As filed with the Securities and Exchange Commission on July 17, 1997 Registration Statement No. 333-25833

> SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

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AMENDMENT NO. 1 TO

FORM S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

HYBRIDON, INC.

(Exact name of registrant as specified in its charter)

DELAWARE

04-3072298

(State or other jurisdiction

(I.R.S. Employer Identification No.)

of incorporation or organization)

620 MEMORIAL DRIVE

CAMBRIDGE, MASSACHUSETTS 02139

(617) 528-7000

(Address, including zip code, and telephone number, including area code, of registrant's principal

executive offices)

E. ANDREWS GRINSTEAD, III

CHAIRMAN OF THE BOARD, PRESIDENT AND CHIEF EXECUTIVE OFFICER

HYBRIDON, INC.

620 MEMORIAL DRIVE

CAMBRIDGE, MASSACHUSETTS 02139

(617) 528-7000

(Name, address, including zip code, and telephone number, including area code,

of agent for service)

COPY TO:

DAVID E. REDLICK, ESQ.

HALE AND DORR LLP

60 STATE STREET

BOSTON, MASSACHUSETTS 02109

(617) 526-6000

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO PUBLIC: AS SOON AS PRACTICABLE AFTER THIS REGISTRATION STATEMENT BECOMES EFFECTIVE.

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

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with

dividend or interest reinvestment plans, check the following box. /X/

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. / / 333- .

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. / / 333- $\,$.

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

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

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 pursuant to this Prospectus 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.

SUBJECT TO COMPLETION, DATED JULY 17, 1997

PROSPECTUS

HYBRIDON, INC.

\$50,000,000 OF 9% CONVERTIBLE SUBORDINATED NOTES DUE 2004

AND

7,486,631 SHARES OF COMMON STOCK

This Prospectus covers the offer and sale (the "Offering") of (i) an aggregate principal amount of \$50,000,000 of 9% Convertible Subordinated Notes Due 2004 (the "Notes") and (ii) 7,486,631 shares of Common Stock, \$001 par value per share (the "Common Stock"), of Hybridon, Inc. ("Hybridon" or the "Company").

An aggregate of 7,130,125 of the shares of Common Stock that may be sold in the Offering (the "Note Shares") are issuable upon conversion of the Notes. The Notes were initially sold to Forum Capital Markets L.P. (the "Initial Purchaser") by the Company on April 2, 1997 (the "Initial Offering"), and, the Initial Purchaser has advised the Company, have since been resold by the Initial Purchaser to "qualified institutional buyers" ("QIBs"), as defined in Rule 144A under the Securities Act of 1933, as amended (the "Securities Act"), and institutional "accredited investors" (the "Institutional Accredited

Investors"), as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act. The Notes are convertible into shares of Common Stock, at the option of the holder, at a conversion price of \$7.0125 per share, subject to certain adjustments.

The remaining 356,506 shares of Common Stock that may be sold in the Offering (the "Warrant Shares" and, together with the Note Shares, the "Shares") are issuable upon exercise of warrants (the "Warrants"), at an exercise price of \$7.0125 per share, issued by the Company to the Initial Purchaser in connection with the Initial Offering. The Notes and the Shares together are referred to herein as the "Securities." The Securities offered hereby may be sold from time to time for the accounts of certain stockholders and noteholders of the Company (the "Selling Securityholders"), or by their pledgees, donees, transferees or other successors in interest. See "The Selling Securityholders."

The Company will not receive any of the proceeds from the sale of the Securities covered by this Prospectus. The Company will bear all expenses incurred in effecting the registration of the Securities covered by this Prospectus, including all registration and filing fees, printing expenses, fees and disbursements of counsel and auditors for the Company and fees for listing the securities to be registered on each securities exchange on which similar securities issued by the Company are then listed. In addition, the Company will reimburse the Selling Securityholders for the reasonable fees and disbursements (not to exceed \$15,000 in the aggregate) of one firm of attorneys in connection with

4 the Offering. The Selling Securityholders will pay any discounts and commissions incurred upon the sale of the Securities.

The Securities covered by this Prospectus may be sold from time to time by the Selling Securityholders, or by their pledgees, donees, transferees or other successors in interest, in the over-the-counter market, through the writing of options on the Securities, in ordinary brokerage transactions, in negotiated transactions, or otherwise, at market prices prevailing at the time of sale or at negotiated prices. See "Plan of Distribution."

The Selling Securityholders and intermediaries through whom the Securities are sold may be deemed "underwriters" within the meaning of the Securities Act, with respect to the Securities offered, and any profits realized or commissions received may be deemed underwriting compensation. The Company and the Selling Securityholders have agreed to certain indemnification arrangements with respect to the Offering. See "Plan of Distribution."

The Notes are eligible for trading in the Private Offerings, Resales and Trading through Automated Linkages ("PORTAL") Market of the National Association of Securities Dealers, Inc. The Company's Common Stock is traded on the Nasdaq National Market under the symbol "HYBN." On July 15, 1997, the closing sale price of the Common Stock on the Nasdaq National Market was \$5.50 per share.

THE SECURITIES OFFERED HEREBY INVOLVE A HIGH DEGREE OF RISK. SEE "RISK FACTORS" BEGINNING ON PAGE 6.

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION NOR HAS THE SECURITIES AND EXCHANGE COMMISSION OR ANY STATE SECURITIES COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

-2-

5

AVAILABLE INFORMATION

The Company is subject to the informational requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and in accordance therewith files reports, proxy statements and other information with the Securities and Exchange Commission (the "Commission"). Such reports, proxy statements and other information may be inspected and copied at the public reference facilities maintained by the Commission at 450 Fifth Street, N.W., Room 1024, Washington, D.C. 20549 and at the Commission's regional offices located at Seven World Trade Center, Suite 1300, New York, New York 10048, and at Citicorp Center, 500 West Madison Street, Suite 1400, Chicago, Illinois 60661. Copies of such materials also may be obtained from the Public Reference Section of the Commission at 450 Fifth Street, N.W., Washington, D.C. 20549 at prescribed rates. In addition, the Company is required to file electronic versions of these documents through the Commission's Electronic Data Gathering, Analysis and Retrieval system (EDGAR). The Commission maintains a World Wide Web site at http://www.sec.gov that contains reports, proxy and information statements and other information regarding registrants that file electronically with the Commission.

The Company has filed with the Commission a Registration Statement on Form S-3 (together with all amendments, supplements, exhibits and schedules thereto, the "Registration Statement") under the Securities Act, with respect to the Securities offered hereby. This Prospectus does not contain all of the information set forth in the Registration Statement, as certain items are omitted in accordance with the rules and regulations of the Commission. For further information pertaining to the Company and the Securities, reference is made to such Registration Statement. Statements contained in this Prospectus regarding the contents of any agreement or other document are not necessarily complete, and in each instance reference is made to the copy of such agreement or document filed as an exhibit to the Registration Statement, each such statement being qualified in all respects by such reference. The Registration Statement may be inspected without charge at the office of the Commission at 450 Fifth Street, N.W., Washington, D.C. 20549, and copies of all or any part thereof may be obtained from the Commission at prescribed rates.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

 $\hbox{The following documents filed by the Company with the Commission are incorporated herein by reference:}$

- (i) The Company's Annual Report on Form 10-K for the year ended December 31, 1996, filed with the Commission on March 31, 1997;
- (ii) The Company's Proxy Statement for the Annual Meeting of Stockholders to be held on May 19, 1997, filed with the Commission on April 24, 1997;
- (iv) The Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 1997, filed with the Commission on May 15, 1997; and
- (v) The Company's Registration Statement on Form 8-A, filed with the Commission on December 8, 1995.

All documents filed by the Company with the Commission pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act subsequent to the date hereof and prior to the termination of the offering of the Securities registered hereby shall be deemed to be incorporated by reference into this Prospectus and to be a part hereof from the date of filing such documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Prospectus to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Prospectus.

The Company will provide without charge to each person to whom this Prospectus is delivered, upon written or oral request of such person, a copy of any or all of the foregoing documents incorporated by reference into this Prospectus (without exhibits to such documents other than exhibits specifically incorporated by reference into such documents). All such requests shall be directed to: Hybridon, Inc., 620 Memorial Drive, Cambridge, Massachusetts 02139, Attention: Investor Relations Department, Telephone: (617) 528-7000.

NO PERSON HAS BEEN AUTHORIZED TO GIVE ANY INFORMATION OR TO MAKE ANY REPRESENTATIONS IN CONNECTION WITH THIS OFFERING OTHER THAN THOSE CONTAINED IN THIS PROSPECTUS AND, IF GIVEN OR MADE, SUCH OTHER INFORMATION AND REPRESENTATIONS MUST NOT BE RELIED UPON AS HAVING BEEN AUTHORIZED BY THE COMPANY. NEITHER THE DELIVERY OF THIS PROSPECTUS NOR ANY SALE MADE HEREUNDER SHALL, UNDER ANY CIRCUMSTANCES, CREATE ANY IMPLICATION THAT THERE HAS BEEN NO CHANGE IN THE AFFAIRS OF THE COMPANY SINCE THE DATE HEREOF OR THAT THE INFORMATION CONTAINED HEREIN IS CORRECT AS OF ANY TIME SUBSEQUENT TO ITS DATE. THIS PROSPECTUS DOES NOT CONSTITUTE AN OFFER TO SELL OR A SOLICITATION OF AN OFFER TO BUY ANY SECURITIES OTHER THAN THE REGISTERED SECURITIES TO WHICH IT RELATES. THIS PROSPECTUS DOES NOT CONSTITUTE AN OFFER TO SELL OR A SOLICITATION OF AN OFFER TO BUY SUCH SECURITIES IN ANY CIRCUMSTANCES IN WHICH SUCH OFFER OR SOLICITATION IS UNLAWFUL.

SPECIAL NOTE REGARDING FORWARD-LOOKING INFORMATION

Certain statements in this Prospectus and in the documents incorporated herein constitute "forward-looking statements" within the meaning of Section 27A of the Securities Act and Section 2B of the Exchange Act. For this purpose, any statements contained herein or incorporated herein that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words "believes," "plans," "expects" and similar expressions are intended to identify forward-looking statements. There are a number of important factors that could cause the results of the Company to differ materially from those indicated by such forward-looking statements. These factors include those set forth in "Risk Factors" herein.

-4-

7

THE COMPANY

Hybridon, Inc. ("Hybridon" or the "Company"), established in 1989, is a leader in the discovery and development of novel genetic medicines based primarily on antisense technology. Antisense technology involves the use of synthetic segments of DNA (oligonucleotides) constructed through rational drug design to interact at the genetic level with target messenger RNA, which codes for the production of proteins. In contrast to traditional drugs, which are designed to interact with protein molecules associated with diseases, antisense drugs work at the genetic level to interrupt the process by which disease-causing proteins are produced. Drugs based on antisense technology may have broader applicability, greater efficacy and fewer side effects than conventional drugs because antisense compounds are designed to intervene early in the disease process at the genetic level and in a highly specific fashion.

Hybridon, Inc. was incorporated in Delaware in May 1989. The Company's principal executive offices are located at 620 Memorial Drive, Cambridge, Massachusetts 02139 and its telephone number is (617) 528-7000. The Company has filed for trademark protection for "Hybridon" and the Hybridon logo. "GEM" is a registered trademark of the Company. This Prospectus also includes or incorporates by reference names and marks of companies other than the Company.

-5-

8

RISK FACTORS

The Securities offered hereby involve a high degree of risk. The following risk factors should be considered carefully in addition to the other information included or incorporated by reference in this Prospectus before purchasing the Securities offered hereby.

EARLY STAGE OF DEVELOPMENT; TECHNOLOGICAL UNCERTAINTY

Hybridon's potential pharmaceutical products are at various stages of research, preclinical testing or clinical development. There are a number of technological challenges that the Company must successfully address to complete any of its development efforts. To date, most of the Company's resources have been dedicated to applying oligonucleotide chemistry and cell biology to the research and development of potential pharmaceutical products based upon antisense technology. As in most drug discovery programs, the results of in vitro, tissue culture and preclinical studies by the Company may be inconclusive and may not be indicative of results that will be obtained in human clinical trials. In addition, results attained in early human clinical trials by the Company may not be indicative of results that will be obtained in later clinical trials. Neither the Company, nor to its knowledge, any other company has successfully completed human clinical trials of a product based on antisense technology, and there can be no assurance that any of the Company's products will be successfully developed.

The success of any of the Company's potential pharmaceutical products depends in part on the molecular target on the genetic material chosen as the site of action of the oligonucleotide. There can be no assurance that the Company's choice will be appropriate for the treatment of the targeted disease indication in humans or that mutations in the genetic material will not result in a reduction in or loss of the efficacy or utility of a Company product.

UNCERTAINTY ASSOCIATED WITH CLINICAL TRIALS

Before obtaining regulatory approvals for the commercial sale of any of its pharmaceutical products under development, the Company must undertake extensive and costly preclinical studies and clinical trials to demonstrate that such products are safe and efficacious. The results from preclinical studies and early clinical trials are not necessarily predictive of results that will be obtained in later stages of testing or development, and there can be no assurance that the Company's clinical trials will demonstrate the safety and efficacy of any pharmaceutical products or will result in pharmaceutical products capable of being produced in commercial quantities at reasonable cost or in a marketable form.

Although the Company is conducting clinical trials of certain oligonucleotide compounds and is developing several oligonucleotide compounds on which it plans to file IND applications with the U.S. Food and Drug Administration (the "FDA") and equivalent filings outside of the U.S., there can be no assurance that necessary preclinical studies on these compounds will be completed satisfactorily or that the Company otherwise will be able to make its intended filings. Further, there can be no assurance that the Company will be permitted to undertake and complete human clinical trials of any of the Company's potential products, either in the U.S. or elsewhere, or, if permitted, that such products will not have undesirable side effects or other characteristics that may prevent or limit their commercial use.

The rate of completion of the Company's human clinical trials,

if permitted, will be dependent upon, among other factors, the rate of patient enrollment. Patient enrollment is a function of many factors, including the size of the patient population, the nature of the protocol, the availability of

-6-

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alternative treatments, the proximity to clinical sites and the eligibility criteria for the study. Delays in planned patient enrollment might result in increased costs and delays, which could have a material adverse effect on the Company. The Company or the FDA or other regulatory agencies may suspend clinical trials at any time if the subjects or patients participating in such trials are being exposed to unacceptable health risks.

FUTURE CAPITAL NEEDS; UNCERTAINTY OF ADDITIONAL FUNDING

The Company's future capital requirements will depend on many factors, including continued scientific progress in its research, drug discovery and development programs, the magnitude of these programs, progress with preclinical and clinical trials, sales of DNA products and reagents to third parties manufactured on a custom contract basis by the Hybridon Specialty Products Division and the margins on such sales, the time and costs involved in obtaining regulatory approvals, the costs involved in filing, prosecuting and enforcing patent claims, competing technological and market developments, the ability of the Company to establish and maintain collaborative academic and commercial research, development and marketing relationships, the ability of the Company to obtain third-party financing for leasehold improvements and other capital expenditures and the costs of manufacturing scale-up and commercialization activities and arrangements.

The Company anticipates that it will be required to raise substantial additional funds through external sources, including through collaborative relationships and public or private financings, to support the Company's operations from time to time. No assurance can be given that additional financing will be available, or, if available, that it will be available on acceptable terms. If additional funds are raised by issuing equity securities, further dilution to then existing stockholders will result. Additionally, the terms of any such additional financing may adversely affect the holdings or rights of then existing stockholders. If adequate funds are not available, the Company may be required to curtail significantly one or more of its research, drug discovery or development programs, or obtain funds through arrangements with collaborative partners or others that may require the Company to relinquish rights to certain of its technologies, product candidates or products which the Company would otherwise pursue on its own.

HISTORY OF OPERATING LOSSES AND ACCUMULATED DEFICIT

Hybridon has incurred net losses since its inception. At December 31, 1996, the Company's accumulated deficit was approximately \$149.2 million. Such losses have resulted principally from costs incurred in the Company's research and development programs and from general and administrative costs associated with the Company's development. No revenues have been generated from sales of pharmaceutical products developed by the Company and no revenues from the sale of such products are anticipated for a number of years, if ever. The Company expects to incur additional operating losses over the next several years and expects cumulative losses to increase significantly as the Company's research and development and clinical trial efforts expand. The Company expects that losses will fluctuate from quarter to quarter and that such fluctuations may be substantial. Although the Company's Hybridon Specialty Products Division has begun to generate revenues from the sale of synthetic DNA products and reagents manufactured by it on a custom contract basis, there can be no assurance that demand for and margins on these products will not be lower than anticipated. The Company's ability to achieve profitability is dependent in part on obtaining regulatory approvals for its pharmaceutical products and entering into agreements for drug discovery, development and commercialization. There can be no assurance that the Company will obtain required regulatory approvals, enter into any additional agreements for drug discovery, development and commercialization or ever achieve sales or profitability.

10 PATENTS AND PROPRIETARY RIGHTS

The Company's success will depend in part on its ability to develop patentable products and obtain and enforce patent protection for its products both in the U.S. and in other countries. The Company has filed and intends to file applications as appropriate for patents covering both its products and processes. However, the patent positions of pharmaceutical and biotechnology firms, including Hybridon, are generally uncertain and involve complex legal and factual questions. No assurance can be given that patents will issue from any pending or future patent applications owned by or licensed to Hybridon. Since patent applications in the U.S. are maintained in secrecy until patents issue, and since publication of discoveries in the scientific or patent literature tend to lag behind actual discoveries by several months, the Company cannot be certain that it was the first creator of inventions covered by pending patent applications or that it was the first to file patent applications for such inventions. Further, there can be no assurance that the claims allowed under any issued patents will be sufficiently broad to protect the Company's technology. In addition, no assurance can be given that any issued patents owned by or licensed to the Company will not be challenged, invalidated or circumvented, or that the rights granted thereunder will provide competitive advantages to the Company.

The commercial success of the Company will also depend in part on its neither infringing patents issued to competitors or others nor breaching the technology licenses upon which the Company's products might be based. The Company's licenses of patents and patent applications impose various commercialization, sublicensing, insurance and other obligations on the Company. Failure of the Company to comply with these requirements could result in termination of the license. The Company is aware of patents and patent applications belonging to competitors, and it is uncertain whether these patents and patent applications will require the Company to alter its products or processes, pay licensing fees or cease certain activities. In particular, competitors of the Company and other third parties hold issued patents and pending patent applications relating to antisense and other gene expression modulation technologies which may result in claims of infringement against the Company or other patent litigation. There can be no assurance that the Company will be able successfully to obtain a license to any technology that it may require or that, if obtainable, such technology can be licensed at a reasonable cost or on an exclusive basis.

The pharmaceutical and biotechnology industries have been characterized by extensive litigation regarding patents and other intellectual property rights. Litigation, which could result in substantial cost to the Company, may be necessary to enforce any patents issued or licensed to the Company and/or to determine the scope and validity of others' proprietary rights. The Company also may have to participate in interference proceedings declared by the U.S. Patent and Trademark Office, which could result in substantial cost to the Company, to determine the priority of inventions. Furthermore, the Company may have to participate at substantial cost in International Trade Commission proceedings to abate importation of products which would compete unfairly with products of the Company.

Hybridon engages in collaborations, sponsored research agreements and other agreements with academic researchers and institutions and government agencies. Under the terms of such agreements, third parties may have rights in certain inventions developed during the course of the performance of such collaborations and agreements.

The Company relies on trade secrets and proprietary know-how which it seeks to protect, in part, by confidentiality agreements with its collaborators, employees and consultants. There can be no assurance that these agreements will not be breached, that the Company would have adequate remedies for any breach or that the Company's trade secrets will not otherwise become known or be independently developed by competitors.

Through its Hybridon Specialty Products Division, the Company manufactures oligonucleotide compounds on a custom contract basis for third parties. The results of operations of the Hybridon Specialty Products Division will be dependent upon the demand for and margins on these products, which may be lower than anticipated by the Company. The results of operations of the Hybridon Specialty Products Division also may be affected by the price and availability of raw materials. It is possible that Hybridon's manufacturing capacity may not be sufficient for production of oligonucleotides both for the Company's internal needs and for sale to third parties. The Company's manufacturing facility must comply with good manufacturing practices ("GMP") and other FDA regulations.

The Company will be competing against a number of third parties, as well as the possibility of internal production by the Company's customers, in connection with the operations of the Hybridon Specialty Products Division. Many of these third parties are likely to have greater financial, technical and human resources than the Company. Key competitive factors will include the price and quality of the products as well as manufacturing capacity and ability to comply with specifications and to fulfill orders on a timely basis. The Company may be required to reduce the cost of its product offerings to meet competition. Failure to manufacture oligonucleotide compounds in accordance with the purchaser's specifications could expose the Company to breach of contract and/or product liability claims from the purchaser or the purchaser's customers. The Company has limited experience in sales, marketing and distribution and is relying in part upon the efforts of a third party, Perkin-Elmer Corporation ("Perkin-Elmer"), in connection with the marketing and sale of products by the Hybridon Specialty Products Division.

NEED TO ESTABLISH COLLABORATIVE COMMERCIAL RELATIONSHIPS; DEPENDENCE ON PARTNERS

Hybridon's business strategy includes entering into strategic alliances or licensing arrangements with corporate partners, primarily pharmaceutical and biotechnology companies, relating to the development and commercialization of certain of its potential products. Although the Company is a party to corporate collaborations with G.D. Searle & Co. ("Searle"), a subsidiary of Monsanto Company, in the field of inflammation/immunomodulation, F. Hoffmann-La Roche Ltd. ("Roche") relating to human papilloma virus and hepatitis C virus, and Medtronic, Inc. ("Medtronic") involving the development of a drug delivery service for use in delivering Hybridon's antisense compounds for the treatment of Alzheimer's disease, there can be no assurance that these collaborations will be scientifically or commercially successful, that the Company will be able to negotiate additional collaborations, that such collaborations will be available to the Company on acceptable terms or that any such relationships, if established, will be scientifically or commercially successful. The Company expects that under certain of these arrangements, the collaborative partner will have the responsibility for conducting human clinical trials and the submission for regulatory approval of the product candidate with the FDA and certain other regulatory agencies. Should the collaborative partner fail to develop a marketable product, the Company's business may be materially adversely affected. There can be no assurance that the Company's collaborative partners will not be pursuing alternative technologies or developing alternative compounds either on their own or in collaboration with others, including the Company's competitors, as a means for developing treatments for the diseases targeted by these collaborative programs. The Company's business also will be affected by the performance of its corporate partners in marketing any successfully developed products within the geographic areas in which such partners are granted marketing rights. The Company's plan is to retain manufacturing rights for many of the products it may license pursuant to arrangements with corporate partners. However, there can be no assurance that the Company will be able to retain such rights on acceptable terms, if at all, or that the Company will have the ability to produce the quantities of product required under the terms of such arrangements.

12 NO ASSURANCE OF REGULATORY APPROVAL; GOVERNMENT REGULATION

The Company's preclinical studies and clinical trials, as well as the manufacturing and marketing of the potential products being developed by it and the products sold by the Hybridon Specialty Products Division, are subject to extensive regulation by numerous federal, state and local governmental authorities in the U.S. Similar regulatory requirements exist in other countries where the Company intends to test and market its drug candidates. Preclinical studies of the Company's product development candidates are subject to Good Laboratory Practices ("GLP") requirements and the manufacture of any products by the Company, including products developed by the Company and products manufactured for third parties on a custom contract basis by the Hybridon Specialty Products Division, will be subject to GMP requirements prescribed by the FDA.

The regulatory process, which includes preclinical studies, clinical trials and post-clinical testing of each compound to establish its safety and effectiveness, takes many years and requires the expenditure of substantial resources. Delays may also be encountered and substantial costs incurred in foreign countries. There can be no assurance that, even after the passage of such time and the expenditure of such resources, regulatory approval will be obtained for any drugs developed by the Company. Data obtained from preclinical and clinical activities are subject to varying interpretations which could delay, limit or prevent regulatory approval by the FDA or other regulatory agencies. The Company, an independent Institutional Review Board, the FDA or other regulatory agencies may suspend clinical trials at any time if the participants in such trials are being exposed to unacceptable health risks. Moreover, if regulatory approval of a drug is granted, such approval may entail limitations on the indicated uses for which it may be marketed. Failure to comply with applicable regulatory requirements can, among other things, result in fines, suspension of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecutions. FDA policy may change and additional government regulations may be established that could prevent or delay regulatory approval of the Company's potential products. In addition, a marketed drug and its manufacturer are subject to continual review, and subsequent discovery of previously unknown problems with a product or manufacturer may result in restrictions on such product or manufacturer, including withdrawal of the product from the market and withdrawal of the right to manufacture the product. All of the foregoing regulatory matters also will be applicable to development, manufacturing and marketing undertaken by any strategic partners or licensees of the Company.

COMPETITION

There are many companies, both private and publicly traded, that are conducting research and development activities on technologies and products similar to or competitive with the Company's antisense technologies and proposed products. For example, many other companies are actively seeking to develop products, including antisense oligonucleotides, with disease targets similar to those being pursued by the Company. Some of these competitive products are in clinical trials. The Company believes that the industry-wide interest in investigating the potential of gene expression modulation technologies will continue and will accelerate as the techniques which permit the design and development of drugs based on such technologies become more widely understood. There can be no assurance that the Company's competitors will not succeed in developing products based on oligonucleotides or other technologies, existing or new, which are more effective than any that are being developed by the Company, or which would render Hybridon's antisense technologies obsolete and noncompetitive. Moreover, there currently are commercially available products for the treatment of many of the disease targets being pursued by the Company.

Competitors of the Company engaged in all areas of biotechnology and drug discovery in the U.S. and other countries are numerous

and include, among others, pharmaceutical and chemical companies, biotechnology firms, universities and other research institutions. Many of the Company's

-10-

13

competitors have substantially greater financial, technical and human resources than the Company. In addition, many of these competitors have significantly greater experience than the Company in undertaking preclinical studies and human clinical trials of new pharmaceutical products and obtaining FDA and other regulatory approvals of products for use in health care. Furthermore, if the Company is permitted to commence commercial sales of products, it will also be competing with respect to manufacturing efficiency and marketing capabilities, areas in which it has limited or no experience. Accordingly, the Company's competitors may succeed in obtaining FDA or other regulatory approvals for products or in commercializing such products more rapidly than the Company.

LIMITED MANUFACTURING CAPABILITY

While the Company believes that its existing production capacity will be sufficient to enable it to satisfy its current research needs and to support the Company's preclinical and clinical requirements for oligonucleotide compounds, the Company will need to purchase additional equipment to expand its manufacturing capacity in order to satisfy its future requirements, subject to obtaining regulatory approvals, for commercial production of its product candidates. In addition, Hybridon Specialty Products Division is using the Company's existing production capacity to custom contract manufacture synthetic DNA products for commercial sale. As a result, depending on the level of sales by the Hybridon Specialty Products Division, and the success of the Company's product development programs, Hybridon's manufacturing capacity may not be sufficient for production for both its internal needs and sales to third parties. In addition, in order to successfully commercialize its product candidates or achieve satisfactory margins on sales, the Company may be required to reduce further the cost of production of its oligonucleotide compounds, and there can be no assurance that the Company will be able to do so.

The manufacture of the Company's products is subject to GMP requirements prescribed by the FDA or other standards prescribed by the appropriate regulatory agency in the country of use. To the Company's knowledge, therapeutic products based on chemically-modified oligonucleotides have never been manufactured on a commercial scale. There can be no assurance that the Company will be able to manufacture products in a timely fashion and at acceptable quality and price levels, that it or its suppliers can manufacture in compliance with GMP or other regulatory requirements or that it or its suppliers will be able to manufacture an adequate supply of product. The Company has in the past relied in part and may in the future rely upon third party contractors in connection with the manufacture of some compounds. Reliance on such third parties entails a number of risks, including the possibility that such third parties may fail to perform on an effective or timely basis or fail to abide by regulatory or contractual restrictions applicable to the Company.

There are three sources of supply for the nucleotide building blocks used by the Company in its current oligonucleotide manufacturing process. This process is covered by issued patents either held by or licensed to these three companies. Therefore, these companies are likely the sole suppliers to Hybridon of these nucleotide building blocks. The inability of Hybridon to obtain these nucleotide building blocks from one of these suppliers could have a material adverse effect on Hybridon.

ABSENCE OF SALES AND MARKETING EXPERIENCE

The Company expects to market and sell certain of its products directly and certain of its products through co-marketing or other licensing arrangements with third parties. The Company has limited experience in sales, marketing or distribution, and does not expect to establish a sales and marketing plan or direct sales capability with respect to the products being developed by it until such time as one or more of such products approaches marketing approval. In addition, although the Company does have a limited direct

-11-

14

manufactured DNA products to third parties by the Hybridon Specialty Products Division, the Company has entered into a sales and marketing arrangement with Perkin-Elmer with respect to such products and is reliant in part on the efforts of Perkin-Elmer to promote these products. In order to market the products being developed by it directly, the Company will be required to develop a substantial marketing staff and sales force with technical expertise and with supporting distribution capability. There can be no assurance that the Company will be able to build such a marketing staff or sales force, that the cost of establishing such a marketing staff or sales force will be justifiable in light of any product revenues or that the Company's direct sales and marketing efforts will be successful. In addition, if the Company succeeds in bringing one or more products to market, it may compete with other companies that currently have extensive and well-funded marketing and sales operations. There can be no assurance that the Company's marketing and sales efforts would enable it to compete successfully against such other companies. To the extent the Company enters into co-marketing or other licensing arrangements, any revenues received by the Company will be dependent in part on the efforts of third parties and there can be no assurance that such efforts will be successful.

NO ASSURANCE OF MARKET ACCEPTANCE

Pharmaceutical products, if any, resulting from the Company's research and development programs are not expected to be commercially available for a number of years. There can be no assurance that, if approved for marketing, such products will achieve market acceptance. The degree of market acceptance will depend upon a number of factors, including the receipt of regulatory approvals, the establishment and demonstration in the medical community of the clinical efficacy and safety of the Company's products and their potential advantages over existing treatment methods and reimbursement policies of government and third-party payors. There is no assurance that physicians, patients, payors or the medical community in general will accept or utilize any products that may be developed by the Company.

PRODUCT LIABILITY EXPOSURE AND INSURANCE

The use of any of the Company's potential products in clinical trials and the commercial sale of any products, including the products being developed by it and the DNA products and reagents manufactured and sold on a custom contract basis by the Hybridon Specialty Products Division, may expose the Company to liability claims. These claims might be made directly by consumers, health care providers or by pharmaceutical and biotechnology companies or others selling such products. Hybridon has product liability insurance coverage, and such coverage is subject to various deductibles. Such coverage is becoming increasingly expensive, and no assurance can be given that the Company will be able to maintain or obtain such insurance at reasonable cost or in sufficient amounts to protect the Company against losses due to liability claims that could have a material adverse effect on the Company.

HAZARDOUS MATERIALS

The Company's research and development and manufacturing activities involves 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 standards prescribed by federal, state and local 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 have a material adverse effect on the Company.

The Company's ability to commercialize its pharmaceutical products successfully will depend in part on the extent to which appropriate reimbursement levels for the cost of such products and related treatment are obtained from government authorities, private health insurers and other organizations, such as health maintenance organizations ("HMOs"). Third-party payors are increasingly challenging the prices charged for medical products and services. Also the trend towards managed health care in the U.S. and the concurrent growth of organizations such as HMOs, which could control or significantly influence the purchase of health care services and products, as well as legislative proposals to reduce government insurance programs, may all result in lower prices for the Company's products. The cost containment measures that health care providers are instituting could affect the Company's ability to sell its products and may have a material adverse effect on the Company.

UNCERTAINTY OF HEALTH CARE REFORM MEASURES

Federal, state and local officials and legislators (and certain foreign government officials and legislators) have proposed or are reportedly considering proposing a variety of reforms to the health care systems in the U.S. and abroad. The Company cannot predict what health care reform legislation, if any, will be enacted in the U.S. or elsewhere. Significant changes in the health care system in the U.S. or elsewhere are likely to have a substantial impact over time on the manner in which the Company conducts its business. Such changes could have a material adverse effect on the Company. The existence of pending health care reform proposals could have a material adverse effect on the Company's ability to raise capital. Furthermore, the Company's ability to commercialize its potential products may be adversely affected to the extent that such proposals have a material adverse effect on the business, financial condition and profitability of other companies that are prospective corporate partners with respect to certain of the Company's proposed products.

ATTRACTION AND RETENTION OF KEY EMPLOYEES AND SCIENTIFIC COLLABORATORS

The Company is highly dependent on the principal members of its management and scientific staff, including E. Andrews Grinstead, III, the Company's Chairman of the Board, President and Chief Executive Officer, and Sudhir Agrawal, the Company's Senior Vice President of Discovery and Chief Scientific Officer, the loss of whose services could have a material adverse effect on the Company. Furthermore, recruiting and retaining qualified scientific personnel to perform research and development work in the future will also be critical to the Company's success. There can be no assurance that the Company will be able to attract and retain such personnel on acceptable terms given the competition for experienced scientists among numerous pharmaceutical, biotechnology and health care companies, universities and non-profit research institutions.

The Company's anticipated growth and expansion into areas and activities requiring additional expertise, such as clinical testing, governmental approvals, production and marketing, are expected to require the addition of new management personnel and the development of additional expertise by existing management personnel. The failure to acquire such services or to develop such expertise could have a material adverse effect on the Company.

The Company's success will depend in part on its continued ability to develop and maintain relationships with independent researchers and leading academic and research institutions. The competition for such relationships is intense, and there can be no assurance that the Company will be able to develop and maintain such relationships on acceptable terms. The Company has entered into a number of such collaborative relationships relating to specific disease targets and other research activities in order to augment its internal research capabilities and to obtain access to the specialized knowledge or expertise of its collaborative partners. The loss of any such collaborative relationship

could have an adverse effect on the Company's ability to conduct research and development in the area targeted by such collaboration.

POSSIBLE VOLATILITY OF SHARE PRICE

Investors should be aware that market prices for securities of companies such as Hybridon are highly volatile. Factors such as fluctuations in the Company's operating results, announcements of technological innovations or new commercial therapeutic products by the Company or its competitors, governmental regulation, developments in patent or other proprietary rights, public concern as to the safety of drugs developed by the Company and general market conditions may have a significant effect on the market price of the Company's Common Stock.

CONCENTRATION OF OWNERSHIP BY DIRECTORS AND EXECUTIVE OFFICERS

As of February 28, 1997, the Company's directors and executive officers and their affiliates beneficially owned approximately 19.4% of the Company's outstanding Common Stock (including 4,382,857 shares issuable upon the exercise of outstanding warrants and options held by the Company's directors and executive officers and their affiliates which are exercisable within the 60-day period following February 28, 1997). As a result, these stockholders, if acting together, may have the ability to influence the outcome of corporate actions requiring stockholder approval. This concentration of ownership may have the effect of delaying or preventing a change in control of the Company.

SUBORDINATION

The Notes are unsecured and subordinated in right of payment in full to all existing and future Senior Indebtedness (as defined below) of the Company. As a result of such subordination, in the event of bankruptcy, liquidation or reorganization of the Company, or upon the acceleration of any Senior Indebtedness, the Senior Indebtedness must be paid in full before the Company may make any payments with respect to the principal of or interest on the Notes and any other obligations ranking pari passu with the Notes. As of February 28, 1997, outstanding Senior Indebtedness aggregated approximately \$11.1 million. Incurrence of additional Senior Indebtedness is not prohibited or limited, and the Company may incur additional Senior Indebtedness in the future. See "Description of the Notes -- Subordination."

FUNDING OF REPURCHASE OBLIGATIONS; ABSENCE OF SINKING FUND

There is no sinking fund with respect to the Notes, and at maturity the entire outstanding principal amount thereof will become due and payable by the Company. Also, upon the occurrence of certain events the Company will be required to offer to repurchase all or a portion of the outstanding Notes. The source of funds for any such payment at maturity or earlier repurchase will be the Company's available cash or cash generated from operating or other sources, including, without limitation, borrowings or sales of assets or equity securities of the Company. There can be no assurance that sufficient funds will be available at the time of any such event to pay such principal or to make any required repurchase.

LACK OF PUBLIC MARKET; RESTRICTIONS ON RESALE

There is no existing trading market for the Notes, and there can be no assurance regarding the future development of a market for the Notes or the ability of holders of the Notes to sell their Notes or the price at which such holders may be able to sell their Notes. If such a market were to develop, the Notes could trade at prices that may be higher or lower than the purchase price obtained in the

-14-

17

Initial Offering depending on many factors, including prevailing interest rates, the Company's operating results and the market for similar securities. The

Initial Purchaser has advised the Company that it currently intends to make a market in the Notes. The Initial Purchaser is not obligated to do so, however, and any market-making with respect to the Notes may be discontinued at any time without notice. Therefore, there can be no assurance as to the liquidity of any trading market for the Notes or that an active public market for the Notes will develop. The Notes are eligible for trading in the PORTAL Market of the National Association of Securities Dealers, Inc. The Common Stock into which the Notes are convertible is listed on the Nasdaq National Market.

ANTITAKEOVER PROVISIONS

The Company's Restated Certificate of Incorporation (the "Restated Certificate") requires that any action required or permitted to be taken by stockholders of the Company must be effected at a duly called annual or special meeting of stockholders and may not be effected by any consent in writing, and will require reasonable advance notice by a stockholder of a proposal or director nomination which such stockholder desires to present at any annual or special meeting of stockholders. Special meetings of stockholders may be called only by the Chief Executive Officer or, if none, the President of the Company or by the Board of Directors. The Restated Certificate provides for a classified Board of Directors, and members of the Board of Directors may be removed only for cause upon the affirmative vote of holders of at least two-thirds of the shares of capital stock of the Company entitled to vote.

Moreover, the Board of Directors has the authority, without further action by the stockholders, to fix the rights and preferences of, and issue shares of, Preferred Stock.

In addition to these provisions of the Restated Certificate, the terms of the Notes require the Company, upon a Change of Control (as defined below) of the Company, to offer to repurchase the Notes at a repurchase price equal to 150% of the principal amount thereof, plus accrued and unpaid interest to the date of repurchase. There can be no assurance that the Company would have sufficient financial resources available to satisfy all of its obligations under the Notes in the event of a Change of Control. The Company's failure to purchase the Notes would result in a default under the indenture (the "Indenture") dated March 26, 1997 between the Company and State Street Bank and Trust Company (the "Trustee") under which the Notes were issued, which could have adverse consequences for the Company and the holders of the Notes. See "Description of the Notes--Repurchase at the Option of Holders Upon Change of Control." The definition of "Change of Control" in the Indenture includes a sale, transfer or other disposition of "all or substantially all" of the assets of the Company and its subsidiaries in a single transaction or series of related transactions. There is little case law interpreting the phrase "all or substantially all" in the context of an indenture. Because there is no precise established definition of this phrase, the ability of a holder of the Notes to require the Company to repurchase the Notes as a result of a sale, transfer or other disposition of all or substantially all of the Company's assets may be uncertain.

The foregoing provision of the Notes, together with the provisions of the Restated Certificate described above and other provisions of the Restated Certificate, may have the effect of deterring hostile takeovers or delaying or preventing changes in control or management of the Company, including transactions in which stockholders might otherwise receive a premium for their shares over then current market prices. In addition, these provisions may limit the ability of stockholders to approve transactions that they may deem to be in their best interests.

NO DIVIDENDS ANTICIPATED IN FUTURE

The Company has not paid any cash dividends on the Common Stock since its inception and does not anticipate paying any cash dividends on its Common Stock in the future. Declaration of dividends on the Common Stock will depend upon, among other things, future earnings, the operating

business conditions. However, the Indenture limits the Company's ability to pay dividends or make other distributions on its Common Stock, and the Company is currently prohibited from paying cash dividends under a credit facility with a commercial bank.

RATIO OF EARNINGS TO FIXED CHARGES

The Company's earnings were inadequate to meet its fixed charges in 1992, 1993, 1994, 1995 and 1996 by \$13.6 million, \$19.1 million, \$25.2 million, \$33.9 million and \$46.4 million, respectively. Assuming that the Notes were outstanding for all of 1996, and after giving effect to interest expense of \$4.5 million and the amortization of deferred financing costs of \$428,000 for such period, the Company's earnings would have been inadequate to meet its fixed charges by \$46.4 million in the year ended December 31, 1996. For the purpose of calculating the ratio of earnings to fixed charges, earnings represent the Company's loss from continuing operations before income taxes plus fixed charges. Fixed charges consist of interest expense on all indebtedness plus the interest portion of rental expense on non-cancelable leases and amortization of debt issuance costs and debt discount.

USE OF PROCEEDS

The Company will not receive any proceeds from the sale of the Securities by the Selling Securityholders or their transferees.

DESCRIPTION OF THE NOTES

The Notes were issued under the Indenture, a copy of which was filed as an exhibit to the Form 8-K and is available upon request from the Company. The following statements are summaries of certain terms applicable to the Notes and do not purport to be complete. The summaries are subject to, and qualified in their entirety by reference to, the provisions of the Indenture and the Notes, including the definitions therein of certain terms. Whenever reference is made to defined terms of the Indenture and not otherwise defined herein, such defined terms are incorporated herein by this reference.

GENERAL

The Notes are unsecured general obligations of the Company, subordinate in right of payment to certain other obligations of the Company as described under "Description of the Notes -- Subordination," and convertible into Common Stock as described under "Description of the Notes-- Conversion of the Notes." The Notes are limited to \$50,000,000 aggregate principal amount and mature on April 1, 2004 (the "Maturity Date"). The Notes bear interest at 9% per annum from the date of original issue or from the most recent Interest Payment Date (as defined below) to which interest has been paid or duly provided for, and accrued but unpaid interest is payable semi-annually in arrears on April 1 and October 1 of each year commencing October 1, 1997 (each, an "Interest Payment Date"), or, if any such day is not a business day, on the next succeeding business day. Interest will be paid to Noteholders of record ("Holders") at the close of business on the March 15 and September 15, respectively, immediately preceding the relevant Interest Payment Date (each, a "Regular Record Date"). Interest is computed on the basis of a 360-day year of twelve 30-day months.

Principal and premium, if any, and interest are payable, and the Notes may be presented for conversion, registration of transfer and exchange, at the office or agency of the Company maintained for those purposes in New York, New York (which initially will be the corporate trust office of the Trustee), except that, at the option of the Company, payment of interest may be made by check mailed

-16-

The Notes were issued in fully registered form, without coupons, in denominations of \$1,000 and any integral multiple thereof. At any time the Company may deliver Notes to the Trustee for authentication and the Trustee shall, in accordance with the instructions of the Company, authenticate and deliver such Notes as provided in the Indenture. No service charge will be made for any transfer or exchange of Notes, but, subject to certain exceptions set forth in the Indenture, the Company may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection therewith.

CONVERSION OF THE NOTES

The Notes are convertible at any time prior to the Maturity Date (subject to earlier redemption or repurchase, as described below) into shares of Common Stock at a conversion price of \$7.0125 per share (the "Conversion Price"), subject to adjustment under certain circumstances as described below. The right to convert Notes called for redemption will terminate at the close of business on the business day next preceding the date fixed for redemption, and will be lost if not exercised prior to that time, even if such redemption occurs at a time when conversion of the Notes is not in the best interests of the Holders, unless the Company defaults on payment of the Redemption Price (as defined below).

Prior to April 1, 2000, a Holder who surrenders a Note (or portion thereof) for conversion will receive all unpaid and accrued interest with respect to such Note (or portion thereof) so converted from the Interest Payment Date immediately preceding the date of conversion through the date of conversion. In addition, a Holder who surrenders a Note (or portion thereof) for conversion between the close of business on a Regular Record Date and the next Interest Payment Date (regardless of whether such conversion occurs before or after April 1, 2000) will receive interest on such Interest Payment Date with respect to such Note (or portion thereof) so converted through such Interest Payment Date. Subject to such payments in the event of conversion after the close of business on a Regular Record Date, no payment or adjustment shall be made upon any conversion on account of any interest accrued but unpaid on the Notes surrendered for conversion.

The Conversion Price is subject to adjustment as set forth in the Indenture upon the occurrence of certain events, including: (i) the issuance of Common Stock as a dividend or other distribution on any class of capital stock of the Company; (ii) a subdivision or combination of outstanding shares of Common Stock; (iii) the issuance or distribution of capital stock of the Company or the issuance or distribution of options, rights, warrants or convertible or exchangeable securities entitling the holder thereof to subscribe for, purchase, convert into or exchange for capital stock of the Company at less than the current market price of such capital stock on the date of issuance or distribution, but in each case only if such issuance or distribution is made generally to holders of Common Stock or of a class or series of capital stock convertible into or exchangeable or exercisable for Common Stock (provided that (A) the issuance of capital stock upon the exercise of such options, rights or warrants or the conversion or exchange of convertible or exchangeable securities will not cause an adjustment in the Conversion Price if no such adjustment would have been required at the time such options, rights or warrants or convertible or exchangeable securities were issued and (B) the issuance of convertible preferred stock as a dividend on convertible preferred stock will not cause an adjustment in the Conversion Price if no such adjustment would have been required at the time such underlying convertible preferred stock was issued and the conversion provisions of such convertible preferred stock so issued as a dividend are the same as in such underlying convertible preferred stock); (iv) the dividend or other distribution to holders of Common Stock, or of a class or series of capital stock convertible into or exchangeable or exercisable for Common Stock, generally (other than in connection with the liquidation or distribution of the Company) of evidences of indebtedness of the Company or

with the liquidation, dissolution or winding up of the Company); and (v) distributions consisting exclusively of cash to the extent the amount of such cash combined with all such cash distributions made within the preceding 12 months with respect to which no adjustment has been made, exceeds 10% of the Company's market capitalization (being the product of the then current market price of the Common Stock multiplied by the number of shares of Common Stock then outstanding) on the record date for such distribution.

Notwithstanding the foregoing, (a) if the options, rights or warrants or convertible or exchangeable securities described in clause (iii) of the preceding paragraph are exercisable only upon the occurrence of certain triggering events, then the Conversion Price will not be adjusted until such triggering events occur, and (b) if such options, rights or warrants or convertible or exchangeable securities expire unexercised, the Conversion Price will be readjusted to take into account only the actual number of such options, rights or warrants or convertible or exchangeable securities which were exercised. In addition, notwithstanding the provisions of the preceding paragraph, no adjustment in the Conversion Price shall be made upon (i) the issuance of Common Stock, the issuance of stock options or the issuance of Common Stock upon exercise of such options under any stock-based compensation or incentive plan now existing or hereafter adopted for officers, directors, employees of, or consultants or advisors to, the Company; or (ii) the issuance of Common Stock upon the exercise of warrants of the Company outstanding on the date hereof unless the exercise price thereof is changed after the date of the Indenture (other than solely by operation of the anti-dilution provisions thereof).

No adjustment will be made to the Conversion Price until cumulative adjustments to the Conversion Price amount to at least 1% of the Conversion Price, as last adjusted. Except as stated above, the Conversion Price will not be adjusted for the issuance of Common Stock or any securities convertible into or exchangeable for Common Stock or carrying the right to purchase any of the foregoing, or the payment of dividends on the Common Stock. The Company from time to time may reduce the Conversion Price if the Board of Directors of the Company has made a determination that such reduction would be in the best interests of the Company, which determination shall be conclusive.

In the event of (i) any reclassification or change of the Common Stock or (ii) a consolidation, merger or combination to which the Company is a party or a sale or conveyance to another entity of the property and assets of the Company as an entirety or substantially as an entirety, in each case as a result of which holders of Common Stock will be entitled to receive stock, other securities, other property or assets (including cash) with respect to or in exchange for such Common Stock, each Holder will have the right thereafter to convert such Holder's Notes into the kind and amount of shares of stock, other securities or other property or assets which the Holder would have owned or have been entitled to receive immediately upon such consolidation, merger, combination, sale or conveyance had such Note been converted into Common Stock immediately prior to the effective date of such reclassification, change, consolidation, merger, combination, sale or conveyance. Certain of the foregoing events may also constitute or result in a Change of Control requiring the Company to offer to repurchase the Notes. See "Description of the Notes--Repurchase at the Option of Holders Upon Change of Control."

Fractional shares of Common Stock will not be issued upon conversion. A person otherwise entitled to a fractional share of Common Stock upon conversion will receive cash equal to the equivalent fraction of the current market price of a share of Common Stock on the business day prior to conversion.

-18-

OPTIONAL REDEMPTION BY THE COMPANY

The Notes are not redeemable at the option of the Company prior to April 1, 2000. Thereafter, the Notes are redeemable, in whole or from time to time in part, upon not less than 30 days' nor more than 60 days' prior

notice of redemption to each Holder at such Holder's last address as it appears in the Note Register, at the Redemption Prices established for the Notes, together with accrued but unpaid interest, if any, to the date fixed for redemption; provided that from April 1, 2000 to March 31, 2001, the Notes may not be redeemed unless the closing market price per share of the Common Stock equals or exceeds 150% of the Conversion Price for at least 20 out of 30 consecutive trading days, and the Notes are redeemed within 60 days after any such trading period. The Redemption Prices for the Notes (expressed as a percentage of the principal amount) are as follows:

For the 12 Months	
On or After April 1,	Percentage
2000	104.5%
2001	103.0%
2002	101.5%
2003 and thereafter	100.0%

If less than all the Notes are to be redeemed, the Trustee will select the Notes to be redeemed in compliance with the requirements of the principal national securities exchange, if any, on which the Notes are quoted or listed, or, if the Notes are not quoted or listed, on a pro rata basis by lot or by such method that complies with applicable legal requirements and that the Trustee considers fair and appropriate. The Trustee may select for redemption portions of the principal amount of Notes that have a denomination larger than \$1,000. Notes and portions thereof will be redeemed in the amount of \$1,000 or integral multiples of \$1,000. The Trustee will make the selection from Notes outstanding and not previously called for redemption.

REPURCHASE AT THE OPTION OF HOLDERS UPON CHANGE OF CONTROL

If a Change of Control occurs, the Company will, on the terms outlined below, offer to repurchase each Holder's Notes pursuant to an offer (the "Change of Control Offer") at a purchase price equal to 150% of the principal amount of such Holder's Notes, plus accrued but unpaid interest, if any, to the date of purchase.

A "Change of Control" means the occurrence of any of the following events: (i) any person or group (within the meaning of Section 13(d) or Section 14(d) of the Exchange Act), becomes the direct or indirect beneficial owner of shares of capital stock of the Company representing greater than 50% of the combined voting power of all outstanding shares of capital stock of the Company entitled to vote in the election of directors under ordinary circumstances; (ii) subject to certain exceptions, the Company consolidates with or merges into any other entity and the Common Stock is changed or exchanged as a result; (iii) the Company sells, transfers or otherwise disposes of all or substantially all of the collective assets of the Company and its subsidiaries in a single transaction or a series of related transactions; (iv) at any time Continuing Directors (as defined below) cease to constitute a majority of the Board of Directors of the Company then in office; or (v) on any day (a "Calculation Date") the Company makes any distribution or distributions of cash, property or securities (other than regular quarterly dividends, Common Stock, preferred stock which is substantially equivalent to Common Stock or rights to acquire Common Stock or preferred stock which is substantially equivalent to Common Stock) to holders of Common Stock, or the Company or any of its subsidiaries purchases or otherwise acquires Common Stock, and the sum of the fair market value of such distribution or purchase on the Calculation Date, plus the fair market value, when made, of all such distributions and purchases which have occurred during the 12 month period ending on the Calculation Date, in each

case expressed as a percentage of the aggregate market price of all of the shares of Common Stock outstanding at the close of business on the last day prior to the date of the applicable distribution or purchase, exceeds 50%. "Continuing Director" means at any date a member of the Company's Board of Directors (i) who was a member of the Board on March 26, 1997 or (ii) who was nominated or elected by at least two-thirds of the directors who were Continuing Directors at the time of such nomination or election or whose election to the Company's Board of Directors was recommended or endorsed by at least two-thirds of the directors who were Continuing Directors at the time of such election. Under this definition, if the present Board of Directors of the Company were to approve a new director or directors and then resign, no Change of Control would occur even though the present Board of Directors would thereafter cease to be in office.

Within 30 days after any Change of Control, unless the Company has previously given a notice of optional redemption by the Company of all of the Notes, the Company will give a notice of the Change of Control Offer to each Holder at such Holder's last address as it appears on the Note Register, which will include: (i) a statement that a Change of Control has occurred and that the Company is offering to repurchase all of such Holder's Notes; (ii) a brief description of such Change of Control; (iii) the repurchase price (the "Change of Control Payment"); (iv) the expiration date of the Change of Control Offer, which must be no earlier than 30 days nor later than 60 days from the date such notice is given; (v) the date such purchase will be effected, which must be no later than 30 days after expiration date of the Change of Control Offer; (vi) a statement that unless the Company defaults in the payment of the Change of Control Payment, all Notes accepted for payment pursuant to the Change of Control Offer shall cease to accrue interest after the Change of Control Payment Date; (vii) the Conversion Price; (viii) the name and address of the paying agent and conversion agent; (ix) a statement that Notes must be surrendered to the paying agent to collect the Change of Control Payment; and (x) any other procedures that a Holder must follow in order to have such Notes repurchased and required by applicable law to be included therein.

In the event that the Company is required to make a Change of Control Offer, the Company will comply with any applicable securities laws and regulations, including, to the extent applicable, Section 14(e) of and Rule 14e-1 and any other tender offer rules under the Exchange Act which may then be applicable in connection with any offer by the Company to purchase Notes at the option of the Holders.

The Company could in the future enter into certain transactions, including certain recapitalizations of the Company, that would not constitute a Change of Control, but that would increase the amount of Senior Indebtedness (or any other indebtedness) outstanding at such time. The incurrence of significant amounts of additional indebtedness could have an adverse effect on the Company's ability to service its indebtedness, including the Notes. If a Change of Control were to occur, there can be no assurance that the Company would have sufficient funds at the time of such event to pay the Change of Control Payment for all Notes tendered by the Holders.

Certain of the Company's existing and future agreements relating to its indebtedness could prohibit the purchase by the Company of the Notes pursuant to the tender by Holders pursuant to a Change of Control Offer. Depending on the financial circumstances of the Company, such purchase by the Company could cause a breach of certain covenants contained in such agreements. A default by the Company on its obligation to pay the Change of Control Payment could, pursuant to cross- default provisions, result in acceleration of the payment of other indebtedness of the Company outstanding at that time. See "Description of the Notes--Subordination."

on the Notes is, to the extent set forth in the Indenture, subordinated in right of payment to the prior payment in full of all Senior Indebtedness. Upon any payment or distribution of assets to creditors upon any liquidation, dissolution, winding up, reorganization, assignment for the benefit of creditors or marshalling of assets, whether voluntary, involuntary or in receivership, bankruptcy, insolvency or similar proceedings, the holders of all Senior Indebtedness will be first entitled to receive payment in full of all amounts due or to become due thereon before any payment is made on account of principal of and premium, if any, and interest on the Notes or on account of any other monetary claims under or in respect of the Notes, and before the Company may acquire any of the Notes for any cash, property, assets or securities. No payments on account of principal of and premium, if any, and interest on the Notes shall be made if at the time thereof: (i) there exists a default in the payment of all or any portion of the obligations under any Senior Indebtedness or (ii) there exists a default in any covenant with respect to the Senior Indebtedness that would permit acceleration of the maturity date (other than as specified in clause (i) of this sentence), which default has not been cured or waived and is continuing, and such default would permit the maturity of such Senior Indebtedness to be accelerated; provided that no such default will prevent any payment on, or in respect of, the Notes for more than 120 days unless the maturity of such Senior Indebtedness has been accelerated.

Subject to payment in full of all Senior Indebtedness, the Holders will be subrogated to the rights of the holders of the Senior Indebtedness to the extent of payments made on Senior Indebtedness upon any distribution of assets in any such proceedings out of the distributive share of the Notes.

"Senior Indebtedness" means the principal of (and premium, if any), and accrued interest on (including all interest accruing subsequent to the commencement of any bankruptcy or similar proceeding, whether or not a claim for post-petition interest is allowable as a claim in any such proceeding): (a) existing indebtedness of the Company (including indebtedness of others quaranteed by the Company) other than the Notes, which is (i) for money borrowed or (ii) evidenced by a note or similar instrument given in connection with the acquisition of any businesses, properties or assets of any kind, (b) now or hereafter existing obligations of the Company as lessee under leases required to be capitalized on the balance sheet of the lessee under generally accepted accounting principles and leases of property or assets made as part of any sale and leaseback transaction to which the Company is a party, (c) all reimbursement obligations and other liabilities (contingent or otherwise) with respect to letters of credit, bank quarantees or bankers' acceptances, (d) amendments, renewals, extensions, modifications and refundings of any such indebtedness or obligation and (e) future indebtedness of the Company described in (a) above, and amendments, renewals, extensions, modifications and refundings thereof, if the instrument creating or evidencing such future indebtedness provides that such indebtedness or obligation is senior in right of payment to the Notes; provided, however, that future indebtedness of the Company which is, by its terms, convertible or exchangeable into capital stock will rank pari passu with the Notes unless the instruments creating such convertible indebtedness provide by their terms that such convertible indebtedness is junior in right of payment to the Notes. Senior Indebtedness does not include indebtedness or amounts owed (except to banks and other financial institutions) for compensation to employees, or for goods or materials purchased, or services utilized, in the ordinary course of business of the Company or of any other person from whom such indebtedness or amount was assumed or for whom such indebtedness was quaranteed.

The Notes are unsecured obligations of the Company, and, accordingly, will rank pari passu with all unsecured trade debt and unsecured obligations of the Company that arise by operation of law or are imposed by any judicial or governmental authority. The Notes are obligations exclusively of the Company, and accordingly, will be effectively subordinated to all indebtedness and other

its subsidiaries. The right of the Company, and, therefore, the right of creditors of the Company (including Holders) to receive assets of any such subsidiary upon the liquidation or reorganization of such subsidiary or otherwise, as a practical matter, will be effectively subordinated to the claims of such subsidiary's creditors, except to the extent the Company is itself recognized as a creditor of such subsidiary or such other creditors have agreed to subordinate their claims to the payment of the Notes, in which case the claims of the Company would still be subordinate to any secured claim on the assets of such subsidiary and any indebtedness of such subsidiary senior to that held by the Company.

At February 28, 1997, approximately \$11.1 million of Senior Indebtedness was outstanding. The Company will from time to time incur additional indebtedness constituting Senior Indebtedness.

In the event that, notwithstanding the foregoing, the Trustee or any Holder receives any payment or distribution of assets of the Company of any kind in contravention of any of the subordination provisions of the Indenture, whether in cash, property or securities, including, without limitation, by way of set-off or otherwise, in respect of the Notes before all Senior Indebtedness is paid in full, then such payment or distribution will be held by the recipient in trust for the benefit of and shall be paid over to the holders of Senior Indebtedness or their representative or representatives to the extent necessary to make payment in full of all Senior Indebtedness remaining unpaid, after giving effect to any concurrent payment or distribution, or provision therefor, to or for the holders of Senior Indebtedness.

CERTAIN COVENANTS OF THE COMPANY

Limitation on Dividend Restrictions Affecting Subsidiaries. The Company may not, and may not permit any of its subsidiaries other than Unrestricted Subsidiaries (as defined below) to, create or otherwise cause or suffer to exist or become effective any encumbrance or restriction of any kind on the ability of any subsidiary to (a) pay to the Company dividends or make to the Company any other distribution of its capital stock, (b) pay any debt owed to the Company or any other subsidiary, (c) make loans or advances to the Company or any other subsidiary, or (d) transfer any of its property or assets to the Company or any other subsidiary, other than such encumbrances or restrictions existing or created under or by reason of (i) applicable laws, (ii) the Indenture, (iii) covenants or restrictions contained in any instrument governing debt of the Company or any of the subsidiaries existing on the date of the Indenture or thereafter, (iv) customary provisions restricting subletting, assignment and transfer of any lease governing a leasehold interest of the Company or any of the subsidiaries or in any license or other agreement entered into in the ordinary course of business, (v) any agreement governing debt of a person acquired by the Company or any of the subsidiaries in existence at the time of such acquisition (but not created in contemplation thereof), which encumbrances or restrictions are not applicable to any person, or the property or assets of any person, other than the person, or the property or assets of the person, so acquired, or (vi) any restriction with respect to a subsidiary imposed pursuant to an agreement entered into in accordance with the terms of the Indenture for the sale or disposition of capital stock or property or assets of such subsidiary, pending the closing of such sale or disposition.

For purposes of the preceding paragraph, "Unrestricted Subsidiaries" means any subsidiaries of the Company which are not wholly-owned by the Company, which are designated as Unrestricted Subsidiaries by the Board of Directors and which, in the aggregate, at the time of any Investment (as defined) by the Company in any such subsidiary hold less than 20% of the Company's assets as shown on the Company's consolidated balance sheet as at the time of such Investment.

Limitation on Restricted Payments and Investments. The Company may not, and may not permit, any of its subsidiaries to, directly or indirectly, (i) declare or pay any distribution or dividend on or in

respect of any class of its capital stock (except dividends or distributions payable by wholly-owned subsidiaries of the Company and dividends or distributions payable in Qualified Stock (as defined below) of the Company or in options, warrants or other rights to purchase Qualified Stock of the Company); or (ii) purchase, repurchase, prepay, redeem, defease or otherwise acquire or retire for value (other than in Qualified Stock of the Company or in options, warrants or other rights to purchase Qualified Stock of the Company) any capital stock of the Company or any of its subsidiaries (other than a wholly-owned subsidiary of the Company), except for the repurchase of any shares of Common Stock held by employees, directors or officers of, or consultants or advisors to, the Company or any of its subsidiaries pursuant to the terms of any stock restriction, stock repurchase or similar agreement at a price per share that is less than 95% of the then market price of the Common Stock (any such prohibited declaration, payment, distribution, purchase, repurchase, prepayment, redemption, defeasance or other acquisition or retirement or investment referred to in clauses (i) or (ii) above being hereinafter referred to as a "Restricted Payment"), unless at the time of and after giving effect to such proposed Restricted Payment (the value of such payment, if other than cash, as determined by the Board of Directors, including a majority of the independent directors of the Board of Directors, whose determination shall be conclusive and evidenced by a resolution of the Board of Directors) (A) no Event of Default (as defined below) (and no event that, after notice or lapse of time, or both, would become an Event of Default) shall have occurred and be continuing and (B) (I) the value of such Restricted Payment, together with all other Restricted Payments made during the fiscal year in which such Restricted Payment is to be made, does not exceed 50% of the Company's consolidated net income with respect to the immediately preceding fiscal year, or (II) the closing bid price of the Common Stock is at least \$14.025 for each of the 10 trading days preceding the approval by the Board of Directors of such Restricted Payment and the Company's market capitalization at the time of such approval (defined as the average closing bid price of the Common Stock for the 10 trading day period preceding such approval multiplied by the number of outstanding shares of Common Stock at such time) is at least 400% of the Company's outstanding debt immediately prior to and immediately after such Restricted Payment and all Restricted Payments under this clause (II) do not exceed \$5.0 million in any fiscal year of the Company.

"Qualified Stock" means capital stock which is not, and which is not convertible into or exercisable or exchangeable for capital stock which is, subject to repurchase or redemption at the option of the holder or mandatorily by the Company prior to December 31, 2004 or exchangeable or convertible into debt securities of the Company or any of its subsidiaries at the option of the holder or mandatorily prior to December 31, 2004.

Limitation on Line of Business. For so long as any Notes are outstanding, the Company and its subsidiaries may engage solely in the manufacturing, marketing, research, development and sale of products or services in or related to the pharmaceutical or biotechnology industries.

Transactions with Related Persons. The Company may not, and may not permit any of its subsidiaries to, directly or indirectly, enter into any transaction or series of related transactions (including, without limitation, the sale, purchase, exchange or lease of assets, property or services) with (a) any beneficial owner of 5% or more of the outstanding voting securities of the Company (as determined in accordance with Section 13(d) of the Exchange Act) at the time of such transaction, (b) any officer, director or employee of the Company, or any of its subsidiaries or of any such beneficial owner of 5% or more of the outstanding voting securities of the Company as described in clause (a) above or (c) any Related Person (as defined), unless such transaction or series of transactions (A) is on terms that are no less favorable to the Company or any such subsidiary, as the case may be, than would be available in a comparable transaction with an unrelated third party or (B) (x) if such transaction or series of related transactions involve aggregate payments in excess of \$60,000, the Company delivers an officer's certificate to the Trustee certifying that such transaction complies with clause (A) above and such transaction or series of transactions is approved by a majority of the

independent directors of the Board of Directors of the Company or (y) if such transaction or series of related transactions involve aggregate payments in excess of \$1.0 million, the Company obtains an opinion as to the fairness to the Company or such subsidiary from a financial point of view issued by an investment banking firm, appraisal firm or accounting firm, in each case of national standing. Notwithstanding the foregoing, this provision will not apply to (i) any transaction entered into between the Company and subsidiaries of the Company (but excluding transactions with any subsidiary of which more than 5% of the outstanding voting securities (as determined in accordance with Section 13(d) under the Exchange Act) are beneficially owned by persons who are (a) officers, directors or employees of the Company, of any of its subsidiaries or of any beneficial owner of 5% or more of the outstanding voting securities of the Company (as determined in accordance with Section 13(d) under the Exchange Act) at the time of such transaction, (b) a beneficial owner of 5% or more of the outstanding voting securities of the Company (as determined in accordance with Section 13(d) under the Exchange Act) or (c) Related Persons), (ii) the payment of compensation and provision of benefits to officers and employees of the Company and loans and advances to such officers and employees in the ordinary course of business, or any issuance of securities, or other payments, awards or grants in cash, securities or otherwise (including the grant of stock options or similar rights to officers, employees and directors of the Company or any subsidiary) pursuant to, or the funding of, employment arrangements, stock options and stock ownership plans or other benefit plans approved by the majority of independent directors, (iii) any Designated Transactions (as defined) and (iv) transactions with any person who is a director of the Company or of any of its subsidiaries and who is not (a) the beneficial owner of 5% or more of the outstanding voting securities of the Company (as determined in accordance with Section 13(d) under the Exchange Act) or (b) an officer or employee of the Company, of any of its subsidiaries or of any such beneficial owner of 5% or more of the outstanding voting securities of the Company at the time of such transaction.

Limitation on Issuance of Securities. The Company has agreed with the Initial Purchaser that it will not, prior to April 2, 2000, issue any security that is directly or indirectly convertible into or exchangeable for equity securities of the Company which provides for a conversion or exchange price which is calculated based upon the future market value of the Common Stock unless at the time of the issuance of the security an initial conversion or exchange price is established and the formula for calculating an adjusted conversion or exchange price expressly provides that such conversion or exchange price shall not be less than the initial conversion or exchange price other than as a result of anti-dilution adjustments to the conversion or exchange price resulting from issuance of equity securities by the Company.

CONSOLIDATION, MERGER AND SALE OF ASSETS

The Company may not, without the consent of the Holders of a majority in aggregate principal amount of the Notes then outstanding, consolidate with or merge into any other entity or convey, transfer, sell or lease all or substantially all of its assets to any entity in a single transaction or a series of related transactions, unless: (i) either (a) the Company is the continuing corporation or (b) the entity formed by such consolidation or into which the Company is merged or the entity to which such assets are sold, leased, transferred, conveyed or disposed is organized under the laws of the U.S. or any state thereof or the District of Columbia and expressly assumes by supplemental indenture all obligations of the Company under the Notes and the Indenture, (ii) immediately before and immediately after giving effect to such merger, consolidation, conveyance, transfer, sale, lease or disposition no Event of Default, and no event which, after notice or lapse of time or both, would become an Event of Default, under the Indenture shall have occurred and is continuing, (iii) immediately after giving effect to such merger, consolidation, conveyance, transfer, sale, lease or disposition, the Notes and the Indenture, as supplemented, will be valid and enforceable obligations of the Company or such successor, and (iv) the Company shall have delivered to the Trustee an officer's certificate and an opinion of counsel, each stating that such merger, consolidation, conveyance, transfer, sale, lease

27

supplemental indenture does not conflict with the applicable provisions of the Indenture and, with respect to the officer's certificate only, that all conditions precedent to such transactions provided in the Indenture have been satisfied.

EVENTS OF DEFAULT

The following are Events of Default under the Indenture: (a) failure to pay principal of or premium, if any, on any Note when due and payable, whether at maturity, upon redemption, upon a Change of Control Offer or otherwise, whether or not such payment is prohibited by the subordination provisions of the Indenture; (b) failure to pay any interest on any Note when due, which failure continues for 10 days, whether or not such payment is prohibited by the subordination provisions of the Indenture; (c) failure to perform the other covenants of the Company in the Indenture, which failure continues for 60 days after written notice as provided in the Indenture; (d) failure to pay when due principal of and/or acceleration of, any indebtedness for money borrowed by the Company or any of its subsidiaries (other than Unrestricted Subsidiaries in certain circumstances) in excess of \$2.0 million, individually or in the aggregate, if such indebtedness is not discharged, or such acceleration is not annulled, within 30 days after written notice as provided in the Indenture; and (e) certain events of bankruptcy, insolvency or reorganization of the Company or any significant subsidiary. Subject to the provisions of the Indenture relating to the duties of the Trustee in case of the occurrence of an Event of Default, the Trustee will be under no obligation to exercise any of its rights or powers under the Indenture at the request or direction of any of the Holders, unless such Holders shall have offered to the Trustee reasonable indemnity. Subject to such provisions for the indemnification of the Trustee, the Holders of a majority in aggregate principal amount of the outstanding Notes will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee or exercising any trust or power conferred on the Trustee.

If an Event of Default occurs and is continuing, either the Trustee or the Holders of at least 25% in aggregate principal amount of the then outstanding Notes by notice to the Company and Trustee may declare the unpaid principal and premium, if any, of and interest on all outstanding Notes due and payable; provided, however, that if an Event of Default under clause (e) above shall occur, all unpaid principal and premium, if any, of and interest on all outstanding Notes will automatically become due and payable without any declaration or other act on the part of the Trustee or any Holders. After such acceleration, but before a judgment or decree based on acceleration, the Holders of a majority in aggregate principal amount of the then outstanding Notes may, under certain circumstances, rescind and annul such acceleration if all Events of Default, other than the nonpayment of accelerated principal, have been cured or waived as provided in the Indenture. For information as to waiver of defaults, see "Description of the Notes--Modifications, Amendments and Waivers."

No Holder of any Note will have any right to institute any proceeding with respect to the Indenture or for the appointment of a receiver or trustee or for any other remedy thereunder unless (i) such Holder shall have previously given to the Trustee written notice of a continuing Event of Default, (ii) Holders of at least 25% in aggregate principal amount of the then outstanding Notes shall have made written request and offered satisfactory indemnity to the Trustee to institute such proceeding as Trustee, (iii) the Trustee failed to institute such proceeding within 60 days after the receipt of such request of and offer of indemnity, and (iv) during such 60-day period, no direction inconsistent with such request shall have been given to the Trustee by the Holders of a majority in aggregate principal amount of the then outstanding Notes.

 $\hbox{Modifications and amendments of the Indenture may be made by the Company and the Trustee with the consent of the Holders of not less than a majority in aggregate principal amount of }$

-25-

28

the then outstanding Notes held by persons other than affiliates of the Company; provided, however, that no such modification or amendment may, without the consent of the Holder of each outstanding Note affected thereby, (i) change the stated maturity of, or any installment of interest on or waive a default in the payment of principal or premium, if any, of or interest on, any Note, (ii) reduce the principal amount of any Note or reduce the rate or extend the time of payment of interest on any Note, (iii) increase the Conversion Price (other than in connection with a reverse stock split as provided in the Indenture), (iv) change the place or currency of payment of principal, premium or repurchase price, if any, of or interest on, any Note, (v) impair the right to institute suit for the enforcement of any payment on or with respect to any Note, (vi) adversely affect the right to exchange or convert Notes, (vii) reduce the vote of the Holders necessary to waive certain defaults or compliance with certain provisions of the Indenture, consent to any merger, consolidation or conveyance, sale, transfer or lease of assets or modify or amend the Indenture, (viii) modify the provisions of the Indenture with respect to the subordination of the Notes in a manner adverse to the Holders, (ix) except as permitted by the Indenture, consent to the assignment or transfer by the Company of any of its rights and obligations thereunder, or (x) modify the provisions of the Indenture with respect to the right to require the Company to repurchase Notes in a manner adverse to the Holders.

The Holders of a majority in aggregate principal amount of the then outstanding Notes held by persons other than affiliates of the Company may, on behalf of all Holders, waive any past default under the Indenture or Event of Default, except a default in the payment of principal, premium, if any, or repurchase price of or interest on any of the Notes or a provision which under the Indenture cannot be amended without the consent of the Holder of each outstanding Note.

Amendments and supplements of the Indenture may be made by the Company and the Trustee without the consent of any Holder, in part, to: (i) cure any ambiguity, defect or inconsistency (which does not adversely affect the rights of any Holder); (ii) comply with the restriction on mergers, consolidations, and asset sales or with the provisions relating to conversion upon such events; (iii) add to the covenants of the Company further covenants, restrictions, conditions or provisions for the protection of the Holders; (iv) make any change that does not adversely affect the legal rights of any Holder under the Indenture; or (v) comply with requirements of the Commission in order to effect or maintain qualification of the Indenture under the Trust Indenture Act of 1939, as amended (the "Trust Indenture Act").

DISCHARGE OF INDENTURE

Under the Indenture, the Company may defease and be discharged from its obligations with respect to the Notes while the Notes remain outstanding (except for certain obligations to convert the Notes into Common Stock, register the transfer, substitution or exchange of Notes, to replace stolen, lost or mutilated Notes and to maintain an office or agency and the rights, obligations and immunities of the Trustee), if all outstanding Notes will become due and payable at their scheduled maturity within one year and the Company has irrevocably deposited, or caused to be deposited, with the Trustee (or another trustee satisfying the requirements of the Indenture), in trust for such purpose, (i) money in an amount, (ii) U.S. Government Obligations (as defined) which through the payment of principal, premium, if any, and interest in accordance with their terms (without reinvestment of such interest or principal) will provide not later than one day before the due date of any payment money in an amount, or (iii) a combination thereof, sufficient in the opinion of a nationally recognized firm of independent public accountants expressed in a written certification thereof delivered to the Trustee, to pay the principal of, and premium, if any, of and interest on the outstanding Notes

at maturity or upon redemption, together with all other amounts payable by the Company under the Indenture. Such defeasance will become effective 91 days after such deposit only if, among other things, (a) no Event of Default with respect to the Notes has occurred and is continuing on the date of such deposit or will occur as a result of such deposit or at any time during the period ending on the 91st day after

-26-

29

the date of such deposit, (b) such defeasance does not result in a breach or violation of, or constitute a default under, any other agreement or instrument to which the Company is a party or by which it is bound, and (c) the Company has delivered to the Trustee (I) either a private Internal Revenue Service ruling or an opinion of counsel that Holders will not recognize income, gain or loss for federal income tax purposes as a result of such deposit, defeasance and discharge and will be subject to federal income tax on the same amount, in the same manner, and at the same times, as would have been the case if such deposit, defeasance and discharge had not occurred, (II) an opinion of counsel to the effect that the deposit shall not result in the Company, the Trustee or the trust being deemed to be an "investment company" under the Investment Company Act of 1940, as amended, and (III) an officer's certificate and opinion of counsel stating that such discharge does not conflict with the applicable provisions of the Indenture and, with respect to such officer's certificate only, that all conditions precedent under the Indenture relating to a discharge have been complied with.

GOVERNING LAW

The Indenture and the Notes are governed by, and construed in accordance with, the laws of the State of New York, without giving effect to such State's conflict of law principles.

CONCERNING THE TRUSTEE

State Street Bank and Trust Company, the Trustee under the Indenture, has been appointed by the Company as the paying agent, conversion agent, registrar and custodian with respect to the Notes. The Company and its subsidiaries may maintain deposit accounts and conduct other banking transactions with the Trustee or its affiliates in the ordinary course of business, and the Trustee and its affiliates may from time to time in the future provide the Company and its subsidiaries with banking and financial services in the ordinary course of their business.

BOOK-ENTRY, DELIVERY AND FORM

The Notes were initially issued in the form of two registered Notes in global form, without coupons (the "Global Notes"). Each Global Note was deposited on April 2, 1997, the date of the closing of the sale of the Notes to the Initial Purchaser (the "Closing Date"), with, or on behalf of, The Depository Trust Company (the "Depositary") and registered in the name of Cede & Co., as nominee of the Depositary. Interests in one of the Global Notes (the "QIB Global Note") are available for purchase only by "qualified institutional buyers," as defined in Rule 144A under the Securities Act ("QIBs"). The other Global Note (the "Temporary Global Note") was initially issued in temporary global form and promptly re-registered in certificated form as described below.

Interests that were (i) originally issued to or transferred to institutional "accredited investors," as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act, who are not QIBs or to any other persons who are not QIBs (the "Institutional Accredited Investors"), or (ii) issued as described below under "Certificated Securities," were initially issued through the Temporary Global Note and re- registered in a form without coupons (the "Certificated Securities"). Upon the transfer to a QIB of Certificated Securities, such Certificated Securities will, unless the QIB Global Note has previously been exchanged for Certificated Securities, be exchanged for an interest in the QIB Global Note representing the principal amount of the Notes being transferred.

The Depositary has advised the Company that it is (i) a limited-purpose trust company organized under the laws of the State of New York, (ii) a member of the Federal Reserve System, (iii) a "clearing corporation" within the meaning of the Uniform Commercial Code, as amended, and (iv) a "Clearing Agency" registered pursuant to Section 17A of the Exchange Act. The Depositary was created to hold securities for its participating organizations (collectively, the "Participants") and to

-27-

30

facilitate the clearance in accounts of its Participants. The Depositary's Participants include securities brokers and dealers, banks and trust companies, clearing corporations and certain other organizations. Access to the Depositary's system is also available to other entities such as bank's, dealers and trust companies (collectively, the "Indirect Participants") that clear through or maintain a custodial relationship with a Participant, either directly or indirectly. QIBs may elect to hold Notes purchased by them through the Depositary. QIBs who are not Participants may beneficially own securities held by or on behalf of the Depositary only through Participants or Indirect Participants. Persons that are not QIBs may not hold Notes through the Depositary, with the exception of the Temporary Global Note which was held temporarily by Cede & Co. on behalf of the Institutional Accredited Investors.

Pursuant to procedures established by the Depositary, (i) upon deposit of the QIB Global Note, the Depositary credited the accounts of Participants, designated by the Initial Purchaser, with an interest in the QIB Global Note and (ii) ownership of the Notes is shown on, and the transfer of ownership thereof is effected only through, records maintained by the Depositary (with respect to the interests of Participants), the Participants and the Indirect Participants. The laws of some states require that certain persons take physical delivery in definitive form of securities that they own and that security interests in negotiable instruments can only be perfected by delivery of certificates representing the instruments. Consequently, the ability to transfer the Notes or to pledge the Notes as collateral will be limited to such extent.

So long as the Depositary or its nominee is the registered owner of the QIB Global Note, the Depositary or such nominee, as the case may be, will be considered the sole owner or Holder of the Notes represented by the QIB Global Note for all purposes under the Indenture. Except as provided below, owners of beneficial interests in the QIB Global Note are not entitled to have the Notes represented by the QIB Global Note registered in their names, did not receive and were not entitled to receive physical delivery of the Certificated Securities, and are not considered the owners or Holders thereof under the Indenture for any purpose, including with respect to the giving of any directions, instructions or approvals to the Trustee thereunder. As a result, the ability of a person having a beneficial interest in the Notes represented by the QIB Global Note to pledge such interest to persons or entities that do not participate in the Depositary's system, or to otherwise take actions with respect to such interest, may be affected by the lack of a physical certificate evidencing such interest.

Accordingly, each QIB owing a beneficial interest in the QIB Global Note must rely on the procedures of the Depositary and, if such QIB is not a Participant or an Indirect Participant, on the procedures of the Participant through which such QIB owns its interest, to exercise any rights of a Holder under the Indenture or the QIB Global Note. The Company understands that under existing industry practice, in the event the Company requests any action of Holders of the Notes or a QIB that is an owner of a beneficial interest in the QIB Global Note desires to take any action that the Depositary, as the Holder of the QIB Global Note, is entitled to take, the Depositary would authorize the Participants to take such action and the Participants would authorize QIBs owning through such Participants to take such action or would otherwise act upon the instructions of such QIBs. Neither the Company nor the Trustee have any responsibility or liability for any aspect of the records relating to or payments made on account of Notes by the Depositary, or for

maintaining, supervising or reviewing any records of the Depositary relating to the Notes.

Payments with respect to the principal of, premium, if any, and interest on any of the Notes represented by the QIB Global Note registered in the name of the Depositary or its nominee on the applicable record date are payable by the Trustee to or at the direction of the Depositary or its nominee in its capacity as the registered Holder of the QIB Global Note representing the Notes under the Indenture. Under the terms of the Indenture, the Company and the Trustee may treat the persons in whose names the Notes, including the QIB Global Note, are registered as the owners thereof for the purpose of receiving such payments and for any and all other purposes whatsoever. Consequently,

-28-

31

neither the Company nor the Trustee has or will have responsibility or liability for the payment of such amounts to beneficial owners of the Notes (including principal, premium, if any, and interest), or to immediately credit the accounts of the relevant Participants with such payment, in amounts proportionate to their respective holdings in principal amount of beneficial interest in the QIB Global Note as shown on the records of the Depositary. Payments by the Participants and the Indirect Participants to the beneficial owners of the Notes is governed by standing instructions and customary practice and is the responsibility of the Participants or the Indirect Participants.

CERTIFICATED SECURITIES

If (i) the Company notifies the Trustee in writing that the Depositary is no longer willing or able to act as a depositary and the Company is unable to locate a qualified successor within 90 days or (ii) the Company, at its option, notifies the Trustee in writing that it elects to cause the issuance of the Notes in definitive form under the Indenture, then, upon surrender by the Depositary of the QIB Global Note, Certificated Securities will be issued to each person that the Depositary identifies as the beneficial owner of the Notes represented by the QIB Global Note. In addition, subject to certain conditions, any person having a beneficial interest in the QIB Global Note may, upon request to the Trustee, exchange such beneficial interest for Certificated Securities. Upon any such issuance, the Trustee is required to register such Certificated Securities in the name of such person or persons (or the nominee of any thereof), and cause the same to be delivered thereto.

Neither the Company nor the Trustee shall be liable for any delay by the Depositary or any Participant or Indirect Participant in identifying the beneficial owners of the related Notes and each person may conclusively rely on, and shall be protected in relying on instructions from the Depositary for all purposes (including with respect to the registration and delivery, and the respective principal amounts, of the Notes to be issued).

The information in this section concerning the Depositary and the Depositary's book-entry system has been obtained from sources that the Company believes to be reliable. The Company will have no responsibility for the performance by DTC or its Participants of their respective obligations as described hereunder or under the rules and procedures governing their respective operations.

SAME-DAY FUNDS SETTLEMENT AND PAYMENT

The Indenture requires that payments in respect of the Notes represented by the QIB Global Note (including principal, premium, if any, interest and liquidated damages, if any) be made by wire transfer of immediately available funds to the accounts specified by the registered Holder of the QIB Global Note. With respect to Certificated Securities, the Company will make all payments of principal, premium, if any, interest and liquidated damages, if any, by wire transfer of immediately available funds to the accounts specified by Holders thereof or, if no such account is specified, by mailing a check to each such Holder's registered address. Secondary trading in long-term notes and Notes of corporate issuers is generally settled in clearing-house or next-day funds.

In contrast, the Notes represented by the QIB Global Note are eligible to trade in the PORTAL Market and to trade in the Depositary's Same-Day Funds Settlement System, and any permitted secondary market trading activity in such Notes will therefore, be required by the Depositary to be settled in immediately available funds. The Company expects that secondary trading in the Certificated Securities will also be settled in immediately available funds.

-29-

32

THE WARRANTS

In connection with the Initial Offering, the Company sold to the Initial Purchaser, for nominal consideration, the Warrants. The Warrants entitle the Initial Purchaser to purchase 356,506 shares of Common Stock at an exercise price of \$7.0125 per share at any time on or prior to April 2, 2002. The Warrants contain anti-dilution provisions providing for adjustment of the exercise price and number and type of securities issuable upon exercise of the Warrants upon the occurrence of certain events.

THE SELLING SECURITYHOLDERS

The following table sets forth, to the knowledge of the Company, certain information, as of July 3, 1997, with respect to the Selling Securityholders for whom the Company is registering the Securities for resale to the public. The Company will not receive any of the proceeds from the sale of the Securities.

To the Company's knowledge, none of the Selling Securityholders, other than the Initial Purchaser, holds any position or office with, has been employed by, or has otherwise had a material relationship with the Company or any of its subsidiaries within the past three years. In connection with the Initial Offering, the Initial Purchaser (a) purchased the Notes from the Company for \$47.5 million at a discount of 5% of the aggregate principal amount of the Notes, (b) received reimbursement from the Company of \$200,000 for its expenses incurred in connection with the Initial Offering and (c) purchased the Warrants for nominal consideration.

Name of Selling Securityholder	Number of Shares of Common Stock Beneficially Owned Prior to Offering(1)	Number of Shares of Common Stock Offered Hereby	Number of Shares of Common Stock Beneficially Owned After Offering(1)(2)	Percentage of Shares of Common Stock Beneficially Owned after Offering (1)(2)	Notes Beneficially Owned Prior to Offering	Notes Offered Hereby	Notes Beneficially Owned After Offering (2)	Percentage of the Notes Beneficially Owed After the Offering
								(2)
General Motors Employees Domestic Group Trust	1,133,689	1,133,689	0	0 %	\$7,950,000	\$7,950,000	\$0	0%
The Guardian Life Insurance Company of America	812,834	812,834	0	0 %	\$5,700,000	\$5,700,000	\$0	0 %
Forum Capital Markets L.P.	630,873(3)	630,873(3	0	0%	\$1,924,000	\$1,924,000	\$0	0%
Lincoln National Life	547,593	547,593	0	0%	\$3,840,000	\$3,840,000	\$0	0%

-30-

WG Trading Company LP	313,725	313,725	0	0%	\$2,200,000	\$2,200,000	\$0	0%	
Saif Corporation/ State of Oregon	285,204	285,204	0	0 &	\$2,000,000	\$2,000,000	\$0	0 %	
Oregon Equity Fund/ State of Oregon	285,204	285,204	0	0%	\$2,000,000	\$2,000,000	\$0	0%	
CNA Income Shares, Inc.	213,903	213,903	0	0%	\$1,500,000	\$1,500,000	\$0	0%	
Allstate Insurance Company	213,903	213,903	0	0%	\$1,500,000	\$1,500,000	\$0	0%	
Lincoln National Convertible Securities Fund	212,477	212,477	0	0%	\$1,490,000	\$1,490,000	\$0	0%	
Nesbit Burns Securities, Inc.	189,090	189,903	0	0%	\$1,326,000	\$1,326,000	\$0	0 %	
Paresco, Inc.	178,253	178,253	0	0 %	\$1,250,000	\$1,250,000	\$0	0 %	
Laterman & Co. Offshore Strategies	142,602	142,602	0	0%	\$1,000,000	\$1,000,000	\$0	0%	
Bankers Trust Asset Management	142,602	142,602	0	0%	\$1,000,000	\$1,000,000	\$0	0%	
Paloma Securities L.L.C.	142,602	142,602	0	0%	\$1,000,000	\$1,000,000	\$0	0%	
Michelangelo, L.P.	135,472	135,472	0	0%	\$950,000	\$950,000	\$0	0%	
Raphael, L.P.	135,472	135,472	0	0%	\$950,000	\$950,000	\$0	0%	
JMG Capital Partners L.P.	106,951	106,951	0	0%	\$750,000	\$750,000	\$0	0%	
Declaration of Trust for the Defined Benefit Plan of ICI American Holdings	96,969	96,969	0	0%	\$680,000	\$680,000	\$0	0%	
First Marathon Services, Inc.	85,561	85,561	0	0%	\$600,000	\$600,000	\$0	0%	
Winchester Convertible Plus Ltd.	79,857	79,857	0	0%	\$560,000	\$560,000	\$0	0%	
Thermo Electron Balance Investment Fund	75,579	75,579	0	0 %	\$530,000	\$530,000	\$0	0%	
State of Delaware Retirement Trust	74,153	74,153	0	0%	\$520,000	\$520,000	\$0	0%	
Libertyview Plus Fund	71,301	71,301	0	0%	\$500,000	\$500,000	\$0	0%	
				-31-					
34									
The Zazove	71,301	71,301	0	0%	\$500,000	\$500,000	\$0	0%	

The Zazove Convertible Fund L.P.	71,301	71,301	0	0%	\$500,000	\$500,000	\$0	0%
Growth & Income Portfolio of the Equi-Select Series Trust	71,301	71,301	0	0%	\$500,000	\$500,000	\$0	0 8
Declaration of Trust for the Defined Benefit Plan of ZEMECA Holdings	66,310	66,310	0	0%	\$465,000	\$465,000	\$0	0.6
J.W. McConnell Family Trust	64,171	64,171	0	0 %	\$450,000	\$450,000	\$0	0%
Weirton Trust	62,032	62,032	0	0%	\$435,000	\$435,000	\$0	0%
Forest Fulcrum Fund Ltd.	57,040	57,040	0	0 %	\$400,000	\$400,000	\$0	0%
Angelo Gordon, L.P.	49,910	49,910	0	0%	\$350,000	\$350,000	\$0	0%
Forest Fulcrum Fund	46,345	46,345	0	0 %	\$325,000	\$325,000	\$0	0%
Guardian Pension Trust	42,780	42,780	0	0 %	\$300,000	\$300,000	\$0	0%
Harris Insight	41,354	41,354	0	0%	\$290,000	\$290,000	\$0	0%

Fred Kolber & Co.	35,650	35,650	0	0%	\$250,000	\$250,000	\$0	0%
Libertyview Fund, LLC	35,650	35,650	0	0%	\$250,000	\$250,000	\$0	0%
ICI American Holdings Trust	28,520	28,520	0	0%	\$200,000	\$200,000	\$0	0%
Hillside Capital Incorporated Corporate Account	28,520	28,520	0	0%	\$200,000	\$200,000	\$0	0%
Zeneca Holdings Pension Trust	28,520	28,520	0	0%	\$200,000	\$200,000	\$0	0%
Walker Art Center	23,529	23,529	0	0%	\$165,000	\$165,000	\$0	0%
Foundation Acct. #1	19,964	19,964	0	0%	\$140,000	\$140,000	\$0	0%
Forest Performance Greyhound	14,260	14,260	0	0%	\$100,000	\$100,000	\$0	0%
Forest Performance Ltd.	14,260	14,260	0	0%	\$100,000	\$100,000	\$0	0%
Other Selling Securityholders(4)	62,032	62,032	0	0%	\$435,000	\$435,000	\$0	0%

-32-

35

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- The number of Securities beneficially owned is determined under rules promulgated by the Commission, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rules, beneficial ownership includes any Securities as to which the individual has sole or shared voting power or investment power and also any Securities which the individual has the right to acquire within 60 days after July 3, 1997 through the exercise of any stock option or other right. The inclusion herein of such Securities, however, does not constitute an admission that the Selling Securityholders are direct or indirect beneficial owners of such Securities. The Selling Securityholders have sole voting power and investment power with respect to all Securities of capital stock listed as owned by the Selling Securityholders.
- (2) It is unknown if, when or in what amounts a Selling Securityholder may offer Securities for sale and there can be no assurance that the Selling Securityholders will sell any or all of the Securities offered hereby. Because the Selling Securityholders may offer all or some of the Securities pursuant to this Offering, and because there are currently no agreements, arrangements or understandings with respect to the sale of any of the Securities that will be held by the Selling Securityholders after completion of the Offering, no estimate can be given as to the amount of the Securities that will be held by the Selling Securityholders after completion of the Offering. However, for purposes of this table, the Company has assumed that, after completion of the Offering, no Securities will be held by the Selling Securityholders.
- (3) Consists of 356,506 shares of Common Stock issuable upon exercise of the Warrants and 274,367 shares of Common Stock issuable upon conversion of the Notes.
- (4) These Selling Securityholders hold, in the aggregate, less than one percent of the aggregate principal amount of the Notes and less than one percent of the shares of Common Stock issuable upon conversion of the Notes.

PLAN OF DISTRIBUTION

The Securities covered hereby may be offered and sold from time to time by the Selling Securityholders, or by their pledgees, donees, transferees or other successors in interest. The Selling Securityholders will act independently of the Company in making decisions with respect to the timing, manner and size of each sale. Such sales may be made in the over-the-counter market or otherwise, at prices related to the then current market price or in negotiated transactions, including pursuant to one or more of the following methods: (a) purchases by a broker-dealer as principal and resale by such broker or dealer for its account pursuant to this Prospectus; (b) ordinary brokerage transactions and transactions in which the broker solicits purchasers; and (c) block trades in which the broker-dealer so engaged will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction. In effecting sales, broker-dealers engaged by the Selling Securityholders, or by their pledgees, donees, transferees or other successors in interest may arrange for other broker-dealers to participate. Broker-dealers will receive commissions or discounts from the Selling Securityholders, or by their pledgees, donees, transferees or other successors in interest in amounts to be negotiated immediately prior to the sale.

In offering the Securities covered hereby, the Selling Securityholders and any broker-dealers and any other participating broker-dealers who execute sales for the Selling Securityholders may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales, and any profits realized by the Selling Securityholders and the compensation of such broker-dealer may be deemed to be underwriting discounts and commissions. In addition, any of the Shares covered by this Prospectus which qualify for sale pursuant to Rule 144 may be sold under Rule 144 rather than pursuant to this Prospectus.

-33-

36

The Company has agreed to indemnify the Selling Securityholders against certain liabilities in connection with the offer and sale of the Securities, including liabilities under the Securities Act, and to contribute to payments that the Selling Securityholders may be required to make in respect thereof. The Selling Securityholders have agreed to indemnify in certain circumstances the Company and certain related persons against certain liabilities, including liabilities under the Securities Act.

The Company has agreed with the Selling Securityholders to keep the Registration Statement of which this Prospectus constitutes a part effective until the earlier of (i) such time as all of the Notes or Note Shares have been disposed of pursuant to and in accordance with such Registration Statement or pursuant to Rule 144 under the Securities Act or any other applicable exemption under the Securities Act without additional restriction upon public resale or are eligible for resale pursuant to Rule 144(k) under the Securities Act, or (ii) April 2, 1999. The Company intends to de-register any of the Notes or Note Shares not sold by the Selling Securityholders at the end of such period.

LEGAL MATTERS

The validity of the Securities offered hereby will be passed upon for the Company by Hale and Dorr LLP, a limited liability partnership including professional corporations, 60 State Street, Boston, Massachusetts 02109. Attorneys in the law firm of Hale and Dorr LLP beneficially own an aggregate of 32,077 shares of Common Stock (including shares issuable upon exercise of stock options).

EXPERTS

The Consolidated Financial Statements incorporated in this Prospectus by reference have been audited by Arthur Andersen LLP, independent public accountants, as indicated in their report with respect thereto, and are

37

NO DEALER, SALESPERSON OR OTHER PERSON HAS BEEN AUTHORIZED TO GIVE ANY INFORMATION OR TO MAKE ANY REPRESENTATIONS OTHER THAN THOSE CONTAINED IN THIS PROSPECTUS AND, IF GIVEN OR MADE, SUCH INFORMATION OR REPRESENTATIONS MUST NOT BE RELIED UPON AS HAVING BEEN AUTHORIZED BY THE COMPANY OR THE SELLING SECURITYHOLDERS. THIS PROSPECTUS DOES NOT CONSTITUTE AN OFFER TO SELL OR A SOLICITATION OF ANY OFFER TO BUY TO ANY PERSON IN ANY JURISDICTION IN WHICH SUCH OFFER OR SOLICITATION OF AN OFFER OR SOLICITATION WOULD BE UNLAWFUL. NEITHER THE DELIVERY OF THIS PROSPECTUS NOR ANY OFFER OR SALE HEREUNDER SHALL, UNDER ANY CIRCUMSTANCES, CREATE ANY IMPLICATION THAT THERE HAS BEEN NO CHANGE IN THE AFFAIRS OF THE COMPANY OR THAT THE INFORMATION CONTAINED HEREIN IS CORRECT AS OF ANY DATE HEREOF.

TABLE OF CONTENTS

	PAGE
Available Information	3
Incorporation of Certain Documents By Reference	2
Special Note Regarding Forward-Looking	
Information	4
The Company	5
Risk Factors Fixed Charges	
Use of Proceeds	
Description of the Notes	
The Warrants	
The Selling Securityholders	
Plan of Distribution	
Experts	34

HYBRIDON, INC.

\$50,000,000 OF 9% CONVERTIBLE SUBORDINATED NOTES DUE 2004

AND

7,486,631 SHARES COMMON STOCK

July , 1997

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38

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth the various expenses to be incurred in connection with the sale and distribution of the securities being registered hereby, all of which will be borne by the Company. All amounts shown are estimates except the Securities and Exchange Commission registration fee.

Filing Fee - Securities and Exchange Commission	\$ 25,000
Legal fees and expenses of the Selling Securityholders	\$ 10,000
Miscellaneous expenses	
Total Expenses	\$100,000 =====

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Article EIGHTH of the Registrant's Restated Certificate of Incorporation provides that no director of the Registrant shall be personally liable for any monetary damages for any breach of fiduciary duty as a director, except to the extent that the Delaware General Corporation law prohibits the elimination or limitation of liability of directors for breach of fiduciary duty.

Article NINTH of the Registrant's Restated Certificate of Incorporation provides that a director or officer of the Registrant (a) shall be indemnified by the Registrant against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement incurred in connection with any litigation or other legal proceeding (other than an action by or in the right of the Registrant) brought against him by virtue of his position as a director or officer of the Registrant if he acted in good faith and in a manner he reasonably believed to be in, or not opposed to, the best interests of the Registrant, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful and (b) shall be indemnified by the Registrant against all expenses (including attorneys' fees) and amounts paid in settlement incurred in connection with any action by or in the right of the Registrant brought against him by virtue of his position as a director or officer of the Registrant if he acted in good faith and in a manner he reasonably believed to be in, or not opposed to, the best interests of the Registrant, except that no indemnification shall be made with respect to any matter as to which such person shall have been adjudged to be liable to the

Registrant, unless a court determines that, despite such adjudication but in view of all of the circumstances, he is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that a director or officer has been successful, on the merits or otherwise, including, without limitation, the dismissal of an action without prejudice, he is required to be indemnified by the Registrant against all expenses (including attorneys' fees) incurred in connection therewith. Expenses shall be advanced to a Director or officer at his request, provided that he undertakes to repay the amount advanced if it is ultimately determined that he is not entitled to indemnification for such expenses.

II-1

39

Indemnification is required to be made unless the Registrant determines that the applicable standard of conduct required for indemnification has not been met. In the event of a determination by the Registrant that the director or officer did not meet the applicable standard of conduct required for indemnification, or if the Registrant fails to make an indemnification payment within 60 days after such payment is claimed by such person, such person is permitted to petition the court to make an independent determination as to whether such person is entitled to indemnification. As a condition precedent to the right of indemnification, the director or officer must give the Registrant notice of the action for which indemnity is sought and the Registrant has the right to participate in such action or assume the defense thereof.

Article NINTH of the Registrant's Restated Certificate of Incorporation further provides that the indemnification provided therein is not exclusive, and provides that in the event that the Delaware General Corporation Law is amended to expand the indemnification permitted to directors or officers the Registrant must indemnify those persons to the full extent permitted by such law as so amended.

Section 145 of the Delaware General Corporation Law provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against amounts paid and expenses incurred in connection with an action or proceeding to which he is or is threatened to be made a party by reason of such position, if such person shall have acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal proceeding, if such person had no reasonable cause to believe his conduct was unlawful; provided that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the adjudicating court determines that such indemnification is proper under the circumstances.

The Company is a party to indemnification agreements with Mr. Grinstead and Mr. Payne. Such agreements provide that either of such individuals shall be indemnified by the Registrant (a) against all expenses (as defined in the agreements), judgments, fines, penalties and amounts paid in settlement actually and reasonably incurred in connection with any legal proceeding (other than one brought by or on behalf of the Registrant) if such individual acted in good faith and in a manner which he reasonably believed to be in, or not opposed to, the best interests of the Registrant, and with respect to any criminal proceeding, had no reasonable cause to believe that his conduct was unlawful and (b) against all expenses and amounts paid in settlement actually and reasonably incurred in connection with a legal proceeding brought by or on behalf of the Registrant if such individual acted in good faith and in a manner which he reasonably believed to be in, or not opposed to, the best interests of the Registrant, except that no indemnification shall be made in respect of any claim, issue or matter as to which such individual has been adjudged to be liable. If, with respect to such proceedings, such individual is successful on the merits or otherwise, such individual shall be reimbursed for all expenses. These individuals are required to provide notice to the Registrant of any threatened or pending litigation, and the Registrant has the right to participate in such action or assume the defense thereof.

40 ITEM 16. LIST OF EXHIBITS.

- 1* Purchase Agreement dated as of March 26, 1997 between Forum Capital Markets L.P. ("Forum") and the Company.
- 4.1* Indenture dated as of March 26, 1997 between State Street Bank and Trust Company and the Company, including as an exhibit thereto the form of the QIB Global Note and the form of the Temporary Global Note.
- 4.2* Registration Rights Agreement dated as of March 26, 1997 between Forum and the Company.
- 5** Opinion of Hale and Dorr LLP.
- 10.1* Warrant Agreement dated as of March 26, 1997 between Forum and the Company.
- 23.1** Consent of Hale and Dorr LLP, included in Exhibit 5.
- 23.2 Consent of Arthur Andersen LLP.
- 23.3 Consent of Banner & Witcoff, Ltd.
- 24** Power of Attorney.
- 99** Form T-1. Statement of Eligibility under the Trust Indenture Act of State Street Bank and Trust Company.

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Incorporated by reference to Exhibits to the Registrant's Current Report on Form 8-K dated April 2, 1997 and filed with the Commission on April 14, 1997.

** Previously filed.

ITEM 17. UNDERTAKINGS.

The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended (the "Securities Act");

(ii) To reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement. Notwithstanding the foregoing, any increase or decrease in the volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any derivation from the low or high and of the estimated maximum offering range may be reflected in the form of prospectus filed with the ${\tt Commission}$ pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the Registration Statement: and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement.

(2) That, for the purposes of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at the time shall be deemed to be the initial bona fide offering thereof.

II-3

41

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

The Company hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Company's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein and the offering of such securities at the time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Corporation pursuant to the indemnification provisions described herein, 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 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 to file an application for the purpose of determining the eligibility of the trustee to act under Subsection (a) of Section 310 of the Trust Indenture Act in accordance with the rules and regulations prescribed by the Commission under Section 305(b)(2) of the Trust Indenture Act.

II-4

42

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Amendment No. 1 to Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, Commonwealth of Massachusetts, on this 17th day of July, 1997.

By: /s/ E. Andrews Grinstead, III

: /s/ E. Andrews Grinstead, III

E. Andrews Grinstead, III Chairman of the Board, President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Amendment No. 1 to Registration Statement has been signed by the following persons in the capacities and on the date indicated.

Signature	Title	Date
/s/ E. Andrews Grinstead, IIIE. Andrews Grinstead, III		July 17, 1997
* Anthony J. Payne	Senior Vice President of Finance and Administration, Treasurer, Secretary and Chief Financial Officer (Principal Financial and Accounting Officer)	July 17, 1997
* Sudhir Agrawal	Director	July 17, 1997
	II-5	
43		
* J. Robert Buchanan	Director	July 17, 1997
*	Divertor	Tv.1.v. 17 1007
Mohamed El-Khereiji	Director	July 17, 1997
* Youssef El-Zein	Director	July 17, 1997
* Nasser Menhall	Director	July 17, 1997
* Jerry A. Weisbach	Director	July 17, 1997
* James B. Wyngaarden	Director	July 17, 1997
* Paul C. Zamecnik	Director	July 17, 1997
*By: /s/ E. Andrews Grinstead, III E. Andrews Grinstead, III Attorney-in-fact		

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the incorporation by reference in this registration statement on Form S-3 (File No. 333-25833) of our report dated February 21, 1997 (except with respect to the matter discussed in Note 1, as to which the date is March 26, 1997) included in Hybridon's Form 10-K for the year ended December 31, 1996, and to all references to our Firm included in this registration statement.

/s/ Arthur Andersen LLP
-----ARTHUR ANDERSEN LLP

Boston, Massachusetts, July 14, 1997

[LETTERHEAD OF BANNER & WITCOFF, LTD.]

July 15, 1997

Hybridon, Inc. 620 Memorial Drive Cambridge, Massachusetts 02139

Re: Hybridon, Inc. -- Annual Report on Form 10-K

Dear Sirs:

Banner & Witcoff, Ltd. hereby consents to the reference to our firm under the section "Business -- Patents, Trade Secrets and Licenses" in the Hybridon, Inc. Annual Report on Form 10-K for the year ended December 31, 1996, which is incorporated by reference in Hybridon, Inc.'s Registration Statement on Form S-3 (File No. 333-25833).

Yours very truly,

/s/ Peter D. McDermott

Peter D. McDermott