in the laboratory.

#### COLLABORATIVE AGREEMENTS

The Company believes that antisense and drug delivery technologies are broadly applicable for the potential development of pharmaceutical products in many therapeutic areas. To exploit its core technologies as fully as possible, the Company's strategy is to enter into collaborative research agreements with major pharmaceutical companies directed at specific molecular targets. It is anticipated that collaborative research agreements may provide the Company with funding for programs conducted by the Company aimed at discovering and developing antisense compounds to inhibit the production of individual molecular targets. Partners may be granted options to obtain licenses to co-develop and to market drug candidates resulting from its collaborative research programs. The Company intends to retain manufacturing rights to its antisense products. There can be no assurance, however, it will be able to enter into collaborative research agreements with large pharmaceutical companies on terms and conditions satisfactory to the Company.

#### MANUFACTURING

The Company believes that it has developed significant proprietary manufacturing techniques which will allow large-scale, low-cost synthesis and purification of NEU-GENES. Because the Company's NEU-GENE compounds are based upon a malleable backbone chemistry, the Company believes that NEU-GENE synthesis will be more cost-effective than those of competing technologies. The Company has established sufficient manufacturing capacity to meet immediate research and development needs.

The Company currently intends to retain manufacturing rights to all products incorporating its proprietary and patented technology, whether such products are sold directly by the Company or through collaborative agreements with industry partners. The Company's current production capacity is insufficient for the requirements of human clinical studies. Consequently, the Company intends to contract with a Good Manufacturing Practices ("GMP") facility beginning in 1997 to produce its near term therapeutic candidates for pre-clinical and clinical trial studies. There is no assurance, however, that the Company's plans will not change as a result of unforeseen contingencies.

In March 1993, the Company moved to its present laboratory facility. This facility and the laboratory procedures followed by the Company have not been formally inspected by the FDA and will have to be approved as products move from the research phase through the clinical testing phase to commercialization. The Company will be required to comply with FDA requirements for GMP in connection with human clinical trials and commercial production. See "Drug Approval Process and Other Government Regulations."

## MARKETING STRATEGY

The Company plans to market the initial products for which it obtains regulatory approval, through marketing arrangements or other licensing arrangements with large pharmaceutical companies. Implementation of this strategy will depend on many factors, including the market potential of any products the Company develops and the Company's financial resources. The Company does not expect to establish a direct sales capability for therapeutic compounds for at least the next several years. To market products that will serve a large, geographically diverse patient population, the Company expects to enter into licensing, distribution, or partnering agreements with pharmaceutical companies that have large, established sales organizations. The timing of the Company's entry into marketing arrangements or other licensing arrangements with large pharmaceutical companies will depend on successful product development and regulatory approval within the regulatory framework established by the Federal Food, Drug and Cosmetics Act, as amended, and regulations promulgated thereunder. Although the implementation of initial aspects of the Company's marketing strategy may be undertaken before this process is completed, the development and approval process typically is not completed in less than three to five years after the filing of an IND application and the Company's marketing strategy therefore may not be implemented for several years. See "Drug Approval Process and Other Governmental Regulation" and "Risk Factors-- Dependence on Third Parties for Clinical Testing, Manufacturing and Marketing."

## PATENTS AND PROPRIETARY RIGHTS

The proprietary nature of, and protection for, the Company's product candidates, processes and know-how are important to its business. The Company plans to prosecute and defend aggressively its patents and proprietary technology. The Company's policy is to patent the technology, inventions, and improvements that are considered important to the development of its business. The Company also relies upon trade secrets, know-how, and continuing technological innovation to develop and maintain its competitive position.

The Company owns eleven U.S. patents covering various polymer compositions effective in sequence-specific binding to single-stranded nucleic acids, subunits used in producing the polymers, therapeutic and diagnostic applications of the polymers, combinatorial library compositions formed from the subunits, and polymer compositions effective in sequence-specific binding to double-stranded nucleic acid. The issued patents expire between 2008 and 2014. Corresponding patent applications have been filed in Europe, Japan, Australia, and Canada, and nine of these foreign applications have been granted as patents, with expiration dates between 2006 and 2012. The Company has additional pending applications in the area of its NEU-GENES technology, and has filed patent applications covering the basic compositions of matter, methods of synthesis, and medical uses of CYTOPORTER compounds. The Company intends to protect its proprietary technology with additional filings as appropriate.

There can be no assurance that any patents applied for will be granted or that patents held by the Company will be valid or sufficiently broad to protect the Company's technology or provide a significant competitive advantage, nor can the Company provide assurance that practice of the Company's patents or proprietary technology will not infringe third-party patents.

Although the Company believes that it has independently developed its technology and attempts to ensure that its technology does not infringe the proprietary rights of others, if infringement were alleged and proven, there can be no assurance that the Company could obtain necessary licenses on terms and conditions that would not have an adverse effect on the Company. The Company is not aware of any asserted or unasserted claims that its technology violates the proprietary rights of any person. See "Risk Factors--Patents and Proprietary Rights."

The production and marketing of the Company's products and its research and development activities are subject to regulation for safety, efficacy and quality by numerous governmental authorities in the United States and other countries. In the United States, drugs are subject to rigorous regulation. The Federal Food, Drug and Cosmetics Act, as amended, and the regulations promulgated thereunder, as well as other federal and state statutes and regulations, govern, among other things, the testing, manufacture, safety, efficacy, labeling, storage, record keeping, approval, advertising and promotion of the Company's proposed products. Product development and approval within this regulatory framework take a number of years and involve the expenditure of substantial resources. In addition to obtaining FDA approval for each product, each drug manufacturing establishment must be registered with, and approved by, the FDA. Domestic manufacturing establishments are subject to regular inspections by the FDA and must comply with GMP. To supply products for use in the United States, foreign manufacturing establishments must also comply with GMP and are subject to periodic inspection by the FDA or by regulatory authorities in certain of such countries under reciprocal agreement with the FDA.

**NEW DRUG DEVELOPMENT AND APPROVAL.** The United States system of new drug approval is the most rigorous in the world. According to a February 1993 report by the Congressional Office of Technology Assessment, it cost an average of \$359 million and took an average of 15 years from discovery of a compound to bring a single new pharmaceutical product to market. Approximately one in 1,000 compounds that enter the pre-clinical testing stage eventually makes it to human testing and only one-fifth of those are ultimately approved for commercialization. In recent years, societal and governmental pressures have created the expectation that drug discovery and development costs can be reduced without sacrificing safety, efficacy and innovation. The need to significantly improve or provide alternative strategies for successful pharmaceutical discovery, research and development remains a major health care industry challenge.

**DRUG DISCOVERY.** In the initial stages of drug discovery, before a compound reaches the laboratory, typically tens of thousands of potential compounds are randomly screened for activity in an assay assumed to be predictive of a particular disease process. This drug discovery process can take several years. Once a "screening lead" or starting point for drug development is found, isolation and structural determination are initiated. Numerous chemical modifications are made to the screening lead (called "rational synthesis") in an attempt to improve the drug properties of the lead. After a compound emerges from the above process, it is subjected to further studies on the mechanism of action and further IN VITRO animal screening. If the compound passes these evaluation points, animal toxicology is performed to begin to analyze the toxic effect of the compound, and if the results indicate acceptable toxicity findings, the compound emerges from the basic research mode and moves into the pre-clinical phase. The Company has many compounds at the drug discovery phase and three compounds that it expects to move to pre-clinical testing within 12 to 24 months.

**PRE-CLINICAL TESTING.** During the pre-clinical testing stage, laboratory and animal studies are conducted to show biological activity of the compound against the targeted disease, and the compound is evaluated for safety. These tests can take up to three years or more to complete. The Company's restenosis compound currently is in pre-clinical testing, and the Company presently anticipates that Cyclosporin-CP will enter this phase in 1997 and Paclitaxel-CP in 1998.

**INVESTIGATIONAL NEW DRUG APPLICATION.** After pre-clinical testing, an IND is filed with the FDA to begin human testing of the drug. The IND becomes effective if the FDA does not reject it within 30 days. The IND must indicate the results of previous experiments, how, where and by whom the new studies will be conducted, how the chemical compound is manufactured, the method by which it is believed to work in the human body, and any toxic effects of the compound found in the animal studies. In addition, the IND must be reviewed and approved by an Institutional Review Board consisting of physicians at the hospital or



clinic where the proposed studies will be conducted. Progress reports detailing the results of the clinical trials must be submitted at least annually to the FDA. The Company expects to file two INDs in 1998.

**PHASE I CLINICAL TRIALS.** After an IND becomes effective, Phase I human clinical trials can begin. These studies, involving usually between 20 and 80 healthy volunteers, can take up to one year or more to complete. The studies determine a drug's safety profile, including the safe dosage range. The Phase I clinical studies also determine how a drug is absorbed, distributed, metabolized and excreted by the body, as well as the duration of its action.

**PHASE II CLINICAL TRIALS.** In Phase II clinical trials, controlled studies of approximately 100 to 300 volunteer patients with the targeted disease assess the drug's effectiveness. These studies are designed primarily to evaluate the effectiveness of the drug on the volunteer patients as well as to determine if there are any side effects on these patients. These studies can take up to two years or more and may be conducted concurrently with Phase I clinical trials. In addition, Phase I/II clinical trials may be conducted that evaluate not only the efficacy but also the safety of the drug on the patient population. The Company anticipates that its phase I/phase II clinical trials with Resten-NG and Cyclosporin-CP will begin in 1998.

**PHASE III CLINICAL TRIALS.** This phase typically lasts up to three years or more and usually involves 1,000 to 3,000 patients with the targeted disease. During the Phase III clinical trials, physicians monitor the patients to determine efficacy and to observe and report any adverse reactions that may result from long-term use of the drug.

**NEW DRUG APPLICATION ("NDA").** After the completion of all three clinical trial phases, the data are analyzed and if the data indicate that the drug is safe and effective, an NDA is filed with the FDA. The NDA must contain all of the information on the drug that has been gathered to date, including data from the clinical trials. NDAs are often over 100,000 pages in length. The average NDA review time for new pharmaceuticals approved in 1995 was approximately 19 months.

**FAST TRACK REVIEW.** In December 1992, the FDA formalized procedures for accelerating the approval of drugs to be marketed for the treatment of certain serious diseases for which no satisfactory alternative treatment exists, such as Alzheimer's disease and AIDS. If it is demonstrated that the drug has a positive effect on survival or irreversible morbidity during Phase II clinical trials, then the FDA may approve the drug for marketing without completion of Phase III testing.

**APPROVAL.** If the FDA approves the NDA, the drug becomes available for physicians to prescribe. The Company must continue to submit periodic reports to the FDA, including descriptions of any adverse reactions reported. For certain drugs which are administered on a long-term basis, the FDA may request additional clinical studies (Phase IV) after the drug has begun to be marketed to evaluate long-term effects.

In addition to regulations enforced by the FDA, the Company also is or will be subject to regulation under the Occupational Safety and Health Act, the Environmental Protection Act, the Toxic Substances Control Act, the Resource Conservation and Recovery Act and other present and future federal, state or local regulations. The Company's research and development activities involve the controlled use of hazardous materials, chemicals, viruses and various radioactive compounds. Although the Company believes that its safety procedures for handling and disposing of such materials comply with the standard prescribed by state and federal regulations, the risk of accidental contamination or injury from these materials cannot be completely eliminated. In the event of such an accident, the Company could be held liable for any damages that result, and any such liability could exceed the resources of the Company.

For marketing outside the United States, the Company or its prospective licensees will be subject to foreign regulatory requirements governing human clinical trials and marketing approval for drugs and devices. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary widely from country to country.

## COMPETITION

Several companies are pursuing the development of antisense technology, including Glaxo, Boehringer Ingelheim, Gilead, Hybridon, ISIS, and Lynx. All of these companies are in development stages, and, in some cases, are in human trials with antisense compounds generally similar to the Company's NEU-GENE compounds. While the Company believes that none of these companies is likely to introduce an antisense compound into the commercial market in the immediate future, many pharmaceutical and biotechnology companies, including all of those listed above, have financial and technical resources greater than those currently available to the Company and have more established collaborative relationships with industry partners than does the Company. Lynx has recently announced that it plans to begin clinical trials with an antisense compound for restenosis and that it will co-develop this potential application with Schwarz Pharma AG. The Company believes that the combination of pharmaceutical properties of its NEU-GENE compounds for restenosis afford it competitive advantages when compared with the antisense compounds of competitors. Many companies are pursuing drug delivery technology, including Biovail, Cellegy Pharmaceuticals, Cygnus, and Noven, among others. If the Company's antisense and drug delivery technologies attain regulatory and commercial acceptance as the basis for the commercial pharmaceutical products, it is to be expected that additional companies, including large, multinational pharmaceutical companies, will choose to compete in the Company's markets, either directly or through collaborative arrangements.

The Company can also expect to compete with other companies exploiting alternative technologies that address the same therapeutic needs as does the Company's technology. The biopharmaceutical market is subject to rapid technological change, and it can be expected that competing technologies will emerge and will present a competitive challenge to the Company.

## FACILITIES

The Company occupies 18,400 square feet of leased laboratory and office space at 4575 S.W. Research Way, Suite 200, Corvallis, Oregon 97333. The Company's executive office is located in 2,400 square feet of leased space at One S.W. Columbia, Suite 1105, Portland, Oregon 97258.

## EMPLOYEES

As of March 31, 1997, the Company had 32 employees, 12 of whom hold advanced degrees. Twenty-seven employees are engaged directly in research and development activities, and five are in administration. None of the Company's employees is covered by collective bargaining agreements, and management considers relations with its employees to be good.

MANAGEMENT

DIRECTORS AND EXECUTIVE OFFICERS

The directors and officers of the Company and their ages are as follows:

NAME	AGE	POSITION
John A. Beaulieu(1)(2)	62	Chairman of the Board
Denis R. Burger, Ph.D.(1)	53	Chief Executive Officer, Director
James E. Summerton, Ph.D.(1)	52	President, Chief Scientific Officer, Director
Alan P. Timmins	37	Chief Operating Officer, Chief Financial Officer
Dwight D. Weller, Ph.D.	46	Vice President of Research and Development, Director
Frederick C. Pearson, Ph.D.	53	Vice President of Regulatory Affairs and Clinical Development
Nick Bunick	60	Director
James B. Hicks, Ph.D.	50	Director
Donald R. Johnson, Ph.D.(1)	68	Director
James E. Reinmuth, Ph.D.(2)	56	Director
Joseph Rubinfeld, Ph.D.(2)	64	Director

(1) Member of the Executive Committee

(2) Member of the Compensation and Audit Committees

JOHN A. BEAULIEU has served as a director at the Company since 1991 and was elected Chairman in January 1996. He is the Managing Partner of Cascadia Pacific Management, LLC ("CPM"). CPM is the contract manager for the Oregon Resource and Technology Development Fund, a state-funded venture capital fund. Mr. Beaulieu is also a general partner in Seed Management, a Vancouver B.C.-based venture capital firm. Mr. Beaulieu is a director of TCC Communications, Biozyme Inc., Virtual Corp., EPC Inc., and Puriponics LLC. Mr. Beaulieu received his BS&C degree in Accounting and an M.B.A. from the University of Santa Clara.

DENIS R. BURGER, PH.D. has served as Chief Executive Officer of the Company since January 1996 and as a director of the Company since 1991. From 1992 to 1995, he was President and Chief Operating Officer of the Company. He co-founded Epitope, Inc., a biotechnology company, and served as Chairman from 1981 to 1990. Dr. Burger has also been a member of Sovereign Ventures, LLC, a biotechnology consulting and merchant banking venture since 1991. Dr. Burger is a member of the Board of Directors of Cellegy Pharmaceuticals, Inc., an emerging pharmaceutical company focused on drug delivery, SuperGen, Inc., a pharmaceutical company focused on life-threatening diseases, and Trinity Biotech, plc., an Irish diagnostics company. Dr. Burger held the positions of Assistant Professor, Associate Professor and Professor at the Oregon Health Sciences University ("OHSU") from 1969 to 1986. Dr. Burger received a B.A. in Bacteriology and Immunology from the University of California at Berkeley and his M.S. and Ph.D. degrees in Microbiology and Immunology from the University of Arizona.

JAMES E. SUMMERTON, PH.D. has been President and Chief Scientific Officer since January 1996. He founded the Company in 1980 and was its Chairman and Chief Executive Officer until January 1996. He held the position of assistant professor of Biochemistry-Biophysics at Oregon State University from 1978 to 1980. He is the inventor or co-inventor on all of the Company's patents and pending applications. Dr. Summerton received a B.S. in Chemistry from Northern Arizona University and a Ph.D. from the University of Arizona. Dr. Summerton first conceived of the concept of sequence-specific gene-inactivation in 1969.

ALAN P. TIMMINS has served as Chief Operating Officer and Chief Financial Officer of the Company since October 1996 and Executive Vice President and Chief Financial Officer since 1992. From 1981 to 1991, he served in a variety of positions at the firm of Price Waterhouse LLP, most recently as a Senior Manager specializing in high technology and emerging growth companies. Mr. Timmins received a B.B.A. in Accounting and Management from the University of Portland and an M.B.A. from Stanford University. He is a Certified Public Accountant.

DWIGHT D. WELLER, PH.D. has served as Vice President of Research and Development of the Company since 1992 and as a director of the Company since 1991. He joined the faculty of Oregon State University in 1978 as Assistant Professor and was an Associate Professor in the Chemistry Department from 1984 to 1992. He is co-inventor on all but one of the Company's issued patents and patent applications. Dr. Weller received a B.S. in Chemistry from Lafayette College and a Ph.D. in Chemistry from the University of California at Berkeley, followed by postdoctoral work in Bio-Organic Chemistry at the University of Illinois.

FREDERICK C. PEARSON, PH.D. has served as Vice President of Regulatory Affairs and Clinical Development for the Company since March 1997. From 1994 to 1997, he served as Director of Biotechnology for the Colorado Advanced Technology Institute. During 1992 and 1993, he was Vice President and General Manager of Greenwich Pharmaceuticals, Inc., and Vice President, Product Development for the Virus Research Institute. Additionally, he served from 1988 to 1992 as Vice President, Scientific Affairs for Cell Technology. From 1986 through 1988, he was Vice President, Renal Therapy Division, Baxter International. Dr. Pearson received a B.S. in Biology from Nasson College in 1966 and his Ph.D. in Microbiology/ Virology from the University of New Hampshire in 1972.

NICK BUNICK has served as a director of the Company since 1992. Mr. Bunick is the President and Chairman of the Board of a real estate development company and a principal in an investment management company. In 1986, he was one of three co-founders of InFocus Systems, Inc., a high technology computer display company. Mr. Bunick received a B.S. in Business Administration and Marketing from the University of Florida.

JAMES B. HICKS, PH.D. has served as a director of the Company since 1997. He has served as the Chief Executive Officer, Chief Scientist and a director of Hedral Therapeutics, Inc., a biotechnology company, since its founding in 1993. Previously, he was a founding scientist and a Senior Scientific Director at ICOS Corporation from 1990 to 1993, and Director of the PPG Industries/Scripps Joint Research Program at Scripps Clinic, as well as an Adjunct Member of the Molecular Biology Department in the Research Institute of Scripps Clinic from 1986 to 1990. From 1978 through 1986, he was Senior Scientist and Lab Chief of the Delbruck Laboratory at Cold Spring Harbor Laboratory. Dr. Hicks received his B.A. degree in Biology from Willamette University and his Ph.D. in Molecular Biology from the University of Oregon, followed by post-doctoral research at Cornell University.

DONALD R. JOHNSON, PH.D. has served as a director of the Company since 1991. He founded Technology Conversion, a research and new product development consulting firm in 1986, and has served as its President since that time. Dr. Johnson was Director, New Technology Research, Diagnostic and Bioresearch Products at E. I. du Pont de Nemours and Company, Inc., from 1983 to 1986. Dr. Johnson received a B.A. in Chemistry from the University of Minnesota and a Ph.D. in Analytical Chemistry from the University of Wisconsin.

JAMES E. REINMUTH, PH.D. has served as a director of the Company since 1991. He was Dean of the College of Business Administration at the University of Oregon from 1976 to 1994 and since 1995 has been the Charles H. Lundquist Distinguished Professor of Business at University of Oregon. Dr. Reinmuth is the Chairman of the Board of Directors and Chief Executive Officer of Athena Medical Corp., a feminine health care company. He is also the President and Chief Executive Officer of Fuji Advanced Filtration, Inc. Dr. Reinmuth is a general partner in Rubicon Asset Management Corp. Dr. Reinmuth received a B.S. in

Mathematics from the University of Washington and his M.S. and Ph.D. degrees in Statistics from Oregon State University.

JOSEPH RUBINFELD, PH.D. has been a director of the Company since 1996. He has served as Chief Executive Officer, President, Chief Scientific Officer and a director of SuperGen, Inc. since its inception in 1992. Dr. Rubinfeld was one of the four initial founders of Amgen Inc. in 1980 and served as Vice President and Chief of Operations until 1983. From 1987 to 1990, he was Senior Director at Cetus Corporation. From 1968 to 1980, Dr. Rubinfeld was employed at Bristol-Myers Squibb (formerly Bristol-Myers International Corporation) in a variety of positions, most recently as Vice President and Director of Research and Development. He received his B.S. in Chemistry from C.C.N.Y., and his M.A. and Ph.D. degrees in Chemistry from Columbia University.

#### DIRECTOR COMPENSATION

Directors who are not employees of the Company receive a non-qualified option to purchase 33,334 shares of Common Stock at an exercise price equal to the fair market value of the Common Stock on the date of the grant pursuant to the Company's Stock Incentive Plan, which vests over four years. See "Stock Incentive Plan." Drs. Johnson and Rubinfeld are reimbursed for expenses for attendance at board meetings.

#### SCIENTIFIC ADVISORY COMMITTEE

The Company has established relationships with a group of scientific advisors with expertise in their respective fields that complement the Company's product research and development. The following individuals serve on the Scientific Advisory Committee to the Company's Board of Directors:

CHRISTOPHER K. MATHEWS, PH.D. is Chairman of the Scientific Advisory Committee. He is the Chairman of the Biochemistry-Biophysics Department at Oregon State University. Dr. Mathews received a B.A. from Reed College and a Ph.D. in Biochemistry from the University of Washington. He performed postdoctoral work in Biochemistry at the University of Pennsylvania. Dr. Mathews joined the Scientific Advisory Committee in 1994 and was a director of the Company from 1991 to 1994.

STEVEN H. HEFENEIDER, PH.D. has been a staff immunologist at the Veterans Administration Medical Center in Portland, Oregon since 1985 and Research Associate Professor in the Department of Medicine at Oregon Health Sciences University ("OHSU") since 1987. He received a B.S. in Biology from the University of Oregon, an M.S. in Genetics from the University of Minnesota and a Ph.D. in Microbiology and Immunology from OHSU in 1981.

DAVID J. HINRICHS, PH.D. is a Research Scientist at the Veterans Administration Medical Center in Portland, Oregon and a Professor of Microbiology and Immunology at OHSU. From 1976 to 1985, he was a Professor of Microbiology at Washington State University. He received a Ph.D. in Microbiology from the University of Arizona in 1967.

JEFFREY D. HOSENPUD, M.D. has been Chief of Cardiology and a Professor of Medicine at the Medical College of Wisconsin in Milwaukee since 1994. Dr. Hosenpud was Professor of Medicine and Head of the Cardiac Transplant Medicine at OHSU from 1984 to 1994, and Medical Director for the Registry of the International Society for Heart & Lung Transplantation since 1993. Dr. Hosenpud completed his M.D. at the University of California, Los Angeles.

#### EXECUTIVE COMPENSATION

Summary Compensation Table. The following table sets forth, for the fiscal year ended December 31, 1996, certain summary information concerning compensation of the persons serving as the Company's Chief Executive Officer (the "Named Officers"). No other executive officer received compensation exceeding \$100,000.

SUMMARY COMPENSATION TABLE

	1996 COMPENSATION		LONG-TERM COMPENSATION	
	SALARY	BONUS	SECURITIES UNDERLYING OPTIONS	ALL OTHER COMPENSATION(1)
Denis R. Burger, Ph.D. Chief Executive Officer.....	\$ 121,925	--	--	\$ 2,443
James E. Summerton, Ph.D., President and Chief Scientific Officer(2).....	\$ 92,483	--	--	\$ 2,712

(1) Represents matching amounts received under the Company's 401(k) plan.

(2) Dr. Summerton resigned as the Chairman and Chief Executive Officer in January 1996 and is now the Company's President and Chief Scientific Officer.

AGGREGATE OPTION EXERCISES IN LAST FISCAL YEAR AND FISCAL YEAR-END OPTION VALUES

The following table sets forth information concerning the value of unexercised options as of December 31, 1996, held by the Named Officers. No options were exercised by the Named Officers during the year ended December 31, 1996.

NAME	NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS AT DECEMBER 31, 1996 (#)		VALUE OF UNEXERCISED IN-THE-MONEY OPTIONS AT DECEMBER 31, 1996 (\$)(1)	
	EXERCISABLE	UNEXERCISABLE	EXERCISABLE	UNEXERCISABLE
Denis R. Burger, Ph.D.....	365,735	--	520,487	--
James Summerton, Ph.D.(2).....	132,220	93,334	144,502	125,418

(1) Based upon the difference between the fair market value of the securities underlying the options at December 31, 1996 (\$6.00 per share as determined by the Board of Directors) and the exercise price of the options.

(2) Dr. Summerton resigned as the Chairman and Chief Executive Officer in January 1996 and is now the Company's President and Chief Scientific Officer.

EMPLOYMENT AGREEMENTS

The Company has entered into employment contracts with Drs. Burger and Summerton that provide for annual base salaries for Drs. Burger and Summerton of \$120,000 and \$90,000, respectively, that increase to \$225,000 and \$150,000, respectively, on January 1, 1997. The employment agreements also provide for the payment to Drs. Burger and Summerton of one additional year of base salary and the immediate and full vesting of all options granted to them under the Company's Stock Incentive Plan in the event of the termination of their respective employment for reasons, other than cause, or upon their voluntary termination upon a change in control of the Company. In addition, the employment agreements prevent Drs. Burger and Summerton from competing with the Company for a period of two years following termination of their employment for any reason. Dr. Summerton's agreement also provides that the Company shall engage him as a consultant for a term of one year following the termination of his employment at the rate of \$75,000 per year and grants the Company the option to engage him as a consultant on the same terms for a second year. Drs. Burger and Summerton are deferring their January 1, 1997, salary increases until completion of the Company's initial public offering.

## STOCK INCENTIVE PLAN

The Stock Incentive Plan was adopted by the Board of Directors and was approved by the shareholders in 1992. The purposes of the Stock Incentive Plan are to attract and retain the best available personnel for positions of substantial responsibility, to provide additional incentive to the employees and consultants of the Company and to promote the success of the Company's business.

The Stock Incentive Plan is administered by the Compensation Committee (the "Committee"). Transactions under the Stock Incentive Plan are intended to comply with all applicable conditions of Rule 16b-3 promulgated under the Securities Exchange Act of 1934. In addition to determining who will be granted options, the Committee has the authority and discretion to determine when options will be granted and the number of options to be granted. The Committee may determine which options may be intended to qualify ("Incentive Stock Options") for special treatment under the Internal Revenue Code of 1986, as amended from time to time (the "Code"), or whether options are non-qualified options ("Non-Qualified Stock Options") which are not intended to so qualify. The Committee also may determine the time or times when each option becomes exercisable, the duration of the exercise period for options and the form or forms of the instruments evidencing options granted under the Stock Incentive Plan. The Committee may adopt, amend and rescind such rules and regulations as in its opinion may be advisable for the administration of the Stock Incentive Plan. The Committee also may construe the Stock Incentive Plan and the provisions in the instruments evidencing option granted under Stock Incentive Plan to employee and officer participants and is empowered to make all other determinations deemed necessary or advisable for the administration of the Stock Incentive Plan. SARs and stock bonuses may also be granted under the Stock Incentive Plan.

The Stock Incentive Plan contains provisions for proportionate adjustment of the number of shares for outstanding options and the option price per share in the event of stock dividends, recapitalizations resulting in stock splits or combinations or exchanges of shares. In addition, the Stock Incentive Plan provides for adjustments in the purchase price and exercise period by the Committee in the event of a proposed dissolution or liquidation of the Company, or any corporate separation or division, including, but not limited to, split-up, split-off or spin-off, or a merger or consolidation of the Company with another corporation, or in the event there is a change in constitution of the Common Stock of the Company.

Participants in the Stock Incentive Plan may be selected by the Committee from employees, officers, directors and consultants of the Company. In determining the persons to whom options will be granted and the number of shares to be covered by each option, the Committee will take into account the duties of the respective persons, their present and potential contributions to the success of the Company and such other factors as the Committee deems relevant to accomplish the purposes of the Stock Incentive Plan.

Only employees of the Company as the term "employees" is defined for the purposes of Code will be entitled to receive Incentive Stock Options. Incentive Stock Options granted under the Stock Incentive Plan are intended to satisfy all requirements for incentive stock options under Section 422 of the Code and the Treasury Regulations thereunder.

Each option granted under the Stock Incentive Plan will be evidenced by a written option agreement between the Company and the optionee. The option price of any Incentive Stock Option may be not less than 100% of the fair market value per share on the date of grant of the option; provided, however, that any Incentive Stock Option granted under the Stock Incentive Plan to a person owning more than 10% of the total combined voting power of the Common Stock will have an option price of not less than 110% of the fair market value per share on the date of grant of the Incentive Stock Option. Each Non-Qualified Stock Option granted under the Stock Incentive Plan will be at an exercise price as determined by the Board of Directors. Fair market value on the date of grant is defined as a value determined in the discretion of the Board; provided, however, that where there is a public market for the Common Stock, the fair market value per share shall be the closing price of the Common Stock for the date of grant or authorization of sale, as reported in THE WALL STREET JOURNAL.

The exercise period of Incentive Stock Options granted under the Stock Incentive Plan generally may not exceed 10 years from the date of grant thereof. Incentive Stock Options granted to a person owning more than 10 percent of the total combined voting power of the Common Stock of the Company will be for no more than five years. The Committee will have the authority to accelerate or extend the exercisability of any outstanding option at such time and under such circumstances as it, in its sole discretion, deems appropriate. However, no exercise period may be extended to increase the term of an Incentive Stock Option beyond 10 years from the date of grant.

To exercise an option, the optionee must pay the full exercise price in whole or in part consisting of cash or transfer to the Company of shares having a fair market value at the time of such exercise equal to the option exercise price.

An option may not be exercised unless the optionee then is an employee, officer, director or consultant of the Company, and unless the optionee has remained continuously as an employee, officer, director or consultant of the Company since the date of grant of the option. If the optionee ceases to be an employee, officer, director or consultant of the Company, all options which are not vested under the Stock Incentive Plan by the time of death, disability, retirement or termination of employment, immediately terminate. All options granted to such optionee that are fully vested to such optionee but not yet exercised, will terminate (i) 12 months after the date the optionee ceases to be an employee, officer or director of the Company by reason of death or disability; or (ii) 30 days after termination of employment for any other reason.

If an optionee dies while an employee, officer, director or consultant, or is terminated by reason of disability, all options theretofore granted to such optionee, unless earlier terminated in accordance with their terms, may be exercised at any time within one year after the date of death or disability of said optionee, by the optionee or by the optionee's estate or by a person who acquired the right to exercise such options by request or inheritance, but only to the extent of the right to exercise as of the date of death or disability.

Options granted under the Stock Incentive Plan are not transferable other than by will or by the laws of descent and distribution. Options may be exercised during the lifetime of the optionee only by the optionee. An optionee has no rights as a shareholder with respect to any shares covered by an option until the option has been exercised.

The Company, to the extent permitted by law, may deduct a sufficient number of shares due to the optionee upon exercise of the option to allow the Company to pay federal, state and local taxes of any kind required by law to be withheld upon the exercise otherwise due to the optionee. The Company is not obligated to advise any optionee of the existence of any tax or the amount which the Company will be required to withhold.

As of the date of this Prospectus, options to purchase 1,126,886 shares of the Company's Common Stock have been granted and are outstanding under the Stock Incentive Plan, at a weighted average exercise price of \$4.73 per share, and 206,447 shares were available for future grants.

#### LIMITATION OF LIABILITY AND INDEMNIFICATION

The Company's Third Restated Articles of Incorporation eliminate, to the fullest extent permitted by Oregon law, liability of a director to the Company or its shareholders for monetary damages for conduct as a director. While liability for monetary damages has been eliminated, equitable remedies such as injunctive relief or rescission remain available. In addition, a director is not relieved of his or her responsibilities under any other law, including the federal securities laws.

The Company's Third Restated Articles of Incorporation require the Company to indemnify its directors to the fullest extent not prohibited by law. The Oregon Business Corporation Act authorizes a corporation, through its articles of incorporation and bylaws, to limit the liability of directors and to grant



indemnity to directors, officers, employees or agents for actions taken with respect to corporation in their respective capacities as directors, officers, employees or agents. Indemnification for such liabilities may be provided to an officer, director, employee or agent based upon the determination by a vote of the disinterested Board of Directors, a vote by a special committee of the Board of Directors, by the determination of a special legal counsel or by a vote of the shareholders that the director, officer, employee or agent may properly be indemnified under the statute. The Company believes that the limitation of liability provisions in its Third Restated Articles may enhance the Company's ability to attract and retain qualified individuals to serve as directors.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing provisions or otherwise, the Company has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Company of expenses incurred or paid by a director, officer or controlling person of the Company in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Company will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

## CERTAIN TRANSACTIONS

James E. Summerton, Ph.D., the President, Chief Scientific Officer, and a director of the Company, is the general partner of Anti-Gene Development Group ("AGDG"), and was the general partner of NEU-GENE Development Group ("NGDG"). AGDG was founded in 1981 and NGDG was founded in 1984 to own and fund the Company's development of gene-targeted therapeutics and NEU-GENE technology. NGDG and AGDG were combined in 1989, with AGDG as the surviving entity. The Company entered into numerous research and development contracts with AGDG and NGDG, all of which were completed or were superseded by the Technology Transfer Agreement described below.

On February 9, 1993, the Company and AGDG entered into a Technology Transfer Agreement wherein effective May 19, 1993, AGDG conveyed all intellectual property in its control related to antisense technology (the "Intellectual Property") to the Company. As part of the conveyance, the Company tendered to AGDG for liquidation all partnership units received pursuant to an exchange offer and received a 49.37% undivided interest in the intellectual property. The Company then purchased the remaining undivided interest in the Intellectual Property in consideration of payments of 4.05% of gross revenues in excess of \$200 million, if any, sales of products by the Company which would, in the absence of the Technology Transfer Agreement, infringe a valid claim under any patent transferred to the Company (the "Technology Fees"). The Company's obligation to make payments of the Technology Fees with respect to a particular product terminates upon the expiration of all patents transferred to the Company pursuant to the Technology Transfer Agreement related to that product.

Pursuant to a License and Option Agreement by and between AGDG and the Company dated February 9, 1993 (the "License Agreement"), the Company granted to AGDG a royalty-free non-exclusive license to use the Intellectual Property for internal research and development and to sell small quantities of products incorporating the Intellectual Property. In addition, if AGDG develops any specific prototype products which incorporate any of the Intellectual Property, the Company has the right to commercialize and market such products in consideration of payments of 4.05% of gross revenues, in excess of the \$200 million exemption for all products utilizing the Intellectual Property, to AGDG. If the Company elects not to commercialize the proposed AGDG product or fails to meet certain product development milestones, the Company is required to grant AGDG a license to develop and market the proposed product (an "AGDG License"). The Company is entitled to payments for the AGDG License but only if the proposed product incorporates patented improvements developed by the Company to the Intellectual Property. The amount of the license fee payable to the Company by AGDG pursuant to an AGDG License, if any, is equal to the percentage payable to AGDG for products sold by the Company and covered by the Technology Transfer Agreement. AGDG also has the right to obtain an exclusive royalty-free license to use, develop, make, sell, distribute and sublicense products utilizing the Intellectual Property at such time as the Company has less than 10 full-time employees engaged in developing, testing or marketing products based upon the Intellectual Property for a period of at least 180 consecutive days.

On January 20, 1997, AGDG and the Company amended the Technology Transfer Agreement to reduce the Technology Fees arising from the sale of diagnostic products from 4.05% to 2% and to remove the \$200 million exemption with respect to sales of such diagnostic products. The Company also granted to AGDG royalty-bearing licenses to make, use and sell certain quantities of product derived from the Intellectual Property.

The Company's Board of Directors has required, in conformity with Oregon law, that a transaction in which a director has a conflict of interest be approved by a majority of disinterested directors. The Board has recognized that Dr. Summerton has a direct or indirect conflict of interest in connection with transactions between the Company and AGDG and, in such circumstances, the terms and conditions of such transactions have been negotiated for the Company by officers other than Dr. Summerton and have been approved by a majority of disinterested directors after disclosure of the conflict of interest.

Pursuant to an August 4, 1992 restatement of earlier agreements between Oregon Resource and Technology Development Fund ("ORTDF"), the Company, AGDG and Dr. Summerton, warrants to purchase 600,000 shares of the Company's Common Stock were issued to ORTDF. John A. Beaulieu was president of ORTDF and a director of the Company at that time. In connection with this issuance to ORTDF, they acquired certain rights to register such shares under the Securities Act. See "Description of Securities--Registration Rights." In May 1993, ORTDF acquired warrants to purchase an additional 357,500 shares in exchange for 325 partnership units in AGDG conveyed to the Company. Such warrants carry no registration rights. In March 1996, ORTDF exercised its warrants in a cashless exercise for which ORTDF acquired 957,452 shares of the Company's Common Stock.

PRINCIPAL SHAREHOLDERS

The following table sets forth certain information with respect to the beneficial ownership of the Company's Common Stock as of May 16, 1997, and as adjusted to give effect to the sale by the Company of the shares of Common Stock offered (assuming no exercise of the Overallotment Option or the Warrants) by (i) each person (or group of affiliated persons) who is known by the Company to own beneficially 5% or more of the Common Stock, (ii) each of the Company's directors, (iii) the Named Officer, and (iv) all executive officers and directors of the Company as a group. The information as to each person or entity has been furnished by such person or entity, and unless otherwise indicated, the persons named in the table have sole voting and sole investment power with respect to all shares beneficially owned, subject to community property laws where applicable.

NAME AND ADDRESS OF BENEFICIAL OWNER(1)	SHARES BENEFICIALLY OWNED(1)	PERCENT OF SHARES OUTSTANDING	
		BEFORE UNIT OFFERING	AFTER UNIT OFFERING(1)
James E. Summerton, Ph.D.(2) ANTIVIRALS INC. 4575 S.W. Research Way, Suite 200 Corvallis, OR 97333	2,553,473	24.8%	20.7%
John A. Beaulieu(3) 4370 N.E. Halsey, Suite 233 Portland, OR 97213	990,785	9.7%	8.1%
Oregon Resource and Technology Development Fund(4) 4370 N.E. Halsey, Suite 233 Portland, OR 97213	990,785	9.7%	8.1%
Wayne Embree(5) 4370 N.E. Halsey, Suite 233 Portland, OR 97213	957,452	9.4%	7.8%
Denis R. Burger, Ph.D.(6) ANTIVIRALS INC. 1 S.W. Columbia, Suite 1105 Portland, OR 97258	406,886	3.9%	3.3%
Dwight D. Weller, Ph.D.(7) ANTIVIRALS INC. 4575 S.W. Research Way, Suite 200 Corvallis, OR 97333	370,178	3.6%	3.0%
Nick Bunick(8) ANTIVIRALS INC. 1 S.W. Columbia, Suite 1105 Portland, OR 97258	200,733	2.0%	1.6%
Alan P. Timmins(9) ANTIVIRALS INC. 1 S.W. Columbia, Suite 1105 Portland, OR 97258	68,825	*	*

NAME AND ADDRESS OF BENEFICIAL OWNER(1)	SHARES BENEFICIALLY OWNED(1)	PERCENT OF SHARES OUTSTANDING	
		BEFORE UNIT OFFERING	AFTER UNIT OFFERING(1)
Donald R. Johnson, Ph.D.(10) ANTIVIRALS INC. 1 S.W. Columbia, Suite 1105 Portland, OR 97258	64,333	*	*
James E. Reinmuth, Ph.D.(11) ANTIVIRALS INC. 1 S.W. Columbia, Suite 1105 Portland, OR 97258	51,817	*	*
Joseph Rubinfeld, Ph.D.(12) ANTIVIRALS INC. 1 S.W. Columbia, Suite 1105 Portland, OR 97258	8,334	*	*
James B. Hicks, Ph.D. ANTIVIRALS INC. 1 S.W. Columbia, Suite 1105 Portland, OR 97258	0	*	*
Frederick C. Pearson, Ph.D. ANTIVIRALS INC. 4575 S.W. Research Way, Suite 200 Corvallis, OR 97333	0	*	*
All executive officers and directors as a group (11 persons)	4,715,365	53.7%	44.8%

\* Less than 1%.

(1) Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission and generally includes voting or investment power with respect to securities. Shares of Common Stock subject to options and warrants currently exercisable or convertible, or exercisable or convertible within 60 days of May 16, 1997, are deemed beneficially owned and outstanding for computing the percentage of the person holding such securities, but are not considered outstanding for computing the percentage of any other person.

(2) Includes 158,886 shares subject to options exercisable within 60 days of May 16, 1997, and 727,154 shares held jointly or by others over which Dr. Summerton exercises voting and investment power. Does not include 66,667 shares subject to options exercisable after June 10, 1997.

(3) Includes 33,334 shares subject to options exercisable within 60 days of May 16, 1997, of which Mr. Beaulieu is the record owner. ORTDF is the beneficial owner of all of the 33,334 options for which Mr. Beaulieu is the record owner. Includes 957,452 shares of common stock issued to Cascadia Pacific Management, LLC for the benefit of ORTDF.

(4) Includes 33,334 shares subject to options held of record by Mr. Beaulieu and exercisable within 60 days of May 16, 1997 and 957,942 shares issued to Cascadia Pacific Management, LLC for the benefit of ORTDF. See Note 3 above.

(5) Includes 957,452 shares of Common Stock issued to Cascadia Pacific Management, LLC for the benefit of ORTDF.

- (6) Includes 34,434 shares held by Sovereign Ventures, LLC, a limited liability company in which Dr. Burger is a general partner. Also includes 365,735 shares subject to options exercisable within 60 days of May 16, 1997.
- (7) Includes 247,634 shares held jointly or by others over which Dr. Weller exercises voting and investment power, 94,018 shares subject to options exercisable by Dr. Weller and 1,860 shares subject to options exercisable by Dr. Weller's spouse within 60 days of May 16, 1997, and 25,000 shares subject to warrants exercisable within 60 days of May 16, 1997. Does not include 25,000 shares subject to warrants exercisable after July 15, 1997.
- (8) Includes 50,667 shares held jointly or by others over which Mr. Bunick exercises voting and investment power. Includes 33,334 shares subject to options exercisable within 60 days of May 16, 1997.
- (9) Includes 68,825 shares subject to options exercisable within 60 days of May 16, 1997. Does not include 38,333 shares subject to options exercisable after July 15, 1997.
- (10) Includes 33,334 shares subject to options and 16,667 shares subject to warrants exercisable within 60 days of May 16, 1997.
- (11) Includes 33,334 shares subject to options exercisable within 60 days of May 16, 1997. Also includes 5,051 shares held jointly with others over which Dr. Reinmuth exercises voting and investment power.
- (12) Includes 8,334 shares subject to options exercisable within 60 days of May 16, 1997. Does not include 25,000 shares subject to options exercisable after July 15, 1997.

## DESCRIPTION OF SECURITIES

The authorized capital stock of the Company consists of 50,000,000 shares of Common Stock and 2,000,000 shares of Preferred Stock.

### UNITS

Each Unit consists of one share of Common Stock and one redeemable Warrant. The Units will separate immediately upon issuance, and the Common Stock and Warrants that comprise the Units will trade as separate securities.

### COMMON STOCK

The Company is authorized to issue 50,000,000 shares of Common Stock. As of March 31, 1997, 8,779,763 shares of Common Stock were outstanding, held of record by 881 shareholders. The holders of Common Stock are entitled to one vote for each share held of record on all matters submitted to a vote of shareholders (and do not have any cumulative voting rights). Subject to preferences that may be applicable to outstanding shares of Preferred Stock, if any, the holders of Common Stock are entitled to receive ratably such dividends as may be declared by the Company's Board of Directors out of funds legally available therefor. Holders of Common Stock have no preemptive, subscription or redemption rights, and there are no redemption, conversion or similar rights with respect to such shares. In the event of a liquidation, dissolution or winding up of the Company, holders of the Common Stock are entitled to share equally and ratably in the assets of the Company, if any, remaining after the payment of all liabilities of the Company and the liquidation preference of any outstanding class or series of Preferred Stock. The outstanding shares of Common Stock are fully paid and nonassessable. The rights, preferences and privileges of holders of Common Stock are subject to any series of Preferred Stock that the Company may issue in the future, as described below.

### PREFERRED STOCK

The Company is authorized to issue up to 2,000,000 shares of undesignated Preferred Stock. No shares of Preferred Stock have been issued. The Board of Directors has the authority to issue the undesignated Preferred Stock in one or more series and to fix the rights, preferences, privileges and restrictions granted to or imposed upon any wholly unissued shares of undesignated Preferred Stock, as well as to fix the number of shares constituting any series and the designation of such series, without any further vote or action by the shareholders. The Board of Directors, without shareholder approval, may issue Preferred Stock with voting and conversion rights which could materially adversely affect the voting power of the holders of Common Stock. The issuance of Preferred Stock could also decrease the amount of earnings and assets available for distribution to holders of Common Stock. In addition, the issuance of Preferred Stock may have the effect of delaying, deferring or preventing a change in control of the Company. At present, the Company has no plans to issue any shares of Preferred Stock. See "Risk Factors--Anti-Takeover Effects of Certain Charter Provisions and Oregon Law" and "Certain Provisions of the Company's Articles of Incorporation and Bylaws."

### WARRANTS

REPRESENTATIVES' WARRANTS. In connection with this offering, the Company has authorized the issuance of the Representatives' Warrants and has reserved 400,000 shares of Common Stock for issuance upon exercise of such warrant (including the warrants issuable upon exercise of the Representatives' Warrants). The Representatives' Warrants will entitle the holder to acquire up to an aggregate of 200,000 Units at an exercise price of \$ \_\_\_\_\_ per Unit (120% of the initial public offering price for the Units). The Representatives' Warrants will be exercisable at any time from the first anniversary of the date of this Prospectus until the fifth anniversary of the date of this Prospectus.

THE WARRANTS. Each Warrant will entitle the holder to purchase one share of Common Stock at a price of \$ \_\_\_\_\_ per share (150% of the initial public offering price for the Units). The Warrants will, subject to certain conditions, be exercisable at any time until the fifth anniversary of the date of this Prospectus, unless earlier redeemed. The Warrants are redeemable by the Company at \$.25 per Warrant, upon 30 days written notice, if the closing bid price (as defined in the Warrant Agreement described below) per share of the Common Stock for each of the 20 consecutive trading days immediately preceding the date notice of redemption is given equals or exceeds 200% of the then-current Warrant exercise price. If the Company gives notice of its intention to redeem, a holder would be forced either to exercise his or her Warrant before the date specified in the redemption notice or accept the redemption price.

The Warrants will be issued in registered form under a Warrant Agreement (the "Warrant Agreement") between the Company and ChaseMellon Shareholder Services, as warrant agent (the "Warrant Agent"). The shares of Common Stock underlying the Warrants, when issued upon exercise of a Warrant, will be fully paid and nonassessable, and the Company will pay any transfer tax incurred as a result of the issuance of Common Stock to the holder upon its exercise.

The Warrants and the Representatives' Warrants contain provisions that protect the holders against dilution by adjustment of the number of shares that may be purchased by the holders. Such adjustments will occur in the event, among others, that the Company makes certain distributions to holders of its Common Stock. The Company is not required to issue fractional shares upon the exercise of a Warrant or Representatives' Warrants. The holder of a Warrant or Representatives' Warrants will not possess any rights as a shareholder of the Company until such holder exercises the Warrant or Representatives' Warrants.

A Warrant may be exercised upon surrender of the Warrant Certificate on or before the expiration date of the Warrant at the offices of the Warrant Agent, with the form of "Election To Purchase" on the reverse side of the Warrant Certificate completed and executed as indicated, accompanied by payment of the exercise price (by certified or bank check payable to the order of the Company or by wire transfer of good funds) for the number of shares with respect to which the Warrant is being exercised.

For a holder to exercise the Warrants, there must be a current registration statement in effect with the Commission and qualification in effect under applicable state securities laws (or applicable exemptions from state qualification requirements) with respect to the issuance of shares or other securities underlying the Warrants. The Company has agreed to use all commercially reasonable efforts to cause a registration statement with respect to such securities under the Securities Act to be filed and to become and remain effective in anticipation of and prior to the exercise of the Warrants and to take such other actions under the laws of various states as may be required to cause the sale of Common Stock (or other securities) issuable upon exercise of Warrants to be lawful. If a current registration statement is not in effect at the time a Warrant is exercised, the Company may at its option redeem the Warrant by paying to the holder cash equal to the difference between the market price of the Common Stock on the exercise date and the exercise price of the Warrant. The Company will not be required to honor the exercise of Warrants if, in the opinion of the Company's Board of Directors upon advice of counsel, the sale of securities upon exercise would be unlawful.

The foregoing discussion of certain terms and provisions of the Warrants and Representatives' Warrants is qualified in its entirety by reference to the detailed provisions of the Warrant Agreement and Representatives' Warrant Certificate, the form of each of which has been filed as an exhibit to the Registration Statement of which this Prospectus is a part.

For the life of the Warrants and Representatives' Warrants, the holders thereof have the opportunity to profit from a rise in the market price of the Common Stock without assuming the risk of ownership of the shares of Common Stock issuable upon the exercise of the warrants. The warrant holders may be expected to exercise their warrants at a time when the Company would, in all likelihood, be able to obtain any needed capital by an offering of Common Stock on terms more favorable than those provided for by



the warrants. Further, the terms on which the Company could obtain additional capital during the life of the warrants may be adversely affected.

**OTHER WARRANTS.** The Company has outstanding certain warrants to purchase 147,899 shares of Common Stock, of which warrants to purchase 25,000 shares are not presently exercisable. Of these warrants, 38,001 are exercisable through the period ending 90 days after the expiration of lock-up agreements entered into in connection with this offering, of which 27,001 are exercisable at a price of \$0.0003 per share and 11,000 are exercisable at a price of \$1.14 per share. Warrants to purchase 14,467 shares are exercisable through July 17, 1997, at an exercise price of \$0.0003 per share. Warrants to purchase 25,000 shares are exercisable through December 31, 1997, at an exercise price of \$0.0003 per share. Warrants to purchase 1,100 shares are exercisable through August 8, 2001, at an exercise price of \$4.56 per share. Warrants to purchase 44,334 shares are currently exercisable and do not have a termination date; warrants to purchase 11,000 of these shares are exercisable at a price of \$1.14 per share and warrants to purchase 33,334 of these shares are exercisable at \$0.0003 per share.

The Company also has outstanding a warrant to purchase 219,334 shares of Common Stock, exercisable through the earlier of the closing of a firmly underwritten public offering by the Company with proceeds exceeding \$5,000,000, or May 14, 2002, at an exercise price of \$6.00 per share, which price is subject to adjustment to prevent dilution. The exercise price is also subject to a fair market value adjustment to make the price paid by the warrant holder equivalent to the price paid by certain independent third-party purchasers. For purposes of this adjustment, an independent third-party purchaser is any party who purchases shares of the Company's Common Stock for not less than \$250,000, who was not a shareholder of the Company on May 1, 1992, and who is not an affiliate, officer or director of the Company. The Company has agreed to register the shares underlying this warrant under certain circumstances. See "Registration Rights."

The Company additionally has outstanding warrants to purchase 60,201 shares of Common Stock at an exercise price of \$9.00 per share. These warrants are exercisable through the earlier of August 30, 2001 or three years from the date of closing by the Company of an initial public offering.

#### CERTAIN FEDERAL INCOME TAX CONSIDERATIONS

The following discussion sets forth certain federal income tax consequences, under current law, relating to the purchase and ownership of the Units and the Common Stock and Warrants constituting the Units. The discussion is a summary and does not purport to deal with all aspects of federal taxation that may be applicable to an investor, nor does it consider specific facts and circumstances that may be relevant to a particular investor's tax position. Certain holders (such as dealers in securities, insurance companies, tax exempt organizations, foreign persons and those holding Common Stock or Warrants as part of a straddle or hedge transaction) may be subject to special rules that are not addressed in this discussion. This discussion is based on current provisions of the Internal Revenue Code of 1986, as amended, and on administrative and judicial interpretations as of the date hereof, all of which are subject to change. ALL INVESTORS SHOULD CONSULT THEIR OWN TAX ADVISORS AS TO THE SPECIFIC TAX CONSEQUENCES TO THEM OF THIS OFFERING, INCLUDING THE APPLICABILITY OF FEDERAL, STATE, LOCAL AND FOREIGN TAX LAWS.

**ALLOCATION OF PURCHASE PRICE.** Each Unit as a whole will have a tax basis equal to the cost of the Unit. The measure of income or loss from certain transactions described below depends upon the tax basis in each of the Warrants and the Common Stock comprising the Unit. The tax basis for each of the Warrants and the Common Stock will be determined by allocating the cost of the Unit among the securities which comprise the Unit in proportion to the relative fair market values of those elements at the time of acquisition.

**U.S. HOLDERS OF COMMON STOCK OR WARRANTS.** The following discussion concerns the material U.S. federal income tax consequences of the ownership and disposition of Common Stock or Warrants

applicable to a U.S. Holder of such Common Stock or Warrants. In general, a "U.S. Holder" is (i) a citizen or resident of the U.S., (ii) a corporation or partnership created or organized in the U.S. or under the laws of the U.S. or any state, or (iii) an estate or trust whose income is includable in gross income for U.S. federal income tax purposes regardless of its source.

**DIVIDENDS.** Dividends, if any, paid to a U.S. Holder generally will be includable in the gross income of such U.S. Holder as ordinary income to the extent of such U.S. Holder's share of the Company's current or accumulated earnings and profits. See "Dividend Policy."

**SALE OF COMMON STOCK.** The sale of Common Stock should generally result in the recognition of gain or loss to a U.S. Holder thereof in an amount equal to the difference between the amount realized and such U.S. Holder's tax basis in the Common Stock. If the Common Stock constitutes a capital asset in the hands of a U.S. Holder, gain or loss upon the sale of the Common Stock will be characterized as long-term or short-term capital gain or loss, depending on whether the Common Stock has been held for more than one year.

**EXERCISE AND SALE OF WARRANTS.** No gain or loss will be recognized by a U.S. Holder of a Warrant on the purchase of shares of Common Stock for cash pursuant to an exercise of a Warrant (except that gain will be recognized to the extent cash is received in lieu of fractional shares). The tax basis of Common Stock received upon the exercise of a Warrant will equal the sum of the U.S. Holder's tax basis for the exercised Warrant and the exercise price. The holding period of the Common Stock acquired upon the exercise of the Warrant will begin on the date the Warrant is exercised and the Common Stock is purchased (i.e., it does not include the period during which the Warrant was held).

Gain or loss from the sale or other disposition of a Warrant (or loss in the event that the Warrant expires unexercised as discussed below), other than pursuant to a redemption by the Company, will be capital gain or loss to its U.S. Holder if the Common Stock to which the Warrant relates would have been a capital asset in the hands of such holder. Such capital gain or loss will be long-term capital gain or loss if the U.S. Holder has held the Warrant for more than one year at the time of the sale, disposition or lapse. It is unclear whether the redemption of a Warrant by the Company would generate ordinary or capital income or loss.

**EXPIRATION OF WARRANTS WITHOUT EXERCISE.** If a holder of a Warrant allows it to expire without exercise, the expiration will be treated as a sale or exchange of the Warrant on the expiration date. The U.S. Holder will have a taxable loss equal to the amount of such U.S. Holder's tax basis in the lapsed Warrant. If the Warrant constitutes a capital asset in the hands of the U.S. Holder, such taxable loss will be characterized as long-term or short-term capital loss depending upon whether the Warrant was held for the required long-term holding period.

**BACKUP WITHHOLDING.** A shareholder who is a U.S. Holder may be subject to backup withholding at the rate of 31% in connection with distributions received with respect to his or her shares, unless the shareholder (i) is a corporation or comes within certain other exempt categories and, when required, demonstrates this fact or (ii) provides a correct taxpayer identification number, certifies as to no loss of exemption for backup withholding and otherwise complies with applicable requirements of the backup withholding rules. Any amount paid as backup withholding will be creditable against such shareholder's income tax liability. The Company will report to the shareholders and the I.R.S. the amount of any "reportable payments" distributed and the amount of tax withheld, if any, with respect to the shares.

**NON-U.S. HOLDERS OF COMMON STOCK OR WARRANTS.** The following discussion concerns the material U.S. federal income and estate tax consequences of the ownership and disposition of shares of Common Stock or Warrants applicable to Non-U.S. Holders of such shares of Common Stock or Warrants. In general, a "Non-U.S. Holder" is any holder other than a U.S. Holder, as defined in the preceding section.

**DIVIDENDS.** Dividends, if any, paid to a Non-U.S. Holder generally will be subject to U.S. withholding tax at a 30% rate (or a lower rate as may be prescribed by an applicable tax treaty) unless the dividends are effectively connected with a trade or business of the Non-U.S. Holder within the United States. See "Dividend Policy." Dividends effectively connected with such a trade or business will generally not be subject to withholding (if the Non-U.S. Holder properly files an executed IRS Form 4224 with the payor of the dividend) and generally will be subject to federal income tax on a net income basis at regular graduated rates. In the case of a Non-U.S. Holder which is a corporation, such effectively connected income also may be subject to the branch profits tax (which is generally imposed on a foreign corporation on the repatriation from the U.S. of effectively connected earnings and profits). The branch profits tax may not apply if the recipient is a qualified resident of certain countries with which the U.S. has an income tax treaty. To determine the applicability of a tax treaty providing for a lower rate of withholding, dividends paid to an address in a foreign country are presumed, under the current I.R.S. position, to be paid to a resident of that country, unless the payor had definite knowledge that such presumption is not warranted or an applicable tax treaty (or U.S. Treasury Regulations thereunder) requires some other method for determining a Non-U.S. Holder's treaty status. The Company must report annually to the I.R.S. and to each Non-U.S. Holder the amount of dividends paid to, and the tax withheld with respect to, each Non-U.S. Holder. These reporting requirements apply regardless of whether withholding was reduced or eliminated by an applicable tax treaty. Copies of these information returns also may be made available under the provisions of a specific treaty or agreement to the tax authorities in the country in which the Non-U.S. Holder resides.

**SALE OF COMMON STOCK.** Generally, a Non-U.S. Holder will not be subject to federal income tax on any gain realized upon the disposition of such holder's shares of Common Stock unless (i) the gain is effectively connected with a trade or business carried on by the Non-U.S. Holder within the U.S. (in which case the branch profits tax may apply); (ii) the Non-U.S. Holder is an individual who holds the shares of Common Stock as a capital asset and is present in the U.S. for 183 days or more in the taxable year of the disposition and to whom such gain is U.S. source; (iii) the Non-U.S. Holder is subject to tax pursuant to the provisions of U.S. tax law applicable to certain former U.S. citizens or residents; or (iv) the Company is or has been a "U.S. real property holding corporation" for federal income tax purposes (which the Company does not believe that it is or is likely to become) at any time during the five-year period ending on the date of disposition (or such shorter period that such shares were held) and, subject to certain exceptions, the Non-U.S. Holder held, directly or indirectly, more than 5% of the Common Stock.

**EXERCISE AND SALE OF WARRANTS.** Generally, a Non-U.S. Holder who recognizes capital gain from the sale of a Warrant, other than pursuant to a redemption by the Company, will not be subject to U.S. federal income tax unless (i) the gain is effectively connected with a trade or business carried on by the Non-U.S. Holder within the United States (in which case the branch profits tax may apply); (ii) the Non-U.S. Holder is an individual who is present in the U.S. for 183 days or more in the taxable year of sale and to whom the gain is U.S. source; (iii) the Non-U.S. Holder is subject to tax pursuant to the provisions of U.S. law applicable to certain former U.S. citizens or residents; or (iv) the Company is or has been a "U.S. real property holding corporation" for federal income tax purposes (which the Company does not believe it is or is likely to become) at any time during the five-year period ending on the date of sale (or such shorter period such Warrants were held) and, subject to certain exceptions, the Non-U.S. Holder held, directly or indirectly, more than 5% of the Warrants.

**ESTATE TAX.** Shares of Common Stock and Warrants owned or treated as owned by an individual who is not a citizen or resident (as specially defined for U.S. federal estate tax purposes) of the U.S. at the time of death will be includable in the individual's gross estate for U.S. federal estate tax purposes, unless an applicable tax treaty provides otherwise, and may be subject to U.S. federal estate tax.

**BACKUP WITHHOLDING AND INFORMATION REPORTING.** Under current U.S. federal income tax law, backup withholding tax (which generally is a withholding tax imposed at the rate of 31% on certain payments to

persons that fail to furnish certain required information) and information reporting apply to payments of dividends (actual and constructive) made to certain non-corporate U.S. persons. The backup withholding tax and information reporting requirements applicable to U.S. persons will generally not apply to dividends paid on Common Stock to a Non-U.S. Holder at an address outside the U.S., although dividends paid to Non-U.S. Holders will be reported and taxed as described above under "Dividends."

The payment of the proceeds from the disposition of shares of Common Stock or Warrants through the U.S. office of a broker will be subject to information reporting and backup withholding unless the holder, under penalties of perjury, certifies, among other things, its status as a Non-U.S. Holder or otherwise establishes an exemption. Generally, the payment of the proceeds from the disposition of shares of Common Stock or Warrants to or through a non-U.S. office of a broker will not be subject to backup withholding and will not be subject to information reporting. In the case of the payment of proceeds from the disposition of shares of Common Stock or Warrants through a non-U.S. office of a broker that is a U.S. person or a "U.S.-related person," existing regulations require information reporting (but not backup withholding) on the payment unless the broker receives a statement from the owner, signed under penalties of perjury, certifying, among other things, its status as a non-U.S. Holder or the broker has documentary evidence in its files that the owner is a Non-U.S. Holder and the broker has no actual knowledge to the contrary. For this purpose, a "U.S.-related person" is (i) a "controlled foreign corporation" for U.S. federal income tax purposes or (ii) a foreign person 50% or more of whose gross income from all sources for the three-year period ending with the close of its taxable year preceding the payment (or for such part of the period that the broker has been in existence) is derived from activities that are effectively connected with the conduct of a U.S. trade or business.

Any amounts withheld from a payment to a Non-U.S. Holder under the backup withholding rules will be allowed as a credit against such holder's U.S. federal income tax liability and may entitle such holder to a refund, provided that the required information is furnished to the I.R.S. Non-U.S. Holders should consult their tax advisors regarding the application of these rules to their particular situations, the availability of an exemption therefrom and the procedure for obtaining such an exemption, if available.

#### REGISTRATION RIGHTS

**REPRESENTATIVES' WARRANTS.** The Representatives' Warrants provide certain rights with respect to the registration under the Securities Act of the 400,000 shares issuable upon exercise thereof (including shares of Common Stock issuable upon the exercise of the Warrants included therein). The Company has agreed that during the entire period between the first anniversary and fifth anniversary after the date of this Prospectus it will register the issuance of such shares upon the exercise of the Representatives' Warrants (and, if necessary, their resale) so as to permit their public resale without restriction. These registration rights could result in substantial future expense to the Company and could adversely affect the Company's ability to complete future equity or debt financings. Furthermore, the registration and sale of Common Stock of the Company held by or issuable to the holders of registration rights, or even the potential of such sales, could have an adverse effect on the market price of the securities offered hereby.

**OTHER REGISTRATION RIGHTS.** Holders of 834,568 shares of Common Stock, or their transferees, are entitled to certain rights with respect to the registration of such shares under the Securities Act. Under the terms of an Agreement to Purchase Limited Partnership Interests dated as of August 4, 1992 among AGDG, the Company and ORTDF, if the Company proposes to register any of its Common Stock for sale to the public, ORTDF may require the Company to include in such registration any shares of Common Stock issued or issuable upon the exercise of certain warrants to purchase Common Stock of the Company held by ORTDF subject to certain conditions and limitations. As of the date of this Prospectus, ORTDF held 599,970 shares of Common Stock which enjoy registration rights. ORTDF will not participate in this offering.

Under the terms of a Registration Rights Agreement dated as of May 20, 1992 between the Company and Ice Bear, Inc., an Alaska corporation ("Ice Bear"), if the Company proposes to register any of its stock or other securities under the Act in connection with a public offering of those securities for cash, Ice Bear may require the Company to include in such registration any shares of Common Stock held or issued or issuable upon the exercise of certain warrants to purchase Common Stock of the Company held by Ice Bear subject to certain conditions and limitations. As of the date of this Prospectus, Ice Bear holds 21,930 shares of Common Stock and warrants to purchase 219,334 shares of Common Stock, all of which enjoy registration rights. Ice Bear will not participate in this offering.

#### CERTAIN PROVISIONS OF THE COMPANY'S ARTICLES OF INCORPORATION AND BYLAWS

Certain provisions of the Company's Third Restated Articles of Incorporation and Bylaws could make more difficult the acquisition of the Company by means of a tender offer, a proxy contest or otherwise and the removal of incumbent officers and directors. These provisions include authorization of the issuance of up to 2,000,000 shares of Preferred Stock, with such characteristics, and potential effects on the acquisition of the Company, as are described in "Preferred Stock" above. This provision is expected to discourage certain types of coercive takeover practices and inadequate takeover bids and to encourage persons seeking to acquire control of the Company to negotiate first with the Company. The Company believes that the benefits of increased protection of the Company's potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure the Company outweigh the disadvantages of discouraging such proposals because, among other things, negotiation of such proposals could result in an improvement of their terms. See "Risk Factors--Anti-Takeover Effects of Certain Charter Provisions and Oregon Law."

#### OREGON CONTROL SHARE AND BUSINESS COMBINATION STATUTES

Upon completion of this offering, the Company will become subject to the Oregon Control Share Act (the "Control Share Act"). The Control Share Act generally provides that a person (the "Acquiring Person") who acquires voting stock of an Oregon corporation in a transaction that results in the Acquiring Person holding more than 20%, 33 1/3% or 50% of the total voting power of the corporation (a "Control Share Acquisition") cannot vote the shares it acquires in the Control Share Acquisition ("control shares") unless voting rights are accorded to the control shares by (i) a majority of each voting group entitled to vote and (ii) the holders of a majority of the outstanding voting shares, excluding the control shares held by the Acquiring Person and shares held by the Company's officers and inside directors. The term "Acquiring Person" is broadly defined to include persons acting as a group.

The Acquiring Person may, but is not required to, submit to the Company a statement setting forth certain information about the Acquiring Person and its plans with respect to the Company. The statement may also request that the Company call a special meeting of shareholders to determine whether voting rights will be accorded to the control shares. If the Acquiring Person does not request a special meeting of shareholders, the issue of voting rights of control shares will be considered at the next annual meeting or special meeting of shareholders. If the Acquiring Person's control shares are accorded voting rights and represent a majority or more of all voting power, shareholders who do not vote in favor of voting rights for the control shares will have the right to receive the appraised "fair value" of their shares which may not be less than the highest price paid per share by the Acquiring Person for the control shares.

Upon completion of this offering, the Company will become subject to certain provision of the Oregon Business Corporation Act that govern business combinations between corporations and interested shareholders (the "Business Combination Act"). The Business Combination Act generally provides that if a person or entity acquires 15% or more of the voting stock of an Oregon corporation (an "Interested Shareholder"), the corporation and the Interested Shareholder, or any affiliated entity of the Interested Shareholder, may not engage in certain business combination transactions for three years following the date the person became an Interested Shareholder. Business combination transactions for this purpose

include (a) a merger or plan of share exchange, (b) any sales, lease, mortgage or other disposition of 10% or more of the assets of the corporation and (c) certain transactions that result in the issuance of capital stock of the corporation to the Interested Shareholder. These restrictions do not apply if (i) the Interested Shareholder, as a result of the transaction in which such person became an Interested Shareholder, owns at least 85% of the outstanding voting stock of the corporation (disregarding shares owned by directors who are also officers and certain employee benefit plans), (ii) the board of directors approves the share acquisition or business combination before the Interested Shareholder acquires 15% or more of the corporation's outstanding voting stock or (iii) the board of directors and the holders of at least two-thirds of the outstanding voting stock of the corporation (disregarding shares owned by the Interested Shareholder) approve the transaction after the Interested Shareholder acquires 15% or more of the corporation's voting stock. See "Risk Factors--Anti-Takeover Effects of Certain Charter Provisions and Oregon Law."

#### TRANSFER AGENT AND REGISTRAR

The Transfer Agent and Registrar for the Company's Common Stock and the Warrant Agent for the Warrants is ChaseMellon Shareholder Services.

#### SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for the Units, Common Stock or Warrants. No prediction can be made of the effect, if any, that future market sales of shares of Common Stock or the availability of such shares for sale will have on the prevailing market price of the Common Stock following this offering. Nevertheless, sales of substantial amounts of such shares in the open market following this offering could adversely affect the prevailing market price of the Common Stock.

Upon completion of this offering and assuming no exercise of outstanding options and warrants to purchase Common Stock after December 31, 1996, the Company will have 10,779,763 outstanding shares of Common Stock. See "Description of Securities." The 2,000,000 shares of Common Stock which are included in the Units and sold in this offering (or 2,300,000 shares if the Overallotment Option is exercised in full) by the Company and, subject to certain conditions, up to 2,300,000 shares of Common Stock issuable upon exercise of the Warrants (including Warrants subject to the Overallotment Option, and, commencing approximately 12 months after the date of this Prospectus, up to 400,000 shares of Common Stock that are issuable upon exercise of the Representative's Warrants (including the Warrants included therein), will, subject to any applicable state law restrictions on secondary trading (see "Risk Factors-- Possible Illiquidity of Trading Market"), be freely tradeable without restriction under the Securities Act, except that any shares purchased by an "affiliate" of the Company (as that term is defined in Rule 144 under the Securities Act) will be subject to the resale limitations of Rule 144.

The remaining 8,779,763 shares of Common Stock are "restricted" shares within the meaning of Rule 144 under the Securities Act (the "Restricted Shares"). Of this number, approximately 1,358,055 shares not subject to lock-up agreements will be eligible for immediate resale without restriction under Rule 144(k) of the Securities Act. An additional 19,000 shares held for more than one but less than two years by shareholders who are not affiliates of the Company and who are not subject to lock-up agreements are eligible for sale under Rule 144 of the Securities Act, subject to the volume and other limitations thereunder. Upon expiration of lock-up agreements with Paulson Investment Company, Inc. ("Paulson") three months after the date of this Prospectus (or earlier with the consent of Paulson), approximately 56,000 shares will be eligible for immediate resale subject to the limitations of Rule 144 and approximately 1,492,035 shares will be eligible for resale immediately without restriction pursuant to Rule 144(k). Upon expiration of lock-up agreements with Paulson six months after the date of this Prospectus (or earlier with the consent of Paulson), approximately 952,500 shares will be eligible for immediate resale subject to the limitations of Rule 144 and approximately 1,826,984 shares will be eligible for resale immediately without restriction pursuant to Rule 144(k). Upon expiration of lock-up agreements with Paulson nine months

after the date of this Prospectus (or earlier with the consent of Paulson), approximately 1,199,000 shares will be eligible for immediate resale subject to the limitations of Rule 144 and approximately 2,402,933 shares will be eligible for resale immediately without restriction pursuant to Rule 144(k). Upon expiration of lock-up agreements with Paulson one year after the date of this Prospectus (or earlier with the consent of Paulson), approximately 5,943,911 shares will be eligible for immediate resale subject to the limitations of Rule 144 and approximately 2,835,852 shares will be eligible for resale immediately without restriction pursuant to Rule 144(k). As of the date of this Prospectus, options to purchase 1,126,886 shares of Common Stock have been granted under the Stock Incentive Plan, which shares, if acquired pursuant to the exercise of options, are subject to lock-up agreements which expire one year after the date of this Prospectus (or earlier with the consent of the Representative).

In general, under Rule 144, as currently in effect, any person (or persons whose shares are aggregated) who has beneficially owned Restricted Shares for at least one year, is entitled to sell, within any three-month period, a number of shares that does not exceed the greater of (i) 1% of the then outstanding shares of the Company's Common Stock (approximately 102,798 shares immediately after this offering) or (ii) the average weekly trading volume of the Company's Common Stock in the Nasdaq National Market during the four calendar weeks immediately preceding the date on which notice of the sale is filed with the Securities and Exchange Commission. Sales pursuant to Rule 144 are also subject to certain requirements relating to manner of sale, notice and availability of current public information about the Company. A person who is not deemed to have been an affiliate of the Company at any time during the 90 days immediately preceding the sale and whose Restricted Shares have been fully-paid for two years since the later of the date they were acquired from the Company or the date they were acquired from an affiliate of the Company may sell such Restricted Shares under Rule 144(k) without regard to the limitations and requirements described above. Under Rule 701, shares privately issued under certain compensatory stock-based plans, such as the Stock Incentive Plan, may be resold under Rule 144 by non-affiliates, subject only to the manner of sale requirements, and by affiliates without regard to the one-year holding period requirement, commencing 90 days after the Company becomes subject to certain periodic reporting requirements.

Shortly after this offering, the Company intends to file a registration statement under the Securities Act covering shares of Common Stock reserved for issuance under the Company's outstanding stock options and Stock Incentive Plan (other than shares issued upon the exercise of options prior to the effective date of such registration statement). Based on the number of options outstanding and options and shares reserved for issuance, such registration statement would cover approximately 1,333,333 shares. Such registration statement will automatically become effective upon filing. All shares issuable under the Company's Stock Incentive Plan are subject to a six-month lock-up period following the date of this Prospectus.

Prior to this offering, there has been no established public market for the Common Stock. No prediction can be made of the effect, if any, that sales of shares under Rule 144 or the availability of shares for sale will have on the market price of the Common Stock prevailing from time to time after the offering. The Company is unable to estimate the number of shares that may be sold in the public market under Rule 144, because such amount will depend on the trading volume in, and market price for, the Common Stock and other factors. Nevertheless, sales of substantial amounts of shares in the public market, or the perception that such sales could occur, could adversely affect the market price of the Common Stock of the Company. See "Underwriting."

UNDERWRITING

The underwriters named below (the "Underwriters"), for whom Paulson Investment Company, Inc., Millennium Financial Group, Inc. and First Colonial Securities Group, Inc. are acting as representatives, have severally agreed subject to the terms and conditions of the Underwriting Agreement between the Company and the several Underwriters (the "Underwriting Agreement"), to purchase from the Company, and the Company has agreed to sell to the Underwriters, the number of Units set forth in the table below at the price set forth on the cover page of this Prospectus.

UNDERWRITER	NUMBER OF UNITS
Paulson Investment Company, Inc.....	
Millennium Financial Group, Inc.....	
First Colonial Securities Group, Inc.....	
Total.....	2,000,000

The Underwriting Agreement provides that the obligations of the Underwriters to purchase such Units are subject to certain conditions. The Underwriters are committed to purchase all the 2,000,000 Units offered by this Prospectus, but not the 300,000 Units subject to the Overallotment Option, if any are purchased.

The Representatives have advised the Company that the Underwriters propose to offer the Units to the public at the initial public offering price set forth on the cover page of this Prospectus and to selected dealers at such price less a concession within the discretion of the Representatives, and that the Underwriters and such dealers may reallocate a concession to other dealers, including the Underwriters, within the discretion of the Representatives. After the initial public offering of the Units, the public offering price, the concessions to selected dealers and the reallocation to other dealers may be changed by the Representatives.

The Company has granted the Underwriters the Overallotment Option, expiring at the close of business 45 days after the date of this Prospectus, to purchase up to 300,000 additional Units from the Company on the same terms as apply to the sale of the Units set forth above. The Underwriters may exercise the Overallotment Option only to cover overallotments, if any, incurred in the sale of Units.

The Company has agreed that if it elects to redeem the Warrants at any time commencing one year after the date of this Prospectus, it will retain Paulson as the Company's solicitation agent ("Warrant Solicitation Agent"). The Company has agreed to pay the Warrant Solicitation Agent for its services a solicitation fee equal 2% of the total amount paid by the holders of the Warrants whom the Warrant Solicitation Agent solicited to exercise the Warrants. The exercise will be presumed to be unsolicited unless the customer states in writing that the transaction was solicited by the Warrant Solicitation Agent and designates in writing the registered representative as the Warrant Solicitation Agent entitled to receive compensation for the exercise. The fee is not payable for the exercise of any Warrant held by a Warrant Solicitation Agent in a discretionary account at the time of exercise, unless the Warrant Solicitation Agent receives from the customer prior specific written approval of such exercise. No member of the National Association of Securities Dealers, Inc. or person associated with a member will receive a solicitation fee or any other compensation or expense reimbursement in connection with the exercise of a Warrant if the market price of the Common Stock received upon exercise of the Warrant is lower than the exercise price of the Warrant.



The Representatives have informed the Company that they do not expect the Underwriters to confirm sales of Units offered by this Prospectus to any account on a discretionary basis.

The Underwriting Agreement provides for indemnification between the Company and the Underwriters against certain liabilities, including liabilities under the Securities Act, and for contribution by the Company and the Underwriters to payments that may be required to be made in respect thereof.

The Company has agreed to pay the Representatives a nonaccountable expense allowance equal to 2% of the gross proceeds from the sale of Units offered hereby, of which \$35,000 has already been paid.

The Company has agreed to issue to the Representatives the Representatives' Warrants to purchase from the Company up to 200,000 Units at an exercise price per Unit equal to \$ (120% of the initial offering price of the Units). The Representatives' Warrants are exercisable for a period of four years beginning one year from the date of this Prospectus, and is not transferable for a period of one year from the date of this Prospectus except to one of the Underwriters or to any individual who is either a partner or an officer of an Underwriter, or by will or by the laws of descent and distribution. The Representatives' Warrants are not redeemable by the Company. The Company has agreed to maintain an effective registration statement with respect to the issuance of securities underlying the Representatives' Warrants (and, if necessary, to allow their public resale without restriction) at all times during the period in which the Representatives' Warrants are exercisable. Such securities are being registered on the Registration Statement of which this Prospectus is a part.

The Company has agreed that, for a period of one year following the closing of this offering, it will not, subject to certain exceptions, offer, sell, contract to sell, grant any option for the sale or otherwise dispose of any securities of the Company without Paulson's consent. The Company's officers and directors and certain other shareholders have agreed that for a period of one year following the closing of this offering, they will not offer, sell, contract to sell, grant any option for the sale or otherwise dispose of any securities of the Company (other than intra-family transfer or transfers to trusts for estate planning purposes), without Paulson's consent. See "Shares Eligible For Future Sale."

Prior to this offering, there has been no public market for the Units, Common Stock or Warrants. Accordingly, the initial public offering price has been determined by negotiations between the Company and the Representatives. Among the factors considered in determining the initial public offering price were the history and the prospects of the Company and the industry in which it operates, the status and development prospects for the Company's proposed products and the trends of such results, the experience and qualifications of the Company's executive officers and the general condition of the securities markets at the time of this offering.

#### LEGAL MATTERS

The validity of the Units offered hereby will be passed upon for the Company by Ater Wynne Hewitt Dodson & Skerritt, LLP, Portland, Oregon. Certain legal matters with respect to patents and proprietary rights of the Company, as described in this Prospectus, are being passed upon for the Company by Dehlinger & Associates, Palo Alto, California, patent counsel to the Company. Certain legal matters relating to this offering will be passed upon for the Underwriters by Weiss, Jensen, Ellis & Howard, P.C., Portland, Oregon.

#### EXPERTS

The financial statements of the Company as of December 31, 1996 and for each of the two years in the period ended December 31, 1996 appearing in this Prospectus have been audited by Arthur Andersen LLP, independent auditors, as set forth in their report thereon appearing elsewhere herein, and are included in reliance upon such report given upon the authority of such firm as experts in accounting and auditing.

The information contained in "Risk Factors--Patents and Proprietary Rights" and in "Business-- Patents and Proprietary Rights" has been reviewed and approved by Dehlinger & Associates, Palo Alto, California, patent counsel to the Company, as experts in such matters, and is included in reliance upon their review and approval.

#### ADDITIONAL INFORMATION

The Company has filed with the Securities and Exchange Commission (the "Commission") a Registration Statement on Form SB-2 under the Securities Act with respect to the Units offered hereby, of which this Prospectus forms a part. This Prospectus does not contain all of the information set forth in the Registration Statement and the exhibits and schedules thereto. For further information with respect to the Company and the Units, Common Stock and Warrants, reference is made to the Registration Statement and such exhibits and schedules. Statements contained in this Prospectus as to the contents of any contract or other documents referred to are not necessarily complete and, in each instance, if such contract or document is filed as an exhibit to the Registration Statement, reference is made to the copy of such contract or document filed as an exhibit, each such statement being qualified in all respects by such reference to such exhibit. The Registration Statement and the exhibits and schedules thereto may be inspected without charge at the Commission's principal office in Washington, D.C., and copies of all or any part thereof may be obtained from the Public Reference Section of the Commission, 450 Fifth Street, N.W., Washington, D.C. 20549, upon payment of certain fees prescribed by the Commission. The Commission also maintains a site on the World Wide Web that contains reports, proxy and information statements and other information regarding registrants that file electronically with the Commission. The address of such site is <http://www.sec.gov>.

ANTIVIRALS INC.  
INDEX TO FINANCIAL STATEMENTS

Report of Independent Public Accountants.....	F-2
Balance Sheets.....	F-3
Statements of Operations.....	F-4
Statements of Shareholders' Equity.....	F-5
Statements of Cash Flows.....	F-8
Notes to Financial Statements.....	F-9

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To the Board of Directors and Shareholders of  
ANTIVIRALS INC.

We have audited the accompanying balance sheets of ANTIVIRALS INC. (an Oregon corporation in the development stage) as of December 31, 1995 and 1996, and the related statements of operations, shareholders' equity and cash flows for the years ended December 31, 1995 and 1996 and for the period from inception (July 22, 1980) to December 31, 1996. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of ANTIVIRALS INC. as of December 31, 1995 and 1996, and the results of its operations and its cash flows for the years ended December 31, 1995 and 1996 and for the period from inception (July 22, 1980) to December 31, 1996, in conformity with generally accepted accounting principles.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses from operations and, at December 31, 1996, has a deficit accumulated during the development stage of \$12,425,483. In addition, as more fully discussed in Note 7 to the financial statements, the Company has filed with certain securities regulators a registration statement pertaining to a planned rescission offering for certain purchasers' equity securities because Company management cannot draw a conclusion with certainty that all applicable state and federal securities laws were complied with in all material respects in connection with the issuance of such securities. Such factors raise substantial doubt about the Company's ability to continue as a going concern. Management's plan in regard to these matters is also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of these uncertainties.

ARTHUR ANDERSEN LLP  
Portland, Oregon  
March 10, 1997

ANTIVIRALS INC.  
(A DEVELOPMENT STAGE COMPANY)

BALANCE SHEETS

ASSETS

	DECEMBER 31,		MARCH 31,
	1995	1996	1997
	(UNAUDITED)		
<b>CURRENT ASSETS:</b>			
Cash and cash equivalents.....	\$ 680,892	\$ 3,011,229	\$ 2,305,351
Short-term securities--available-for-sale.....	212,750	30,000	--
Other current assets.....	7,236	28,255	28,255
	900,878	3,069,484	2,333,606
<b>PROPERTY AND EQUIPMENT, at cost:</b>			
Laboratory equipment.....	677,728	738,160	779,851
Office equipment.....	181,803	187,248	187,248
Leasehold improvements.....	1,464,603	1,464,603	1,478,249
	2,324,134	2,390,011	2,445,348
Less--Accumulated depreciation and amortization.....	(1,379,377)	(1,858,359)	(1,980,045)
	944,757	531,652	465,303
PATENT COSTS, net.....	449,254	474,806	488,125
DEFERRED OFFERING COSTS.....	--	143,110	382,602
OTHER ASSETS.....	29,847	29,847	29,847
	\$ 2,324,736	\$ 4,248,899	\$ 3,699,483
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>			
<b>CURRENT LIABILITIES:</b>			
Accounts payable.....	\$ 85,298	\$ 153,202	\$ 183,762
Accrued payroll.....	149,715	169,609	182,329
Deferred payments.....	19,051	7,996	7,996
	254,064	330,807	374,087
COMMON STOCK SUBJECT TO RESCISSION, \$.0001 par value, 1,292,973 issued and outstanding.....	3,121,965	3,121,965	3,121,965
<b>SHAREHOLDERS' EQUITY:</b>			
Preferred stock, \$.0001 par value, 2,000,000 shares authorized; none issued and outstanding.....	--	--	--
Common stock, \$.0001 par value, 50,000,000 shares authorized; 5,816,838, 7,486,790 and 7,486,790 shares issued and outstanding in 1995 and 1996, and March 31, 1997 (unaudited), respectively.....	582	749	749
Additional paid-in capital.....	9,189,496	13,220,861	13,220,861
Unrealized gain on available-for-sale securities.....	96,750	--	--
Deficit accumulated during the development stage.....	(10,338,121)	(12,425,483)	(13,018,179)
	(1,051,293)	796,127	203,431
	\$ 2,324,736	\$ 4,248,899	\$ 3,699,483

See accompanying notes.

ANTIVIRALS INC.  
(A DEVELOPMENT STAGE COMPANY)

STATEMENTS OF OPERATIONS

	YEAR ENDED DECEMBER 31,		JULY 22, 1980 (INCEPTION) TO DECEMBER 31, 1996	THREE MONTHS ENDED MARCH 31,		JULY 22, 1980 (INCEPTION) TO MARCH 31, 1997
	1995	1996	1996	1996	1997	(UNAUDITED)
				(UNAUDITED)	(UNAUDITED)	(UNAUDITED)
REVENUES, from grants and research contracts.....	\$ 82,500	\$ 27,227	\$ 689,497	\$ --	\$ --	\$ 689,497
OPERATING EXPENSES:						
Research and development.....	2,097,796	1,729,554	9,011,574	349,565	451,723	9,463,297
General and administrative.....	609,723	613,811	4,549,582	75,321	170,028	4,719,610
Total operating expenses.....	2,707,519	2,343,365	13,561,156	424,886	621,751	14,182,907
OTHER INCOME.....	68,133	228,776	446,176	170,639	29,055	475,231
NET LOSS.....	\$ (2,556,886)	\$ (2,087,362)	\$ (12,425,483)	\$ (254,247)	\$ (592,696)	\$ (13,018,179)
NET LOSS PER SHARE.....	\$ (0.37)	\$ (0.25)		\$ (0.04)	\$ (0.07)	
SHARES USED IN PER SHARE CALCULATION.....	6,982,459	8,233,548		7,109,810	8,233,548	

See accompanying notes.

ANTIVIRALS INC.  
(A DEVELOPMENT STAGE COMPANY)

STATEMENTS OF SHAREHOLDERS' EQUITY

	PARTNERSHIP UNITS	COMMON STOCK SHARES	COMMON STOCK AMOUNT	ADDITIONAL PAID-IN CAPITAL	UNREALIZED GAIN ON AVAILABLE- FOR-SALE SECURITIES	DEFICIT ACCUMULATED DURING THE DEVELOPMENT STAGE
BALANCE AT JULY 22, 1980 (inception)..... No activity	--	--	\$ --	\$ --	\$ --	\$ --
BALANCE AT OCTOBER 31, 1980.....	--	--	--	--	--	--
Issuance of partnership units and common stock in October 1981 for equipment and supplies valued at \$3,500 and technology...	1,000	1,666,667	167	3,333	--	--
Issuance of partnership units and common stock for cash, \$500 per unit.....	150	250,000	25	75,055	--	--
Issuance of partnership units for consulting services, \$500 per unit.....	10	--	--	5,000	--	--
Issuance of common stock in connection with financing agreement.....	--	33,333	3	7	--	--
Net loss.....	--	--	--	--	--	(9,224)
BALANCE AT OCTOBER 31, 1981.....	1,160	1,950,000	195	83,395	--	(9,224)
Issuance of common stock for consulting services.....	--	54,600	5	11	--	--
Net loss.....	--	--	--	--	--	(57,962)
BALANCE AT OCTOBER 31, 1982.....	1,160	2,004,600	200	83,406	--	(67,186)
Issuance of partnership units and common stock for cash, \$550 per unit.....	60	100,000	10	33,020	--	--
Issuance of common stock for consulting services.....	--	21,733	2	5	--	--
Net loss.....	--	--	--	--	--	(27,475)
BALANCE AT OCTOBER 31, 1983.....	1,220	2,126,333	212	116,431	--	(94,661)
Issuance of partnership units and common stock for cash, \$600 per unit.....	10	16,667	2	6,003	--	--
Issuance of partnership units and common stock for consulting services and \$1,000 cash, \$550 to \$600 per unit.....	20	16,667	2	11,503	--	--
Issuance of common stock for consulting services.....	--	2,533	--	1	--	--
Issuance of common stock for donation to charitable organizations.....	--	100,000	10	20	--	--
Net loss.....	--	--	--	--	--	(21,463)
BALANCE AT OCTOBER 31, 1984.....	1,250	2,262,200	226	133,958	--	(116,124)
Issuance of partnership units and common stock in December 1984 for technology.....	1,000	166,667	16	(16)	--	--
Issuance of partnership units and common stock for cash, \$50 to \$100 per unit.....	460	78,333	8	23,515	--	--
Issuance of partnership units for cash, \$50 to \$550 per unit.....	140	--	--	17,000	--	--
Issuance of common stock for consulting services.....	--	6,733	1	1	--	--
Net loss.....	--	--	--	--	--	(8,469)
BALANCE AT OCTOBER 31, 1985.....	2,850	2,513,933	251	174,458	--	(124,593)
Issuance of partnership units and common stock for cash, \$50 to \$500 per unit.....	90	105,000	11	31,521	--	--
Issuance of common stock for consulting services.....	--	8,500	1	1	--	--
Net loss.....	--	--	--	--	--	(32,353)
BALANCE AT OCTOBER 31, 1986.....	2,940	2,627,433	263	205,980	--	(156,946)
Issuance of partnership units and common stock for cash, \$500 per unit.....	20	33,333	3	10,007	--	--
Issuance of partnership units and warrants to purchase 400,000 shares of common stock for cash, \$500 to \$2,500 per unit.....	80	--	--	100,000	--	--
Issuance of common stock for consulting services.....	--	28,533	3	6	--	--
Net loss.....	--	--	--	--	--	(71,616)
BALANCE AT OCTOBER 31, 1987.....	3,040	2,689,299	269	315,993	--	(228,562)
	TOTAL SHAREHOLDERS' EQUITY					
BALANCE AT JULY 22, 1980 (inception)..... No activity	\$ --					

BALANCE AT OCTOBER 31, 1980.....	--
Issuance of partnership units and common stock in October 1981 for equipment and supplies valued at \$3,500 and technology...	3,500
Issuance of partnership units and common stock for cash, \$500 per unit.....	75,080
Issuance of partnership units for consulting services, \$500 per unit.....	5,000
Issuance of common stock in connection with financing agreement.....	10
Net loss.....	(9,224)
BALANCE AT OCTOBER 31, 1981.....	74,366
Issuance of common stock for consulting services.....	16
Net loss.....	(57,962)
BALANCE AT OCTOBER 31, 1982.....	16,420
Issuance of partnership units and common stock for cash, \$550 per unit.....	33,030
Issuance of common stock for consulting services.....	7
Net loss.....	(27,475)
BALANCE AT OCTOBER 31, 1983.....	21,982
Issuance of partnership units and common stock for cash, \$600 per unit.....	6,005
Issuance of partnership units and common stock for consulting services and \$1,000 cash, \$550 to \$600 per unit.....	11,505
Issuance of common stock for consulting services.....	1
Issuance of common stock for donation to charitable organizations.....	30
Net loss.....	(21,463)
BALANCE AT OCTOBER 31, 1984.....	18,060
Issuance of partnership units and common stock in December 1984 for technology.....	--
Issuance of partnership units and common stock for cash, \$50 to \$100 per unit.....	23,523
Issuance of partnership units for cash, \$50 to \$550 per unit.....	17,000
Issuance of common stock for consulting services.....	2
Net loss.....	(8,469)
BALANCE AT OCTOBER 31, 1985.....	50,116
Issuance of partnership units and common stock for cash, \$50 to \$500 per unit.....	31,532
Issuance of common stock for consulting services.....	2
Net loss.....	(32,353)
BALANCE AT OCTOBER 31, 1986.....	49,297
Issuance of partnership units and common stock for cash, \$500 per unit.....	10,010
Issuance of partnership units and warrants to purchase 400,000 shares of common stock for cash, \$500 to \$2,500 per unit.....	100,000
Issuance of common stock for consulting services.....	9
Net loss.....	(71,616)
BALANCE AT OCTOBER 31, 1987.....	87,700

See accompanying notes.



ANTIVIRALS INC.  
(A DEVELOPMENT STAGE COMPANY)

STATEMENTS OF SHAREHOLDERS' EQUITY

	PARTNERSHIP UNITS	COMMON STOCK SHARES	COMMON STOCK AMOUNT	ADDITIONAL PAID-IN CAPITAL	UNREALIZED GAIN ON AVAILABLE-FOR- SALE SECURITIES	DEFICIT ACCUMULATED DURING THE DEVELOPMENT STAGE
BALANCE AT OCTOBER 31, 1987.....	3,040	2,689,299	\$ 269	\$ 315,993	--	\$ (228,562)
Issuance of partnership units and common stock for cash, \$500 per unit.....	100	166,667	17	50,033	--	--
Issuance of partnership units and common stock for cash, \$1,250 per unit.....	20	33,333	3	25,007	--	--
Issuance of partnership units for cash, \$50 per unit.....	20	--	--	1,000	--	--
Issuance of partnership units and warrants to purchase 400,000 shares of common for cash, \$1,250 per unit.....	80	--	--	100,000	--	--
Compensation expense related to issuance of warrants for partnership units.....	--	--	--	10,000	--	--
Issuance of common stock for consulting services and employee compensation.....	--	47,014	5	9	--	--
Net loss.....	--	--	--	--	--	(266,194)
BALANCE AT OCTOBER 31, 1988.....	3,260	2,936,313	294	502,042	--	(494,756)
Exercise of warrants for common stock.....	--	141,667	14	28	--	--
Issuance of partnership units and common stock for cash, \$1,250 per unit.....	10	16,667	1	12,504	--	--
Issuance of partnership units and warrants to purchase 800,000 shares of common stock for cash, \$1,250 per unit.....	160	--	--	200,000	--	--
Issuance of common stock for consulting services and employee compensation.....	--	17,733	2	4	--	--
Compensation expense related to issuance of warrants for partnership units.....	--	--	--	2,500	--	--
Net loss.....	--	--	--	--	--	(243,926)
BALANCE AT OCTOBER 31, 1989.....	3,430	3,112,380	311	717,078	--	(738,682)
Exercise of warrants for common stock.....	--	33,333	3	7	--	--
Issuance of partnership units and common stock for cash, \$1,250 per unit.....	74	123,334	12	92,525	--	--
Issuance of partnership unit for cash, \$5,000 per unit.....	1	--	--	5,000	--	--
Issuance of common stock for cash, \$4.56 per share.....	--	1,100	--	5,000	--	--
Issuance of partnership units and warrants to purchase 200,000 shares of common stock for cash, \$1,250 per unit.....	40	--	--	50,000	--	--
Issuance of common stock for consulting services and employee compensation.....	--	11,400	2	51,678	--	--
Compensation expense related to issuance of warrants for partnership units.....	--	--	--	40,000	--	--
Exercise of warrant for partnership units...	10	--	--	12,500	--	--
Net loss.....	--	--	--	--	--	(351,772)
BALANCE AT OCTOBER 31, 1990.....	3,555	3,281,547	328	973,788	--	(1,090,454)
Issuance of partnership units for cash, \$5,000 per unit.....	23.5	--	--	117,500	--	--
Exercise of warrants for partnership unit and common stock.....	1	1,100	--	1,250	--	--
Issuance of common stock for cash, \$4.56 per share.....	--	24,750	3	112,505	--	--
Compensation expense related to issuance of warrants for common stock.....	--	--	--	1,520	--	--
Issuance of common stock for consulting services, \$4.56 per share.....	--	1,657	--	7,547	--	--
Common stock subject to rescission.....	--	(7,127)	(1)	(32,499)	--	--
Net loss.....	--	--	--	--	--	(274,844)
BALANCE AT OCTOBER 31, 1991.....	3,579.5	3,301,927	330	1,181,611	--	(1,365,298)

TOTAL  
SHAREHOLDERS'  
EQUITY

BALANCE AT OCTOBER 31, 1987.....	\$ 87,700
Issuance of partnership units and common stock for cash, \$500 per unit.....	50,050
Issuance of partnership units and common stock for cash, \$1,250 per unit.....	25,010
Issuance of partnership units for cash, \$50 per unit.....	1,000
Issuance of partnership units and warrants	

to purchase 400,000 shares of common for cash, \$1,250 per unit.....	100,000
Compensation expense related to issuance of warrants for partnership units.....	10,000
Issuance of common stock for consulting services and employee compensation.....	14
Net loss.....	(266,194)
-----	
BALANCE AT OCTOBER 31, 1988.....	7,580
Exercise of warrants for common stock.....	42
Issuance of partnership units and common stock for cash, \$1,250 per unit.....	12,505
Issuance of partnership units and warrants to purchase 800,000 shares of common stock for cash, \$1,250 per unit.....	200,000
Issuance of common stock for consulting services and employee compensation.....	6
Compensation expense related to issuance of warrants for partnership units.....	2,500
Net loss.....	(243,926)
-----	
BALANCE AT OCTOBER 31, 1989.....	(21,293)
Exercise of warrants for common stock.....	10
Issuance of partnership units and common stock for cash, \$1,250 per unit.....	92,537
Issuance of partnership unit for cash, \$5,000 per unit.....	5,000
Issuance of common stock for cash, \$4.56 per share.....	5,000
Issuance of partnership units and warrants to purchase 200,000 shares of common stock for cash, \$1,250 per unit.....	50,000
Issuance of common stock for consulting services and employee compensation.....	51,680
Compensation expense related to issuance of warrants for partnership units.....	40,000
Exercise of warrant for partnership units...	12,500
Net loss.....	(351,772)
-----	
BALANCE AT OCTOBER 31, 1990.....	(116,338)
Issuance of partnership units for cash, \$5,000 per unit.....	117,500
Exercise of warrants for partnership unit and common stock.....	1,250
Issuance of common stock for cash, \$4.56 per share.....	112,508
Compensation expense related to issuance of warrants for common stock.....	1,520
Issuance of common stock for consulting services, \$4.56 per share.....	7,547
Common stock subject to rescission.....	(32,500)
Net loss.....	(274,844)
-----	
BALANCE AT OCTOBER 31, 1991.....	(183,357)

See accompanying notes.

ANTIVIRALS INC.  
(A DEVELOPMENT STAGE COMPANY)

STATEMENTS OF SHAREHOLDERS' EQUITY (CONTINUED)

	PARTNERSHIP UNITS	COMMON STOCK SHARES	COMMON STOCK AMOUNT	ADDITIONAL PAID-IN CAPITAL	UNREALIZED GAIN ON AVAILABLE- FOR-SALE SECURITIES
BALANCE AT OCTOBER 31, 1991.....	3,579.5	3,301,927	\$ 330	\$ 1,181,611	--
Issuance of partnership units for cash, \$5,000 per unit.....	15.5	--	--	77,500	--
Issuance of common stock for cash, \$4.56 per share.....	--	17,050	2	77,498	--
Compensation expense related to issuance of warrants for common stock.....	--	--	--	7,500	--
Common stock subject to rescission.....	--	(32,486)	(3)	(148,135)	--
Net loss.....	--	--	--	--	--
BALANCE AT DECEMBER 31, 1991.....	3,595	3,286,491	329	1,195,974	--
Issuance of partnership units for cash, \$5,000 per unit.....	30.5	--	--	152,500	--
Exercise of warrants for partnership units and common stock.....	22	2,200	--	28,750	--
Conversion of debt into common stock and partnership units.....	9	9,634	1	87,859	--
Issuance of common stock for cash, \$4.56 per share.....	--	868,906	87	3,954,625	--
Issuance of common stock for consulting services, \$4.56 per share.....	--	22,872	2	104,167	--
Compensation expense related to issuance of warrants for common stock and partnership units.....	--	--	--	262,833	--
Common stock subject to rescission.....	--	(410,099)	(41)	(1,870,008)	--
Net loss.....	--	--	--	--	--
BALANCE AT DECEMBER 31, 1992.....	3,656.5	3,780,004	378	3,916,700	--
Exercise of warrants for partnership units.....	9	--	--	4,500	--
Issuance of common stock in exchange for partnership units.....	(1,809.5)	1,632,950	163	(163)	--
Withdrawal of partnership net assets upon conveyance of technology.....	(1,856)	--	--	(176,642)	--
Issuance of common stock for cash and short-term investments, \$4.95 per share.....	--	507,084	50	2,510,014	--
Exercise of warrants for common stock.....	--	3,844	1	9,999	--
Common stock subject to rescission.....	--	(808,902)	(81)	(901,119)	--
Net loss.....	--	--	--	--	--
BALANCE AT DECEMBER 31, 1993.....	--	5,114,980	511	5,363,289	--
Issuance of common stock for cash, \$4.95 per share.....	--	565,216	57	2,797,761	--
Exercise of warrants for common stock.....	--	24,667	2	122,098	--
Issuance of common stock for consulting services, \$4.95 per share.....	--	151	--	749	--
Unrealized gain on available-for-sale securities.....	--	--	--	--	61,000
Common stock subject to rescission.....	--	(34,359)	(3)	(170,075)	--
Net loss.....	--	--	--	--	--
BALANCE AT DECEMBER 31, 1994.....	--	5,670,655	567	8,113,822	61,000
Issuance of common stock for cash, \$6.00 per share.....	--	146,183	15	862,674	--
Compensation expense related to issuance of warrants for common stock.....	--	--	--	213,000	--
Unrealized gain on available-for-sale securities.....	--	--	--	--	35,750
Net loss.....	--	--	--	--	--
BALANCE AT DECEMBER 31, 1995.....	--	5,816,838	582	9,189,496	96,750
Exercise of warrants for common stock.....	--	957,452	96	(96)	--
Issuance of common stock for cash, \$6.00 per share.....	--	712,500	71	4,031,461	--
Liquidation of available-for-sale securities.....	--	--	--	--	(96,750)
Net loss.....	--	--	--	--	--
BALANCE AT DECEMBER 31, 1996.....	--	7,486,790	\$ 749	\$13,220,861	--
 Net Loss.....	--	--	--	--	--
BALANCE AT MARCH 31, 1997 (UNAUDITED).....	--	7,486,790	\$ 749	\$13,220,861	\$ --

	DEFICIT ACCUMULATED DURING THE DEVELOPMENT STAGE	TOTAL SHAREHOLDERS' EQUITY
BALANCE AT OCTOBER 31, 1991.....	\$ (1,365,298)	\$ (183,357)
Issuance of partnership units for cash, \$5,000 per unit.....	--	77,500

Issuance of common stock for cash, \$4.56 per share.....	--	77,500
Compensation expense related to issuance of warrants for common stock.....	--	7,500
Common stock subject to rescission.....	--	(148,138)
Net loss.....	(91,588)	(91,588)
<hr/>		
BALANCE AT DECEMBER 31, 1991.....	(1,456,886)	(260,583)
Issuance of partnership units for cash, \$5,000 per unit.....	--	152,500
Exercise of warrants for partnership units and common stock.....	--	28,750
Conversion of debt into common stock and partnership units.....	--	87,860
Issuance of common stock for cash, \$4.56 per share.....	--	3,954,712
Issuance of common stock for consulting services, \$4.56 per share.....	--	104,169
Compensation expense related to issuance of warrants for common stock and partnership units.....	--	262,833
Common stock subject to rescission.....	--	(1,870,049)
Net loss.....	(1,731,138)	(1,731,138)
<hr/>		
BALANCE AT DECEMBER 31, 1992.....	(3,188,024)	729,054
Exercise of warrants for partnership units.....	--	4,500
Issuance of common stock in exchange for partnership units.....	--	--
Withdrawal of partnership net assets upon conveyance of technology.....	--	(176,642)
Issuance of common stock for cash and short-term investments, \$4.95 per share.....	--	2,510,064
Exercise of warrants for common stock.....	--	10,000
Common stock subject to rescission.....	--	(901,200)
Net loss.....	(2,346,939)	(2,346,939)
<hr/>		
BALANCE AT DECEMBER 31, 1993.....	(5,534,963)	(171,163)
Issuance of common stock for cash, \$4.95 per share.....	--	2,797,818
Exercise of warrants for common stock.....	--	122,100
Issuance of common stock for consulting services, \$4.95 per share.....	--	749
Unrealized gain on available-for-sale securities.....	--	61,000
Common stock subject to rescission.....	--	(170,078)
Net loss.....	(2,246,272)	(2,246,272)
<hr/>		
BALANCE AT DECEMBER 31, 1994.....	(7,781,235)	394,154
Issuance of common stock for cash, \$6.00 per share.....	--	862,689
Compensation expense related to issuance of warrants for common stock.....	--	213,000
Unrealized gain on available-for-sale securities.....	--	35,750
Net loss.....	(2,556,886)	(2,556,886)
<hr/>		
BALANCE AT DECEMBER 31, 1995.....	(10,338,121)	(1,051,293)
Exercise of warrants for common stock.....	--	--
Issuance of common stock for cash, \$6.00 per share.....	--	4,031,532
Liquidation of available-for-sale securities.....	--	(96,750)
Net loss.....	(2,087,362)	(2,087,362)
<hr/>		
BALANCE AT DECEMBER 31, 1996.....	\$(12,425,483)	\$ 796,127
<hr/>		
Net Loss.....	(592,696)	(592,696)
<hr/>		
BALANCE AT MARCH 31, 1997 (UNAUDITED).....	\$(13,018,179)	\$ 203,431
<hr/>		

See accompanying notes.

ANTIVIRALS INC.  
(A DEVELOPMENT STAGE COMPANY)

STATEMENTS OF CASH FLOWS

	YEAR ENDED DECEMBER 31,		FOR THE PERIOD JULY 22, 1980 (INCEPTION) TO DECEMBER 31, 1996		THREE MONTHS ENDED MARCH 31,		FOR THE PERIOD JULY 22, 1980 (INCEPTION) TO MARCH 31, 1997
	1995	1996			1996	1997	(UNAUDITED)
					(UNAUDITED)	(UNAUDITED)	(UNAUDITED)
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>							
Net loss.....	\$(2,556,886)	\$(2,087,362)	\$ (12,425,483)	\$ (254,247)	\$ (592,696)	\$ (13,018,179)	
Adjustments to reconcile net loss to net cash used in operating activities--							
Depreciation and amortization.....	503,340	520,300	2,061,438	129,157	132,016	2,193,454	
Realized gain on sale of short-term investments available for sale...	--	(96,750)	(96,750)	(96,750)	--	(96,750)	
Compensation expense on issuance of common stock and partnership units.....	--	--	182,392	--	--	182,392	
Compensation expense on issuance of warrants to purchase common stock or partnership units.....	213,000	--	562,353	--	--	562,353	
Conversion of interest accrued to common stock.....	--	--	7,860	--	--	7,860	
Changes in operating assets and liabilities:							
Decrease (increase) in other current assets.....	8,645	(21,019)	(28,255)	(8,791)	--	(28,255)	
Increase in other assets.....	--	--	(45,191)	--	--	(45,191)	
Net increase in accounts payable, accrued payroll and deferred payments.....	53,318	76,743	334,570	(105,381)	43,280	377,850	
Net cash used in operating activities.....	(1,778,583)	(1,608,088)	(9,447,066)	(336,012)	(417,400)	(9,864,466)	
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>							
Proceeds from sale or redemption of short-term investments.....	15,000	182,750	217,750	212,750	30,000	247,750	
Purchase of property and equipment...	(90,594)	(65,877)	(2,413,356)	--	(55,337)	(2,468,693)	
Patent costs.....	(177,989)	(66,870)	(642,959)	(12,668)	(23,649)	(666,608)	
Net cash (used in) provided by investing activities.....	(253,583)	50,003	(2,838,565)	200,082	(48,986)	(2,887,551)	
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>							
Proceeds from sale of common stock and partnership units.....	862,689	4,031,532	15,536,612	--	--	15,536,612	
Withdrawal of partnership net assets.....	--	--	(176,642)	--	--	(176,642)	
Issuance of convertible debt.....	--	--	80,000	--	--	80,000	
Deferred offering costs.....	--	(143,110)	(143,110)	--	(239,492)	(382,602)	
Net cash provided by (used in) financing activities.....	862,689	3,888,422	15,296,860	--	(239,492)	15,057,368	
(DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS.....	(1,169,477)	2,330,337	3,011,229	(135,930)	(705,878)	2,305,351	
<b>CASH AND CASH EQUIVALENTS:</b>							
Beginning of period.....	1,850,369	680,892	--	680,892	3,011,229	--	
End of period.....	\$ 680,892	\$ 3,011,229	\$ 3,011,229	\$ 544,962	\$ 2,305,351	\$ 2,305,351	

See accompanying notes.

ANTIVIRALS INC.  
(A DEVELOPMENT STAGE COMPANY)

NOTES TO FINANCIAL STATEMENTS

1. ORGANIZATION AND NATURE OF BUSINESS:

ANTIVIRALS INC. (the Company) was incorporated in the State of Oregon on July 22, 1980. The mission of the Company is to develop and commercialize improved therapeutic products based upon antisense and drug delivery technology.

Through May 1993, the financial statements include the combined accounts of the Company and ANTI-GENE DEVELOPMENT GROUP, a limited partnership (AGDG or the Partnership) founded in 1981 and registered in the State of Oregon. Substantially all income generated and proceeds from the Partnership unit sales have been paid to the Company under the terms of research and development contracts entered into by the Partnership and the Company. Significant transactions between the Company and the Partnership have been eliminated.

In March 1993, the Company offered to all partners in the Partnership the opportunity to exchange their partnership units or warrants to purchase partnership units (unit warrants) for common stock or warrants to purchase common stock. Under the terms of the offer, which was completed May 1, 1993, each partner could elect to exchange each unit held or unit warrant held for 1,100 shares of common stock or warrants to purchase 1,100 shares of common stock of the Company, respectively. One partner exchanged 325 partnership units for warrants to purchase 357,500 shares of common stock. Total shares and warrants to purchase shares issued in the exchange offer were 1,632,950 and 381,700, respectively.

Effective May 19, 1993, the Company and the Partnership entered into a Technology Transfer Agreement wherein the Partnership conveyed all intellectual property in its control to the Company. As part of the conveyance, the Company tendered to the Partnership for liquidation all partnership units received pursuant to the exchange offer and received a 49.37 percent undivided interest in the intellectual property. The Company then purchased the remaining undivided interest in the intellectual property for rights to payments of 4.05 percent of gross revenues in excess of \$200 million, from sales of products which would, in the absence of the Technology Transfer Agreement, infringe a valid claim under any patent transferred to the Company.

The remaining net assets of the Partnership, \$176,642 of cash, were no longer combined with those of the Company in May 1993. Under the terms of the Technology Transfer Agreement, the Partnership ceased active sales of partnership units and income generating activities and no longer will enter into research and development contracts with the Company. The Partnership currently exists primarily for the purpose of collecting potential future payments from the Company as called for in the Technology Transfer Agreement.

Beginning in 1991, the Company changed its fiscal year from a fiscal year ending on October 31, to a calendar year. The new fiscal year was adopted prospectively.

In March 1996, the Company commenced a private offering wherein 712,500 shares of common stock were sold for net proceeds of \$4,031,532, which included warrants to purchase 60,201 shares of common stock at \$9.00 per share. These warrants are exercisable through the earlier of five years from issuance or three years from the filing for an initial public offering.

On October 3, 1996, the Board of Directors authorized management of the Company to file a registration statement with the SEC offering to the public 1,500,000 units (the Units), each unit consisting of one share of the Company's common stock, and one warrant to purchase one share of common stock.

ANTIVIRALS INC.  
(A DEVELOPMENT STAGE COMPANY)

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

1. ORGANIZATION AND NATURE OF BUSINESS: (CONTINUED)

The Units will separate immediately following issuance and thereafter the common stock and warrants that make up the Units will trade only as separate securities.

In November 1996, the shareholders approved a reverse split of the Company's outstanding Common Stock on the basis of one share for each three shares of the then-outstanding common stock. The share information in the accompanying financial statements has been retroactively restated to reflect the reverse split. The Common Stock will continue to have \$.0001 par value. The shareholders approved the authorization of a new class of preferred stock which includes 2,000,000 shares at \$.0001 par value.

The Company is in the development stage. Since its inception in 1980 through December 31, 1996, the Company has incurred losses of approximately \$12.4 million, substantially all of which resulted from expenditures related to research and development and general and administrative expenses. The Company has not generated any material revenue from product sales to date, and there can be no assurance that revenues from product sales will be achieved. Moreover, even if the Company does achieve revenues from product sales, the Company nevertheless expects to incur operating losses over the next several years. The financial statements have been prepared assuming that the Company will continue as a going concern. The Company's ability to achieve a profitable level of operations in the future will depend in large part on its completing product development of its antisense and/or drug delivery products, obtaining regulatory approvals for such products and bringing these products to market. During the period required to develop these products, the Company will require substantial financing. There is no assurance that such financing will be available when needed or that the Company's planned products will be commercially successful. If necessary, the Company's management will curtail expenditures in an effort to conserve operating funds. The likelihood of the long-term success of the Company must be considered in light of the expenses, difficulties and delays frequently encountered in the development and commercialization of new pharmaceutical products, competitive factors in the marketplace as well as the burdensome regulatory environment in which the Company operates. There can be no assurance that the Company will ever achieve significant revenues or profitable operations.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

USE OF ESTIMATES

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

CASH AND CASH EQUIVALENTS

The Company considers all highly liquid investments with an original maturity of three months or less to be cash equivalents.

SHORT-TERM SECURITIES--AVAILABLE-FOR-SALE

In January 1994, the Company adopted Statement of Financial Accounting Standards No. 115, "Accounting for Certain Investments in Debt and Equity Securities" (SFAS 115). In accordance with

ANTIVIRALS INC.  
(A DEVELOPMENT STAGE COMPANY)

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES: (CONTINUED)

SFAS 115, the Company has classified its investment securities as available-for-sale and, accordingly, such investment securities are stated on the balance sheet at their fair market value, which approximated cost at December 31, 1996 and exceeded cost by \$96,750 at December 31, 1995. The unrealized difference between the cost and the fair market value of these securities has been reflected as a separate component of shareholders' equity. These short-term securities included state government obligations with a cost, which approximated fair market value, of \$30,000 at December 31, 1995 and 1996 and common stock with a fair value of \$182,750 at December 31, 1995.

PROPERTY AND EQUIPMENT

Property and equipment is stated at cost and depreciated over the estimated useful lives of the assets, generally five years, using the straight-line method. Leasehold improvements are amortized over the shorter of the lease term or the estimated useful life of the asset.

PATENT COSTS

Patent costs consist primarily of legal and filing fees incurred to file patents on proprietary technology developed by the Company. Patent costs are amortized on a straight-line basis over the shorter of the estimated economic lives or the legal lives of the patents, generally 17 years. Total accumulated amortization at December 31, 1995 and 1996 was \$127,000 and \$168,000, respectively.

RESEARCH AND DEVELOPMENT

Research and development costs are expensed as incurred.

INCOME TAXES

The Company accounts for income taxes, in accordance with Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes" (SFAS 109). Under SFAS 109, deferred tax assets and liabilities are recorded based on the tax effected difference between the tax bases of assets and liabilities and their carrying amount for financial reporting purposes, referred to as temporary differences, using enacted marginal income tax rates.

NET LOSS PER SHARE

Net loss per share is calculated using the weighted average number of shares outstanding. Common equivalent shares (stock options and warrants) are excluded from the computation as their effect is antidilutive, except that, pursuant to the Securities and Exchange Commission ("SEC") Staff Accounting Bulletins, common and common equivalent shares issued during the period commencing 12 months prior to the initial filing of a proposed public offering at prices below the public offering price have been considered in the calculation as if they were outstanding for all periods presented (using the treasury stock method for stock options and warrants at the estimated initial public offering price).

UNAUDITED INTERIM FINANCIAL INFORMATION

The unaudited financial statements have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission. Certain information and note disclosures normally included in



ANTIVIRALS INC.  
(A DEVELOPMENT STAGE COMPANY)

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES: (CONTINUED)

annual financial statements prepared in accordance with generally accepted accounting principles have been condensed or omitted pursuant to those rules and regulations, although the Company believes that the disclosures made are adequate to make the information presented not misleading. These unaudited financial statements reflect, in the opinion of management, all adjustments (which include only normal recurring adjustments) necessary to fairly present the results of operations, changes in cash flows and financial position as of and the for periods presented. These unaudited financial statements should be read in conjunction with the audited financial statements and related notes thereto, appearing elsewhere herein. The results of the interim periods presented are not necessarily indicative of results to be expected for a full year.

3. SHAREHOLDERS' EQUITY:

At December 31, 1996, the Company had one stock option plan, the 1992 Stock Incentive Plan (the Plan) which provides for the issuance of incentive stock options to its employees and nonqualified stock options, stock appreciation rights and bonus rights to employees, directors of the Company and consultants. The Company has reserved 1,333,333 shares of common stock for issuance under the Plan. Options issued under the Plan generally vest ratably over four years and expire five to ten years from the date of grant.

During 1995, the Financial Accounting Standards Board issued SFAS 123, which defines a fair value based method of accounting for an employee stock option and similar equity instruments and encourages all entities to adopt that method of accounting for all of their employee stock compensation plans. However, it also allows an entity to continue to measure compensation cost for those plans using the method of accounting prescribed by Accounting Principles Board Opinion No. 25 (APB 25). Entities electing to remain with the accounting in APB 25 must make pro forma disclosures of net income and, if presented, earnings per share, as if the fair value based method of accounting defined in SFAS 123 had been adopted. The Company has elected to account for its stock-based compensation plans under APB 25; however, the Company has computed, for pro forma disclosure purposes, the value of all options granted during 1995 and 1996 using the Black-Scholes options pricing model as prescribed by SFAS 123 using the following weighted average assumptions for grants:

Risk-free interest rate.....	6%
Expected dividend yield.....	0%
	4 - 5
Expected lives.....	Years
Expected volatility.....	70%

Using the Black-Scholes methodology, the total value of options granted during 1995 and 1996 was \$431,582 and \$148,866, respectively, which would be amortized on a pro forma basis over the vesting period of the options (typically four years). The weighted average fair value of options granted during 1995 and 1996 was \$3.14 and \$3.72, respectively. The value of warrants granted in 1995 and 1996 have not been considered as such warrant grants related to the raising of additional equity.

ANTIVIRALS INC.  
(A DEVELOPMENT STAGE COMPANY)

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

3. SHAREHOLDERS' EQUITY: (CONTINUED)

If the Company had accounted for its stock-based compensation plans in accordance with SFAS 123, the Company's net income and net income per share would approximate the pro forma disclosures below:

	FOR THE YEAR ENDED DECEMBER 31,			
	1995		1996	
	AS REPORTED	PRO FORMA	AS REPORTED	PRO FORMA
	-----	-----	-----	-----
Net loss.....	\$ (2,556,886)	\$ (2,810,494)	\$ (2,087,362)	\$ (2,185,676)
Net loss per share.....	(0.37)	(0.40)	(0.25)	(0.27)

The effects of applying SFAS 123 in this pro forma disclosure are not indicative of future amounts. SFAS 123 does not apply to awards prior to January 1, 1995, and additional awards are anticipated in future years.

A summary of the status of the Company's stock option plans and changes are presented in the following table:

	FOR THE YEAR ENDED DECEMBER 31,			
	1995		1996	
	SHARES	WEIGHTED AVERAGE EXERCISE PRICE	SHARES	WEIGHTED AVERAGE EXERCISE PRICE
	-----	-----	-----	-----
Options outstanding at beginning of year.....	977,148	\$ 4.65	1,109,828	\$ 4.71
Granted.....	137,400	5.01	40,000	6.00
Exercised.....	--	--	--	--
Canceled.....	4,720	4.95	26,001	4.98
Options outstanding at end of year.....	1,109,828	4.71	1,123,827	4.75
Exercisable at end of year.....	804,181	\$ 4.67	960,495	\$ 4.61

The following table sets forth the exercise price range, number of shares outstanding at December 31, 1996, weighted average remaining contractual life, weighted average exercise price, number of exercisable shares and weighted average exercise price of exercisable options by groups of similar price and grant date:

OPTIONS OUTSTANDING					
EXERCISE PRICE	OUTSTANDING SHARES AT DECEMBER 31, 1996	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE (YEARS)	WEIGHTED AVERAGE EXERCISE PRICE	OPTIONS EXERCISABLE	
				EXERCISABLE OPTIONS	WEIGHTED AVERAGE EXERCISE PRICE
-----	-----	-----	-----	-----	-----
\$4.56	790,901	5.45	\$ 4.56	724,236	\$ 4.56
4.95	183,679	7.46	4.95	127,012	4.95
5.01	99,800	0.42	5.01	99,800	5.01
6.00	49,447	7.61	6.00	9,447	6.00



ANTIVIRALS INC.  
(A DEVELOPMENT STAGE COMPANY)

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

3. SHAREHOLDERS' EQUITY: (CONTINUED)

The Company has also issued warrants for the purchase of common stock in conjunction with financing and compensation arrangements. A summary of the status of the Company's warrants and changes are presented in the following table:

	YEAR ENDED DECEMBER 31,			
	1995		1996	
	SHARES	WEIGHTED AVERAGE EXERCISE PRICE	SHARES	WEIGHTED AVERAGE EXERCISE PRICE
Warrants outstanding at beginning of year.....	1,324,733	\$ 1.02	1,324,733	\$ 1.02
Granted.....	38,000	0.33	60,201	9.00
Exercised.....	--	--	957,500	0.0003
Canceled.....	38,000	0.33	--	--
Warrants outstanding at end of year....	1,324,733	1.02	427,434	4.43
Exercisable at end of year.....	1,299,736	\$ 1.04	402,437	\$ 4.69

The following table sets forth the exercise price range, number of shares outstanding at December 31, 1996, weighted average remaining contractual life, weighted average exercise price, number of exercisable shares and weighted average exercise price of exercisable warrants by groups of similar price and grant date:

WARRANTS OUTSTANDING					
EXERCISE PRICE	OUTSTANDING SHARES AT DECEMBER 31, 1996	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE (YEARS)	WEIGHTED AVERAGE EXERCISE PRICE	WARRANTS EXERCISABLE	
				EXERCISABLE WARRANTS	WEIGHTED AVERAGE EXERCISE PRICE
\$ 0.0003	124,799	Varies	\$ 0.0003	99,802	\$ 0.0003
1.14	22,000	Varies	1.14	22,000	1.14
4.56	1,100	5.75	4.56	1,100	4.56
6.00	219,334	Varies	6.00	219,334	6.00
9.00	60,201	Varies	9.00	60,201	9.00

4. INCOME TAXES:

At December 31, 1995 and 1996, the Company had federal and state tax net operating loss carryforwards of approximately \$7,731,000 and \$9,410,000, respectively. The difference between the operating loss carryforwards on a tax basis and a book basis is due principally to differences in depreciation, amortization, and treatment of research and development costs. The federal and state carryforwards will begin to expire in 1997 and 2008, respectively, if not otherwise used. The Internal Revenue Code rules under Section 382 could limit the future use of these losses based on ownership changes in the value of the Company's stock.

The Company had a net deferred tax asset of \$3,808,000 and \$4,660,000 at December 31, 1995 and 1996, primarily from net operating loss carryforwards. A valuation allowance was recorded to reduce the net deferred tax asset to zero. The net change in the valuation allowance for deferred tax assets was an

ANTIVIRALS INC.  
(A DEVELOPMENT STAGE COMPANY)

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

4. INCOME TAXES: (CONTINUED)

increase of approximately \$1,195,000 and \$852,000 for the years ended December 31, 1995 and 1996, respectively, mainly due to the increase in the net operating loss carryforwards.

An analysis of the deferred tax assets and liabilities as of December 31, 1995, is as follows:

	DEFERRED TAX ASSET	DEFERRED TAX LIABILITY	TOTAL
	-----	-----	-----
Net operating loss carryforwards.....	\$3,092,000	\$ --	\$ 3,092,000
Accrued expenses.....	108,000	--	108,000
Depreciation.....	298,000	--	298,000
Research and development tax credit.....	490,000	--	490,000
	-----	-----	-----
Patent costs.....	--	(180,000)	(180,000)
	-----	-----	-----
	\$3,988,000	\$ (180,000)	3,808,000
	-----	-----	-----
Valuation allowance.....			(3,808,000)
			-----
			\$ --
			-----
			-----

An analysis of the deferred tax assets and liabilities as of December 31, 1996, is as follows:

	DEFERRED TAX ASSET	DEFERRED TAX LIABILITY	TOTAL
	-----	-----	-----
Net operating loss carryforwards.....	\$3,764,000	\$ --	\$ 3,764,000
Accrued expenses.....	23,000	--	23,000
Depreciation.....	403,000	--	403,000
Research and development tax credit.....	660,000	--	660,000
Patent costs.....	--	(190,000)	(190,000)
	-----	-----	-----
	\$4,850,000	\$ (190,000)	4,660,000
	-----	-----	-----
Valuation allowance.....			(4,660,000)
			-----
			\$ --
			-----
			-----

5. LEASE OBLIGATIONS:

The Company leases office and laboratory facilities under various noncancelable operating leases through December 1997. Rent expense under these leases was \$168,000 and \$193,000 for the years ended December 31, 1995 and 1996, respectively, and \$835,000 for the period from July 22, 1980 through December 31, 1996.

In September 1996, the Company leased additional laboratory facilities and extended the lease on its existing laboratory facilities through 2004. At December 31, 1996, the aggregate noncancelable future minimum payments under these leases were \$288,000, \$273,000, \$258,000, \$266,000 and \$274,000 for the years ended December 31, 1997, 1998, 1999, 2000 and 2001, respectively, and \$871,000 thereafter.

6. RELATED PARTY TRANSACTIONS:

The Company paid \$8,000, \$12,000 and \$233,000 to certain nonemployee directors for financial consulting, scientific research services and reimbursement for out-of-pocket costs of attending Board of

ANTIVIRALS INC.  
(A DEVELOPMENT STAGE COMPANY)

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

6. RELATED PARTY TRANSACTIONS: (CONTINUED)

Director meetings during the years ended December 31, 1995 and 1996, and the period from July 22, 1980 through December 31, 1996, respectively.

7. SUBSEQUENT EVENTS:

On January 20, 1997, AGDG and the Company amended the Technology Transfer Agreement to reduce the Technology Fees arising from the sale of diagnostic products from 4.05% to 2% and to remove the \$200 million exemption with respect to sales of such diagnostic products. The Company also granted to AGDG a royalty-bearing license to make, use and sell small quantities of product derived from the Intellectual Property for research purposes only.

In 1997, as a condition to its planned initial public offering, the Company intends to offer to holders of 1,292,973 shares of its common stock, the right to rescind their purchase of shares of the Company's common stock. If all such offerees elect to rescind their purchases, the Company will be required to pay these shareholders \$3,121,965 and 568.67 units of limited partnership interests in AGDG, plus statutory interest. To the extent these shareholders accept the rescission offer, the Company will use up to \$1,500,000 of its cash resources to repurchase the shares. If any additional consideration is required to repurchase the shares, the Company will issue unsecured promissory notes to the shareholders on a pro rata basis. Such notes will bear interest at 9% per annum and mature between 18 and 36 months. If additional Partnership units are issued, the fees arising from the sale of therapeutic products will be adjusted on a pro rata basis, such that if all Partnership unit holders accept the rescission offer, the fees for sales of therapeutic products will increase to approximately 5.25%. Fees related to diagnostic products under such a scenario would remain at 2%. The Company believes that its potential exposure to litigation for possible past violations of securities laws will be effectively eliminated by this rescission offer. All periods presented have been restated to reflect the amount of common stock subject to the rescission offer outside of shareholders' equity.

The Company estimates that the total amount of its obligation for interest to rescinding shareholders could aggregate approximately \$2,129,000 if all eligible shareholders accepted the rescission offer. Because of the contingent nature of such liability and because the ultimate amount to be refunded is not presently known, the potential interest liability has not been accrued but will be recorded as an expense of the Company if and when the amount becomes an actual liability.

The rescission offer will not be made to holders of 22,021 shares of common stock in Florida as state securities laws do not permit such offerings. The rescission offer will also not be made to holders of 192,603 shares of common stock who reside in California and Nevada because the Company believes its potential liability to these holders has been eliminated by the running of applicable statute of limitations. If all the shareholders in Florida, Nevada and California were to successfully assert claims against the Company, the Company would be required to pay these holders approximately \$319,000 and 55 units of limited partnership interests in AGDG, plus \$237,000 in statutory interest. Since no rescission offer has been made to these shareholders and because of the contingent nature of such obligations, the potential liability has not been reflected in the accompanying financial statements.

The Company's cash flow and its financial position could be materially affected by the results of the rescission offer. The financial statements do not include any adjustments that might result from the outcome of the rescission offer.

NO DEALER, SALESPERSON OR OTHER PERSON HAS BEEN AUTHORIZED TO GIVE ANY INFORMATION OR TO MAKE ANY REPRESENTATIONS NOT CONTAINED IN THIS PROSPECTUS IN CONNECTION WITH THE OFFERING COVERED BY THIS PROSPECTUS. IF GIVEN OR MADE, SUCH INFORMATION OR REPRESENTATIONS MUST NOT BE RELIED UPON AS HAVING BEEN AUTHORIZED BY THE COMPANY OR ANY UNDERWRITER. THIS PROSPECTUS DOES NOT CONSTITUTE AN OFFER TO SELL, OR A SOLICITATION OF ANY OFFER TO BUY, UNITS IN ANY JURISDICTION TO ANY PERSON TO WHOM IT IS UNLAWFUL TO MAKE SUCH AN OFFER OR SOLICITATION IN SUCH JURISDICTION. SUBJECT TO ANY DUTIES AND OBLIGATIONS UNDER APPLICABLE SECURITIES LAWS TO UPDATE INFORMATION CONTAINED HEREIN OR INCORPORATED BY REFERENCE HEREIN, NEITHER THE DELIVERY OF THIS PROSPECTUS NOR ANY SALE MADE HEREUNDER SHALL, UNDER ANY CIRCUMSTANCES, CREATE ANY IMPLICATION THAT THE INFORMATION CONTAINED HEREIN IS CORRECT AS OF ANY TIME SUBSEQUENT TO THE DATE HEREOF OR THAT THERE HAS BEEN NO CHANGE IN THE AFFAIRS OF THE COMPANY SINCE THE DATE HEREOF.

TABLE OF CONTENTS

	PAGE
Prospectus Summary.....	3
The Company.....	3
Risk Factors.....	7
Use of Proceeds.....	16
Dividend Policy.....	16
Capitalization.....	17
Dilution.....	17
Selected Financial Data.....	19
Management's Discussion and Analysis of Financial Condition and Results of Operations of the Company.....	21
Business.....	23
Management.....	38
Certain Transactions.....	45
Principal Shareholders.....	47
Description of Securities.....	50
Shares Eligible for Future Sale.....	57
Underwriting.....	59
Legal Matters.....	60
Experts.....	60
Additional Information.....	61
Financial Statements.....	F-1

UNTIL , 1997 (25 DAYS AFTER THE DATE OF THIS PROSPECTUS), ALL DEALERS EFFECTING TRANSACTIONS IN THE UNITS, COMMON STOCK OR THE WARRANTS, WHETHER OR NOT PARTICIPATING IN THIS DISTRIBUTION, MAY BE REQUIRED TO DELIVER A PROSPECTUS. THIS IS IN ADDITION TO THE OBLIGATIONS OF DEALERS TO DELIVER A PROSPECTUS WHEN ACTING AS UNDERWRITERS AND WITH RESPECT TO THEIR UNSOLD ALLOTMENTS OR SUBSCRIPTIONS.

2,000,000 UNITS

[LOGO]

PROSPECTUS

PAULSON INVESTMENT  
COMPANY, INC.

MILLENNIUM FINANCIAL  
GROUP, INC.

FIRST COLONIAL SECURITIES GROUP, INC.

, 1997



PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 24. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

As an Oregon corporation the Company is subject to the Oregon Business Corporation Act ("OBCA") and the exculpation from liability and indemnification provisions contained therein. Pursuant to Section 60.047(2)(d) of the OBCA, Article VI of the Company's Third Restated Articles of Incorporation (the "Articles") eliminates the liability of the Company's directors to the Company or its stockholders, except for any liability related to breach of the duty of loyalty, actions not in good faith and certain other liabilities.

Section 60.387 et seq. of the OBCA allows corporations to indemnify their directors and officers against liability where the director or officer has acted in good faith and with a reasonable belief that actions taken were in the best interests of the corporation or at least not adverse to the corporation's best interests and, if in a criminal proceeding, the individual had no reasonable cause to believe the conduct in question was unlawful. Under the OBCA, corporations may not indemnify against liability in connection with a claim by or in the right of the corporation but may indemnify against the reasonable expenses associated with such claims unless the party is adjusted liable to the corporation. Corporations may not indemnify if the party is adjudged liable for receiving improper personal benefit. The OBCA provides for mandatory indemnification of directors against all reasonable expenses incurred in the successful defense of any claim made or threatened whether or not such claim was by or in the right of the corporation. Finally, a court may order indemnification if it determines that the director or officer is fairly and reasonably entitled to indemnification in view of all the relevant circumstances whether or not the director or officer met the good faith and reasonable belief standards of conduct set out in the statute.

The OBCA also provides that the statutory indemnification provisions are not deemed exclusive of any other rights to which directors or officers may be entitled under a corporation's articles of incorporation or bylaws, any agreement, general or specific action of the board of directors, vote of stockholders or otherwise.

Article VII of the Articles requires the Company to indemnify its directors and officers to the fullest extent not prohibited by law. The Bylaws of the Company also permit the Company to indemnify its directors and officers to the fullest extent permitted by the OBCA.

ITEM 25. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth the costs and expenses, other than underwriting discounts and the Representatives' non-accountable expense allowance, expected to be incurred by the Registrant in connection with the offering described in this Registration Statement. All amounts, except the SEC registration fee, the NASD filing fee and the NASDAQ National Market System listing fee, are estimates.

SEC Registration Fee.....	\$ 16,267
NASD Filing Fee.....	5,218
NASDAQ Listing Fee.....	50,000
Printing and Engraving Expenses.....	65,000
Accounting Fees and Expenses.....	40,000
Legal Fees and Expenses.....	200,000
Blue Sky Fees and Expenses (including fees of Counsel).....	50,000
Transfer Agent and Registrar Fees.....	13,500
Miscellaneous Expenses.....	35,015
	-----
Total.....	\$ 475,000
	-----
	-----

ITEM 26. RECENT SALES OF UNREGISTERED SECURITIES.

Within the last three years, the Company has sold securities without registration under the Securities Act in the transactions and in reliance on the exemptions from registration described below.

1. Between November 1995 and October 1996, the Company sold an aggregate of 866,172 shares of its Common Stock at \$6.00 per share to 208 purchasers. The sale of these shares was exempt from registration pursuant to Section 4(2) of the Securities Act and Regulation D Rule 506, a notice of which was filed with the SEC on October 10, 1995, and subsequently amended on June 14, 1996, and July 22, 1996. The Company obtained detailed information from each investor which provided the Company with a reasonable belief that all investors were "accredited investors" as defined in the Securities Act.

2. On March 15, 1996, the Company issued 957,500 shares of its Common Stock pursuant to the exercise of warrants that were issued to Oregon Resource and Technology Development Corporation (ORTDC). The issuance of the Common Stock upon the exercise of the warrants was exempt from registration pursuant to Section 4(2) of the Securities Act. The Company reasonably believed that ORTDC was an "accredited investor" at the time of both the warrant issuance and exercise. Further, ORTDC was granted a seat on the Company's Board of Directors during the time the warrants were outstanding.

3. Between January 1994 and April 1995, the Company sold an aggregate of 752,972 shares of its Common Stock at \$4.95 per share to 145 purchasers. The sale of these shares was exempt from registration pursuant to Regulation D, Rule 505 and Section 4(2) of the Securities Act. The Company obtained detailed information from each investor which provided the Company with a reasonable belief that there were no more than 35 "unaccredited investors" who purchased shares in the offering. The Company also provided investors with an offering document containing all necessary disclosures.

ITEM 27. EXHIBITS.

(a) Exhibits

NUMBER	DESCRIPTION
1.0	Form of Underwriting Agreement
3.1	Third Restated Articles of Incorporation of AntiVirals, Inc.+
3.2	Bylaws of AntiVirals, Inc.+
4.1	Form of Specimen Certificate for Common Stock*
4.2	Form of Warrant for Purchase of Common Stock+
4.3	Form of Warrant Agreement+
4.4	Form of Representative's Warrant+
4.5	Registration Rights Agreement between AntiVirals Inc. and Ice Bear, Inc., dated May 20, 1992.+
4.6	Purchase Warrants between AntiVirals Inc. and ORTDF, dated August 4, 1992.+
5.0	Opinion of Ater Wynne Hewitt Dodson & Skerritt, LLP as to the legality of the securities being registered*
10.1	1992 Stock Incentive Plan+
10.2	Employment Agreement with Denis R. Burger, Ph.D. dated November 4, 1996+
10.3	Employment Agreement with James Summerton, Ph.D. dated November 4, 1996+
10.4	Employment Agreement with Alan P. Timmins dated November 4, 1996+

NUMBER	DESCRIPTION
10.5	Employment Agreement with Dwight Weller, Ph.D. dated November 4, 1996+
10.6	Technology Transfer Agreement between Anti-Gene Development Group and AntiVirals Inc., dated February 9, 1992.
10.7	Amendment to Technology Transfer Agreement between Anti-Gene Development Group and AntiVirals Inc. dated January 20, 1996.+
10.8	License and Option Agreement between Anti-Gene Development Group and AntiVirals Inc., dated February 9, 1993.+
10.9	Commercial Lease between Research Way Investments, Landlord, and AntiVirals Inc., Tenant, dated June 15, 1992.+
10.10	Lease between Benjamin Franklin Plaza, Inc., Landlord, and AntiVirals Inc., Tenant, dated June 17, 1992.+
10.11	First Amendment to Lease between Benjamin Franklin Plaza, Inc., Landlord, and AntiVirals Inc., Tenant, dated July 24, 1995.+
23.1	Consent of Ater Wynne Hewitt Dodson & Skerritt, LLP (included in legal opinion filed as Exhibit 5.0)*
23.2	Consent of Arthur Andersen LLP
23.3	Consent of Peter Dehlinger & Associates.
25.0	Powers of Attorney (included in signature page in Part II of the Registration Statement)

\* To be filed by amendment.

+ Previously filed as Exhibit to this Registration Statement.

(b) Financial Statement Schedules

ITEM 28. UNDERTAKINGS.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the provisions described in Item 24, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes:

1. To file, during any period in which it offers or sells securities, a post-effective amendment to this registration statement to:

(i) include any prospectus required by section 10(a)(3) of the Securities Act;

(ii) reflect in the prospectus any facts or events which, individually or together, represent a fundamental change in the information set forth in the registration statement; and

(iii) include any additional or changed material information on the plan of distribution.

2. That, for determining liability under the Securities Act, it will treat each post-effective amendment as a new registration statement of the securities offered, and the offering of the securities at that time to be the initial bona fide offering.

3. To file a post-effective amendment to remove from registration any of the securities that remain unsold at the end of the offering.

4. That, for determining any liability under the Securities Act, it will treat the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Company pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act as part of this registration statement as of the time it was declared effective.

5. That, for determining any liability under the Securities Act, it will treat each post-effective amendment that contains a form of prospectus as a new registration statement for the securities offered therein, and the offering of the securities at that time as the initial bona fide offering thereof.

SIGNATURES

In accordance with the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form SB-2 and authorized this registration statement to be signed on its behalf by the undersigned in the city of Portland, state of Oregon, on May 27, 1997.

ANTIVIRALS INC.

By: /s/ DENIS R. BURGER

-----  
Denis R. Burger,  
CHIEF EXECUTIVE OFFICER

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Denis R. Burger and Alan P. Timmins and each of them singly, as true and lawful attorneys-in-fact and agents with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities to sign the Registration Statement filed herewith and any or all amendments to said Registration Statement (including post-effective amendments), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission granting unto said attorneys-in-fact and agents and full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the foregoing, as full to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or his substitute, may lawfully do or cause to be done by virtue hereof.

Witness our hands on the date set forth below.

In accordance with the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacity stated on January 22, 1997.

SIGNATURE

TITLE

-----  
/s/ DENIS R. BURGER

Chief Executive Officer  
and Director (Principal  
Executive Officer)

-----  
Denis R. Burger

/s/ JAMES E. SUMMERTON

President, Chief  
Scientific Officer and  
Director

-----  
James E. Summerton

/s/ ALAN P. TIMMINS

Chief Operating Officer  
and Chief Financial  
Officer (Principal  
Financial and Accounting  
Officer)

-----  
Alan P. Timmins

SIGNATURE

TITLE

-----  
/s/ DWIGHT D. WELLER

Vice President of Research  
and Development and  
Director

-----  
Dwight D. Weller

/s/ JOHN A. BEAULIEU

-----  
Chairman of the Board

-----  
John A. Beaulieu

/s/ NICK BUNICK

-----  
Director

-----  
Nick Bunick

/s/ JAMES B. HICKS

-----  
Director

-----  
James B. Hicks

/s/ DONALD R. JOHNSON

-----  
Director

-----  
Donald R. Johnson

/s/ JAMES E. REINMUTH

-----  
Director

-----  
James E. Reinmuth

/s/ JOSEPH RUBINFELD

-----  
Director

-----  
Joseph Rubinfeld

ANTIVIRALS INC.  
INDEX TO EXHIBITS

NUMBER	DESCRIPTION	PAGE
1.0	Form of Underwriting Agreement.....	
3.1	Third Restated Articles of Incorporation of AntiVirals, Inc.+.....	
3.2	Bylaws of AntiVirals, Inc.+.....	
4.1	Form of Specimen Certificate for Common Stock*.....	
4.2	Form of Warrant for Purchase of Common Stock+.....	
4.3	Form of Warrant Agreement+.....	
4.4	Form of Representative's Warrant+.....	
4.5	Registration Rights Agreement between AntiVirals Inc. and Ice Bear, Inc., dated May 20, 1992.+.....	
4.6	Purchase Warrants between AntiVirals Inc. and ORTDF, dated August 4, 1992.+.....	
5.0	Opinion of Ater Wynne Hewitt Dodson & Skerritt, LLP as to the legality of the securities being registered*.....	
10.1	1992 Stock Incentive Plan+.....	
10.2	Employment Agreement with Denis R. Burger, Ph.D. dated November 4, 1996+.....	
10.3	Employment Agreement with James Summerton, Ph.D. dated November 4, 1996+	
10.4	Employment Agreement with Alan P. Timmins dated November 4, 1996+.....	
10.5	Employment Agreement with Dwight Weller, Ph.D. dated November 4, 1996+.....	
10.6	Technology Transfer Agreement between Anti-Gene Development Group and AntiVirals Inc., dated February 9, 1992.+.....	
10.7	Amendment to Technology Transfer Agreement between Anti-Gene Development Group and AntiVirals Inc. dated January 20, 1996.+.....	
10.8	License and Option Agreement between Anti-Gene Development Group and AntiVirals Inc., dated February 9, 1993.+.....	
10.9	Commercial Lease between Research Way Investments, Landlord, and AntiVirals Inc., Tenant, dated June 15, 1992.+.....	
10.10	Lease between Benjamin Franklin Plaza, Inc., Landlord, and AntiVirals Inc., Tenant, dated June 17, 1992.+.....	
10.11	First Amendment to Lease between Benjamin Franklin Plaza, Inc., Landlord, and AntiVirals Inc., Tenant, dated July 24, 1995.+.....	
23.1	Consent of Ater Wynne Hewitt Dodson & Skerritt, LLP (included in legal opinion filed as Exhibit 5.0)*.....	
23.2	Consent of Arthur Andersen LLP.....	
23.3	Consent of Peter Dehlinger & Associates.....	
25.0	Powers of Attorney (included in signature page in Part II of the Registration Statement)...	

\* To be filed by amendment.

+ Previously filed as an Exhibit to this Registration Statement.

2,000,000 UNITS

ANTIVIRALS INC.

UNDERWRITING AGREEMENT

\_\_\_\_\_, 1997

Paulson Investment Company, Inc.  
Millenium Financial Group  
First Colonial Securities Group, Inc.  
As Representatives of the  
Several Underwriters  
c/o Paulson Investment Company, Inc.  
811 SW Front Avenue  
Portland, Oregon 97204

Gentlemen:

AntiVirals Inc., an Oregon corporation (the "Company"), proposes to sell to the several underwriters (the "Underwriters") named in Schedule I hereto for whom you are acting as Representative (the "Representative") an aggregate of 2,000,000 Units (the "Firm Units"). Each Units will consist of one share of the Company's Common Stock, \$.0001 par value ("Common Stock"), and one Common Stock Purchase Warrant substantially in the form filed as an exhibit to the Registration Statement (hereinafter defined) (the "Warrants"). The respective amounts of the Firm Units to be so purchased by the several Underwriters are set forth opposite their names in Schedule I hereto. The Company also proposes to grant to the Underwriters an option to purchase in the aggregate up to 225,000 additional Units (the "Option Units"), identical to the Firm Units, as set forth below. The offer and sale of the Firm Units and the Option Units pursuant to this Agreement is referred to as the "Offering."

As the Representatives, you have advised the Company (a) that you are authorized to enter into this Agreement for yourselves as Representatives and on behalf of the several Underwriters, and (b) that the several Underwriters are willing, acting severally and not jointly, to purchase the numbers of Firm Units set forth opposite their respective names in Schedule I. The Firm Units and the Option Units (to the extent the aforementioned option is exercised) are herein collectively called the "Units."

In consideration of the mutual agreements contained herein and of the interests of the parties in the transactions contemplated hereby, the parties hereto agree as follows:



1. REPRESENTATIONS AND WARRANTIES OF THE COMPANY.

The Company represents and warrants to each of the Underwriters as follows:

(a) A registration statement on Form SB-2 (File No. 333-20513) with respect to the Units has been carefully prepared by the Company in conformity with the requirements of the Securities Act of 1933, as amended (the "Act"), and the Rules and Regulations (the "Rules and Regulations") of the Securities and Exchange Commission (the "Commission") thereunder and has been filed with the Commission. Copies of such registration statement, including any amendments thereto, the preliminary prospectuses (meeting the requirements of the Rules and Regulations) contained therein and the exhibits, financial statements and schedules, as finally amended and revised, have heretofore been delivered by the Company to you. Such registration statement, together with any registration statement filed by the Company pursuant to Rule 462(b) of the Act, herein referred to as the "Registration Statement," which shall be deemed to include all information omitted therefrom in reliance upon Rule 430A and contained in the Prospectus referred to below, has become effective under the Act and no post-effective amendment to the Registration Statement has been filed as of the date of this Agreement. "Prospectus" means (a) the form of prospectus first filed with the Commission pursuant to Rule 424(b) or (b) the last preliminary prospectus included in the Registration Statement filed prior to the time it becomes effective or filed pursuant to Rule 424(a) under the Act that is delivered by the Company to the Underwriters for delivery to purchasers of the Units, together with the term sheet or abbreviated term sheet filed with the Commission pursuant to Rule 424(b)(7) under the Act. Each preliminary prospectus included in the Registration Statement prior to the time it becomes effective is herein referred to as a "Preliminary Prospectus."

(b) The Company has been duly organized and is validly existing as a corporation in good standing under the laws of the state of Oregon, with corporate power and authority to own or lease its properties and conduct its business as described in the Registration Statement. Except as described in the Prospectus, the Company does not own and never has owned a controlling interest in any corporation or other business entity that has or ever has had any material assets, liabilities or operations. The Company is duly qualified to transact business in all jurisdictions in which the conduct of its business requires such qualification.

(c) The outstanding shares of Common Stock of the Company have been duly authorized and validly issued and are fully paid and non-assessable and have been issued and sold by the Company in compliance in all material respects with applicable securities laws; the Common Stock and Warrants to be included in the Units have been duly authorized and when issued and paid for as contemplated herein will be validly issued, fully paid and non-assessable; and no preemptive rights of stockholders exist with respect to any security of the Company or the issue and sale thereof. Neither the filing of the Registration Statement nor the offering or sale of the Units as contemplated by this Agreement gives rise to any rights, other than those which have been waived or satisfied, for or relating to the registration of any shares of Common Stock or other securities of the Company.

(d) The information set forth under the caption "Capitalization" in the Prospectus is true and correct. The Common Stock and the Warrants conform to the description thereof contained in the Registration Statement. The forms of certificates for the Common Stock and Warrants conform to the corporate law of the jurisdiction of the Company's incorporation.

(e) The Commission has not issued an order preventing or suspending the use of any Prospectus relating to the proposed offering of the Units and has not instituted proceedings for that purpose. The Registration Statement contains, and the Prospectus and any amendments or supplements thereto will contain, all statements which are required to be stated therein by, and will conform, to the requirements of the Act and the Rules and Regulations. The Registration Statement and any amendment thereto do not contain, and will not contain, any untrue statement of a material fact and do not omit, and will not omit, to state any material fact required to be stated therein or necessary to make the statements therein not misleading. The Prospectus and any amendments and supplements thereto do not contain, and will not contain, any untrue statement of material fact; and do not omit, and will not omit, to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that the Company makes no representations or warranties as to information contained in or omitted from the Registration Statement or the Prospectus, or any such amendment or supplement, in reliance upon, and in conformity with, written information furnished to the Company by or on behalf of any Underwriter through the Representative, specifically for use in the preparation thereof.

(f) The financial statements of the Company, together with related notes and schedules as set forth in the Registration Statement, present fairly the financial position and the results of operations and cash flows of the Company at the indicated dates and for the indicated periods. Such financial statements and related schedules have been prepared in accordance with generally accepted principles of accounting, consistently applied throughout the periods involved, except as disclosed herein, and all adjustments necessary for a fair presentation of results for such periods have been made. The summary financial and statistical data of the Company included in the Registration Statement present fairly the information shown therein and such data have been compiled on a basis consistent with the financial statements presented therein and the books and records of the Company.

(g) Arthur Andersen LLP, who have audited certain of the financial statements filed with the Commission as part of the Registration Statement, are independent public accountants as required by the Act and the Rules and Regulations.

(h) There is no action, suit, claim or proceeding pending or, to the knowledge of the Company, threatened against the Company before any court or administrative agency or otherwise which if determined adversely to the Company might result in any material adverse change in the earnings, business, management, properties, assets, rights, operations, condition (financial or otherwise) or prospects of the Company or

to prevent the consummation of the transactions contemplated hereby, except as set forth in the Registration Statement.

(i) The Company has good and marketable title to all of the properties and assets reflected in the financial statements (or as described in the Registration Statement) hereinabove described, subject to no lien, mortgage, pledge, charge or encumbrance of any kind except those reflected in such financial statements (or as described in the Registration Statement) or which are not material in amount. The Company occupies its leased properties under valid and binding leases conforming in all material respects to the description thereof set forth in the Registration Statement.

(j) The Company has filed all federal, state, local and foreign income tax returns which have been required to be filed and has paid all taxes indicated by said returns and all assessments received by it to the extent that such taxes have become due and are not being contested in good faith. All tax liabilities have been adequately provided for in the financial statements of the Company.

(k) Since the respective dates as of which information is given in the Registration Statement, as it may be amended or supplemented, there has not been any material adverse change or any development involving a prospective material adverse change in or affecting the earnings, business, management, properties, assets, rights, operations, condition (financial or otherwise), or prospects of the Company, whether or not occurring in the ordinary course of business, and there has not been any material transaction entered into or any material transaction that is probable of being entered into by the Company, other than transactions in the ordinary course of business and changes and transactions described in the Registration Statement, as it may be amended or supplemented. The Company has no material contingent obligations which are not disclosed in the Company's financial statements included in the Registration Statement or elsewhere in the Prospectus.

(l) The Company is not, nor, with the giving of notice or lapse of time or both, will it be, in violation of or in default under its articles of incorporation or bylaws or under any agreement, lease, contract, indenture or other instrument or obligation to which it is a party or by which it, or any of its properties, is bound and which default is of material significance in respect of the condition, financial or otherwise of the Company or the business, management, properties, assets, rights, operations, condition (financial or otherwise) or prospects of the Company. The execution and delivery of this Agreement and the consummation of the transactions herein contemplated and the fulfillment of the terms hereof will not conflict with or result in a breach of any of the terms or provisions of, or constitute a default under, any indenture, mortgage, deed of trust or other agreement or instrument to which the Company is a party, or of the articles of incorporation or bylaws of the Company or any order, rule or regulation applicable to the Company of any court or of any regulatory body or administrative agency or other governmental body having jurisdiction.

(m) Each approval, consent, order, authorization, designation, declaration or filing by or with any regulatory, administrative or other governmental body necessary in

connection with the execution and delivery by the Company of this Agreement and the consummation of the transactions herein contemplated (except such additional steps as may be required by the Commission, the National Association of Securities Dealers, Inc. (the "NASD") or such additional steps as may be necessary to qualify the Units for public offering by the Underwriters under state securities or Blue Sky laws) has been obtained or made and is in full force and effect.

(n) The Company holds all material patents, patent rights trademarks, trade names, copyrights, trade secrets and licenses of any of the foregoing (collectively, "Intellectual Property Rights") that are necessary to the conduct of its business; there is no claim pending or, to the best knowledge of the Company, threatened against the Company alleging any infringement of Intellectual Property Rights, or any violation of the terms of any license relating to Intellectual Property Rights, nor does the Company know of any basis for any such claim. The Company knows of no material infringement by others of Intellectual Property Rights owned by or licensed to the Company. The Company has obtained, is in compliance in all material respects with and maintains in full force and effect all material licenses, certificates, permits, orders or other, similar authorizations granted or issued by any governmental agency (collectively, "Government Permits") required to conduct its business as it is presently conducted. All applications for additional Government Permits described in the Prospectus as having been made by the Company have been properly and effectively made in accordance with the applicable laws and regulations with respect thereto and such applications constitute, in the best judgment of the Company's management, those reasonably required to have been made in order to carry out the Company's business plan as described in the Prospectus. No proceeding to revoke, limit or otherwise materially change any Government Permit has been commenced or, to the Company's best knowledge, is threatened against the Company or any supplier to the Company with respect to materials supplied to the Company, and the Company has no reason to anticipate that any such proceeding will be commenced against the Company or any such supplier. Except as disclosed or contemplated in the Prospectus, the Company has no reason to believe that any pending application for a Government Permit will be denied or limited in a manner inconsistent with the Company's business plan as described in the Prospectus.

(o) The Company is in all material respects in compliance with all applicable Environmental Laws. The Company has no knowledge of any past, present or, as anticipated by the Company, future events, conditions, activities, investigation, studies, plans or proposals that (i) would interfere with or prevent compliance with any Environmental Law by the Company or (ii) could reasonably be expected to give rise to any common law or other liability, or otherwise form the basis of a claim, action, suit, proceeding, hearing or investigation, involving the Company and related in any way to Hazardous Substances or Environmental Laws. Except for the prudent and safe use and management of Hazardous Substances in the ordinary course of the Company's business, (i) no Hazardous Substance is or has been used, treated, stored, generated, manufactured or otherwise handled on or at any Facility and (ii) to the Company's best knowledge, no Hazardous Substance has otherwise come to be located in, on or under any Facility. No Hazardous Substances are stored at any Facility except in quantities necessary to satisfy the reasonably anticipated use or consumption

by the Company. No litigation, claim, proceeding or governmental investigation is pending regarding any environmental matter for which the Company has been served or otherwise notified or, to the knowledge of the Company threatened or asserted against the Company, or the officers or directors of the Company in their capacities as such, or any Facility or the Company's business. There are no orders, judgments or decrees of any court or of any governmental agency or instrumentality under any Environmental Law which specifically apply to the Company, any Facility or any of the Company's operations. The Company has not received from a governmental authority or other person (i) any notice that it is a potentially responsible person for any Contaminated site or (ii) any request for information about a site alleged to be Contaminated or regarding the disposal of Hazardous Substances.

There is no litigation or proceeding against any other person by the Company regarding any environmental matter. The Company has disclosed in the Prospectus or made available to the Underwriters and their counsel true, complete and correct copies of any reports, studies, investigations, audits, analysis, tests or monitoring in the possession of or initiated by the Company pertaining to any environmental matter relating to the Company, its past or present operations or any Facility.

For the purposes of the foregoing paragraph, "Environmental Laws" means any applicable federal, state or local statute, regulation, code, rule, ordinance, order, judgment, decree, injunction or common law pertaining in any way to the protection of human health or the environment, including without limitation, the Resource Conservation and Recovery Act, the Comprehensive Environmental Response, Compensation and Liability Act, the Toxic Substances Control Act, the Clean Air Act, the Federal Water Pollution Control Act and any similar or comparable state or local law; "Hazardous Substance" means any hazardous, toxic, radioactive or infectious substance, material or waste as defined, listed or regulated under any Environmental Law; "Contaminated" means the actual existence on or under any real property of Hazardous Substances, if the existence of such Hazardous Substances triggers a requirement to perform any investigatory, remedial, removal or other response action under any Environmental Laws or if such response action legally could be required by any governmental authority; "Facility" means any property currently owned, leased or occupied by the Company.

(p) Neither the Company, nor to the Company's best knowledge, any of its affiliates, has taken or intends to take, directly or indirectly, any action designed to cause or result in, or which has constituted or which might reasonably be expected to constitute, the stabilization or manipulation of the price of the shares of Common Stock to facilitate the sale or resale of the Units.

(q) The Company is not an "investment company" within the meaning of such term under the Investment Company Act of 1940, as amended (the "1940 Act"), and the rules and regulations of the Commission thereunder.

(r) The Company maintains a system of internal accounting controls sufficient to provide reasonable assurances that (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as

necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain accountability for assets; (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 existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

(s) The Company carries, or is covered by, insurance in such amounts and covering such risks as is adequate for the conduct of its business and the value of its properties and as is customary for companies engaged in similar industries.

(t) The Company is in compliance in all material respects with all presently applicable provisions of the Employee Retirement Income Security Act of 1974, as amended, including the regulations and published interpretations thereunder ("ERISA"); no "reportable event" (as defined in ERISA) has occurred with respect to any "pension plan" (as defined in ERISA) for which the Company would have any liability; the Company has not incurred and does not expect to incur liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any "pension plan" or (ii) Section 412 or 4971 of the Internal Revenue Code of 1986, as amended, including the regulations and published interpretations thereunder (the "Code"); and each "pension plan" for which the Company would have any liability that is intended to be qualified under Section 401(a) of the Code is so qualified in all material respects and nothing has occurred, whether by action or by failure to act, which would cause the loss of such qualification.

(u) The Company confirms as of the date hereof that it is in compliance with all provisions of Section 1 of Laws of Florida, Chapter 92-198, AN ACT RELATING TO DISCLOSURE OF DOING BUSINESS WITH CUBA, and the Company further agrees that if it commences engaging in business with the government of Cuba or with any person or affiliate located in Cuba after the date the Registration Statement becomes or has become effective with the Commission or with the Florida Department of Banking and Finance (the "Department"), whichever date is later, or if the information reported or incorporated by reference in the Prospectus, if any, concerning the Company's business with Cuba or with any person or affiliate located in Cuba changes in any material way, the Company will provide the Department notice of such business or change, as appropriate, in a form acceptable to the Department.

(v) The Company is in material compliance with all laws, rules, regulations, orders of any court or administrative agency, operating licenses or other requirements imposed by any governmental body applicable to it, including, without limitation, all applicable laws, rules, regulations, licenses or other governmental standards applicable to the industry in which the Company operates; and the conduct of the business of the Company, as described in the Prospectus, will not cause the Company to be in violation of any such requirements.

(w) The Warrants have been authorized for issuance to the various purchasers of the Units and will, when issued, possess rights, privileges, and characteristics

as represented in the most recent form of Warrants filed as an exhibit to the Registration Statement; the securities to be issued upon exercise of the Warrants, when issued and delivered against payment therefor in accordance with the terms of the Warrants, will be duly and validly issued, fully paid, nonassessable and free of preemptive rights, and all corporate action required to be taken for the authorization and issuance of the Warrants, and the securities to be issued upon their exercise, has validly and sufficiently taken.

(x) The Representatives' Warrants (as defined in Paragraph (d) of Section 2 hereof) have been authorized for issuance to the Representatives and will, when issued, possess rights, privileges, and characteristics as represented in the most recent form of Representatives' Warrants filed as an exhibit to the Registration Statement; the securities to be issued upon exercise of the Representatives' warrants, when issued and delivered against payment therefor in accordance with the terms of the Representative's Warrants, will be duly and validly issued, fully paid, nonassessable and free of preemptive rights, and all corporate action required to be taken for the authorization and issuance of the Representatives' Warrants, and the securities to be issued upon their exercise, have been validly and sufficiently taken.

(y) Except as disclosed in the Prospectus, neither the Company nor any of its officers, directors or affiliates have caused any person, other than the Underwriters, to be entitled to reimbursement of any kind, including, without limitation, any compensation that would be includable as underwriter compensation under the NASD's Corporate Financing Rule with respect to the offering of the Units, as a result of the consummation of such offering based on any activity of such person as a finder, agent, broker, investment adviser or other financial service provider.

## 2. PURCHASE, SALE AND DELIVERY OF THE UNITS.

(a) On the basis of the representations, warranties and covenants herein contained, and subject to the conditions herein set forth, the Company agrees to sell to the Underwriters and each Underwriter agrees, severally and not jointly, to purchase, at a price of \$\_\_\_\_\_ per Unit, the number of Firm Units set forth opposite the name of each Underwriter in Schedule I hereof, subject to adjustments in accordance with Section 9 hereof.

(b) Payment for the Firm Units to be sold hereunder is to be made in New York Clearing House funds and, at the option of the Representatives, by certified or bank cashier's checks drawn to the order of the Company or bank wire to an account specified by the Company against either uncertificated delivery of Firm Units or of certificates therefor (which delivery, if certificated, shall take place in such location in New York, New York as may be specified by the Representatives) to the Representatives for the several accounts of the Underwriters. Such payment is to be made at the offices of the Representatives at the address set forth on the first page of this Agreement, or at such other place as you and the Company shall designate, at 7:00 a.m., Pacific time, on the third business day after the date of this Agreement or at such other time and date not later than five business days after as you and the Company shall agree upon, such time and date being herein referred to as the "Closing

Date." (As used herein, "business day" means a day on which the New York Stock Exchange is open for trading and on which banks in New York are open for business and not permitted by law or executive order to be closed.) Except to the extent uncertificated Firm Units are delivered at closing, the certificates for the Firm Units will be delivered in such denominations and in such registrations as the Representative request in writing not later than the second full business day prior to the Closing Date, and will be made available for inspection by the Representatives at least one business day prior to the Closing Date.

(c) In addition, on the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, the Company hereby grants an option to the Representatives to purchase the Option Units at the price per Unit as set forth in the first paragraph of this Section 2. The option granted hereby may be exercised in whole or in part by giving written notice (i) at any time before the Closing Date and (ii) only once thereafter within 45 days after the date of this Agreement, by the Representatives to the Company setting forth the number of Option Units as to which the Representatives is exercising the option, the names and denominations in which the Option Units are to be registered and the time and date at which certificate representing such Units are to be delivered. The time and date at which certificates for Option Units are to be delivered shall be determined by the Representatives but shall not be earlier than three nor later than 10 full business days after the exercise of such option, nor in any event prior to the Closing Date (such time and date being herein referred to as the "Option Closing Date"). If the date of exercise of the option is three or more days before the Closing Date, the notice of exercise shall set the Closing Date as the Option Closing Date. The option with respect to the Option Units granted hereunder may be exercised only to cover over-allotments in the sale of the Firm Units by the Underwriters. The Representatives may cancel such option at any time prior to its expiration by giving written notice of such cancellation to the Company. To the extent, if any, that the option is exercised, payment for the Option Units shall be made on the Option Closing Date in New York Clearing House funds and, at the option of the Representatives, by certified or bank cashier's check drawn to the order of the Company for the Option Units to be sold by the Company or bank wire to an account specified by the Company against delivery of certificates therefor at the offices of Paulson Investment Company, Inc. set forth on the first page of this Agreement.

(d) In addition to the sums payable to the Representative as provided elsewhere herein, the Representatives shall be entitled to receive at the Closing, for itself alone and not as Representatives of the Underwriters, as additional compensation for their services, a purchase warrant (the "Representatives' Warrant") for the purchase of up to \_\_\_\_\_ Units at a price of \$\_\_\_\_\_ per Unit, upon the terms and subject to adjustment and conversion as described in the form of Representatives' Warrant filed as an exhibit to the Registration Statement.

### 3. OFFERING BY THE UNDERWRITERS.

It is understood that the several Underwriters are to make a public offering of the Firm Units as soon as the Representatives deem it advisable to do so. The Firm Units



are to be initially offered to the public at the initial public offering price set forth in the Prospectus. The Representatives may from time to time thereafter change the public offering price and other selling terms. To the extent, if at all, that any Option Units are purchased pursuant to Section 2 hereof, the Representatives will offer them to the public on the foregoing terms.

It is further understood that you will act as the Representatives for the Underwriters in the offering and sale of the Units in accordance with an Agreement Among Underwriters entered into by you and the several other Underwriters.

#### 4. COVENANTS OF THE COMPANY.

The Company covenants and agrees with the several Underwriters that:

(a) The Company will (i) use its best efforts to cause the Registration Statement to become effective or, if the procedure in Rule 430A of the Rules and Regulations is followed, to prepare and timely file with the Commission under Rule 424(b) of the Rules and Regulations a Prospectus in a form approved by the Representatives containing information previously omitted at the time of effectiveness of the Registration Statement in reliance on Rule 430A of the Rules and Regulations, and (ii) not file any amendment to the Registration Statement or supplement to the Prospectus of which the Representatives shall not previously have been advised and furnished with a copy or to which the Representatives shall have reasonably objected in writing or which is not in compliance with the Rules and Regulations.

(b) The Company will advise the Representatives promptly (i) when the Registration Statement or any post-effective amendment thereto shall have become effective, (ii) of receipt of any comments from the Commission, (iii) of any request of the Commission for amendment of the Registration Statement or for supplement to the Prospectus or for any additional information, and (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or the use of the Prospectus or of the institution of any proceedings for that purpose. The Company will use its best efforts to prevent the issuance of any such stop order preventing or suspending the use of the Prospectus and to obtain as soon as possible the lifting thereof, if issued.

(c) The Company will cooperate with the Representatives in endeavoring to qualify the Units for sale under the securities laws of such jurisdictions as the Representatives may reasonably have designated in writing and will make such applications, file such documents, and furnish such information as may be reasonably required for that purpose, provided the Company shall not be required to qualify as a foreign corporation or to file a general consent to service of process in any jurisdiction where it is not now so qualified or required to file such a consent. The Company will, from time to time, prepare and file such statements, reports, and other documents, as are or may be required to continue such qualifications in effect for so long a period as the Representatives may reasonably request for distribution of the Units.

(d) The Company will deliver to, or upon the order of, the Representatives, from time to time, as many copies of any Preliminary Prospectus as the Representatives may reasonably request. The Company will deliver to, or upon the order of, the Representatives during the period when delivery of a Prospectus is required under the Act, as many copies of the Prospectus in final form, or as thereafter amended or supplemented, as the Representatives may reasonably request. The Company will deliver to the Representatives at or before the Closing Date, four signed copies of the Registration Statement and all amendments thereto including all exhibits filed therewith, and will deliver to the Representatives such number of copies of the Registration Statement (including such number of copies of the exhibits filed therewith that may reasonably be requested), and of all amendments thereto, as the Representatives may reasonably request.

(e) The Company will comply with the Act and the Rules and Regulations, and the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules and regulations of the Commission thereunder, so as to permit the completion of the distribution of the Units as contemplated in this Agreement and the Prospectus. If during the period in which a prospectus is required by law to be delivered by an Underwriter or dealer, any event shall occur as a result of which, in the judgment of the Company or in the reasonable opinion of the Underwriters, it becomes necessary to amend or supplement the Prospectus in order to make the statements therein, in the light of the circumstances existing at the time the Prospectus is delivered to a purchaser, not misleading, or, if it is necessary at any time to amend or supplement the Prospectus to comply with any law, the Company promptly will prepare and file with the Commission an appropriate amendment to the Registration Statement or supplement to the Prospectus so that the Prospectus as so amended or supplemented will not, in the light of the circumstances when it is so delivered, be misleading, or so that the Prospectus will comply with the law.

(f) The Company will make generally available to its security holders, as soon as it is practicable to do so, but in any event not later than 15 months after the effective date of the Registration Statement, an earnings statement (which need not be audited) in reasonable detail, covering a period of at least 12 consecutive months beginning after the effective date of the Registration Statement, which earnings statement shall satisfy the requirements of Section 11(a) of the Act and Rule 158 of the Rules and Regulations and will advise you in writing when such statement has been so made available.

(g) The Company will, for a period of five years from the Closing Date, deliver to the Representatives copies of annual reports and copies of all other documents, reports and information furnished by the Company to its stockholders or filed with any securities exchange pursuant to the requirements of such exchange or with the Commission pursuant to the Act or the Exchange Act. The Company will deliver to the Representatives similar reports with respect to significant subsidiaries, as that term is defined in the Rules and Regulations, which are not consolidated in the Company's financial statements.

(h) No offering, sale, short sale or other disposition of any shares of Common Stock of the Company or other securities convertible into or exchangeable or

exercisable for shares of Common Stock or derivative of Common Stock (or agreement for such) will be made for a period of one year after the date of this Agreement, directly or indirectly, by the Company otherwise than hereunder or with the prior written consent of the Representative, which consent will not be unreasonably withheld.

(i) The Company will use its best efforts to list the Common Stock and the Warrants, subject to notice of their issuance, on The Nasdaq Stock Market.

(j) The Company has caused each officer and director and each person who owns, beneficially or of record, 1% or more of the Common Stock outstanding immediately prior to this offering (the "Insiders") to furnish to you, on or prior to the date of this Agreement, a letter or letters, in form and substance satisfactory to the Underwriters (the "Insider Lockup Agreements"), pursuant to which each Insider shall agree not to offer to sell, sell, contract to sell, sell short or otherwise dispose of any shares of Common Stock or other capital stock of the Company, or any other securities convertible, exchangeable or exercisable for Common Stock or derivatives of Common Stock owned by such Insider, or request the registration for the offer or sale of any of the foregoing (or as to which such Insider has the right to direct the disposition of), for a period of one year after the date of this Agreement, directly or indirectly, except with the prior written consent of the Representatives, which consent shall not be unreasonably withheld. In addition, the Company has caused persons (the "Non-insiders") who own in the aggregate at least 85% of the Common Stock outstanding immediately prior to this offering remaining after subtracting the shares owned by those who have executed Insider Lockup Agreements to enter into a letter or letters, in form and substance satisfactory to the Underwriters (the "Other Lockup Agreements"), pursuant to which each such Non-insider shall agree not to offer to sell, sell, contract to sell, sell short or otherwise dispose of any shares of Common Stock or other capital stock of the Company, or any other securities convertible, exchangeable or exercisable for Common Stock or derivatives of Common Stock owned by such Non-insider, or request the registration for the offer or sale of any of the foregoing (or as to which such Non-insider has the right, to direct the disposition of) for a period of one year after the date of this Agreement, directly or indirectly, except with the prior written consent of the Representatives, which consent shall not be unreasonably withheld, provided, however, that notwithstanding the foregoing, a Non-insider may sell or otherwise dispose of up to 50% of the shares of Common Stock or other capital stock of the Company held by such person during the period beginning six months and ending one year after the date of this Agreement. The Insider Lockup Agreements and the Other Lockup Agreements shall also provide that the holder shall give the Representatives prior notice with respect to any offers to sell, sales, contracts to sell, short sales or other dispositions of Common Stock pursuant to Rule 144 under the Act or any similar provisions enacted subsequent to the date of this Agreement, for as long as you are a market maker in the Common Stock or for a period of five years from the date of this Agreement, whichever period is shorter.

(k) The Company shall apply the net proceeds of its sale of the Units as set forth in the Prospectus and shall file such reports with the Commission with respect to the

sale of the Units and the application of the proceeds therefrom as may be required in accordance with Rule 463 under the Act.

(l) The Company shall not invest, or otherwise use the proceeds received by the Company from its sale of the Units in such a manner as would require the Company or any of the subsidiaries to register as an investment company under the 1940 Act.

(m) The Company will maintain a transfer agent and, if necessary under the jurisdiction of incorporation of the Company, a registrar for the Common Stock.

(n) The Company will not take, directly or indirectly, any action designed to cause or result in, or that has constituted or might reasonably be expected to constitute, the stabilization or manipulation of the price of any securities of the Company.

#### 5. COSTS AND EXPENSES.

(a) The Representative shall be entitled to receive from the Company, for themselves alone and not as Representative of the Underwriters, a nonaccountable expense allowance equal to 2% of the aggregate public offering price of Units sold to the Underwriters in connection with the Offering. The Representatives shall be entitled to withhold this allowance on the Closing Date (less the \$35,000 advance against such amount that has been paid by the Company) with respect to Units delivered on the Closing Date and to require the Company to make payment of this allowance on the Option Closing Date with respect to Units delivered on the Option Closing Date.

(b) In addition to the payment described in Paragraph (a) of this Section 5, the Company will pay all costs, expenses and fees incident to the performance of the obligations of the Company under this Agreement, including, without limiting the generality of the foregoing, the following: accounting fees of the Company; the fees and disbursements of counsel for the Company; the cost of printing and delivering to, or as requested by, the Underwriters copies of the Registration Statement, Preliminary Prospectuses, the Prospectus, this Agreement, the Underwriters' Selling Memorandum, the Underwriters' Invitation Letter, the Listing Application, the Blue Sky Survey and any supplements or amendments thereto; the filing fees of the Commission; the filing fees incident to securing any required review by the NASD of the terms of the sale of the Units; the Listing Fee of The Nasdaq Stock Market; reasonable costs of a due diligence investigation of the principals of the Company by a firm acceptable to the Representatives; and the expenses, including the fees and disbursements of counsel for the Underwriters, incurred in connection with the qualification of the Units under state securities or Blue Sky laws. Any transfer taxes imposed on the sale of the Units to the several Underwriters will be paid by the Company. The Company shall not, however, be required to pay for any of the Underwriters' expenses (other than those related to qualification under NASD regulation and state securities or Blue Sky

laws) except that, if this Agreement shall not be consummated, then the Company shall reimburse the several Underwriters for reasonable accountable out-of-pocket expenses, including fees and disbursements of counsel, reasonably incurred in connection with investigating, marketing and proposing to market the Units or in contemplation of performing their obligations hereunder (less the \$35,000 advance that has been paid by the Company); but the Company shall not in any event be liable to any of the several Underwriters for damages on account of loss of anticipated profits from the sale by them of the Units.

(c) In the event the Company elects to redeem the Warrants at any time commencing one year after the date of this Agreement, the Company shall retain Paulson Investment Company, Inc. as the Company's solicitation agent (the "Warrant Solicitation Agent"). The Company shall pay to the Warrant Solicitation Agent for its services a solicitation fee equal to 2% of the total amount paid by the holders of the Warrants whom the Warrant Solicitation Agent solicits to exercise the Warrants. The exercise will be presumed to be unsolicited unless the customer states in writing that the transaction was solicited by the Warrant Solicitation Agent and designates in writing the registered representative of the Warrant Solicitation Agent entitled to receive compensation for the exercise. The fee shall not be payable for the exercise of any Warrant held by the Warrant Solicitation Agent in a discretionary account at the time of exercise, unless the Warrant Solicitation Agent receives from the customer prior specific written approval of such exercise.

#### 6. CONDITIONS OF OBLIGATIONS OF THE UNDERWRITERS.

The several obligations of the Underwriters to purchase the Firm Units on the Closing Date and the Option Units, if any, on the Option Closing Date are subject to the accuracy, as of the Closing Date or the Option Closing Date, as the case may be, of the representations and warranties of the Company contained herein, and to the performance by the Company of their covenants and obligations hereunder and to the following additional conditions:

(a) The Registration Statement and all post-effective amendments thereto shall have become effective and any and all filings required by Rule 424 and Rule 430A of the Rules and Regulations shall have been made, and any request of the Commission for additional information (to be included in the Registration Statement or otherwise) shall have been disclosed to the Representatives and complied with to their reasonable satisfaction. No stop order suspending the effectiveness of the Registration Statement, as amended from time to time, shall have been issued and no proceedings for that purpose shall have been taken or, to the knowledge of the Company, shall be contemplated by the Commission and no injunction, restraining order, or order of any nature by a federal or state court of competent jurisdiction shall have been issued as of the Closing Date which would prevent the issuance of the Units.

(b) The Representatives shall have received on the Closing Date or the Option Closing Date, as the case may be, the opinion of Ater Wynne Hewitt Dodson & Skerritt, LLP, counsel for the Company, dated the Closing Date or the Option Closing Date, as the

case may be, addressed to the Underwriters (and stating that it may be relied upon by counsel to the Underwriters) to the effect that:

(i) The Company has been duly organized and is validly existing as a corporation in good standing under the laws of the state of Oregon, with corporate power and authority to own or lease its properties and conduct its business as described in the Registration Statement; the Company is duly qualified to transact business in all jurisdictions in which the conduct of its business requires such qualification, or in which the failure to qualify would have a materially adverse effect upon the business of the Company.

(ii) The Company has authorized and outstanding capital stock as set forth under the caption "Capitalization" in the Prospectus; the authorized shares of the Company's Common Stock have been duly authorized; the outstanding shares of the Company's Common Stock have been duly authorized and validly issued and are fully paid and non-assessable; all of the securities of the Company conform to the description thereof contained in the Prospectus; the certificates for the Common Stock and Warrants, assuming they are in the form filed with the Commission, are in due and proper form; the shares of Common Stock to be sold by the Company pursuant to this Agreement, including shares of Common Stock to be sold as a part of the Option Units have been duly authorized and, upon issuance and delivery thereof as contemplated in this Agreement and the Registration Statement, will be validly issued, fully paid and non-assessable; no preemptive rights of stockholders exist with respect to any of the Common Stock of the Company or the issuance or sale thereof pursuant to any applicable statute or the provisions of the Company's charter documents or, to such counsel's best knowledge, pursuant to any contractual obligation. The Warrants and the Representatives' Warrants have been authorized for issuance to the purchasers of Units or the Representatives, as the case may be, and will, when issued, possess rights, privileges, and characteristics as represented in the most recent form of Warrants or Representatives' Warrants, as the case may be, filed as an exhibit to the Registration Statement; the securities to be issued upon exercise of the Representatives' Warrants, when issued and delivered against payment therefor in accordance with the terms of the Representatives' Warrants, will be duly and validly issued, fully paid, nonassessable and free of preemptive rights, and all corporate action required to be taken for the authorization and issuance of the Warrants, the Representatives' Warrants, and the securities to be issued upon their exercise, has been validly and sufficiently taken.

(iii) Except as described in or contemplated by the Prospectus, to the knowledge of such counsel, there are no outstanding securities of the Company convertible or exchangeable into or evidencing the right to purchase or subscribe for any shares of capital stock of the Company and there are no outstanding or authorized options, warrants or rights of any character obligating the Company to issue any shares of its capital stock or any securities convertible or exchangeable into or evidencing the right to purchase or subscribe for any shares of such stock; and except as described in the Prospectus, to the knowledge of such counsel, no holder of any securities of the Company or any other person has the right, contractual or otherwise, which has not been satisfied or effectively waived, to cause the Company to sell or otherwise issue to them, or to permit them to underwrite the sale of, any

of the Units or the right to have any Common Stock or other securities of the Company included in the Registration Statement or the right, as a result of the filing of the Registration Statement, to require registration under the Act of any shares of Common Stock or other securities of the Company.

(iv) The Registration Statement has become effective under the Act and, to the best of the knowledge of such counsel, no stop order proceedings with respect thereto have been instituted or are pending or threatened under the Act.

(v) The Registration Statement, the Prospectus and each amendment or supplement thereto comply as to form in all material respects with the requirements of the Act and the applicable rules and regulations thereunder (except that such counsel need express no opinion as to the financial statements and related schedules therein).

(vi) The statements under the captions "Shares Eligible for Future Sale" and "Description of Securities" in the Prospectus and in Item 24 of the Registration Statement, insofar as such statements constitute a summary of documents referred to therein or matters of law, fairly summarize in all material respects the information called for with respect to such documents and matters.

(vii) Such counsel does not know of any contracts or documents required to be filed as exhibits to the Registration Statement or described in the Registration Statement or the Prospectus which are not so filed or described as required, and such contracts and documents as are summarized in the Registration Statement or the Prospectus are fairly summarized in all material respects.

(viii) Such counsel knows of no material legal or governmental proceedings pending or threatened against the Company.

(ix) The execution and delivery of this Agreement and the consummation of the transactions herein contemplated do not and will not conflict with or result in a breach of any of the terms or provisions of, or constitute a default under, the articles of incorporation or bylaws of the Company, or any agreement or instrument known to such counsel to which the Company is a party or by which the Company may be bound.

(x) This Agreement has been duly authorized, executed and delivered by the Company.

(xi) No approval, consent, order, authorization, designation, declaration or filing by or with any regulatory, administrative or other governmental body is necessary in connection with the execution and delivery of this Agreement and the consummation of the transactions herein contemplated (other than as may be required by the NASD or as required by state securities and Blue Sky laws as to which such counsel need express no opinion) except such as have been obtained or made, specifying the same.

(xii) The Company is not, and will not become, as a result of the consummation of the transactions contemplated by this Agreement, and application of the net proceeds therefrom as described in the Prospectus, required to register as an investment company under the 1940 Act.

In rendering such opinion, such counsel may rely as to matters governed by the laws of states other than Oregon or federal laws on local counsel in such jurisdictions, provided that in each case such counsel shall state that they believe that they and the Underwriters are justified in relying on such other counsel. In addition to the matters set forth above, the opinion of Ater Wynne Hewitt Dodson & Skerritt shall also include a statement to the effect that nothing has come to the attention of such counsel that has caused them to believe that (i) the Registration Statement, at the time it became effective under the Act (but after giving effect to any modifications incorporated therein pursuant to Rule 430A under the Act) and as of the Closing Date or the Option Closing Date, as the case may be, contained an untrue statement of a material fact or omitted 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, and (ii) the Prospectus, or any supplement thereto, on the date it was filed pursuant to the Rules and Regulations and as of the Closing Date or the Option Closing Date, as the case may be, contained an untrue statement of a material fact or omitted to state a material fact necessary in order to make the statements, in the light of the circumstances under which they are made, not misleading (except that such counsel need express no view as to financial statements, schedules and statistical information therein).

(c) The Representatives shall have received from Weiss, Jensen, Ellis & Howard, counsel for the Underwriters, an opinion dated the Closing Date or the Option Closing Date, as the case may be, substantially to the effect specified in subparagraphs (i), (iv) and (v) of Paragraph (b) of this Section 6. In rendering such opinion Weiss, Jensen, Ellis & Howard may rely as to all matters governed other than by the laws of the State of Oregon or federal laws on the opinion of counsel referred to in Paragraph (b) of this Section 6. In addition to the matters set forth above, such opinion shall also include a statement to the effect that nothing has come to the attention of such counsel that has caused them to believe that (i) the Registration Statement, or any amendment thereto, as of the time it became effective under the Act (but after giving effect to any modifications incorporated therein pursuant to Rule 430A under the Act) and as of the Closing Date or the Option Closing Date, as the case may be, contained an untrue statement of a material fact or omitted 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, and (ii) the Prospectus, or any supplement thereto, on the date it was filed pursuant to the Rules and Regulations and as of the Closing Date or the Option Closing Date, as the case may be, contained an untrue statement of a material fact or omitted to state a material fact, necessary in order to make the statements, in the light of the circumstances under which they are made, not misleading (except that such counsel need express no view as to financial statements, schedules and statistical information therein). With respect to such statement, Weiss, Jensen,



Ellis & Howard may state that their belief is based upon the procedures set forth therein, but is without independent check and verification.

(d) The Representatives shall have received at the Closing Date or the Option Closing Date, as the case may be, the opinion of Peter Dehlinger & Associates, patent counsel to the Company, dated the Closing Date or the Option Closing Date, as the case may be, addressed to the Underwriters (and stating that it may be relied upon by counsel to the Underwriters) related to the Company's patents and substantially in the form attached hereto as Schedule II hereto.

(e) The Representatives shall have received at or prior to the Closing Date from Weiss, Jensen, Ellis & Howard a memorandum or summary, in form and substance satisfactory to the Representatives, with respect to the qualification for offering and sale by the Underwriters of the Units under the state securities or Blue Sky laws of such jurisdictions as the Representatives may reasonably have designated to the Company.

(f) The Representatives, on behalf of the several Underwriters, shall have received, on each of the dates hereof, the Closing Date and the Option Closing Date, as the case may be, a letter dated the date hereof, the Closing Date or the Option Closing Date, as the case may be, in form and substance satisfactory to the Representatives, of Arthur Andersen LLP confirming that they are independent public accountants within the meaning of the Act and the applicable published Rules and Regulations thereunder and stating that in their opinion the financial statements and schedules examined by them and included in the Registration Statement comply in form in all material respects with the applicable accounting requirements of the Act and the related published Rules and Regulations and containing such other statements and information as are ordinarily included in accountants' "comfort letters" to Underwriters with respect to the financial statements and certain financial and statistical information contained in the Registration Statement and Prospectus.

(g) The Representatives shall have received on the Closing Date or the Option Closing Date, as the case may be, a certificate or certificates of the Chief Executive Officer and the Chief Financial Officer of the Company to the effect that, as of the Closing Date or the Option Closing Date, as the case may be, each of them severally represents as follows:

(i) The Registration Statement has become effective under the Act and no stop order suspending the effectiveness of the Registration Statement has been issued, and no proceedings for such purpose have been taken or are, to his knowledge, contemplated by the Commission;

(ii) The representations and warranties of the Company contained in Section 1 hereof are true and correct as of the Closing Date or the Option Closing Date, as the case may be;

(iii) All filings required to have been made pursuant to Rule 424 or Rule 430A under the Act have been made;

(iv) He or she has carefully examined the Registration Statement and the Prospectus and, in his or her opinion, as of the effective date of the Registration Statement, the statements contained in the Registration Statement were true and correct, and such Registration Statement and Prospectus did not omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading, and since the effective date of the Registration Statement, no event has occurred which should have been set forth in a supplement to or an amendment of the Prospectus which has not been so set forth in such supplement or amendment; and

(v) Since the respective dates as of which information is given in the Registration Statement and Prospectus, there has not been any material adverse change or any development involving a prospective material adverse change in or affecting the condition, financial or otherwise, of the Company or the earnings, business, management, properties, assets, rights, operations, condition (financial or otherwise) or prospects of the Company, whether or not arising in the ordinary course of business.

(h) The Company shall have furnished to the Representative such further certificates and documents confirming the representations and warranties, covenants and conditions contained herein and related matters as the Representative may reasonably have requested.

(i) The Common Stock and Warrants have been approved for designation on The Nasdaq Stock Market upon notice of issuance.

(j) The Lockup Agreements described in Section 4(j) are in full force and effect.

(k) The Company shall have fully completed a rescission offer to certain purchasers of the Company's Common Stock offering them the right to rescind their prior acquisition of Common Stock as described in the registration statement filed with the Commission on Form S-4 (File No. 333-20511) and declared effective by the Commission on May \_\_, 1997.

The opinions and certificates mentioned in this Agreement shall be deemed to be in compliance with the provisions hereof only if they are in all material respects satisfactory to the Representatives and to Weiss, Jensen, Ellis & Howard, counsel for the Underwriters.

If any of the conditions hereinabove provided for in this Section 6 shall not have been fulfilled when and as required by this Agreement to be fulfilled, the obligations of the Underwriters hereunder may be terminated by the Representatives by notifying the

Company of such termination in writing or by telegram at or prior to the Closing Date or the Option Closing Date, as the case may be.

In such event, the Company and the Underwriters shall not be under any obligation to each other (except to the extent provided in Sections 5 and 8 hereof).

7. CONDITIONS OF THE OBLIGATIONS OF THE COMPANY.

The obligations of the Company to sell and deliver the portion of the Units required to be delivered as and when specified in this Agreement are subject to the conditions that at the Closing Date or the Option Closing Date, as the case may be, no stop order suspending the effectiveness of the Registration Statement shall have been issued and in effect or proceedings therefor initiated or threatened.

8. INDEMNIFICATION.

(a) The Company agrees to indemnify and hold harmless each Underwriter and each person, if any, who controls any Underwriter within the meaning of the Act, against any losses, claims, damages or liabilities to which such Underwriter or any such controlling person may become subject under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions or proceedings in respect thereof) arise out of or are based upon (i) any untrue statement or alleged untrue statement of any material fact contained in the Registration Statement, any Preliminary Prospectus, the Prospectus or any amendment or supplement thereto, or (ii) the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading; and will reimburse each Underwriter and each such controlling person upon demand for any legal or other expenses reasonably incurred by such Underwriter or such controlling person in connection with investigating or defending any such loss, claim, damage or liability, action or proceeding or in responding to a subpoena or governmental inquiry related to the offering of the Units, whether or not such Underwriter or controlling person is a party to any action or proceeding; provided, however, that the Company will not be liable in any such case to the extent that any such loss, claim, damage or liability arises out of or is based upon an untrue statement or alleged untrue statement, or omission or alleged omission made in the Registration Statement, any Preliminary Prospectus, the Prospectus, or such amendment or supplement, in reliance upon and in conformity with written information furnished to the Company by or through the Representatives specifically for use in the preparation thereof. This indemnity agreement will be in addition to any liability which the Company may otherwise have.

(b) Each Underwriter severally and not jointly will indemnify and hold harmless the Company, each of its directors, each of its officers who have signed the Registration Statement and each person, if any, who controls the Company within the meaning of the Act, against any losses, claims, damages or liabilities to which the Company or any such director, officer or controlling person may become subject under the Act or otherwise, insofar as such losses, claims, damages or liabilities (or actions or proceedings in

respect thereof) arise out of or are based upon (i) any untrue statement or alleged untrue statement of any material fact contained in the Registration Statement, any Preliminary Prospectus, the Prospectus or any amendment or supplement thereto, or (ii) the omission or the alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances under which they were made; and will reimburse any legal or other expenses reasonably incurred by the Company or any such director, officer or controlling person in connection with investigating or defending any such loss, claim, damage, liability, action or proceeding; provided, however, that each Underwriter will be liable in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission has been made in the Registration Statement, any Preliminary Prospectus, the Prospectus or such amendment or supplement, in reliance upon and in conformity with written information furnished to the Company by or through the Representatives specifically for use in the preparation thereof. This indemnity agreement will be in addition to any liability which such Underwriter may otherwise have.

(c) In case any proceeding (including any governmental investigation) shall be instituted involving any person in respect of which indemnity may be sought pursuant to this Section 8, such person (the "indemnified party") shall promptly notify the person against whom such indemnity may be sought (the "indemnifying party") in writing. No indemnification provided for in Section 8(a) or (b) shall be available to any party who shall fail to give notice as provided in this Section 8(c) if the party to whom notice was not given was unaware of the proceeding to which such notice would have related and was materially prejudiced by the failure to give such notice, but the failure to give such notice shall not relieve the indemnifying party or parties from any liability which it or they may have to the indemnified party for contribution or otherwise than on account of the provisions of Section 8(a) or (b). In case any such proceeding shall be brought against any indemnified party and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel satisfactory to such indemnified party and shall pay as incurred the fees and disbursements of such counsel related to such proceeding. In any such proceeding, any indemnified party shall have the right to retain its own counsel at its own expense. Notwithstanding the foregoing, the indemnifying party shall pay as incurred (or within 30 days of presentation) the fees and expenses of the counsel retained by the indemnified party in the event (i) the indemnifying party and the indemnified party shall have mutually agreed to the retention of such counsel, (ii) the named parties to any such proceeding (including any impleaded parties) include both the indemnifying party and the indemnified party and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them or (iii) the indemnifying party shall have failed to assume the defense and employ counsel acceptable to the indemnified party within a reasonable period of time after notice of commencement of the action. It is understood that the indemnifying party shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the reasonable fees and expenses of more than one separate firm for all such indemnified parties. Such firm shall be designated in writing by

you in the case of parties indemnified pursuant to Section 8(a) and by the Company in the case of parties indemnified pursuant to Section 8(b). The indemnifying party shall not be liable for any settlement of any proceeding effected without its written consent but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party from and against any loss or liability by reason of such settlement or judgment. In addition, the indemnifying party will not, without the prior written consent of the indemnified party, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding of which indemnification may be sought hereunder (whether or not any indemnified party is an actual or potential party to such claim, action or proceeding) unless such settlement, compromise or consent includes an unconditional release of each indemnified party from all liability arising out of such claim, action or proceeding.

(d) If the indemnification provided for in this Section 8 is unavailable to or insufficient to hold harmless an indemnified party under Section 8(a) or (b) above in respect of any losses, claims, damages or liabilities (or actions or proceedings in respect thereof) referred to therein, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (or actions or proceedings in respect thereof) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering of the Units. If, however, the allocation provided by the immediately preceding sentence is not permitted by applicable law then each indemnifying party shall contribute to such amount paid or payable by such indemnified party in such proportion as is appropriate to reflect not only such relative benefits but also the relative fault of the Company on the one hand and the Underwriters on the other in connection with the statements or omissions which resulted in such losses, claims, damages or liabilities, (or actions or proceedings in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (before deducting expenses) received by the Company bears to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the one hand or the Underwriters on the other and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

The Company and the Underwriters agree that it would not be just and equitable if contributions pursuant to this Section 8(d) were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this Section 8(d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages or liabilities (or actions or proceedings in respect thereof) referred to above in this Section 8(d) shall be deemed to include any legal or other expenses

reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this subsection (d), (i) no Underwriter shall be required to contribute any amount in excess of the underwriting discounts and commissions applicable to the Units purchased by such Underwriter, and (ii) no person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations in this Section 8(d) to contribute are several in proportion to their respective underwriting obligations and not joint.

(e) In any proceeding relating to the Registration Statement, any Preliminary Prospectus, the Prospectus or any supplement or amendment thereto, each party against whom contribution may be sought under this Section 8 hereby consents to the jurisdiction of any court having jurisdiction over any other contributing party, agrees that process issuing from such court may be served upon him or it by any other contributing party and consents to the service of such process and agrees that any other contributing party may join him or it as an additional defendant in any such proceeding in which such other contributing party is a party.

(f) Any losses, claims, damages, liabilities or expenses for which an indemnified party is entitled to indemnification or contribution under this Section 8 shall be paid by the indemnifying party to the indemnified party as such losses, claims, damages, liabilities or expenses are incurred. The indemnity and contribution agreements contained in this Section 8 and the representations and warranties of the Company set forth in this Agreement shall remain operative and in full force and effect, regardless of (i) any investigation made by or on behalf of any Underwriter or any person controlling any Underwriter, the Company, its directors or officers or any persons controlling the Company, (ii) acceptance of any Units and payment therefor hereunder, and (iii) any termination of this Agreement. A successor to any Underwriter, or to the Company, its directors or officers, or any person controlling the Company, shall be entitled to the benefits of the indemnity, contribution and reimbursement agreements contained in this Section 8.

#### 9. DEFAULT BY UNDERWRITERS.

If on the Closing Date or the Option Closing Date, as the case may be, any Underwriter shall fail to purchase and pay for the portion of the Units which such Underwriter has agreed to purchase and pay for on such date (otherwise than by reason of any default on the part of the Company), you, as Representatives of the Underwriters, shall use your reasonable efforts to procure within 36 hours thereafter one or more of the other Underwriters, or any others, to purchase from the Company such amounts as may be agreed upon and upon the terms set forth herein, the Firm Units or Option Units, as the case may be, which the defaulting Underwriter or Underwriters failed to purchase. If during such 36 hours you, as such Representatives, shall not have procured such other Underwriters, or any others, to purchase the Firm Units or Option Units, as the case may be, agreed to be purchased by the defaulting Underwriter or Underwriters, then (a) if the aggregate number of Units with respect to which such default shall occur does not exceed 10% of the Firm

Units or Option Units, as the case may be, covered hereby, the other Underwriters shall be obligated, severally, in proportion to the respective numbers of Firm Units or Option Units, as the case may be, which they are obligated to purchase hereunder, to purchase the Firm Units or Option Units, as the case may be, which such defaulting Underwriter or Underwriters failed to purchase, or (b) if the aggregate number of Firm Units or Option Units, as the case may be, with respect to which such default shall occur equals or exceeds 10% of the Firm Units or Option Units, as the case may be, covered hereby, the Company or you as the Representative of the Underwriters will have the right, by written notice given within the next 36-hour period to the parties to this Agreement, to terminate this Agreement without liability on the part of the non-defaulting Underwriters or of the Company except to the extent provided in Section 8 hereof. In the event of a default by any Underwriter or Underwriters, as set forth in this Section 9, the Closing Date or Option Closing Date, as the case may be, may be postponed for such period, not exceeding seven days, as you, as Representative, may determine in order that the required changes in the Registration Statement or in the Prospectus or in any other documents or arrangements may be effected. The term "Underwriter" includes any person substituted for a defaulting Underwriter. Any action taken under this Section 9 shall not relieve any defaulting Underwriter from liability in respect of any default of such Underwriter under this Agreement.

#### 10. NOTICES.

All communications hereunder shall be in writing and, except as otherwise provided herein, will be mailed, delivered, telecopied or telegraphed and confirmed as follows: if to the Underwriters, to Paulson Investment Company, Inc., 811 SW Front Avenue, Portland, Oregon 97204, Attention: Chester L.F. Paulson; with a copy to Weiss, Jensen, Ellis & Howard, 2300 U.S. Bancorp Tower, 111 Fifth Avenue, Portland, Oregon 97204, Attention: Mark A. von Bergen; if to the Company, to AntiVirals Inc., One S.W. Columbia, Suite 1105, Portland, Oregon 97258, Attention: Denis R. Burger, Ph.D.; with a copy to Ater Wynne Hewitt Dodson & Skerritt, LLP, Suite 1800, 222 SW Columbia, Portland, Oregon 97201-6618, Attention: Byron W. Milstead.

#### 11. TERMINATION.

This Agreement may be terminated by you by notice to the Company as follows:

(a) at any time prior to the earlier of (i) the time the Units are released by you for sale by notice to the Underwriters, or (ii) 11:30 a.m. on the first business day following the date of this Agreement;

(b) at any time prior to the Closing Date if any of the following has occurred: (i) since the respective dates as of which information is given in the Registration Statement and the Prospectus, any material adverse change or any development involving a prospective material adverse change in or affecting the condition, financial or otherwise, of the Company and its subsidiaries taken as a whole or the earnings, business, management,

properties, assets, rights, operations, condition (financial or otherwise) or prospects of the Company and its subsidiaries taken as a whole, whether or not arising in the ordinary course of business, (ii) any outbreak or escalation of hostilities or declaration of war or national emergency or other national or international calamity or crisis or change in economic or political conditions if the effect of such outbreak, escalation, declaration, emergency, calamity, crisis or change on the financial markets of the United States would, in your reasonable judgment, make it impracticable to market the Units or to enforce contracts for the sale of the Units, (iii) the Dow Jones Industrial Average shall have fallen by 15 percent or more from its closing price on the day immediately preceding the date that the Registration Statement is declared effective by the Commission, (iv) suspension of trading in securities generally on the New York Stock Exchange or the American Stock Exchange or limitation on prices (other than limitations on hours or numbers of days of trading) for securities on either such Exchange, (v) the enactment, publication, decree or other promulgation of any statute, regulation, rule or order of any court or other governmental authority which in your opinion materially and adversely affects or may materially and adversely affect the business or operations of the Company, (vi) declaration of a banking moratorium by United States or New York State authorities, (vii) any downgrading in the rating of the Company's debt securities by any "nationally recognized statistical rating organization" (as defined for purposes of Rule 436(g) under the Exchange Act); (viii) the suspension of trading of the Common Stock by the Commission on The Nasdaq Stock Market or (ix) the taking of any action by any governmental body or agency in respect of its monetary or fiscal affairs which in your reasonable opinion has a material adverse effect on the securities markets in the United States; or

(c) as provided in Sections 6 and 9 of this Agreement.

#### 12. SUCCESSORS.

This Agreement has been and is made solely for the benefit of the Underwriters, the Company and their respective successors, executors, administrators, heirs and assigns, and the officers, directors and controlling persons referred to herein, and no other person will have any right or obligation hereunder. No purchaser of any of the Units from any Underwriter shall be deemed a successor or assign merely because of such purchase.

#### 13. INFORMATION PROVIDED BY UNDERWRITERS.

The Company and the Underwriters acknowledge and agree that the only information furnished or to be furnished by any Underwriter to the Company for inclusion in any Prospectus or the Registration Statement consists of the information set forth in the last paragraph on the front cover page (insofar as such information relates to the Underwriters), legends required by Item 502(d) of Regulation S-B under the Act and the information under the caption "Underwriting" in the Prospectus.

#### 14. MISCELLANEOUS.



The reimbursement, indemnification and contribution agreements contained in this Agreement and the representations, warranties and covenants in this Agreement shall remain in full force and effect regardless of (a) any termination of this Agreement, (b) any investigation made by or on behalf of any Underwriter or controlling person thereof, or by or on behalf of the Company or its directors or officers and (c) delivery of and payment for the Units under this Agreement.

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

This Agreement shall be governed by, and construed in accordance with, the laws of the state of Oregon. All disputes relating to this Underwriting Agreement shall be adjudicated before a court located in Multnomah County, Oregon to the exclusion of all other courts that might have jurisdiction.

If the foregoing letter is in accordance with your understanding of our agreement, please sign and return to us the enclosed duplicates hereof, whereupon it will become a binding agreement among the Company and the several Underwriters in accordance with its terms.

Very truly yours,

ANTIVIRALS INC.

By: \_\_\_\_\_

Denis R. Burger, Ph.D.  
Chief Executive Officer

The foregoing Underwriting Agreement is hereby confirmed and accepted as of the date first above written.

PAULSON INVESTMENT COMPANY, INC.  
MILLENIUM FINANCIAL GROUP  
FIRST COLONIAL SECURITIES GROUP, INC.

As Representatives of the several Underwriters listed on Schedule I

By: Paulson Investment Company, Inc.

By: \_\_\_\_\_

Authorized Officer

SCHEDULE I

SCHEDULE OF UNDERWRITERS

----- UNDERWRITER	NUMBER OF FIRM UNITS TO BE PURCHASED -----
Paulson Investment Company, Inc. Millenium Financial Group First Colonial Securities Group, Inc.	
	Total: 2,000,000 ----- -----

Schedule I

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the use of our reports dated March 10, 1997, relating to the financial statements of AntiVirals Inc. and to all references to our firm included in Amendment No. 3 to Registration Statement (No. 333-20513) of AntiVirals Inc.

ARTHUR ANDERSEN LLP

Portland, Oregon  
May 27, 1997

CONSENT OF PATENT COUNSEL TO ANTIVIRALS, INC.

We hereby consent to the reference to this firm under the caption "Experts" in the prospectus constituting a part of the Registration Statement on Form SB-2 (No. 333-20511) of AntiVirals, Inc.

DEHLINGER & ASSOCIATES

May 27, 1997  
Palo Alto, California