SHAMAN PHARMACEUTICALS INC
Form 10-K
April 17, 2001

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# SECURITIES AND EXCHANGE COMMISSION

**Washington, D.C. 20549**

# FORM 10-K

**For Annual and Transition Reports**
**Pursuant to Sections 13 or 15(d) of the**
**Securities and Exchange Act of 1934**

/x/ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the fiscal year ended December 31, 2000**

/ / **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the transition period from _____ to _____**

**Commission File No. 0-21022**

# Shaman Pharmaceuticals, Inc.

(Exact name of registrant as specified in its charter)

| **Delaware** | **94-3095806** |
|---|---|
| (State or other jurisdiction of incorporation or organization) | (IRS Employer Identification Number) |
| **213 East Grand Avenue, South San Francisco, California** | **94080** |
| (Address of principal executive offices) | (ZIP Code) |

**Registrant's telephone number, including area code: 650-952-7070**

**Securities Registered Pursuant to Section 12(b) of the Act: None**

**Securities Registered Pursuant to Section 12(g) of the Act:**

**Common Stock $.001 Par Value**

**(Title of Class)**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes /x/ No / /

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (Section 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. / /

The aggregate market value of the voting stock held by non-affiliates of the Registrant based upon the closing sales price of the Common Stock on the Nasdaq OTC Bulletin Board on April 6, 2001 was $1,470,706*

* Excludes 11,544,994 shares of the Registrant's Common Stock held by executive officers, directors and affiliated parties at March 31, 2001. Exclusion of such shares should not be construed to indicate that any such person possesses the power, direct or indirect, to direct or cause the direction of the management or policies of the Registrant or that such person is controlled by or under common control with the Registrant.

The number of shares of the Registrant's Common Stock outstanding was 103,464,136 as of April 6, 2001.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of Registrant's Definitive Proxy Statement to be filed with the Commission pursuant to Regulation 14A in connection with the Company's 2001 Annual Meeting are incorporated herein by reference into Part III of this Report.

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## PART I

### Item 1. Business

In addition to historical information, this report contains predictions, estimates and other forward-looking statements that involve a number of risks and uncertainties that are described more fully in "Risk Factors." While this outlook represents our judgment on the current and future direction of the business, these risks and uncertainties are only some of the factors that may ultimately affect the success of Shaman Pharmaceuticals, Inc. Actual results may differ significantly from any future performance suggested in this report.

All information contained in this Report on Form 10-K reflects a 1-for-20 reverse stock split of the common stock effected on June 22, 1999 and a 1-for-50 reverse stock split of the common stock effected on January 31, 2000.

**Business**

*Overview of current business*

We are focused on the discovery, development, and marketing of novel, proprietary botanical dietary supplements derived from tropical plant sources. In September 1999, we began implementing our commercialization efforts. Our commercialization plans focus on the use of community building initiatives on the Internet and other distribution channels, and is based on marketing our exclusive access to proprietary branded products. We also have available for out-licensing a pipeline of botanical product candidates, as well as novel pharmaceutical product candidates for major human diseases developed by isolating active compounds from tropical plants with a history of medicinal use.

*Overview of our new business plan*

On January 5, 2001, Shaman filed a Chapter 11 reorganization petition (the "Reorganization") for protection under federal bankruptcy law in the United States Bankruptcy Court, Northern District of California (San Francisco) (the "Bankruptcy Court"). As part of the Reorganization, we have petitioned the Bankruptcy Court to sell certain of the tangible and intellectual property assets in order to generate sufficient funds to pay existing, qualified creditors. In addition, we anticipate filing our Plan of Reorganization with the Bankruptcy Court during the second quarter of 2001. We believe this plan will give us the best chance to maximize value of specified products and/or assets currently in Shaman. A more detailed discussion of the Reorganization will be available in our plan to be filed during the second quarter of 2001.

We anticipate the sale of certain Shaman assets to include both tangible and intellectual property assets. Assets to be sold may include Shaman's public shell and associated net operating losses, pharmaceutical and dietary supplement patents and trademarks, plant material and rights to products currently in the product development pipeline. A more detailed discussion of the anticipated sale can be found in our Application to employ Sutter Securities as a financial advisor to sell our public shell and net operating losses and our Application to employ

DoveBid to sell our intellectual property filed with the Bankruptcy Court on March 22, 2001. Because the shell of Shaman will continue, operations are described as if Shaman is a going concern.

**BOTANICALS**

*Background*

In 1997, the U.S. dietary supplement market was $12.9 billion. Of this, over $4.0 billion were herbal or botanical dietary supplements. In 1998, this number was projected to reach $5.0 billion, with a compounded yearly growth rate of approximately 35%. In 1997, 24% of U.S. households reported



using herbal or botanical dietary supplements. The growth of this market has been led by consumers who are interested in complementary, non-pharmaceutical options for treating symptoms, fulfilling unmet dietary needs, and optimizing health, either as an alternative to, or in conjunction with, more conventional medical approaches. We believe that the use of these products will continue to expand based upon the aging of the population, increasing scientific evidence and acceptance by the conventional medical establishment, the ongoing consolidation of industry companies into larger organizations better equipped to market products, and the entrance of powerful consumer companies which provide greater product confidence, while growing the base of consumer users.

We believe that room exists for significant continuing growth of the dietary supplement market and expect the two key drivers of market growth to be (1) growth in the number and breadth of consumers utilizing these products; and (2) continuing effective product innovation to fuel both trial and repurchase.

Growth in the number and breadth of consumers utilizing these products has already begun, and is based in part upon the entrance of the large consumer healthcare companies into the botanical dietary supplements market. These companies have increased the visibility of botanical dietary supplements, placing them not only in local health food stores but also in neighborhood grocery stores, drug stores, and mass merchandisers. Additionally, these companies are spending money on large direct-to-consumer advertising campaigns, placing advertisements during primetime television and in mainstream newspapers and magazines. Consumer surveys show this advertising has resulted in a broader base of consumers being made aware of, trying and utilizing dietary supplements.

Finally, as more consumers have entered the dietary supplement market, they have also begun to demand better quality, more consistency and standardization of products, and scientific evidence regarding the safety and efficacy of products. Increased demand has also strained the supply of natural plant material for some popular products. Not all companies in the industry have proven capable of meeting these consumer demands.

*Strategy*

The concept for our botanical division was developed in 1998, and became the focus of our operations in 1999. The purpose of the botanicals business is to discover, develop and market novel, proprietary botanical dietary supplements derived from tropical plant sources through community building initiatives on the Internet and other focused marketing channels. The unique positioning of our botanicals business stems from our prior experience and efforts in developing pharmaceutical products from tropical plant sources, including significant financial investment, more than 10 years of extensive field research by our teams of ethnobotanists and physicians, and pharmaceutical-level chemical standardization, biological and clinical testing. In the last decade, we have amassed a large body of information on the health benefits of thousands of tropical plant species that have a history of human use, and we have organized this information into an extensive relational database. This database includes over 2,600 tropical plants, many of which have not been introduced or fully developed in the U.S. dietary supplement market. We have identified plants with a documented ethnomedical history of use in our library and database of botanicals for use in key market categories with significant commercial potential. Because many of these plants reflect the previously untapped plant diversity of the rainforests, they may represent novel botanical products that have the opportunity to attain a strong, proprietary market position. We began marketing our first botanical product, Normal Stool Formula ("NSF"), in September 1999.

The opportunity exists to differentiate our product candidates in consumers' minds relative to those of our competitors. Key points of differentiation include:

Novel plants/proprietary products for unmet needs;

Documented, first-hand field experience with traditional use;

Rainforest-based plants and products, since most botanical supplements products currently come from plants found in temperate areas;

Our commitment to conservation and reciprocity;

Sustainable sourcing and supply;

Quality manufactured, standardized products; and

Clinically tested products.

Our commercialization strategy since September 1999 has focused on creating high-end branding of the Shaman name, on our propriety products addressing serious unmet healthcare concerns, and to market these proprietary products to specific communities affected by such healthcare issues.

*Product Discovery and Development Process*

We build on the knowledge and expertise of ethnobotanist and physician teams who work with traditional healers to identify effective treatments in the therapeutic areas that we have targeted. These teams gather comparative data on traditional medicinal and health uses of plants from geographically diverse tropical areas and prioritize plant candidates based on common use among cultures and other factors. The prioritization process includes cross-checking field-derived information against the results of literature searches as to chemical constituents, previously discovered biological activity and other reported medicinal uses. This process is integral to both our pharmaceutical and dietary supplement discovery and development programs.

We were able to initiate our botanicals business by further exploring the botanical library and pipeline we have developed over the past 10 years. In the last decade, we have amassed a large body of information on the healing benefits of thousands of tropical plant species that have a history of human use and have organized this information into an extensive relational database. This database includes information on over 2,600 tropical plants, many of which have not been introduced or fully developed in the U.S. dietary supplement market. Currently, most dietary supplements are derived from plants from temperate regions. We have identified plants with a documented ethnomedical history of use in our library and database of botanicals for use in key market categories with significant commercial potential.

We believe the opportunity exists to differentiate ourselves within the botanical dietary supplement marketplace by backing proprietary products and promotion with quality research, development and manufacturing, a carry-over from our pharmaceutical culture and skill base. Standardization processes can be developed for the ingredients in all our products, including safety verification and, where appropriate, human clinical testing of potential products. Once completed, published clinical data can be utilized for educational purposes with consumers and retailers seeking more information about our products. This distribution of "third party" literature for education and promotional sales can be particularly effective with Internet purchases. We believe that these elements, along with unique formulations and existing and future patents, should add to the proprietary position of our products.

*Products and Product Candidates*

Our first botanical dietary supplement product is Normal Stool Formula ("NSF"), which is designed to relieve diarrhea without causing constipation. NSF is an extract of Croton lechleri, a plant used by indigenous people for relief of gastrointestinal symptoms, and contains a chemical activity marker, SP-303, a patented, clinically proven antidiarrhea agent. NSF also has a patented formulation. The mechanism of NSF is a desirable anti-secretory activity, and NSF does not have anti-motility effects, such as the side effects of constipation and cramping associated with the use of immodium and

loperamide. Such anti-motility agents generally cannot be used on a continuous basis as a result of these side effects.

We began marketing NSF in September 1999, and have focused our marketing efforts on community building initiatives on the Internet and other appropriate focused channels of distribution. We marketed the product initially to people with HIV/AIDS who suffer from chronic diarrhea and began marketing this product to travelers and others who suffer from acute episodes of diarrhea in the fourth quarter of 1999. We are also considering developing a pediatric formulation of NSF, which would complete three distinct commercial product opportunities from one plant extract, differentiated by formulation, packaging, and target customer/community base.

In 2000, we began working to develop a second product line based on a diet system to mitigate Syndrome X symptoms. Syndrome X is the cluster of metabolic disorders that occur in the face of elevated insulin when an individual is insulin resistant, yet still maintains glucose control and is therefore not diabetic. This cluster of coronary heart disease risk factors, such as elevated triglycerides and lower HDL-cholesterol, the "good" cholesterol, are the silent killers associated with Syndrome X. Shaman's Sr. Vice President of Clinical Research, Dr. Gerald Reaven, has developed a trademarked Syndrome X diet system for persons exhibiting Syndrome X symptoms, and has performed over 20 years of clinical research documenting the benefits of this diet system. Direct comparison clinical trial data supports that this diet system provides superior benefits to those exhibiting Syndrome X symptoms than the low fat/high carbohydrate diet guidelines recommended by the American Heart Association. In March 2000, Dr. Reaven published a mass market health book titled, ***SYNDROME X: Overcoming the Silent Killer That Can Give You a Heart Attack*** (Simon & Schuster).

Approximately 30% of the US population is insulin resistant and subject to Syndrome X. Shaman has the exclusive license to diet and nutritional systems designed to combat Syndrome X as well as the trademarked name for use on related products and services. We plan to produce several lines of products based on Dr. Reaven's clinical research. The first is a line of nutrition bars, which match Dr. Reaven's proprietary nutritional system. Sales of the initial bar began mid year 2000 via the Internet and toll free phone call sales. Future Syndrome X products may contain one or more proprietary active ingredient from Shaman's library and may take the form of foods, beverages and standardized dietary supplements.

Many people with AIDS/HIV who are effectively managing the AIDS virus with their antiviral therapies are now also demonstrating metabolic abnormalities consistent with insulin resistance and Syndrome X and progressing to coronary heart disease and type II diabetes. We intend to leverage the identity we will work to establish in the AIDS/HIV community through our NSF product to commence marketing of our Syndrome X diet system in this community, and intend to initially target this community.

*Sales and Marketing*

We launched our first product NSF in July 1999, and began marketing this product in September 1999. NSF is a botanical dietary supplement that relieves diarrhea without causing constipation. NSF has initially been targeted to people with AIDS/HIV who suffer from chronic diarrhea. We are marketing NSF via the Internet, 1-800 direct telephone response advertising, advertising in major metropolitan newspapers, and limited storefront access in major market cities through the 1,100 Medicine Shoppe retail pharmacies, CVS Procare and other. We are also closely working with General Nutrition Centers to launch NSF under GNC's preventative nutrition brand in their more than 4,200 retail locations.

We believe that targeting travelers on the Internet presents an attractive marketing opportunity for NSF since two primary uses of the Internet are currently healthcare information and travel. Beginning in the fourth quarter of 1999, we began marketing NSF to travelers and others suffering from acute



episodes of diarrhea such as Irritable Bowel Syndrome ("IBS") related diarrhea. We are marketing NSF for traveler's via affiliate travel web sites, sample programs to adventure travel and tour companies, and other highly focused target customer programs

*Customers and Partners*

In the fourth quarter of 1999, we secured Cardinal Distribution, a division of Cardinal Health, Inc. to distribute NSF, our first line of clinically tested supplements. In addition, Medicine Shoppe International became the first national retail pharmacy chain customer to carry NSF. Prior to signing an exclusive deal with Medicine Shoppe International, we also secured several individual pharmacy stores to sell NSF. These stores include CVS ProCare, Statscript, APP and Statlanders.

In July 2000, General Nutrition Corporation ("GNC"), a member of the Numico family of companies, signed an agreement to market Shaman's Normal Stool Formula ("NSF") in its U.S. network of more than 4,200 retail stores. GNC also agreed to market NSF through its alliance with Rite Aid pharmacies in 500 plus store-in-store locations. GNC believes they will begin selling NSF in the first half of 2001.

The market for dietary supplements in the United States is growing. In recent consumer surveys, 25% to 30% of consumers report having utilized a botanical dietary supplement, and 36% report moderate to heavy use of complementary medicine.

We believe that our botanicals business has two key initial classes of customers:

consumers, primarily in the HIV/AIDS community, the traveler's market, and Syndrome X community; and

mass market companies that are interested in licensing or partnering with us for the commercialization of our products.

*Potential NSF Customers*

Diarrhea in people with HIV and AIDS is a devastating syndrome. In 1997 in the United States, there were an estimated 225,000 people with AIDS and between 650,000 and 900,000 individuals in the United States were believed to be infected with HIV. While fewer people are dying of AIDS, new cases of AIDS and HIV are still increasing and people are now living longer with both AIDS and HIV. Sources indicate that, of the combined HIV and AIDS population in the United States, approximately 20% to 40% suffer from diarrhea at any given time, with an average duration of 90 days per year. Although protease inhibitors and highly active antiretroviral therapy have improved the prognosis for people living with HIV and AIDS, the problem of diarrhea persists. In the majority of cases the symptom is thought to be related to the anti-viral drugs. Diarrhea therefore remains a serious problem that has not been adequately addressed.

Diarrhea not only compromises the health and quality of life of individuals with AIDS and HIV but also has been shown to increase dramatically the cost of these individuals' medical care. Furthermore, people with chronic diarrhea are forced to restrict their daily activities to accommodate the disruptions caused by this condition because current symptomatic therapies provide either poor relief or undesirable side-effects.

We believe that a product that normalizes water flow in the bowel and promotes stool formation represents a large, focused and untapped market opportunity. We believe that the competitive promotional response may be limited in this discrete market because no specific dietary supplements or over-the-counter antidiarrheals have targeted this population to date, likely because there are no indication or studies in this patient population and the mechanism of action of anti-motility products is counter-indicated for chronic diarrhea.



For the traveler's market, NSF provides a natural alternative to currently available treatments which have unpleasant side effects, such as constipation and rebound diarrhea. More than 35 million individuals travel annually to countries that present the risk of traveler's diarrhea.

*Competition*

Competition in the botanical dietary supplement market differs by channel of distribution. Historically, competition within the health food channel was fragmented and made up of over 200 small, mostly privately held companies. More recently, several large consumer healthcare companies have opened up the mass-market channel, including American Home Products with its Centrum® Herbal brand, Bayer's introduction of botanical ingredients in their One-A-Day® line, and Warner-Lambert's introduction of their Quanterra® brand. Overall, the entrance of these companies is expected to broaden consumer acceptance of botanical products and grow the total botanical dietary supplement market, with the mass market becoming the largest, fastest-growing distribution channel. In order to enter this key channel, we intend to partner with a company with direct to consumer promotional capabilities and extensive experience in this market. We believe that a partner in this channel will value the quality and scientific rigor behind our future products.

We face competition for our first product, NSF, from other over-the-counter anti-diarrhea products such as Immodium ID and Pepto Bismol.

*Government Regulation*

The term "botanical dietary supplement" is defined by the 1994 Dietary Supplement Health and Education Act or DSHEA as "an herb or other botanical or a concentrate, constituent, extract or combination of any botanical that is intended for ingestion as a tablet, capsule, or in liquid form and is not represented for use as a conventional food or as a sole item of a meal or the diet and is labeled as a dietary supplement." The 1994 Dietary Supplement Health and Education Act specifically outlines how botanical products are to be regulated and treated. Some commonly known commodity botanical dietary supplement products include ginseng, gingko biloba, St. John's wort, and echinacea. This statutory definition also differentiates botanical dietary supplements, vitamins and minerals from conventional foods or food additives. Under the law, botanicals may be sold as dietary supplements with claims as to their effect on the structure or function of the human body, providing the seller

has adequate documentation for the claims. Botanical dietary supplements are regulated by the FDA. However, some botanical dietary supplement products require no review or approval to enter the market, while some new products may require the submission of basic safety data prior to marketing. As a result, the FDA regulatory process in the botanical dietary supplement industry is much less rigorous than in the pharmaceutical industry, allowing for much faster market introduction.

One of the unique provisions of DSHEA is the distinction between new dietary ingredients and old dietary ingredients, which had a history of being marketed in the United States prior to DSHEA. Old dietary ingredients have been "grand-fathered" under the law, allowing them to be commercialized without further FDA review. Our pipeline includes more than 400 botanical candidates that are old dietary ingredients, including several near-term product candidates, and numerous new dietary ingredients candidates.

**PHARMACEUTICALS**

*Background*

Pharmaceutical companies continually search for innovative products available for in-license to enhance their existing product portfolios. Products that have an entirely different approach or means of accomplishing the desired therapeutic effect than products currently available are particularly in demand. In addition, companies are looking to develop or in-license products that may be more



effective and/or less costly than those currently available, or those that could offer an alternative to other, more invasive forms of medical treatment and address the self-medication and quality of life issues of the current aging consumer population.

*Strategy*

Until December 1998, we were primarily focused on discovering and developing novel pharmaceutical products for major human diseases by isolating and optimizing active compounds found in tropical plants with a history of medicinal use. We have conducted human clinical trials with our three lead product candidates SP-303/Provir (Phase III/II), nikkomycin Z (Phase I) and SP-134101 (Phase I) targeting five indications. Due to unforeseen delays and costs necessary to complete additional trials for our lead compound, SP-303/Provir for the treatment of diarrhea in people with AIDS, we have chosen to discontinue all pharmaceutical development, manufacturing and marketing activities. We now intend to out-license worldwide marketing rights to our pharmaceutical assets and completed the first such transaction last year with Metabolex, Inc. (See "Partners" below).

*Product Discovery and Development Process*

In our efforts to develop pharmaceutical products, we previously focused on drugs extracted from plants with a long history of medicinal use. Through this process, we successfully identified and developed a number of pharmaceutical candidates, particularly through the preclinical and early clinical stages. These efforts have produced a portfolio of product candidates for out-license.

*Product Candidates*

We conducted human clinical trials with our three leading product candidates SP-303/Provir (Phase III/II), nikkomycin Z (Phase I), and SP-134101 (Phase I) targeting five indications. We have discontinued all pharmaceutical development, manufacturing and marketing activities.

As part of our reorganization in 2001, we have petitioned the Bankruptcy Court to sell certain of the tangible and intellectual property assets associated with our pharmaceuticals operations in order to generate funds to pay existing, qualified creditors and provide operating capital.



The following table describes the major therapeutic areas in which we have had active product development and research.

| Product | Indication | Status | Commercial Rights |
|---|---|---|---|
| Provir | AIDS-associated diarrhea | Completed Phase III study in Q4, 1998. Completed | Shaman |

| Product | Indication | Status | Commercial Rights |
|---|---|---|---|
| | | Phase II efficacy study in Q4, 1997. | |
| Provir | Acute watery diarrhea | Completed two Phase II efficacy trials in Q3, 1998. Completed initial Phase II efficacy studies in 1996 and 1997. | Shaman |
| Provir | Pediatric diarrhea | Formulation to be developed. | Shaman |
| Nikkomycin Z | Endemic mycoses | Completed Phase I study in Q2, 1997. | Shaman |
| Nikkomycin Z And Azoles | Azole-resistant Candida | Initiation of clinical program pending preclinical development by Pfizer. | Shaman |
| SP-134101 | Type II Diabetes | Completed Phase I study in Q1, 1998. | Shaman |
| Oral antihyperglycemic compounds | Type II Diabetes | Preclinical, 29 compounds. | Ono; Lipha S.A.; Metabolix; and Shaman. Shaman may receive royalties on sales outside the U.S. and profit sharing in the U.S. |

*Sales and Marketing*

As part of our reorganization in 2001, we have petitioned the Bankruptcy Court to sell certain of the tangible and intellectual property assets associated with our pharmaceuticals operations in order to generate funds to pay existing, qualified creditors and provide operating capital.

*Partners*

In August 1999, we entered into a License and Sale Agreement with Metabolex, Inc. whereby Metabolex, Inc. has licensed certain rights to Shaman's library of extracts and compounds for research, development, and commercialization purposes. We have received a payment of $350,000 for a perpetual license of certain technology and an additional $65,000 for services rendered. We will receive royalties on any resulting products commercialized. Metabolex, Inc. also has an option to acquire licenses to further technology in exchange for additional consideration over the initial four-month period. In October 1999, we received an additional $250,000 payment from Metabolex, for which Metabolex exercised its option to acquire a perpetual license to other technology.

In September 1996, we entered into a five-year collaborative agreement with Lipha S.A. to develop jointly our antihyperglycemic drugs. In February 1999, we discontinued all research and development work related to this collaborative agreement when we restructured our business to focus on the



research and development of botanical dietary supplements. In August 1999, we issued 133,334 shares of Series R Preferred Stock, having a value of $2.0 million, to Lipha S.A. in partial settlement of claims made by Lipha S.A. in connection with the pharmaceutical research and development agreement between Shaman and Lipha S.A. In December 1999, we entered into a settlement agreement with Lipha S.A. for the discontinuation of the Research Agreement. We will receive no further payments for research and development from Lipha S.A.

In May 1995, we entered into a collaborative agreement with Ono Pharmaceutical Co. Ltd. providing for, among other things, three years of funding for the research and development of compounds for the treatment of Type II diabetes. Although the on-going research funding period under such agreement has expired, Ono continues to have contractual obligations to us for the potential payment of milestones and royalties. There can be no assurance that such milestones will be attained or that we will receive any future milestone payments or royalties from Ono.

*Competition*

The out-licensing of pharmaceuticals is a competitive enterprise. Although many companies consider licensing opportunities, they often investigate multiple opportunities before settling on a select few. While Shaman is subject to this competition, we have had some interest in our products based upon their novelty, safety, efficacy, and advanced stages of development. We are actively seeking to out-license our products and we have multiple on-going discussions. To date, these discussions have resulted in an out-licensing agreement with Metabolix.

**Patents and Proprietary Rights**

Proprietary protection for our product candidates, processes and know-how is important to our business. Our policy is to file patent applications to protect technology, inventions and improvements that are considered commercially important to the development of our business. We also rely upon trade secrets, trade marks, know-how and continuing technological innovation to develop and maintain our competitive position. We prosecute and defend our patents and proprietary technology.

We have 21 U.S. patents issued to date. In addition, we currently have 10 U.S. patent applications pending with the U.S. Patent and Trademark Office and multiple applications filed under the Patent Cooperation Treaty. We do not know whether any of these applications will result in the issuance of any patents or, if any patents are issued, whether any issued patent will provide significant proprietary protection or will be circumvented or invalidated.

We have been issued a U.S. patent related to our specific proanthocyanidin polymer compositions designated SP-303/Provir. Specifically, the patent contains composition of matter claims related to SP-303/Provir contained in our SP-303/Provir product. We have also filed foreign applications corresponding to our issued U.S. patents relating to our proanthocyanidin polymer composition. We have been granted patents in Australia, Mexico, New Zealand and Singapore and have patent applications pending in Canada, Europe, Japan and the Republic of Korea.

We have also filed a U.S. patent application directed to new formulations and methods of using our specific proanthocyanidin polymer composition for treatment of watery diarrhea. These formulations are contained in our SP-303/Provir product.

We have 10 issued U.S. patents relating to compositions and methods for treating Type II diabetes, as well as reducing hyperglycemia associated with other etiologies. We also have six additional U.S. patent applications pending that relate to compositions and methods for treating Type II diabetes, as well as reducing hyperglycemia associated with other etiologies. We have filed 11 international applications under the Patent Cooperation Treaty designating a number of foreign countries, as well as applications in Taiwan, corresponding to eleven U.S. applications.



We also have one issued U.S. patent and corresponding international patent applications in a number of foreign countries relating to methods for administering and sustained release formulations for anti-fungal agents like nikkomycin Z. The methods and compositions are useful for treatment of fungal infections, particularly candidiasis, the most frequently encountered life-threatening mycoses. We have licensed several patents from Bayer AG relating to the use of nikkomycin Z and the composition and use of nikkomycin Z in combination with other antifungal compounds for the development of antifungal agents.

There can be no assurance that our pending patent applications will result in patents being issued or that, if issued, patents will afford protection against competitors with similar technology; nor can there be any assurance that others will not obtain patents that we would need to license or circumvent. See "Risk Factors  Uncertainty Regarding Patents and Proprietary Rights; Current Legal Proceedings Regarding Patents and Proprietary Rights."

**Community Commitment**

*The Healing Forest Conservancy*

In January 1990, we formed The Healing Forest Conservancy, a California not-for-profit public benefit corporation which is dedicated to maintaining global biocultural diversity. The Conservancy focuses on conserving plants that have been used traditionally for medicinal and health purposes and conserving the knowledge of cultures that utilize them. We plan to donate funds to the Conservancy's endowment fund when we have achieved profits from product sales, if any, to provide benefits to indigenous peoples in the countries where our source plants are obtained.

**Employees**

As of March 31, 2001, we had 14 full time employees. These employees focus their activities primarily on winding down the botanicals business and other reorganization activities.

For information with respect to the Executive Officers of the Company, see the section entitled "Election of Directors" appearing in the Company's Proxy Statement in connection with its 2001 Annual Meeting, which is incorporated herein by reference.

**Item 2. Properties**

In March 2001, the Bankruptcy Court approved the assignment of our master lease on 73,000 square feet at our headquarters in South San Francisco, California and we are no longer responsible for future rental payments and operating costs under this operating lease. We continue to occupy free of charge approximately 5,000 square feet of the property through October 2001, at which time we will negotiate terms of a new lease. The South San Francisco facility serves as the principal site for research, process development, quality assurance and quality control and commercialization activities.

**Item 3. Legal Proceedings**

We are currently in a dispute in Europe regarding a patent for our proanthocyanidin polymer composition, which covers the active ingredient in SP-303/Provir. The European Patent Office, the French Patent Office, the German Patent Office and the Australian Patent Office have each granted a patent containing broad claims to proanthocyanidin polymer compositions and methods of use of such compositions, which are similar to our specific composition, to Leon Cariel and the Institut des Substances Vegetales. The effective filing date of these patents is prior to the effective filing date of our foreign pending patent application in Europe. Certain of the foreign patents have been granted in jurisdictions where examination is not rigorous. We have instituted an Opposition in the European



Patent Office against granted European Patent No. 472531 owned by Leon Cariel and Institut des Substances Vegetales. We believe that the granted claims are invalid and intend to vigorously prosecute the Opposition. In the United States, the Patent and Trademark Office awarded judgment to us in an Interference regarding this patent dispute.

In February 1990, we entered into a License Agreement with Dr. Michael Tempesta. The maximum royalty claimed by Dr. Tempesta is two percent on net sales of a certain antiviral agent. In November 1996, a demand for arbitration was filed by Shaman to address a claim made by Dr. Tempesta over the scope and coverage, if any, of the License Agreement. On June 2, 1999, the Company and Dr. Tempesta entered into a Settlement Agreement and Release pursuant to which, among other things, Shaman agreed to pay certain royalties on sales of certain pharmaceutical products derived from SP-303, under the License Agreement dated February 8, 1990 between the Company and Dr. Tempesta, and issued 16,667 shares of our Series R Preferred Stock to Dr. Tempesta in compromise of attorneys fees and costs incurred by Dr. Tempesta in connection with the arbitration proceeding. In December 2000, we entered into a new settlement agreement with Dr. Michael Tempesta, in which we agreed to pay certain royalties on sales of botanicals products derived from SP-303 under the License Agreement dated February 8, 1990 between Shaman and Dr. Tempesta.

In January 2001, we filed a Chapter 11 reorganization petition with the U.S. Bankruptcy Court, Northern District of California. Details of the status of our Reorganization may be found throughout this Annual Report.

With the exception of the items described above, we are not a party to any other material legal proceedings.

**Item 4. Submission of Matters to a Vote of Securities Holders**

No matters were submitted to a vote of securities holders during the fourth quarter of the fiscal year ended December 31, 2000.



**PART II**

**Item 5. Market for Registrant's Common Stock and Related Stockholder Matters**

Since February 2, 1999, Shaman's common stock has been traded on the OTC Bulletin Board of the National Association of Securities Dealers, Inc. and is traded under the symbol "SHPH". Our common stock was traded on the Nasdaq Stock Market from our initial public offering on January 26, 1993 until February 1, 1999. There were approximately 974 stockholders of record as of December 31, 2000.

Set forth below is the range of high and low closing sale prices for Shaman's common stock for the periods indicated, as reported by the OTC Bulletin Board or The Nasdaq Stock Market, as applicable, and as adjusted for the 1-for-20 reverse stock split effected on June 22, 1999 and the 1-for-50 reverse stock split effected on January 31, 2000:

| | | High | Low |
|---|---|---|---|
| Fiscal Year 1998 | | | |
| | First Quarter Ended March 31, 1998 | $ 5,500.00 | $ 4,130.00 |
| | Second Quarter Ended June 30, 1998 | $ 5,000.00 | $ 4,410.00 |
| | Third Quarter Ended September 30, 1998 | $ 4,000.00 | $ 3,190.00 |
| | Fourth Quarter Ended December 31, 1998 | $ 3,310.00 | $ 1,090.00 |
| Fiscal Year 1999 | | | |
| | First Quarter Ended March 31, 1999 | $ 2,030.00 | $ 170.00 |
| | Second Quarter Ended June 30, 1999 | $ 234.50 | $ 36.00 |
| | Third Quarter Ended September 30, 1999 | $ 106.50 | $ 4.50 |
| | Fourth Quarter Ended December 31, 1999 | $ 4.50 | $ 0.50 |
| Fiscal Year 2000 | | | |
| | First Quarter Ended March 31, 2000 | $ 7.90 | $ 0.45 |
| | Second Quarter Ended June 30, 2000 | $ 0.53 | $ 0.09 |
| | Third Quarter Ended September 30, 2000 | $ 0.16 | $ 0.09 |
| | Fourth Quarter Ended December 31, 2000 | $ 0.09 | $ 0.03 |

**DIVIDEND POLICY**

We have paid no cash dividends on the common stock since our inception and do not anticipate paying any dividends in the foreseeable future. Shaman's charter requires that Shaman pay all required dividends to the holders of Series C Preferred Stock prior to the payment of dividends to the holders of our common stock. At December 31, 2000, we had an accumulated deficit of $202.7 million and, until this deficit is eliminated, we will be prohibited from paying cash dividends except out of net profits.



**Item 6. Selected Financial Data**

| | 2000 | 1999 | 1998 | 1997 | 1996 |
|---|---|---|---|---|---|
| | | | (in thousands, except per share data) | | |
| Statements of Operations Data: | | | | | |
| Revenues: | | | | | |
| Product sales | $ 355 | $ 501 | $ | $ | $ |
| Less sales returns and allowance | (59) | (116) | | | |
| Net product sales | 296 | 385 | | | |
| Collaborative agreements | | 665 | 2,660 | 3,500 | 3,406 |

| | 2000 | 1999 | 1998 | 1997 | 1996 |
|---|---|---|---|---|---|
| Total revenues | 296 | 1,050 | 2,660 | 3,500 | 3,406 |
| Operating expenses: | | | | | |
| Cost of goods sold | 170 | 173 | | | |
| Inventory write-down | 1,731 | | | | |
| Research and development | 3,272 | 6,450 | 32,393 | 24,140 | 19,138 |
| Marketing, general and administrative | 6,619 | 6,682 | 5,565 | 4,833 | 3,537 |
| Restructuring costs | 790 | 2,178 | | | |
| Total operating expenses | 12,582 | 15,483 | 37,958 | 28,973 | 22,675 |
| Loss from operations | (12,286) | (14,433) | (35,298) | (25,473) | (19,269) |
| Interest income | 53 | 151 | 550 | 1,218 | 1,082 |
| Interest expense | (8,403) | (1,816) | (2,033) | (5,033) | (603) |
| Other expense | | (393) | | | |
| Provision for reorganization costs | (1,000) | | | | |
| Net loss | (21,636) | (16,491) | (36,781) | (29,288) | (18,790) |
| Preferred Stock dividend(1) | (2,483) | (11,694) | (1,742) | | |
| Net loss applicable to common stockholders | (24,119) | $ (28,185) | $ (38,523) | $ (29,288) | $ (18,790) |
| Basic and diluted net loss per Common Share(2) | $ (0.35) | $ (140.71) | $ (1,916.60) | $ (1,722.82) | $ (1,342.14) |
| Shares used in calculation of basic and diluted net loss per Common Share(2) | 68,335 | 200 | 20 | 17 | 14 |

| | At December 31, | | | | |
|---|---|---|---|---|---|
| | 2000 | 1999 | 1998 | 1997 | 1996 |
| Balance Sheet Data: | | | | | |
| Cash, cash equivalents, and investments | $ 75 | $ 1,172 | $ 9,165 | $ 21,421 | $ 16,533 |
| Working capital | (7,788) | (2,968) | 1,043 | 14,547 | 9,641 |
| Total assets | 1,675 | 5,636 | 13,139 | 26,753 | 22,377 |
| Long-term obligations, including current installments | 2,822 | 3,122 | 5,219 | 6,802 | 4,816 |
| Senior convertible notes | | | | 9,967 | |
| Accumulated deficit | (202,738) | (178,618) | (150,434) | (111,910) | (82,622) |
| Total stockholders' equity (deficiency) | (9,985) | (2,036) | $ 2,110 | $ 5,148 | $ 11,977 |

(1) Includes in 1999, deemed dividends on Preferred Stock of $11,663,876 and dividends paid on Preferred Stock of $29,307.

(2)

Basic and diluted net loss per share is based on the weighted average number of Common Shares outstanding during the period. We have not paid any cash dividends on our capital stock since inception.



**Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

**Overview**

***Overview of current business***

We are focused on the discovery, development, and marketing of novel, proprietary botanical dietary supplements derived from tropical plant sources. In September 1999, we began implementing our commercialization efforts. Our commercialization plans focused on the use of community building initiatives on the Internet and other distribution channels, and is based on marketing our exclusive access to proprietary branded products. We also have available for out-licensing a pipeline of botanical product candidates, as well as novel pharmaceutical product candidates for major human diseases developed by isolating active compounds from tropical plants with a history of medicinal use.

*Overview of our new business plan*

As part of our Reorganization, we have petitioned the Bankruptcy Court to sell certain of our tangible and intellectual property assets in order to generate sufficient funds to pay existing, qualified creditors. In addition, we anticipate filing our Plan of Reorganization with the Bankruptcy Court during the second quarter of 2001. We believe this plan will give us the best chance to maximize value of specified products and/or assets currently in Shaman. A more detailed discussion of the reorganization will be available in our plan to be filed during the second quarter of 2001.

We anticipate the sale of certain Shaman assets to include both tangible and intellectual property assets. Assets to be sold may include Shaman's public shell and associated net operating losses, pharmaceutical and dietary supplement patents and trademarks, plant material and rights to products currently in the product development pipeline. A more detailed discussion of the anticipated sale can be found in our Application to employ Sutter Securities as a financial advisor to sell our public shell and net operating losses and our Application to employ DoveBid to sell our intellectual property filed with the Bankruptcy Court on March 22, 2001. Because the shell of Shaman will continue, operations are described as if Shaman is a going concern.

**Results of Operations for the Years Ended December 31, 2000, 1999 and 1998**

The results of operations for the year ended December 31, 1998 were related to our pharmaceutical operations. Since we ceased operations of our pharmaceutical business and focused our efforts in our botanical business in February 1999, our results of operations for the years ended December 31, 2000 and 1999 were not comparable to results of operations for the year ended December 31, 1998.

Net sales from our botanical dietary supplement products, Normal Stool Formula ("NSF") and Syn X Bar were $296,000 for the year ended December 31, 2000 and $385,000 (NSF only) for the year ended December 31, 1999. In July 2000, Shaman entered into an exclusive worldwide licensing agreement with General Nutrition Corporation ("GNC") to market NSF as an anti-diarrheal dietary supplement product in the health and specialty retail store channels. GNC also markets NSF through its alliance with Rite Aid Corporation in 500 plus store-in-store locations and through Drugstore.com. Shaman made its first shipment of NSF to GNC in October 2000. Shaman will retain the right to sell, market and distribute NSF under its own brand through direct sales channels. Sales to GNC accounted for 36% of the total sales and the remaining 64% was predominantly direct sales by Shaman in 2000. We recorded cost of goods sold of $170,000 and $173,000 for the year ended December 31, 2000 and 1999, respectively.

We recorded collaborative revenues of $665,000 and $2.7 million for 1999 and 1998, respectively. No revenues were recognized in 2000. Revenues for 1999 resulted from the License and Sale Agreement with Metabolex, Inc. and revenues for 1998 resulted from research funding from our



collaboration with Lipha S.A., a wholly-owned subsidiary of Merck KgaA, Darmstadt, Germany ("Lipha S.A.") and research funding from our collaboration with Ono Pharmaceutical Co. Ltd. of Osaka, Japan ("Ono"), which expired in May 1998.

In December 1998, we renegotiated the terms of the existing pharmaceutical research and development agreement between Shaman and Lipha S.A. (the "Research Agreement"). Under the new terms, we forgave $6.0 million in aggregate payments due over the remaining term of the original agreement in exchange for a one-time up-front payment of an aggregate of $2.0 million, consisting of a $1.0 million research payment and a $1.0 million equity investment. We discontinued all research and development work related to this Research Agreement when we restructured our business to focus on the development and marketing of dietary supplements in February 1999. In August 1999, we issued 133,334 shares of Series R Preferred Stock, having a value of $2.0 million, to Lipha S.A. in partial settlement of claims made by Lipha S.A. in connection with the Research Agreement. Out of the $2.0 million, we applied $969,000 to the previously recorded deferred revenue and the balance to restructuring expenses. In December 1999, we entered into a settlement agreement with Lipha S.A. for the discontinuation of the Research Agreement. We will receive no further payments for research and development from Lipha S.A.

We incurred research and development expenses of $3.3 million, $6.4 million (of which $4.2 million was related to the research and development of the botanicals division), and $32.4 million in 2000, 1999 and 1998, respectively. Expenses incurred in 2000 were related to product enhancement. Expenses in 1999 and 1998 include salaries for scientific personnel, clinical development costs, laboratory supplies, patent protection and consulting fees, travel, plant collections, facilities expenses and other expenditures relating to research and product development. Research and development expenses decreased by $3.1 million in 2000 compared to 1999 and decreased by $26.0 million in 1999 compared with 1998. The decrease in 2000 and 1999 was primarily attributable to the closing down of our pharmaceutical business as of February 1, 1999.

We incurred marketing, general and administrative expenses of $6.6 million (of which $3.0 million was marketing and sales expenses), $6.7 million and $5.6 million for 2000, 1999, and 1998, respectively. These expenses include administrative salaries, consulting, advertising, legal, travel and other operating expenses. Marketing, general and administrative expenses decreased $100,000 in 2000 compared to 1999 and increased $1.1 million in 1999 compared to 1998. The increase in 1999 over 1998 was primarily attributable to the marketing expenses related the launch of our first botanical product, NSF.

Interest income was $53,000, $151,000, and $600,000 for 2000, 1999 and 1998, respectively. Interest income decreased $98,000 in 2000 compared to 1999 and $449,000 in 1999 compared with 1998. Interest income fluctuations have been consistent with changes in average cash and investment balances with which we substantially funded our operations in 2000, 1999 and 1998. The balances of cash, cash equivalents and investments were $75,000, $1.2 million and $9.2 million at December 31, 2000, 1999 and 1998, respectively.

Interest expense was $8.4 million, $1.8 million and $2.0 million for 2000, 1999 and 1998, respectively. Interest expense increased in 2000 compared to 1999 was primarily due to a $8.0 million non-cash interest expense related to beneficial conversion features and warrants issued in connection with the issuance of convertible promissory notes and stock-based compensation charges. Interest expense decreased in 1999 compared with 1998 was primarily due to lower average debt balances, partially offset by a $900,000 non-cash interest charge related to the issuance of warrants. Interest expense in the future will be dependent in part on our capacity to finance future operating and equipment needs.

At December 31, 2000, we had federal net operating loss carryforwards of approximately $175 million. The federal net operating loss carryforwards will expire at various dates beginning in 2004 through 2019, if not sooner utilized. Utilization of the net operating losses and credits is subject to a



substantial annual limitation due to the "change in ownership" provisions of the Internal Revenue Code of 1986, as amended. The annual limitation may result in the expiration of net operating losses and credits before utilization. We have recorded a 100% reserve against our deferred tax assets because we believe sufficient uncertainty exists regarding its realizability. As a result of this reserve, our effective tax rate differs from the statutory tax rate.

**Reorganization, Inventory Write-down and Restructuring Expenses**

In connection with the Plan of Reorganization discussed above and in Note 1 to the financial statements, Shaman has recorded a provision of $1.0 million for costs to be incurred during 2001 to execute this plan.

During the fourth quarter of 2000, we decided to close down our botanical dietary supplements operations. Accordingly, we wrote the value of our inventory down to zero.

On February 1, 1999, we initiated a restructuring plan in which we closed down the operations of our pharmaceutical business. We now intend to out-license worldwide marketing rights to all of our pharmaceutical compounds and focus our efforts on the development and commercialization of botanical dietary supplements. The 1999 restructuring plan included: cessation of pharmaceutical research and development activities and related operations; outlicensing of all of our current pharmaceutical research programs; reduction in force of

approximately 60 employees (65% of workforce); sale or disposal of all of our fixed assets that are not needed for our botanicals business; and sub-lease of a portion of our facility.

The termination of 60 employees occurred on February 1, 1999. The following table summarizes Shaman's restructuring activities as of December 31, 2000 (in thousands).

| Category | Total Restructuring Charges | Net Cash (Outflow) Inflow | Non-Cash Items | Accrued Balance at December 31, 2000 |
|---|---|---|---|---|
| Severance and related charges | $ 325 | $ (325) | | $ |
| Cancellation of contracts | 1,310 | (300) | 790 | 1,800 |
| Lipha S.A. settlement of claims | 1,031 | (1,031) | | |
| Gain on disposal of fixed assets | (38) | 38 | | |
| Reversal of estimated liabilities related to pharmaceutical operations | (450) | | 450 | |
| | $ 2,178 | $ (1,618) | 1,240 | $ 1,800 |

At June 30, 1999, we had approximately $969,000 recorded as deferred revenue in connection with the advanced payment received from Lipha S.A. in December 1998, which we had not yet earned. In August 1999, we issued 133,334 shares of Series R Preferred Stock, having a value of $2.0 million, to Lipha S.A. in partial settlement of claims made by Lipha S.A. in connection with the Research Agreement. Out of the $2.0 million, we applied $969,000 to deferred revenue and the balance to restructuring expenses. In December 1999, we entered into a settlement agreement with Lipha S.A. for the discontinuation of the Research Agreement. We will receive no further payments for research and development from Lipha S.A.



**Delisting of our Common Stock from Nasdaq National Market**

The delisting of our common stock from The Nasdaq National Market on February 2, 1999 constituted an optional redemption event for our Series D Preferred Stock. Since we do not have adequate resources to pay to redeem the Series D Preferred Stock, we issued a notice to the holders of the Series D Preferred Stock as required under our charter that prevented the redemption of the Series D Preferred Stock. Under the terms of our charter, the effect of preventing this redemption event by issuing the notice was to increase the annual cumulative dividend payable to the Series D Preferred Stock holders to $180 per share and to adjust the conversion price of the Series D Preferred Stock to 72% of the lowest trading price for a designated period prior to the conversion. The notice preventing the redemption of the Series D Preferred Stock will remain in effect for as long as our securities are not listed on any of The Nasdaq National Market, The Nasdaq SmallCap Market, the American Stock Exchange or the New York Stock Exchange. In connection with the issuance of such notice, we recorded a deemed dividend charge in the amount of $2,273,614 in the first quarter of 1999. We do not believe we will be listed on any of these markets or exchanges in the foreseeable future. As of February 2000, all shares of Series D Preferred Stock had been converted into common stock.

**Liquidity and Capital Resources**

As of December 31, 2000, our cash, cash equivalents and investments totaled approximately $75,000, compared with $1.2 million at December 31, 1999. We invest excess cash according to our investment policy that provides guidelines with regard to liquidity, type of investment, credit ratings and concentration limits.

Cash used in operating activities for the year ended December 31, 2000 of $6.4 million was due primarily to the net loss of $21.6 million offset by non-cash interest expense related to beneficial conversion features and warrants issued in connection with the issuance of convertible promissory notes and stock-based compensation charges. Cash used in investing activities for the year ended December 31, 2000 was $193,000. Cash provided by financing activities for the year ended December 31, 2000 of $5.1 million was due primarily to the issuance of convertible promissory notes and exercise of warrants and options of $6.0 million, offset by payments on long-term obligations of $917,000.

In November 2000, Shaman received a $250,000 bridge loan from an existing stockholder and a related party ("Lender"). The loan was originally due and payable on November 20, 2000. In consideration of the loan, Shaman issued warrants to the Lender to purchase 312,500 shares of Shaman's common stock at an exercise price of $0.01 per share. In December 2000, Shaman issued additional warrants to the Lender to purchase an aggregate total of 4,000,000 shares of Shaman's common stock at an exercise price of $0.01 per share in exchange for extending the loan to end of December 2000. These warrants are exercisable through April 2005. The issuance of such warrants gave rise to a total of

$130,000 non-cash interest charge due to the value of the warrants. On January 2, 2001, Shaman executed a Secured Promissory Note (the "IP Note") in the amount of $255,000 (including the extension of the existing $250,000 bridge loan) in favor of the Lender. The IP Note bears interest at the annual rate of 6.3% per annum and is due and payable on or before June 20, 2001. Each IP Note is secured by a lien on certain assets of the Company. See Note 12 for further information.

In February 2000, Shaman and a wholly-owned subsidiary of Shaman (the "Subsidiary") entered into a convertible note and warrant purchase agreement (the "Note Agreement") with certain investors (the "Note Holders") in connection with a bridge loan financing raising cash proceeds of approximately $3.0 million. Interest on the convertible notes (the "Notes") was accrued at a rate of 12% per annum. The principal amount and accrued interest was to automatically convert at the sole election of the Note Holders on April 30, 2000 into (i) shares of Shaman's common stock with a conversion price of $0.497



per share or (ii) capital stock of the Subsidiary sold in the first equity financing raising at least $5.0 million. Note Holders were issued warrants to purchase shares of Shaman's common stock equal to 40% of the dollar value of each Note Holders' loan participation divided by $0.15. The exercise price of the warrants is $0.15 per share. These warrants are exercisable through April 2005. In March 2000, Shaman and the Note Holders amended the Note Agreement to increase the amount of the Notes to be issued from $3.0 million to $4.0 million. In consideration for amending the Note Agreement, we amended the conversion price of the Notes into Shaman's common stock from a conversion price of $0.497 to the lower of (i) $0.497 per share or (ii) 10 days weighted average price, with a floor of $0.30 per share. In April 2000, Shaman further amended the Note Agreement to increase the amount of the Notes to be issued from $4.0 million to a total of $5.5 million. In consideration for such amendment, we further reduced the conversion price of the Notes such that the unpaid principal and accrued interest automatically converted into Shaman's common stock at a conversion price of $0.15 per share. The Note Holders were issued additional warrants ("Second Warrants") to purchase shares of common stock equal to 50% of the dollar value of their loan participation divided by $0.15. The exercise price of the Second Warrants was $0.10 per share and were exercisable through August 30, 2000. Of the $5.5 million raised, we issued approximately $3.5 million to investors for cash and approximately $2.0 million to creditors and consultants of Shaman in exchange for services rendered. The initial sale and subsequent sale of such Notes and warrants gave rise to a total of $5.5 million non-cash interest expense due to the value of the warrants and beneficial conversion features. In May 2000, the Notes and all accrued interest thereon, a total of $5,587,781, were converted into 37,251,874 shares of Shaman's common stock. In the third quarter of 2000, Shaman received a total of $1,011,675 upon the exercise of 10,116,748 warrants at an exercise price of $0.10 per share. The remaining 8,216,585 shares of the Second Warrants expired at the end of August 2000, without exercise.

In February 2000, Shaman and the Subsidiary entered into a convertible promissory note agreement with an existing stockholder in connection with a bridge loan financing raising cash proceeds of $500,000. Interest was accrued at a rate of 12% per annum. The principal amount and accrued interest was to be automatically converted at a 40% discount on April 30, 2000 into capital stock of the Subsidiary sold in the first equity financing raising at least $5.0 million. In April 2000, Shaman and the stockholder amended the agreement to extend payment terms by an additional 12 months. In consideration for amending the agreement, we issued warrants to this stockholder to purchase 5,000,000 shares of Shaman's common stock at an exercise price of $0.10 per share. These warrants are exercisable through April 30, 2001. The sale of such note and warrant gave rise to a total of $1.8 million non-cash interest charge due to the value of the warrants and beneficial conversion features.

In April 2000, Cardinal Distribution provided Shaman with a $214,000 Marketing Loan to provide incremental market support for sales of Shaman's Normal Stool Formula at Medicine Shoppe Pharmacies across the country. The loan was due November 2000 at an interest rate of ten percent (10%) per annum. The loan was outstanding as of December 31, 2000 and was secured by a Certificate of Deposit and classified on the balance sheet as restricted cash.

In December 1999, we entered into a note purchase agreement (the "Note") with an existing stockholder in which we borrowed $200,000 to purchase inventory for our product, Normal Stool Formula ("NSF"). The loan was originally due and payable in May 2000, at an annual interest rate of 10.50%. The Note was secured by the inventory of our product, NSF and had an option to extend the loan for another six months. In April 2000, we exercised our option to extend the loan for another six months to December 2000. In consideration for extending the loan, we issued to the stockholder warrants to purchase 201,207 shares of common stock at an exercise price of $0.497 per share. In October 2000, we further amended the term of the loan to be due and payable in June 2001. In consideration for further extending the loan, we issued to the stockholder additional warrants to



purchase 600,000 shares of common stock at $0.01 per share. These warrants are exercisable through December 2003. The issuance of warrants gave rise a total of $132,000 non-cash interest charge due to the value of the warrants. On January 2, 2001, Shaman executed a Secured Promissory Note (the "IP Note") in the amount of $231,845 (including the extension of the existing $200,000 loan and accrued interest of

$21,845) in favor of the stockholder. The IP Note bears interest at the annual rate of 6.3% per annum and is due and payable on or before June 20, 2001. Each IP Note is secured by a lien on certain assets of the Company. See Note 12 for further information.

In August 1999, we completed the Series R Preferred Stock rights offering. In the rights offering, we issued 717,149 shares of Series R Convertible Preferred Stock at $15.00 per share to Shaman's common stockholders of record on July 14, 1999, raising net cash proceeds of approximately $5.7 million. Of the 717,149 shares issued, 175,968 shares of Series R Preferred Stock were delivered in payment of expenses to consultants and contractors and 133,334 shares were delivered to Lipha S.A. in partial settlement of claims. The remaining 407,847 shares of Series R Preferred Stock generated the $5.7 million proceeds.

In August 1999, we entered into a License and Sale Agreement with Metabolex, Inc. whereby Metabolex, Inc. has licensed certain rights to Shaman's library of extracts and compounds for research, development, and commercialization purposes. We have received a payment of $350,000 for a perpetual license of certain technology and an additional $65,000 for service rendered. We will receive royalties on any resulting products commercialized. Metabolex, Inc. also has an option to acquire a license to further technology for additional consideration over the initial four-month period. In October 1999, we received an additional $250,000 payment from Metabolex, for which Metabolex exercised its option to acquire a perpetual license to other technology.

In April 1999, we entered into a credit facility and note purchase agreement with certain investors, stockholders, key executives and members of the board of directors, pursuant to which we borrowed approximately $1.0 million in July 1999. The convertible promissory notes issued pursuant to the credit agreement were due and payable on the earlier of (i) 30 days subsequent to the completion of the public rights offering, or (ii) December 31, 1999. Interest on the convertible promissory notes was accrued at an annual rate of 12%. The convertible promissory notes were secured by certain assets of Shaman and were convertible into shares of Series R Preferred Stock, or into common stock if no public offering occurs prior to December 31, 1999. In connection with the credit agreement, we issued warrants to purchase shares of Series R Preferred Stock. The number of shares subject to these warrants is equal to 50% of the debt amount divided by $15, which was the per share sale price of the Series R Preferred Stock. These warrants are exercisable, on a cashless basis, commencing on April 5, 1999, and through the third anniversary date of the public offering. The conversion price of the convertible promissory notes and the exercise price of the warrants was $15, which was the per share offering price of the Series R Preferred Stock. In September 1999, a total of $649,275 of principal and interest under these notes was converted into 43,285 shares of Series R Preferred Stock and a total of $374,816 of principal and interest under these notes was repaid to the note holders. The fair value of the warrants granted of approximately $396,015 was recorded as interest expense in 1999.

The delisting of our common stock from The Nasdaq National Market constituted an Optional Redemption Event, as defined in our Certificate of Incorporation, for the Series D Preferred Stock. In connection therewith, on February 4, 1999, we issued a Control Notice, as defined in the Certificate of Incorporation, that prevented the redemption of the Series D Preferred Stock. This Control Notice will remain in effect for as long as we are not listed on any of The Nasdaq National Market, The Nasdaq SmallCap Market, the American Stock Exchange or the New York Stock Exchange. Delivery of the Control Notice had the effect of increasing the annual dividend to $180 per share and adjusting the conversion price of the Series D Preferred Stock to 72% of the low trading price during a designated time period prior to the conversion. As of February 2000, all shares of Series D Preferred Stock had been converted into common stock.



In December 1998, we completed a private sale of 4,812 shares of common stock for aggregate net proceeds of approximately $7.1 million. In connection with this offering, we have committed a five-year, 3.6% royalty on net sales of SP-303/Provir, if any, in the United States for distribution to HIV/AIDS charities.

In December 1998, we issued 747 shares of common stock to consultants for services rendered. We recorded an expense of approximately $1.1 million in conjunction with the consulting services.

In October 1998, we completed the sale to the public of an aggregate of 140,880 shares of our Series C Convertible Preferred Stock for aggregate gross proceeds of $14.1 million. Each share of Series C Preferred Stock is entitled to receive cumulative dividends paid semi-annually to the holders of record of such shares as follows: (1) an annual stock-on-stock dividend, paid in arrears, in shares of common stock, calculated as the quotient of $10.00 divided by 85% of the average closing price of the common stock for the 10-day trading period ending three trading days prior to the date the dividend is paid; plus (2) a cash amount equaling 0.00005% of our U.S. net sales of our SP-303/Provir product for the treatment of diarrhea, if any, for the preceding two calendar quarters less $5.00. If, under Delaware law, we are unable to pay the cash portion of the dividends, then the cash portion will be paid in shares of common stock valued at 85% of the average closing price of common stock for the 10-day trading period ending three trading days prior to the date on which the dividend is paid. Each share of the Series C Preferred Stock was convertible for a period of 30 days after August 18, 1998, and will be convertible again commencing 12 months after the initial issuance date at the election of each holder, and automatically on the sixth anniversary of the initial issuance date into the greater of (1) 0.0167 shares of common stock or (2) such number of shares of common stock as equals $100, which was the price paid per share of Series C Preferred Stock, divided by 85% of the average closing price of the common stock reported by Nasdaq for the 10-day trading period ending three trading days prior to the date of conversion. The common stock is currently trading on the OTC Bulletin Board. In connection with the issuance of the

Series C Preferred Stock, we recognized a non-cash charge in the amount of $679,000. As of December 31, 2000, a total of 118,910 shares of the Series C Preferred Stock were converted into an aggregate of 5,602,370 shares of common stock.

In June 1998, we entered into stock purchase agreements with certain of our stockholders pursuant to which we acquired the right to sell to these stockholders, subject to certain conditions up to an aggregate of 7,000 shares of Series B Custom Convertible Preferred Stock for an aggregate purchase price of $7,000,000. The stock purchase agreements were terminated upon the closing of the Series C Convertible Preferred Stock financing in October 1998. As consideration for entering into the stock purchase agreements, we issued to these stockholders warrants to purchase an aggregate of 350 shares of common stock. The warrants are exercisable for a period of five years at an exercise price per share equal to 115% of the average trading price of the common stock during specified measurement periods. We have attributed a value of $1.5 million to these warrants.

In June 1997, we issued $10.4 million of senior convertible notes. The notes matured in August 2000 and bore interest at a rate of 5.5% per annum. Interest on the notes was payable in common stock or cash at our option. Initially, the notes were convertible into common stock at 100% of the low trading price during a designated time period prior to conversion provided that the conversion price would not be less than $5,500.00 per share. Starting in November 1997, the notes were convertible into common stock at a 10% discount from the low trading price during a designated time period prior to the conversion, with a floor of $5,500.00 through March 31, 1998, pursuant to a November 1997 understanding with the note holders to revise the terms of the notes (see next paragraph). Of the notes issued, $400,000 was issued to the placement agent as part of the placement fee. We paid the placement agent an additional $300,000 in cash. The placement fees and other offering costs were capitalized in other assets as deferred issuance costs and were amortized to interest expense over the life of the notes to the extent the notes were not converted to common stock. The net



proceeds totaled approximately $9.5 million after the placement agent's fees and other offering expenses.

In March 1998, Shaman and the purchasers of the notes entered into an amendment agreement with the purchasers of the notes in order to avoid conversion of the notes at a price that would be unduly dilutive to our existing stockholders. As consideration for entering into the amendment agreement, we issued to the purchasers of the notes warrants to purchase an aggregate of 138 shares of common stock. The warrants were exercisable through March 18, 2001 at an exercise price of $7,500.00 per share. The warrants expired in March 2001, unexercise. We have attributed a value of $309,000 to these warrants. An aggregate principal balance of $5.6 million of the notes was converted into an aggregate of 2,571 shares of common stock. On December 10, 1998, we issued to the note holders an aggregate of 4,784 shares of the Series D Convertible Preferred Stock in exchange for the cancellation of an aggregate of $4.8 million, including accrued interest, of the notes. Each share of Series D Convertible Preferred Stock is entitled to receive, when, as, and if declared by the Board of Directors out of funds legally available for such purpose, cumulative dividends at the rate of $55 per annum. Dividends on the Series D Preferred Stock are payable in cash or shares of common stock or any combination of cash and shares of common stock, at our option and are payable quarterly on February 1, May 1, August 1 and November 1 of each year. Each share of Series D Preferred Stock is convertible, at any time, into the common stock at the lesser of (1) $1,125.00 per share or (2) 90% of the low trading price during a designated time period prior to the conversion. In addition, the holders received an aggregate of 767 warrants to purchase additional shares of common stock in exchange for surrendering the redemption rights previously held by them under the notes. The warrants were priced at 150% of the average closing price for the month of December 1998. We have attributed a value of $943,680 to these warrants.

In May 1997, we entered into a Loan Agreement with MMC/GATX Partnership No. 1 ("Loan Agreement") to obtain a $5.0 million term loan to payoff pre-existing debt, finance capital asset acquisitions and finance continued research and clinical development. The loan was payable in thirty-six equal monthly installments and the interest rate was 14.58%. The lender was granted warrants to purchase 200 shares of common stock at $6,250.00 per share, which are exercisable over a ten-year period. We have attributed a value of $648,000 to these warrants. This amount was recorded as a discount on the related debt and was amortized as interest expense over the term of the loan. In April 1999, we amended the Loan Agreement to permit us to issue the convertible promissory notes (discussed above) and delay principal payments under the terms until we closed the Series R Preferred Stock rights offering in August 1999. In connection with the amendment, we issued warrants to purchase 39,512 shares of Series R Preferred Stock at $15.00 per share. These warrants were exercisable commencing on August 23, 1999 and through the seventh anniversary of such date. The warrants were exercisable in common stock after February 1, 2000. We have attributed a value of $498,000 to the new warrants issued in 1999 and recorded this amount as interest expense in 1999. In February 2000, we further amended the Loan Agreement to permit Shaman to delay principal payments under the Loan Agreement. In connection with the amendment, we issued warrants to purchase 340,628 shares of common stock at an exercise price of $0.48387 per share. These warrants were exercisable in common stock commencing on February 2, 2000 and through the tenth anniversary of such date. The issuance of these warrants gave rise to $450,000 non-cash interest expense in 2000.

In September 1996, we entered into a five-year collaborative agreement with Lipha S.A. to jointly develop our antihyperglycemic drugs. Upon signing the collaboration, we received an annual research fee of $1.5 million which was amortized to revenue over twelve months, as work was performed. We also received approximately $3.0 million for 389 shares of common stock priced at $7,710.00 per share, representing a 20%

premium to the weighted average price of the common stock at the time of purchase. In exchange for development and marketing rights in all countries except Japan, South Korea, and Taiwan, which countries are covered under an earlier agreement between Shaman and Ono,



Lipha S.A. agreed to provide up to $9.0 million in research payments and up to $10.5 million in equity investments priced at a 20% premium to a multi-day volume weighted average price of the common stock at the time of purchase. The agreement also provided for additional preclinical and clinical milestone payments to us in excess of $10.0 million per compound for each antihyperglycemic drug developed and commercialized. Lipha S.A. agreed to bear all pre-clinical, clinical, regulatory and other development expenses associated with the compounds selected under the agreement. In addition, as products are commercialized, we would receive royalties on all product sales outside the United States and up to 50% of the profits, if we exercised our co-promotion rights, or royalties on all product sales in the United States. Certain of the milestone payments would be credited against future royalty payments, if any, due to us from sales of products developed pursuant to the agreement.

In December 1998, we renegotiated the terms of the existing pharmaceutical research and development agreement between Shaman and Lipha S.A. (the "Research Agreement"). Under the new terms, we forgave $6.0 million in aggregate payments due over the remaining term of the original agreement in exchange for a one-time up-front payment of an aggregate of $2.0 million, consisting of a $1.0 million research payment and a $1.0 million equity investment. We discontinued all research and development work related to this Research Agreement when we restructured our business to focus on the development and marketing of dietary supplements in February 1999. In August 1999, we issued 133,334 shares of Series R Preferred Stock, having a value of $2.0 million, to Lipha S.A. in partial settlement of claims made by Lipha S.A. in connection with the Research Agreement. Out of the $2.0 million, we applied $969,000 to deferred revenue and the balance to restructuring expenses. In December 1999, we entered into a settlement agreement with Lipha S.A. for the discontinuation of the Research Agreement. We will receive no further research payments from Lipha S.A. For the year ended December 31, 1999, we recognized no revenue from this Research Agreement. For the year ended December 31, 1998, we recognized $1.9 million in revenue from the Lipha/Merck collaboration. In addition, we received a total of $2.5 million for issuance of 1,155 shares of common stock, of which 813 shares were priced at $1,850.00 per share in September 1998 and 342 shares were priced at $2,920.00 per share in December 1998, each representing a 20% premium to the weighted average price of the common stock at the time of purchase.

We expect to continue to incur losses through 2001. We need substantial working capital to fund our operations. As of December 31, 2000, we had cash and cash equivalents balances of approximately $75,000. Additionally, we raised approximately $300,000 in connection with a bridge loan financing in January 2001 and received approximately $1.1 million from the assignment of our master lease in April 2001. On January 5, 2001, Shaman filed a Chapter 11 reorganization petition for protection under federal bankruptcy law. As part of the Reorganization, we have petitioned the Bankruptcy Court to sell certain of the tangible and intellectual property assets in order to generate sufficient funds to pay existing, qualified creditors. In addition, we anticipate filing our Plan of Reorganization with the Bankruptcy Court during the second quarter of 2001. We believe this plan will give us the best chance to maximize value of specified products and/or assets currently in Shaman. We anticipate the sale of certain Shaman assets to include both tangible and intellectual property assets. Assets to be sold may include Shaman's public shell and associated net operating losses, pharmaceutical and dietary supplement patents and trademarks, plant material and rights to products currently in the product development pipeline. A more detailed discussion of the anticipated sale can be found in our Application to employ Sutter Securities as a financial advisor to sell our public shell and net operating losses and our Application to employ DoveBid to sell our intellectual property filed with the Bankruptcy Court on March 22, 2001. Unless we are successful in our efforts to sell both tangible and intellectual property assets, we will be unable to fund our current operations beyond May 2001, which may result in the cessation of operations. Even if we are successful in these efforts to sell both tangible and intellectual property assets, such funds may not be adequate to fund our operations on a long-term basis as cash resources will be used to satisfy our existing liabilities.



**Risk Factors and Cautionary Statements**

*This Report on Form 10-K contains, in addition to historical information, forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, that involve risks and uncertainties. Words such as "may", "believe", "estimate", "expect", "plan", "intend", "project", "anticipate", "continues", "could", "potential", "predict" and similar expressions may identify forward-looking statements. Our actual results could differ materially from the results discussed in the forward-looking statements. Factors that could cause or contribute to such differences include those below and elsewhere in this Form 10-K.*

***Risks Associated with our Business***

**We recently filed for reorganization under the protection of the Bankruptcy Courts.**

In late 2000, the Company experienced a severe cash shortage due to the inability to realize anticipated capital from the assignment of our under-market property lease. In response to this lack of funding, we took immediate action to restructure our organization and operations by filing in January 2001 a Chapter 11 reorganization petition for protection under federal bankruptcy law. We currently operate our business as a debtor-in-possession. To the extent that we are unable to effectuate the reorganization of our business, we may be unable to fund our current operations beyond May 2001, which may result in the cessation of operations.

**If we do not raise significant immediate capital, we will be unable to fund continuing operations and will likely be forced to cease operations**

As of December 31, 2000, we had cash and cash equivalents balances of approximately $75,000. Additionally, we raised approximately $300,000 in connection with a bridge loan financing in January 2001 and received approximately $1.1 million from the assignment of our master lease in April 2001. As described above, we filed a Chapter 11 reorganization petition for protection under federal bankruptcy law. As part of the Reorganization, we have petitioned the Bankruptcy Court to sell certain of the tangible and intellectual property assets in order to generate sufficient funds to pay existing, qualified creditors. In addition, we anticipate filing a Plan of Reorganization with the Bankruptcy Court during the second quarter of 2001. We believe this plan will give us the best chance to maximize value of specified products and/or assets currently in Shaman. Unless we are successful in our efforts to sell both tangible and intellectual property assets, we will be unable to fund our current operations beyond May 2001, which may result in the cessation of operations. Even if we are successful in these efforts to sell both tangible and intellectual property assets, such funds may not be adequate to fund our operations on a long-term basis as cash resources will be used to satisfy our existing liabilities.

**We have a history of operating losses, expect continuing losses and may never achieve profitability**

We have incurred significant losses in each year since our founding in 1989 and expect to continue to incur losses for the foreseeable future. We incurred a net loss of approximately $21.6 million (of which $8.0 million was non-cash interest expense) for the year ended December 31, 2000 and an additional deemed dividends of $2.5 million incurred in connection with the issuance of Series R Preferred Stock and issuance of convertible promissory notes and warrants. As of December 31, 2000, our accumulated deficit was approximately $202.7 million.

If we are to become and remain profitable, we will first need to, among other things, generate product revenues. To date, we have not generated any significant product sales and do not anticipated to generate significant product sales in the near future.



**Since we currently have no marketing staff, we may never achieve adequate sales and revenues to achieve profitability**

We currently have no marketing staff. If we are unable to successfully establish, execute and finance a complete marketing plan for our first product, NSF, or subsequent products, we may not achieve a successful product entry into the marketplace and may fail to achieve adequate sales and revenues from our botanical products to achieve profitability. It is unlikely we would ever achieve profitability if our first product is not successfully marketed and sold.

**If we fail to compete in the intensely competitive botanical dietary supplement industry, we may never achieve profitability**

The dietary supplement business is highly competitive and is characterized by significant pressure on pricing and heavy commitment of marketing resources for commodity products. Although our products are proprietary, we may face competition from companies developing and marketing new commercial products that have or claim to have similar functionality. Our failure to successfully compete for customers would inhibit our future growth, revenues and profitability.

**Government regulation of dietary supplements could increase our costs or prohibit or limit sales of our products**

The manufacturing, processing, formulating, packaging, labeling and advertising of our botanical dietary supplement products are subject to regulation in the United States by several federal agencies, including the Food and Drug Administration, the Federal Trade Commission, the Consumer Product Safety Commission, the Department of Agriculture and the Environmental Protection Agency. Our activities are also regulated by various agencies of the states and localities where we will distribute and sell our products.

The composition and labeling of dietary supplements is most actively regulated by the FDA under the provisions of the Federal Food, Drug and Cosmetic Act. The FFDC Act has been revised in recent years by the Nutrition Labeling and Education Act of 1990 and by the Dietary Supplement Health and Education Act of 1994.

Our botanical product candidates are generally regulated as dietary supplements under the 1994 Dietary Supplement Health and Education Act and are, therefore, generally not subject to pre-market approval by the FDA. However, these product candidates are subject to FDA regulation, particularly relating to adulteration and misbranding. For instance, we are responsible for ensuring that all dietary ingredients in a supplement are safe and must notify the FDA in advance of putting a product containing a new dietary ingredient, defined as an ingredient not marketed in the United States before October 15, 1994, on the market and furnish adequate information to provide reasonable assurance of the ingredient's safety. Currently, we are only pursuing products that are old dietary ingredients and are therefore not subject to this procedure. Further, if we make statements about a supplement's effects on the structure or function of the body, we must, among other things, substantiate that the statements are truthful and not misleading. In addition, our product labels must bear proper ingredient and nutritional labeling and we must manufacture our supplements in accordance with current Good Manufacturing Practices regulations for foods. A product can be removed from the market if it is shown to pose a significant or unreasonable risk of illness or injury. Moreover, if the FDA determines that the "intended use" of any of our products is for the diagnosis, cure, mitigation, treatment or prevention of disease, the product would meet the definition of a drug and would require pre-market approval of safety and effectiveness prior to its manufacture and distribution. Our failure to comply with applicable FDA regulatory requirements may result in, among other things, injunctions, product withdrawals, recalls, product seizures, fines and criminal prosecution.



In March 1999, new FDA regulations governing the labeling of dietary supplements took effect. The new rules require that information such as the complete list of ingredients and levels of vitamins and minerals be included on product labels. While in our judgment these regulatory changes are generally favorable to the dietary supplements industry, in the future we may be subject to additional laws or regulations that could have an adverse effect on the industry and on our business. In addition, existing laws and regulations may be repealed and applicable regulatory authorities may interpret them stringently or unfavorably.

We cannot predict the nature of future laws, regulations, interpretations or applications, nor can we determine what effect either additional government regulations or administrative orders, when and if promulgated or disparate federal, state and local regulatory schemes would have on our business in the future. Any change could materially and adversely affect our results of operations and financial condition.

Governmental regulations in foreign countries where we may commence or expand sales may prevent or delay entry into the market or prevent or delay the introduction or require the reformulation of our products. Compliance with such foreign governmental regulations is generally the responsibility of our partners or distributors in those countries, which distributors are independent contractors over whom we have limited or no control.

The costs of compliance with environmental laws and regulations, or our inability or failure to comply with environmental laws and regulations, could substantially increase our costs of doing business or result in liability that could use substantial amounts of our cash resources

In connection with our research and development activities and manufacturing of materials, we are subject to federal, state and local laws, rules, regulations and policies governing the use, generation, manufacture, storage, air emission, effluent discharge, handling and disposal of certain materials and wastes. Although we believe we comply with these laws and regulations in all material respects and have not been required to take any action to correct any noncompliance, we may be required to incur significant costs to comply with environmental and health and safety regulations in the future. Our research, development and manufacturing activities involve the controlled use of hazardous materials and chemicals. Although we believe that our safety procedures for handling and disposing of such materials comply with the standards prescribed by state and federal regulations, we cannot eliminate the risk of accidental contamination or injury from these materials completely. In the event of an accident, we could be held liable for any resulting damages. Although we have secured insurance to mitigate such expense, any such liability could exceed our insurance coverage and resources. Such liability could require us to use a large amount of cash, which would then not be available for funding operations or development and commercialization of our products.

**Product liability claims asserted against us in the future could exceed our insurance coverage and result in substantial liability to Shaman**

Our business exposes us to potential product liability risks that are inherent in the development, testing, manufacture, marketing and sale of pharmaceutical and dietary supplement products. Product liability insurance for the pharmaceutical and dietary supplement industries generally is expensive. Our present product liability insurance coverage, which includes coverage for acts by third parties, including manufacturers of our product candidates, may not be adequate. We will also need to increase our insurance coverage as we further develop our products and we may be unable to obtain adequate insurance coverage against all potential claims at a reasonable cost. Some of our development and manufacturing agreements contain insurance and indemnification provisions pursuant to which we could be held accountable for certain occurrences. If we are subject to product liability claims for which we have inadequate insurance, we could be required to use a large amount of cash, which would then not be available for funding operations or development and commercialization of our products.

**Since the dietary supplement industry is particularly susceptible to public perception of its products, negative publicity regarding the safety or quality of our products could adversely impact our sales of these products**

Because we depend on consumers' perception of the safety and quality of our products as well as similar products distributed by other companies, which may not adhere to the same quality standards as ours, if our products or a competitor's similar products were asserted to be harmful to consumers, our sales and our ability to market our products could be adversely affected by that negative publicity. In addition, because we depend on perceptions, adverse publicity associated with illness or other adverse effects resulting from consumers' failure to use our products as we suggest, other misuse or abuse of our products or any similar products distributed by other companies could affect the market acceptance of our products, decrease sales and make it more difficult to market and sell our products.

Furthermore, we believe the recent growth experienced by the nutritional supplement market is based in part on national media attention regarding recent scientific research suggesting potential health benefits from regular consumption of certain dietary supplements and other nutritional products. This research has been described in major medical journals, magazines, newspapers and television programs. The scientific research to date is preliminary and in the future scientific results and media attention may contain unfavorable or inconsistent findings that could decrease sales and make it more difficult to market and sell our products.

Our dependence on raw plant material from Latin and South America, Africa and Southeast Asia makes us particularly susceptible to the risks of interruptions in our supplies.

We currently import all of the plant materials for our products from countries in Latin and South America, Africa and Southeast Asia. We are dependent upon a supply of raw plant material to make our products. We do not have formal agreements in place with all of our suppliers. Continued source of plant supply risks include:

unexpected changes in regulatory requirements;

exchange rates, tariffs and barriers;

difficulties in coordinating and managing foreign operations;

political instability; and

potentially adverse tax consequences.

Interruptions in supply or material increases in the cost of supply could disrupt or delay sales of our products, inhibit our ability to market our products and have a material adverse effect on our business, financial condition and results of operations. If the prices of raw materials rise, we may not be able to raise prices quickly enough to offset the effect of these increased raw material costs, if at all.

In addition, tropical rainforests and irreplaceable plant resources found only in such rainforests are currently threatened with destruction. The destruction of portions of the rainforests, which contain the source material from which our current or future products are derived, could disrupt supplies, cause the cost of supplies to increase dramatically and materially and adversely affect our business, financial condition and results of operations.

**If we fail to protect our intellectual property rights, we could lose our ability to stop competitors from using our trademarks or selling our products**

Our success will be substantially dependent on our proprietary technology. We rely primarily on a combination of patent, copyright and trademark laws, trade secrets, confidentiality procedures and contractual provisions to protect our intellectual property. These means of protecting our proprietary rights may not be adequate. Our trademarks are valuable assets that are very important to the marketing of our products. Our policy is to pursue registrations for all of the trademarks associated with our key products. We currently have 21 U.S. patents issued and 10 U.S. patent applications



pending. The pending patents may never be approved or issued. Any issued patents may not provide sufficiently broad protection or may not prove valid or enforceable in actions against alleged infringers. Others may independently develop similar products, duplicate any of our

products or design around any of our patents. In addition, many foreign countries may not protect our products and intellectual property rights to the same extent as the laws of the United States and there is considerable variation between countries as to the level of protection afforded under patents and other proprietary rights. Such differences may expose us to increased risks of commercialization in each foreign country in which we may sell products. We also depend on unpatented trade secrets. All of our employees have entered into confidentiality agreements. However, others may independently develop substantially equivalent information and techniques or otherwise gain access to our trade secrets. Our trade secrets may be disclosed or we may be unable to effectively protect our rights to unpatented trade secrets. To the extent that we or our consultants or research collaborators use intellectual property owned by others in their work for us, disputes also may arise as to the rights in related or resulting know-how and inventions. Litigation may be necessary in the future to enforce our intellectual property rights, protect our trade secrets or to determine the validity and scope of the intellectual property rights of others. In the event of litigation to determine the validity of any third party's claims, we could be required to expend significant resources and divert the efforts of our technical and management personnel, whether or not such litigation is determined in our favor.

Our success in outlicensing our pharmaceutical assets depends in large part on our ability to obtain and maintain patents, protect trade secrets and operate without infringing upon the proprietary rights of others. The patent position of companies in the pharmaceutical industry generally is highly uncertain, involves complex legal and factual questions and has recently been the subject of much litigation. No consistent policy has emerged from the U.S. Patent and Trademark Office or PTO or the courts regarding the breadth of claims allowed or the degree of protection afforded under pharmaceutical patents.

We are currently in a dispute in Europe regarding a patent for our proanthocyanidin polymer composition, which covers the active ingredient in SP-303/Provir. The European Patent Office, the French Patent Office, the German Patent Office and the Australian Patent Office have each granted a patent containing broad claims to proanthocyanidin polymer compositions and methods of use of such compositions, which are similar to our specific composition, to Leon Cariel and the Institut des Substances Vegetales. The effective filing date of these patents is prior to the effective filing date of our foreign pending patent application in Europe. Certain of the foreign patents have been granted in jurisdictions where examination is not rigorous. We have instituted an Opposition in the European Patent Office against granted European Patent No. 472531 owned by Leon Cariel and Institut des Substances Vegetales. We believe that the granted claims are invalid and intend to vigorously prosecute the opposition. In the United States, the Patent and Trademark Office awarded judgment to us in an Interference regarding this patent dispute.

We may be unsuccessful in having the granted European patent revoked or the claims sufficiently narrowed so that our proanthocyanidin polymer composition and methods of use are not potentially covered. The holders of the granted European patent may assert against us claims relating to this patent. If they are successful, we may not be able to obtain a license to this patent at all or at reasonable cost or be able to develop or obtain alternative technology to use in Europe or elsewhere. If we cannot obtain licenses to the patent, we may not be able to introduce or sell our SP-303/Provir product in Europe. The earlier effective filing date of this patent could limit the scope of the patents, if any, that we may be able to obtain or result in the denial of our patent applications in Europe or elsewhere.



**If a third party were to bring an infringement claim against us, we would need to expend significant resources in our defense; if the claim were successful, we would need to obtain licenses or develop non-infringing technology**

The pharmaceutical industry and, to a lesser extent, the dietary supplement industry, is subject to frequent litigation regarding patent and other intellectual property rights. Leading companies and organizations in these industries have numerous patents that protect their intellectual property rights in these areas. Third parties may assert claims against us with respect to our existing and future products. In the event of litigation to determine the validity of any third party's claims, we could be required to expend significant resources and divert the efforts of our technical and management personnel whether or not such litigation is determined in our favor. In the event of an adverse result of any such litigation, among other requirements, we could be required to develop non-infringing technology or to obtain licenses to the technology that is the subject of the litigation. We may not be successful in developing non-infringing technology or in obtaining a license to use the technology on commercially reasonable terms.

**"Penny Stock" regulations may impose restrictions on marketability of our stock**

The Securities and Exchange Commission has adopted regulations which generally define "penny stock" to be any equity security that is not traded on a national securities exchange or NASDAQ and that has a market price of less than $5.00 per share or an exercise price of less than $5.00 per share, subject to certain exceptions. Since our securities that are currently included on the OTC Bulletin Board are trading at less than $5.00 per share at any time, our stock may become subject to rules that impose additional sales practice requirements on broker-dealers who sell such securities to persons other than established customers and accredited investors. Accredited investors generally include investors that have assets in excess of $1,000,000 or an individual annual income exceeding $200,000, or, together with the investor's spouse, a joint income of $300,000. For transactions covered by these rules, the broker-dealer must make a special suitability determination for the purchase of such securities and have received the purchaser's written consent to the transaction prior to the purchase. Additionally, for any transaction involving a penny stock, unless exempt, the rules require, among other things, the delivery, prior to the transaction, of a risk disclosure document mandated

by the SEC relating to the penny stock market and the risks associated therewith. The broker-dealer must also disclose the commission payable to both the broker-dealer and the registered representative, current quotations for the securities and, if the broker-dealer is the sole market-maker, the broker-dealer must disclose this fact and the broker-dealer's presumed control over the market. Finally, monthly statements must be sent disclosing recent price information for the penny stock held in the account and information on the limited market in penny stocks. Consequently, the penny stock rules may restrict the ability of broker-dealers to sell our securities and may affect the ability of stockholders to sell our securities in the secondary market.

**Our stock price has been and may continue to be highly volatile**

The price of our common stock has been particularly volatile and will likely continue to fluctuate in the future. Announcements of technological innovations, regulatory matters or new commercial products by us or our competitors, developments or disputes concerning patent or proprietary rights, publicity regarding actual or potential product results relating to products under development by us or our competitors, regulatory developments in both the United States and foreign countries, public concern as to the safety of pharmaceutical or dietary supplement products, and economic and other external factors, as well as period-to-period fluctuations in financial results, may have a significant impact on the market price of our common stock. In addition, from time to time, the stock market experiences significant price and volume fluctuations that may be unrelated to the operating performance of particular companies or industries. The market price of our common stock, like the



stock prices of many publicly traded smaller companies, has been and may continue to be highly volatile.

**Anti-takeover provisions in our charter documents and Delaware law may inhibit potential acquisition bids for Shaman, which may adversely affect the market price of our Common Stock and the voting rights of the holders of the Common Stock**

Certain provisions of our charter documents and Delaware law make it more difficult for a third party to acquire and may discourage a third party from attempting to acquire us, even if a change in control would be beneficial to our stockholders. These provisions could also limit the price that certain investors might be willing to pay in the future for shares of the common stock. The provisions include the division of our board of directors into two separate classes, the ability of the board to elect directors to fill vacancies created by an expansion of the board, the power of the board to amend our bylaws and the requirement that at least 66% of the outstanding shares are required to call a special meeting of stockholders. Our board also has the authority to issue up to 1,800,000 additional shares of preferred stock and to fix the price, rights, preferences, privileges and restrictions of those shares without any further vote or action by the stockholders. The rights of the holders of common stock will be subject to, and may be adversely affected by, the rights of the holders of any preferred stock that may be issued in the future. The issuance of preferred stock with voting rights could make it more difficult for a third party to acquire a majority of the outstanding voting stock. Certain provisions of Delaware law applicable to us could also delay or make more difficult a merger, tender offer or proxy contest involving Shaman, including Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years unless certain conditions are met.

**Item 7A. Qualitative and Quantitative Disclosures about Market Risk**

We are exposed to market risk, including changes to interest rates. A discussion of our accounting policies for financial instruments and further disclosures relating to financial instruments is included in the Summary of Significant Accounting Policies in the Notes to Financial Statements.

Our primary market risks include fluctuations in interest rates, variability in interest rate spread relationships (i.e., Prime to LIBOR spreads).

We believe that fluctuations in interest rates and currency exchange rates in the near term would not materially affect our consolidated operating results, financial position or cash flows as we have limited risks related to interest rate fluctuations.



**Item 8. Financial Statements and Supplementary Data**

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**INDEPENDENT AUDITORS' REPORT**

To the Board of Directors and Stockholders of
Shaman Pharmaceuticals, Inc.
South San Francisco, California

We have audited the statement of net assets in liquidation of Shaman Pharmaceuticals, Inc. as of December 31, 2000, the balance sheet of Shaman Pharmaceuticals, Inc. as of December 31, 1999, and the related statements of operations, stockholders' deficit and cash flows for the years ended December 31, 2000 and 1999. We have also audited Schedule II Valuation and Qualifying Accounts (the "Schedule") for the years ended December 31, 2000 and 1999. These financial statements and the Schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and the Schedule based on our audits.

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

On January 5, 2001, the Company filed a Chapter 11 reorganization petition for protection under federal bankruptcy law. The Company has not yet formalized its Plan of Reorganization. While no formal plan of liquidation has been adopted, as discussed in Note 1 and Note 12, the Company plans to sell substantially all of its assets and may include its public shell and associated net operating losses in such sale. From this date, substantially all core sales, marketing and development activities ceased. As discussed in Note 1, because the Company has not yet emerged from Bankruptcy, the realizability of assets and liabilities are not readily determinable.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets in liquidation of Shaman Pharmaceuticals, Inc. as of December 31, 2000, its financial position at December 31, 1999 and the results of its operations and its cash flows for the years ended December 31, 2000 and 1999 in conformity with accounting principles generally accepted in the United States of America.

Also, in our opinion, the Schedule presents fairly in all material respects the information set forth therein.

BDO SEIDMAN, LLP

San Francisco, California
April 4, 2001

**REPORT OF ERNST & YOUNG, LLP, INDEPENDENT AUDITORS**

The Board of Directors and Stockholders
Shaman Pharmaceuticals, Inc.

We have audited the accompanying balance sheets of Shaman Pharmaceuticals, Inc. as of December 31, 1998 and 1997, and the related statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 1998. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Shaman Pharmaceuticals, Inc. at December 31, 1998 and 1997, and the results of our operations and our cash flows for each of the three years in the period ended December 31, 1998, in conformity with generally accepted accounting principles.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As more fully described in Note 1, the Company had cash, cash equivalents and short-term investments at December 31, 1998 aggregating $9.2 million which are not sufficient to enable the Company to pay its existing liabilities and to fund its operations through December 31, 1999. The Company has incurred recurring operating losses and has total liabilities at December 31, 1998 in excess of its available cash resources. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statements referred to above do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty.

ERNST & YOUNG LLP

Palo Alto, California
February 11, 1999



**SHAMAN PHARMACEUTICALS, INC.**
**(Debtor-In-Possession)**
**STATEMENT OF NET ASSETS IN LIQUIDATION AND BALANCE SHEET**

| | Statement of Net Assets In Liquidation as of December 31, 2000 | Balance Sheet as of December 31, 1999 |
|---|---|---|
| **ASSETS** | | |
| Current assets: | | |
| Cash and cash equivalents | $ 75,285 | $ 1,171,798 |
| Restricted cash | 214,186 | |
| Accounts receivable (net of $116,000 allowance in 1999) | 36,600 | 337,537 |
| Inventory | | 1,718,491 |
| Property and equipment, net, held for sale | 1,159,389 | |
| Amounts due from employees | | 153,392 |
| Other current assets | 190,032 | 127,662 |
| Total current assets | 1,675,492 | 3,508,880 |
| Property and equipment: | | |
| Laboratory equipment | | 1,095,738 |

| | Statement of Net Assets In Liquidation as of December 31, 2000 | Balance Sheet as of December 31, 1999 |
|---|---|---|
| Computer equipment and furniture | | 382,560 |
| Leasehold improvements | | 7,179,564 |
| | | 8,657,862 |
| Less: accumulated depreciation and amortization | | 6,839,150 |
| | | 1,818,712 |
| Other assets | | 308,080 |
| Total assets | $ 1,675,492 | $ 5,635,672 |
| **LIABILITIES, PREFERRED STOCK, AND STOCKHOLDERS' DEFICIENCY** | | |
| Current liabilities: | | |
| Accounts payable and other accrued expenses | $ 1,307,290 | $ 1,528,746 |
| Accrued reorganization costs | 1,000,000 | |
| Accrued clinical trial costs | 627,882 | 585,040 |
| Accrued professional fees | 713,702 | 888,553 |
| Accrued compensation | 268,133 | 202,207 |
| Accrued interest | 144,375 | 334,863 |
| Accrued restructuring costs | 1,800,000 | 1,010,000 |
| Bridge loans | 780,000 | |
| Current installments of long-term obligations | 2,821,980 | 1,927,366 |
| Total current liabilities | 9,463,362 | 6,476,775 |
| Long-term obligations, excluding current installments | | 1,194,991 |
| Preferred stock, $0.001 par value; issuable in series; 2,000,000 shares authorized at December 31, 2000; 21,970 convertible shares issued and outstanding at December 31, 2000 (Liquidation preference of $2,197,000) | 2,197,000 | |
| Stockholders' deficiency: | | |
| Preferred stock, $0.001 par value; issuable in series; 2,000,000 shares authorized at December 31, 1999; 877,968 convertible shares issued and outstanding at December 31, 1999 (Liquidation preference of $11,118,800) | | 877 |
| Common stock, $0.001 par value; 500,000,000 and 220,000,000 shares authorized at December 31, 2000 and 1999, respectively; 102,226,041 and 1,583,602 shares issued and outstanding at December 31, 2000 and 1999, respectively) | 102,226 | 1,584 |
| Additional paid-in capital | 193,127,430 | 176,594,549 |
| Deferred compensation and other adjustments | (476,536) | (14,691) |
| Accumulated deficit | (202,737,990) | (178,618,413) |
| Total stockholders' deficiency | (9,984,870) | (2,036,094) |
| Total liabilities and stockholders' deficiency | $ 1,675,492 | $ 5,635,672 |

See accompanying notes to financial statements.

**SHAMAN PHARMACEUTICALS, INC.**
**(Debtor-In-Possession)**
**STATEMENTS OF OPERATIONS**

| | 2000 | 1999 | 1998 |
|---|---|---|---|
| Revenues: | | | |
| Product sales | $ 355,176 | $ 501,016 | $ |
| Less sales returns and allowances | (59,294) | (116,000) | |
| Net product sales | 295,882 | 385,016 | |
| Collaborative agreements | | 665,000 | 2,659,856 |
| Total revenues | 295,882 | 1,050,016 | 2,659,856 |
| Operating expenses: | | | |
| Cost of goods sold | 169,963 | 173,406 | |
| Inventory write-down | 1,730,809 | | |
| Research and development | 3,272,181 | 6,449,503 | 32,393,374 |
| Marketing, general and administrative | 6,619,160 | 6,682,444 | 5,565,066 |
| Restructuring costs | 790,000 | 2,177,975 | |
| Total operating expenses | 12,582,113 | 15,483,328 | 37,958,440 |
| Loss from operations | (12,286,231) | (14,433,312) | (35,298,584) |
| Interest income | 52,662 | 151,016 | 550,227 |
| Interest expense | (8,402,697) | (1,816,404) | (2,033,004) |
| Other expense | | (392,757) | |
| Provision for costs to be incurred in connection with reorganization | (1,000,000) | | |
| Net loss | (21,636,266) | (16,491,457) | (36,781,361) |
| Preferred Stock dividends(1) | (2,483,311) | (11,693,183) | (1,742,241) |
| Net loss applicable to common stockholders | $ (24,119,577) | $ (28,184,640) | $ (38,523,602) |
| Basic and diluted net loss per common share(2) | $ (0.35) | $ (140.71) | $ (1,916.60) |
| Shares used in calculation of basic and diluted net loss per common share(2) | 68,335,000 | 200,300 | 20,100 |

(1) Includes in 1999, deemed dividends on Preferred Stock of $11,663,876 and dividends paid on Preferred Stock of $29,307.

(2) Basic and diluted net loss per share is based on the weighted average number of Common Shares outstanding during the period. We have not paid any cash dividends on our capital stock since inception.

See accompanying notes to financial statements.

**SHAMAN PHARMACEUTICALS, INC.**
**(Debtor-In-Possession)**
**STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIENCY)**
**For the Years Ended December 31, 1998, 1999 and 2000**

| | Convertible Preferred Stock | Common Stock | Additional Paid-In Capital | Deferred Compensation and Other Adjustments | Accumulated Deficit | Total Stockholders' Deficiency |
|---|---|---|---|---|---|---|
| Balance at January 1, 1998 | $ 400 | $ 18 | $ 117,182,302 | $ (124,910) | $ (111,910,171) | $ 5,147,639 |
| Issuance of 16 shares of common stock upon the exercise of stock options | | | 21,715 | | | 21,715 |
| Issuance of 63 shares of common stock to employees from the 1998 special issuance plan | | | 80,759 | | | 80,759 |
| Issuance of 748 shares of common stock to consultants for consulting services rendered | | | 1,074,110 | | | 1,074,110 |
| Sale of 1,156 shares of common stock in connection with Lipha/Merck collaboration | | 1 | 2,499,999 | | | 2,500,000 |
| Deferred compensation related to granting of options to non-employees, net of amortization and reversals | | | 162,464 | (75,849) | | 86,615 |
| Change in unrealized gain/loss on available-for-sale securities | | | | 14,909 | | 14,909 |
| Value ascribed to Warrants issued in conjunction with Series B Convertible Preferred Stock ($1,462,860) | | | | | | |
| Issuance of 202 shares of common stock in connection with senior convertible notes quarterly interest payments | | | 650,541 | | | 650,541 |
| Issuance of 1,077 shares of common stock upon the conversion of 1,209 shares of Series D Convertible Preferred Stock | (1) | 1 | | | | |
| Issuance of 2,572 shares of common stock upon the conversion of senior convertible notes | | 3 | 5,453,181 | | | 5,453,184 |
| Sale of 140,880 shares of convertible preferred stock in connection with the Series C Convertible Preferred Stock Offering, net of issuance costs of $1.5 million | 141 | | 12,598,553 | | | 12,598,694 |
| Value ascribed to in-the-money conversion option of Series C Convertible Preferred Stock | | | 678,636 | | | 678,636 |
| Issuance of 1,862 shares of common stock upon the conversion of 24,922 shares of Series C Convertible Preferred Stock | (25) | 2 | 23 | | | |
| Issuance of 84 shares of common stock in payment of Dividends on Series C Convertible Preferred Stock | | | | | | |
| Sale of 4,813 shares of common stock in connection with the private placement offering in | | 5 | 7,086,939 | | | 7,086,944 |

| | Convertible Preferred Stock | Common Stock | Additional Paid-In Capital | Deferred Compensation and Other Adjustments | Accumulated Deficit | Total Stockholders' Deficiency |
|---|---|---|---|---|---|---|
| December 1998, net of issuance costs of $.13 million | | | | | | |
| Issuance of 4,784 shares of Series D Convertible Preferred Stock in exchange for cancellation of senior convertible notes | 5 | | 4,176,106 | | | 4,176,111 |
| Value ascribed to in-the-money conversion option of Series D Convertible Preferred Stock | | | 1,063,605 | | | 1,063,605 |
| Value ascribed to Warrants issued in conjunction with Series D Convertible Preferred Stock ($943,680) | | | | | | |
| Net loss applicable to common stockholders | | | | | (38,523,602) | (38,523,602) |
| Balance at December 31, 1998 | $ 520 | $ 30 | $ 152,728,933 | $ (185,850) | $ (150,433,773) | $ 2,109,860 |



| | Convertible Preferred Stock | Common Stock | Additional Paid-In Capital | Deferred Compensation and Other Adjustments | Accumulated Deficit | Total Stockholders' Deficiency |
|---|---|---|---|---|---|---|
| Balance at January 1, 1999 | $ 520 | $ 30 | $ 152,728,933 | $ (185,850) | $ (150,433,773) | $ 2,109,860 |
| Issuance of 1 shares of common stock upon the exercise of stock options | | | 160 | | | 160 |
| Issuance of 544 shares of common stock upon the conversion of 400,000 shares of Series A Convertible Preferred Stock | (400) | | 400 | | | |
| Issuance of 61,362 shares of common stock upon the conversion of 2,387 shares of Series D Convertible Preferred Stock and payment of accrued interest on unpaid dividends | (2) | 62 | 33,719 | | | 33,779 |
| Issuance of 905,160 shares of common stock upon the conversion of 16,281 shares of Series C Convertible Preferred Stock | (16) | 906 | (890) | | | |
| Issuance of 585,752 shares of common stock in payment of Dividends on Series C Convertible Preferred Stock | | 586 | 28,701 | | | 29,287 |
| Payment for the value of fractional shares from the conversion of senior convertible notes into Series D Convertible Preferred Stock | | | (2,225) | | | (2,225) |
| Issuance of 404 shares of common stock in payment of Dividends on Series D Convertible Preferred Stock | | | 20 | | | 20 |
| Issuance of 16,667 shares of Series R Convertible Preferred Stock in connection with settlement of litigation | 16 | | 249,989 | | | 250,005 |
| | 407 | | 5,665,355 | | | 5,665,762 |

| | Convertible Preferred Stock | Common Stock | Additional Paid-In Capital | Deferred Compensation and Other Adjustments | Accumulated Deficit | Total Stockholders' Deficiency |
|---|---|---|---|---|---|---|
| Issuance of 407,847 shares of Series R Convertible Preferred Stock in connection with a rights offering, net of issuance costs of $452,000 | | | | | | |
| Issuance of 175,968 shares of Series R Convertible Preferred Stock to consultants and contractors for service rendered | 176 | | 2,639,344 | | | 2,639,520 |
| Issuance of 133,334 shares of Series R Convertible Preferred Stock to Lipha S.A. in partial settlement of claims | 133 | | 1,999,877 | | | 2,000,010 |
| Issuance of 43,285 shares of Series R Convertible Preferred upon conversion of convertible promissory notes | 43 | | 649,232 | | | 649,275 |
| Value ascribed to the in-the-money conversion option of Series D Convertible Preferred Stock | | | 2,273,614 | | | 2,273,614 |
| Value ascribed to the in-the-money conversion option of Series R Convertible Preferred Stock | | | 9,390,262 | | | 9,390,262 |
| Deferred compensation related to granting of options to non-employees, net of amortization and reversals | | | 43,797 | 156,095 | | 199,892 |
| Value ascribed to warrants issued in conjunction with convertible promissory notes and secured loan | | | 894,261 | | | 894,261 |
| Change in unrealized gain/loss on available-for-sale securities | | | | 15,064 | | 15,064 |
| Net loss applicable to common stockholders | | | | | (28,184,640) | (28,184,640) |
| Balance at December 31, 1999 | $ 877 | $ 1,584 | $ 176,594,549 | $ (14,691) | $ (178,618,413) | $ (2,036,094) |



| | Convertible Preferred Stock | Common Stock | Additional Paid-In Capital | Deferred Compensation and Other Adjustments | Accumulated Deficit | Total Stockholders' Deficiency |
|---|---|---|---|---|---|---|
| Balance at January 1, 2000 | $ 877 | $ 1,584 | $ 176,594,549 | $ (14,691) | $ (178,618,413) | $ (2,036,094) |
| Issuance of 24,090,131 shares of common stock upon the conversion of Series R Convertible Preferred Stock | (777) | 24,090 | (23,313) | | | |
| Issuance of 13,227,593 shares of common stock in payment of expenses to consultants and contractors | | 13,228 | 1,970,911 | | | 1,984,139 |
| Issuance of 24,024,281 shares of common stock in payment of convertible promissory notes, net of issuance cost of $83K | | 24,024 | 3,496,320 | | | 3,520,344 |

| | Convertible Preferred Stock | Common Stock | Additional Paid-In Capital | Deferred Compensation and Other Adjustments | Accumulated Deficit | Total Stockholders' Deficiency |
|---|---|---|---|---|---|---|
| Issuance of 10,116,748 shares of common stock to investors (and consultants) upon the exercise of warrants | | 10,117 | 1,001,558 | | | 1,011,675 |
| Issuance of 2,053,044 shares to employees (and consultants) upon the exercise of stock options | | 2,052 | 122,832 | | | 124,884 |
| Issuance of 1,405,231 shares of common stock upon the exercise of Series R Preferred Stock warrants | | 1,405 | 666,280 | | | 667,685 |
| Issuance of 4,791,594 shares of common stock in payment of Dividends on Series C Convertible Preferred Stock | | 4,791 | | | | 4,791 |
| Issuance of 18,212,567 shares of common stock upon the conversion of 76,351 shares of Series C Convertible Preferred Stock | (77) | 18,213 | (18,136) | | | |
| Issuance of 2,721,205 shares of common stock upon the conversion of 1,189 shares of Series D Convertible Preferred Stock and payment of accrued interest on unpaid dividends | (1) | 2,722 | 223,500 | | | 226,221 |
| Value ascribed to the in-the-money conversion option of Series R Convertible Preferred Stock | | | 2,266,253 | | | 2,266,253 |
| Value ascribed to warrants issued in connection with inventory loan | | | 132,078 | | | 132,078 |
| Value ascribed to warrants issued in connection with bridge loan | | | 130,487 | | | 130,487 |
| Value ascribed to warrants issued in connection with extension of secured loan | | | 451,707 | | | 451,707 |
| Value ascribed to warrants issued in connection with issuance of convertible promissory notes | | | 3,423,000 | | | 3,423,000 |
| Value ascribed to the in-the-money conversion option of convertible promissory notes | | | 2,077,000 | | | 2,077,000 |
| Value ascribed to warrants issued in connection with issuance of bridge loan | | | 1,281,500 | | | 1,281,500 |
| Value ascribed to the in-the-money conversion option of bridge loan | | | 500,000 | | | 500,000 |
| Deferred compensation related to granting of options to employees and non-employees, net of amortization and reversals | | | 1,027,882 | (461,845) | | 566,037 |
| Reclassification of preferred stock due to imminent liquidation | (22) | | (2,196,978) | | | (2,197,000) |
| Net loss applicable to common stockholders | | | | | (24,119,577) | (24,119,577) |

| | Convertible Preferred Stock | Common Stock | Additional Paid-In Capital | Deferred Compensation and Other Adjustments | Accumulated Deficit | Total Stockholders' Deficiency |
|---|---|---|---|---|---|---|
| Balance at December 31, 2000 | $ | $ 102,226 | $ 193,127,430 | $ (476,536) | $ (202,737,990) | $ (9,984,870) |

See accompanying notes to financial statements.



**SHAMAN PHARMACEUTICALS, INC.**
**(Debtor-In-Possession)**
**STATEMENTS OF CASH FLOWS**
**Increase (Decrease) in Cash and Cash Equivalents**

| | Years ended December 31, | | |
|---|---|---|---|
| | 2000 | 1999 | 1998 |
| **Operating activities:** | | | |
| Net loss | $ (21,636,266) | $ (16,491,457) | $ (36,781,361) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | | |
| Depreciation | 653,212 | 746,442 | 1,214,139 |
| Amortization of warrants and deferred equity costs | 638,037 | 415,890 | 286,664 |
| Provision for uncollectible accounts | 230,000 | 116,000 | |
| Inventory write-down | 1,730,809 | | |
| Provision for costs to be incurred in connection with reorganization | 1,000,000 | | |
| (Gain) loss on disposal of fixed assets | (19,154) | (43,285) | 19,834 |
| Interest expense on amortization of debt discounts and beneficial conversion | 8,326,365 | | |
| Interest expense on convertible promissory notes and secured loan | 83,391 | 894,261 | |
| Issuance of common stock to consultants for services rendered | 1, 984,139 | | 1,074,110 |
| Issuance of Series R Preferred Stock to consultants and contractors for services rendered | | 2,639,520 | |
| Issuance of Series R Preferred Stock in connection with settlement of litigation | | 250,005 | |
| Issuance of Series R Preferred Stock to Lipha S.A. in partial settlement of claims | | 1,031,260 | |
| Issuance of note for legal services | | 9,148 | |
| Other compensation | | | 80,759 |
| Payment of interest in common stock | | 33,779 | 328,743 |
| Changes in operating assets and liabilities: | | | |
| Trade accounts receivable | 70,937 | (453,537) | |
| Inventory | (12,318) | (1,718,491) | |
| Prepaid expenses, current assets and other assets | 245,710 | 216,142 | 755,280 |
| Accounts payable, accrued professional fees, accrued compensation, accrued clinical trial costs, accrued restructuring costs and contract research advances | 311,973 | (292,126) | 974,423 |
| Net cash used in operating activities | (6,393,165) | (12,646,449) | (32,047,409) |
| **Investing activities:** | | | |

| | Years ended December 31, | | |
|---|---|---|---|
| Purchases of available-for-sale investments | | | (5,255,947) |
| Maturities of available-for-sale investments | | | 5,032,892 |
| Sales of available-for-sale investments | | 3,292,262 | 7,040,710 |
| Proceeds on sale of fixed assets | 48,433 | 694,544 | |
| Capital expenditures | (9,221) | (102,746) | (375,501) |
| Employee loans, net of repayments | 153,392 | 55,506 | (256,347) |
| Net cash provided by (used in) investing activities | 192,604 | 3,939,566 | 6,185,807 |
| **Financing activities:** | | | |
| Proceeds from issuance of preferred stock, net | | 5,663,699 | 12,598,694 |
| Proceeds from issuance of common stock, net | | | 9,608,659 |
| Proceeds from issuance of convertible promissory notes | 4,216,953 | 1,008,010 | |
| Proceeds from issuance of common stock upon exercise of warrants | 1,679,360 | | |
| Proceeds from issuance of common stock upon exercise of options | 124,884 | | |
| Principal payments on long-term obligations and convertible promissory notes | (917,149) | (2,880,524) | (2,310,080) |
| Proceeds from asset financing arrangements | | 200,000 | 511,123 |
| Net cash provided by financing activities | 5,104,048 | 3,991,185 | 20,408,396 |
| Net decrease in cash and cash equivalents | (1,096,513) | (4,715,698) | (5,453,206) |
| Cash and cash equivalents at beginning of year | 1,171,798 | 5,887,496 | 11,340,702 |
| Cash and cash equivalents at end of year | 75,285 | $ 1,171,798 | $ 5,887,496 |
| **Supplemental Information** | | | |
| Interest paid | $ 320,978 | $ 462,018 | $ 605,069 |

See accompanying notes to financial statements.



**SHAMAN PHARMACEUTICALS, INC.**
**(Debtor-In-Possession)**
**NOTES TO FINANCIAL STATEMENTS**

**1. Summary of Significant Accounting Policies**

*Overview of current business*

We are focused on the discovery, development, and marketing of novel, proprietary botanical dietary supplements derived from tropical plant sources. In September 1999, we began implementing our commercialization efforts. Our commercialization plans focus on the use of community building initiatives on the Internet and other distribution channels, and is based on marketing our exclusive access to proprietary branded products. We also have available for out-licensing a pipeline of botanical product candidates, as well as novel pharmaceutical product candidates for major human diseases developed by isolating active compounds from tropical plants with a history of medicinal use.

*Overview of our new business plan and bankruptcy proceedings*

On January 5, 2001, Shaman filed a Chapter 11 reorganization petition (the "Reorganization") for protection under federal bankruptcy law in the United States Bankruptcy Court, Northern District of California (San Francisco) (the "Bankruptcy Court"). As part of this Reorganization, we have petitioned the Bankruptcy Court to sell certain of the tangible and intellectual property assets in order to generate sufficient funds to pay

existing, qualified creditors. In addition, we anticipate filing our Plan of Reorganization with the Bankruptcy Court sometime in the second quarter of 2001. We believe this plan will give us the best chance to maximize value of specified products and/or assets currently in Shaman. A more detailed discussion of the reorganization will be available in our plan to be filed sometime in the second quarter of 2001.

As a result of our Chapter 11 petition, we are operating as debtor-in-possession under the Untied States Bankruptcy Code (the "Code"), which protects us from our creditors pending reorganization under the jurisdiction of the Bankruptcy Court. As Debtors-In-Possession, we are authorized to operate our business but may not engage in transactions outside the ordinary course of business without approval from the Bankruptcy Court. As part of the Reorganization process, we have attempted to notify all known or potential creditors of the Chapter 11 filing for the purpose of identifying all pre-petition claims.

In the Chapter 11 case, substantially all of the liabilities as of the filing date are subject to settlement under a plan of reorganization. Generally, actions to enforce or otherwise effect repayment of all pre-petition liabilities as well as all pending litigation against the Company are stayed while the Company continues its business operations as debtors-in-possession. The Company files schedules with the Bankruptcy Court setting forth the assets and liabilities of the debtors as of the filing date as reflected in the Company's accounting records. Differences between amounts reflected in such schedules and claims filed by creditors will be investigated and amicably resolved or adjudicated before the Bankruptcy Court. The ultimate amount and settlement terms for such liabilities are subject to a plan of reorganization, and accordingly, are not presently determinable and accordingly, may differ significantly from the amounts currently recorded.

Under the Bankruptcy Code, the Company may elect to assume or reject real estate leases, employment contracts, personal property leases, service contracts and other executory pre-petition contracts, subject to Bankruptcy Court review. The Company cannot presently determine or reasonably estimate the ultimate liability that may result from rejecting leases or from filing of claims for any rejected contracts, and no provisions have been made for these items.



The Company's Statement of Net Assets as of December 31, 2000 has prepared on a liquidation basis. As the Company's bankruptcy proceedings have not been completed, the liquidation of liabilities is subject to uncertainty. As a result, the Company's liabilities have been reported using accounting principles applicable to a going concern, which contemplates the realization of assets and the payment of liabilities in the ordinary course of business.

We anticipate the sale of certain Shaman assets to include both tangible and intellectual property assets. Assets to be sold may include Shaman's public shell and associated net operating losses, pharmaceutical and dietary supplement patents and trademarks, plant material and rights to products currently in the product development pipeline. Shaman is winding down its business and selling off its assets. This wind-down is expected to be completed in mid-2001.

Management's estimate of expenditures, for which a provision has been recorded at December 31, 2000, to be incurred in connection with the Reorganization through June 30, 2001 is as follows (in thousands):

| Category | Estimated expenditures |
|---|---|
| Salaries and benefits | $ 800 |
| Legal costs | 120 |
| Other professional fees | 80 |
| Proceeds from assignment of lease, net of rent paid | (1,000) |
| Total | $ 0 |

Shaman anticipates receiving cash ranging from $1.5 million to $10.0 million from the sales of the tangible and intellectual property assets. These amounts include the $1.0 million received in April 2001 from the assignment of our master lease. The high end of the range could be achieved if a "purchaser" of Shaman's public shell were able to realize and compensate Shaman for utilization of its approximately $175 million of Net Operating Loss carry-forwards. No assurance can be provided that such a purchase will be identified or that proceeds received by Shaman will exceed those already received.

**Revenue Recognition**

Revenue under our collaborative research agreements is recognized ratably as costs are incurred by us in accordance with the performance requirements of the agreements. Non-refundable payments that are not dependent on future performance under collaborative agreements and represent the culmination of an earnings process are recognized as revenue when received. Payments received which are still subject to future performance requirements are deferred until earned. Revenues from achievement of milestone events are recognized when the funding party agrees that the scientific or clinical results stipulated in the agreement have been met. Product sales revenue is recognized when product is shipped and no significant uncertainties remain as to pricing and collectibility.

**Research and Development Expense**

Research and development expense consists of independent research and development costs and the costs associated with work performed under collaborations. Research and development costs include direct and research-related overhead expenses and are expensed as incurred.

**Stock-Based Compensation**

Statement of Financial Accounting Standards, "Accounting for Stock-Based Compensation" ("SFAS 123") encourages, but does not require, companies to record compensation expense for stock-



based employee compensation plans at fair value. We have elected to follow the disclosure requirements of SFAS 123 for the years ended December 31, 2000, 1999 and 1998 and to continue to measure stock-based compensation to employees in accordance with APB Opinion No. 25, "Accounting for Stock Issued to Employees." Note 9 contains a summary of the pro forma effects to reported net loss applicable to common stockholders and net loss per common share for 2000, 1999 and 1998 as if we had elected to recognize compensation expense based on the fair value of options granted as described by SFAS 123.

We grant stock options to employees and directors for a fixed number of shares with an exercise price equal to the fair market value of shares at the date of grant. We account for stock option grants to employees and directors in accordance with APB Opinion No. 25, *Accounting for Stock Issued to Employees,* as interpreted by FAS Interpretation No. 44 and, accordingly, recognize no compensation expense for the stock option grants to employees and directors.

**Per Share Data**

Net loss per share is computed using the weighted average number of shares of common stock outstanding. The impact of stock options and other common stock equivalents have been excluded from the computation in all years presented as they are antidilutive. At December 31, 2000, we had substantial options, convertible preferred stock and convertible warrants outstanding which will further dilute our stockholders' loss per share.

**Comprehensive Loss**

As of January 1, 1998, we adopted Financial Accounting Standards Board ("FASB") Statement No. 130, Reporting Comprehensive Income ("SFAS 130"). SFAS 130 established new rules for the reporting and displaying of comprehensive income and its components; however, the adoption of this statement had no impact on our net loss or total stockholders' equity. SFAS 130 requires unrealized gains or losses on our available for sale securities, which prior to adoption were reported in stockholder's equity, to be included in other comprehensive income (loss). Since our cumulative loss is approximately $202.7 million, our comprehensive loss was not significantly different from our net loss applicable to common stockholders in 2000, 1999 and 1998.

**Cash, Cash Equivalents, Investments and Concentration of Credit Risk**

We consider all highly liquid investments with remaining maturities of three months or less at time of purchase to be cash equivalents. Investments with maturities of less than one year from the balance sheet date and with original maturities greater than 90 days are considered short-term investments. Investments with maturities greater than one year from the balance sheet date are considered long-term investments. Investments consist primarily of commercial paper, investments in government securities, corporate bonds and asset-backed securities. These investments typically bear minimal risk. This diversification of risk is consistent with our policy to maintain high liquidity and ensure safety of principal. We maintain our cash, cash equivalents and investments in accounts with several United States banks and brokerage houses.

**Inventories**

Inventory is stated at the lower of cost (first-in, first-out basis) or market. Cost includes raw materials and contracted costs for the manufacturing of the product. All inventory was written off at December 31, 2000.



**Property and Equipment**

Property and equipment are stated at cost. Depreciation of equipment and furniture is provided on a straight-line basis over the estimated useful lives of the respective assets, which range from three (computer equipment and furniture) to five (laboratory equipment) years. Equipment held under capital leases is amortized using the straight-line method over the shorter of the lease term or estimated useful life of the asset. Leasehold improvements are amortized on a straight-line basis over the remaining life of the lease. Shaman expects to realize approximate net book value of its property and equipment upon disposition.

**Use of Estimates**

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

**Carrying Value of Long-Lived Assets and Long-Lived Assets to be Disposed**

In accordance with Financial Accounting Standards Board Statement No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long Lived Assets to be Disposed Of," we record impairment losses on long-lived assets when events and circumstances indicate that the assets might be impaired and the undiscounted cash flows estimated to be generated by those assets are less than the carrying amounts of those assets. Based on our estimate of future undiscounted cash flows, we expect to recover the carrying amounts of our long-lived assets. Nonetheless, it is reasonably possible that the estimate of undiscounted cash flows may change in the near term resulting in the need to write-down those assets to fair value.

**Segment Reporting**

In June 1997, the FASB issued SFAS No. 131, *Disclosures about Segments of an Enterprise and Related Information* ("FAS131"). SFAS 131 establishes standards for the way that public business enterprises report information about operating segments in annual financial statements and requires that those enterprises report selected information about operating segments in interim financial reports. It also establishes standards for related disclosures about products and services, geographic areas and major customers. We have determined that in 2000, 1999 and 1998, we operated in only one segment.

**Advertising Costs**

Advertising costs are expensed as incurred. We incurred a total of $1.3 million and $521,332 in advertising costs for the years ended December 31, 2000 and 1999.

**Reclassification**

Certain prior year amounts have been reclassified to confirm to the current year's presentation.

**Recent Accounting Pronouncements**

In June 1998, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standard (SFAS) No. 133, *Accounting for Derivative Instrument and Hedging Activities*. SFAS No. 133 requires companies to recognize all derivative contracts as either assets or liabilities in the balance sheet and to measure them at fair value. If certain conditions are met, a derivative may be specifically designated as a hedge, the objective of which is to match the timing of gain or loss recognition on the hedging derivative with the recognition of (i) the changes in the fair value of the hedged assets or liabilities that are attributable to the hedged risk or (ii) the earnings effect of the

hedged forecasted transaction. For a derivative not designated as a hedging instrument, the gain and loss is recognized in income in the period of change. In June 1999, the FASB issued SFAS No. 137, *Accounting for Derivative Instruments and Hedging Activities Deferral of the Effective Date of FASB Statement No. 133*, which amends SFAS No. 133 to be effective for all fiscal quarters of all fiscal year beginning after June 15, 2000. In June 2000, the FASB issued SFAS No. 138, *Accounting for Derivative Instruments and Hedging Activities An Amendment of FASB Statement No. 133*, which addressed certain implementation of issues of SFAS No. 133.

Historically, Shaman has not entered into derivative contracts to hedge existing risks or for speculative purposes. Accordingly, we do not expect the adoption of the new standard to have a material impact on our financial position, results of operations or cash flows.

In December 1999, the Securities and Exchange Commission ("SEC") staff release Staff Accounting Bulletin ("SAB") No. 101, *Revenue Recognition in Financial Statements*, which provides interpretive guidance on the recognition and disclosure of revenue in financial statements. SAB 101 must be applied to financial statements no later than the quarter ended September 30, 2000. There was no material impact from the application of SAB 101 on our financial position, results of operations or cash flows.

In March 2000, the FASB issued Interpretation No. 44 ("FIN 44"), *Accounting for Certain Transactions Involving Stock Compensation*, an interpretation of APB Opinion No. 25. FIN 44 clarifies the application of Accounting Principles Board Opinion NO. 25 for (a) the definition of an employee for purposes of applying Opinion No. 25, (b) the criteria for determining whether a plan qualifies as a non-compensatory plan, (c) the accounting consequences of various modifications to the terms of a previously fixed stock option or award, and (d) the accounting for an exchange of stock compensation awards in a business combination. FIN 44 became effective July 2, 2000, but certain conclusions cover specific events that occur after either December 15, 1998 or January 12, 2000. There was no material impact from the application of FIN 44 on Shaman's financial position, results of operations or cash flow.

**2. Restructuring Plan**

On February 1, 1999, we initiated a restructuring plan in which we closed down the operations of our pharmaceutical business. We now intend to out-license worldwide marketing rights to all of our pharmaceutical compounds and focus our efforts on the development and commercialization of botanical dietary supplements. The restructuring plan included: cessation of pharmaceutical research and development activities and related operations; outlicensing of all of our current pharmaceutical research programs; reduction in force of approximately 60 employees (65% of workforce); sale or disposal of all of our fixed assets that are not needed for our botanicals business; and sub-lease of a portion of our facility.

The termination of 60 employees occurred on February 1, 1999. The following table summarizes Shaman's restructuring activities as of December 31, 2000 (in thousands).

| Category | Total Restructuring Charges | Net Cash (Outflow) Inflow | Non-Cash Items | Accrued Balance at December 31, 2000 |
|---|---|---|---|---|
| Severance and related charges | $ 325 | $ (325) | | $ |
| Cancellation of contracts | 1,310 | (300) | 790 | 1,800 |
| Lipha S.A. settlement of claims | 1,031 | (1,031) | | |
| Gain on disposal of fixed assets | (38) | 38 | | |
| Reversal of estimated liabilities related to pharmaceutical operations | (450) | | 450 | |
| | $ 2,178 | $ (1,618) | 1,240 | $ 1,800 |



At June 30, 1999 we had approximately $969,000 recorded as deferred revenue in connection with the advanced payment received from Lipha S.A. in December 1998, which we had not yet earned. In August 1999, we issued 133,334 shares of Series R Preferred Stock, having a value of $2.0 million, to Lipha S.A. in partial settlement of claims made by Lipha S.A. in connection with the Research Agreement. Out of the $2.0 million, we applied $969,000 to deferred revenue and the balance to restructuring expenses. In December 1999, we entered into a settlement agreement with Lipha S.A. for the discontinuation of the Research Agreement. We will receive no further payments for research and development from Lipha S.A.

**3. Collaborative Relationships**

In August 1999, we entered into a License and Sale Agreement with Metabolex, Inc. whereby Metabolex, Inc. has licensed certain rights to Shaman's library of extracts and compounds for research, development, and commercialization purposes. We received a payment of $350,000 for a perpetual license of certain technology and an additional $65,000 for an option fee to specific technology. We will receive royalties on any resulting products commercialized. Metabolex, Inc. also has an option to license further compound and technology for additional consideration over an initial four-month period. In October 1999, we received an additional $250,000 payment from Metabolex, for which Metabolex exercised its option to acquire a perpetual license to additional technology. Revenues from Metabolex, Inc. accounted for 100% of the contact revenues in 1999. We recognized no revenue in 2000.

In September 1996, we entered into a five-year collaborative agreement with Lipha S.A. to jointly develop Shaman's antihyperglycemic drugs. Upon signing the collaboration, we received an annual research fee of $1.5 million which was amortized to revenue over twelve months as the work was performed. We also received approximately $3 million for 389 shares of common stock priced at $7,710 per share, representing a 20% premium to the weighted average price of the common stock at the time of purchase. In exchange for development and marketing rights in all countries except Japan, South Korea, and Taiwan (which are covered under an earlier agreement between Shaman and Ono Pharmaceutical Co. Ltd. Osaka, Japan ("Ono"), Lipha S.A agreed to provide up to $9.0 million in research payments and up to $10.5 million in equity investments priced at a 20% premium to a multi-day volume weighted average price of common stock at the time of purchase. The research payments were recognized as revenue ratably as the related costs were incurred by us in the performance of our obligations to perform certain research and clinical trial activities. The agreement also provided for additional preclinical and clinical milestone payments to us in excess of $10.0 million per compound for each antihyperglycemic drug developed and commercialized. Lipha S.A. agreed to bear all pre-clinical, clinical, regulatory and other development expenses associated with the compounds selected under the agreement. Preclinical and clinical milestone payments would be recognized as revenue as certain preclinical hurdles were met and as certain phases of the clinical trials and the FDA approval process were completed. In addition, as products were commercialized, Shaman would receive royalties on all product sales outside the United States and up to 50% of the profits (if we exercise our co-promotion rights) or royalties on all product sales in the United States. Certain of the milestone payments would be credited against future royalty payments, if any, due to us from sales of products developed pursuant to the agreement.

In December 1998, we renegotiated the terms of the existing pharmaceutical research and development agreement between Shaman and Lipha S.A. (the "Research Agreement"). Under the new terms, we forgave $6.0 million in aggregate payments due over the remaining term of the original agreement in exchange for a one-time up-front payment of an aggregate of $2.0 million, consisting of a $1.0 million research payment and a $1.0 million equity investment. We discontinued all research and development work related to this Research Agreement when we restructured our business to focus on the development and marketing of dietary supplements in February 1999. In August 1999, we issued



133,334 shares of Series R Preferred Stock, having a value of $2.0 million, to Lipha S.A. in partial settlement of claims made by Lipha S.A. in connection with the Research Agreement. Out of the $2.0 million, we applied $969,000 to deferred revenue and the balance to restructuring expenses. In December 1999, we entered into a settlement agreement with Lipha S.A. for the discontinuation of the Research Agreement. There will be no further research payments from Lipha S.A. For the year ended December 31, 2000 and 1999, we recognized no revenue from this Research Agreement as we discontinued all research and development activities related to this Research Agreement in February 1999. For the year ended December 31, 1998, we recognized $1.9 million in revenue from Lipha S.A. collaboration. In addition, we received a total $2.5 million for issuance of 1,155 shares of common stock, of which 813 shares were priced at $1,850.00 per share in September 1998 and 342 shares were priced at $2,920 per share in December 1998, each representing a 20% premium to the weighted average price of the common stock at the time of purchase. Revenues from Lipha S.A. accounted for 70% of total revenues earned in 1998.

In May 1995, we entered into a collaborative agreement with Ono providing for, among other things, three years of funding for the research and development of compounds for the treatment of Type II diabetes. Under the agreement, Shaman was obligated to screen 100 diabetes-specific plants per year *in vivo*, isolate and identify active compounds, and participate in any medicinal chemistry modification. In turn, Ono provided us with access to Ono's preclinical and clinical development capabilities through proprietary in vitro assays and medicinal chemistry effort. Ono's development and commercialization rights are for the countries of Japan, South Korea and Taiwan. Under the terms of the agreement, Ono provided $7.0 million in collaborative research funding and agree to pay preclinical and clinical milestone payments of $4.0 million per compound for each antidiabetic drug that is commercialized. We received an additional $1.0 million payment (beyond the $7.0 million commitment) in December 1996 for enhanced access rights to these compounds. In May 1998, our collaborative agreement with Ono, and the ongoing research and development funding received pursuant thereto, expired under the original terms thereof and was not renewed. Under the agreement, Ono will continue to provide milestone payments and royalties to us on any resulting products Ono develops from compounds identified during the three-year term of the agreement. We recognized $790,000 in revenue from the Ono collaboration for 1998 and recognized no revenue in 2000 and 1999. Revenues from Ono accounted for 30% of total revenues earned in 1998.

We did not incur any costs in connection with aforementioned collaborative relations during the year ended December 31, 2000 and the costs associated with revenue from these collaborations were minimal for the year ended December 31, 1999. Costs associated with revenue from these collaborations totaled $8.2 million and $11.4 million for the year ended December 31, 1999 and 1998, respectively, and are included in

research and development expenses in the accompanying financial statements.

**4. Inventories**

During the fourth quarter of 2000, we decided to close down our botanical dietary supplements operations as there was no ready market or estimated recoverable amounts for these items. Accordingly, we wrote the value of our inventory down to zero.

Inventories consisted of the following (in thousands):

| | December 31, | |
|---|---|---|
| | 2000 | 1999 |
| Raw materials | $ | $ 1,587 |
| Finished goods | | 131 |
| Total | $ | $ 1,718 |



**5. Debt Obligations**

At December 31, 2000, long-term obligations consist of secured and unsecured term loans and secured borrowings used to acquire property and equipment, capital lease arrangements and a leasehold improvement financing obligation. As of result of the Reorganization, all long-term obligations were classified as current.

In November 2000, Shaman received a $250,000 bridge loan from an existing stockholder ("Lender"). The loan was originally due and payable on November 20, 2000. In consideration of the loan, Shaman issued warrants to the Lender to purchase 312,500 shares of Shaman's common stock at an exercise price of $0.01 per share. In December 2000, Shaman issued additional warrants to the Lender to purchase an aggregate total of 4,000,000 shares of Shaman's common stock at an exercise price of $0.01 per share in exchange for extending the loan to end of December 2000. These warrants are exercisable through April 2005. The issuance of such warrants gave rise a total of $130,000 non-cash interest charge due to the value of the warrants. On January 2, 2001, Shaman executed a Secured Promissory Note (the "IP Note") in the amount of $255,000 (including the extension of the existing $250,000 bridge loan) in favor of the Lender. The IP Note bears interest at the annual rate of 6.3% per annum and is due and payable on or before June 20, 2001. This IP Note is secured by a lien on certain assets of the Company. See Note 12 for further information.

In April 2000, Cardinal Distribution provided Shaman with a $214,000 Marketing Loan to provide incremental market support for sales of Shaman's Normal Stool Formula at Medicine Shoppe pharmacies across the country. The loan was due November 2000 at an interest rate of ten percent (10%) per annum. The loan was outstanding as of December 31, 2000 and was secured by a Certificate of Deposit which is classified on the balance sheet as restricted cash.

In February 2000, Shaman and a wholly-owned subsidiary of Shaman (the "Subsidiary") entered into a convertible note and warrant purchase agreement (the "Note Agreement") with certain investors (the "Note Holders") in connection with a bridge loan financing raising cash proceeds of approximately $3.0 million. Interest on the convertible notes (the "Notes") was accrued at a rate of 12% per annum. The principal amount and accrued interest was to automatically convert at the sole election of the Note Holders on April 30, 2000 into (i) shares of Shaman's common stock with a conversion price of $0.497 per share or (ii) capital stock of the Subsidiary sold in the first equity financing raising at least $5.0 million. Note Holders were issued warrants to purchase shares of Shaman's common stock equal to 40% of the dollar value of each Note Holders' loan participation divided by $0.15. The exercise price of the warrants is $0.15 per share. These warrants are exercisable through April 2005. In March 2000, Shaman and the Note Holders amended the Note Agreement to increase the amount of the Notes to be issued from $3.0 million to $4.0 million. In consideration for amending the Note Agreement, we amended the conversion price of the Notes into Shaman's common stock from a conversion price of $0.497 to the lower of (i) $0.497 per share or (ii) 10 days weighted average price, with a floor of $0.30 per share. In April 2000, Shaman further amended the Note Agreement to increase the amount of the Notes to be issued from $4.0 million to a total of $5.5 million. In consideration for such amendment, we further reduced the conversion price of the Notes such that the unpaid principal and accrued interest automatically converted into Shaman's common stock at a conversion price of $0.15 per share. The Note Holders were issued additional warrants ("Second Warrants") to purchase shares of common stock equal to 50% of the dollar value of their loan participation divided by $0.15. The exercise price of the Second Warrants was $0.10 per share and were exercisable through August 30, 2000. Of the $5.5 million raised, we issued approximately $3.5 million to investors for cash and approximately $2.0 million to creditors and consultants of

Shaman in exchange for services rendered. The initial sale and subsequent sale of such Notes and warrants gave rise to a total of $5.5 million non-cash interest expense due to the value of the warrants and beneficial conversion features. In May 2000, the Notes and all accrued interest thereon, a total of $5,587,781, were converted into 37,251,874 shares of Shaman's common stock. In the third quarter of 2000,



Shaman received a total of $1,011,675 upon the exercise of 10,116,748 warrants at an exercise price of $0.10 per share. The remaining 8,216,585 shares of the Second Warrants expired at the end of August 2000, without exercise.

In February 2000, Shaman and the Subsidiary entered into a convertible promissory note agreement with an existing stockholder in connection with a bridge loan financing raising cash proceeds of $500,000. Interest was accrued at a rate of 12% per annum. The principal amount and accrued interest was to be automatically converted at a 40% discount on April 30, 2000 into capital stock of the Subsidiary sold in the first equity financing raising at least $5.0 million. In April 2000, Shaman and the stockholder amended the agreement to extend payment terms by an additional 12 months. In consideration for amending the agreement, we issued warrants to this stockholder to purchase 5,000,000 shares of Shaman's common stock at an exercise price of $0.10 per share. These warrants are exercisable through April 30, 2001. The sale of such note and warrant gave rise to a total of $1.8 million non-cash interest charge due to the value of the warrants and beneficial conversion features.

In December 1999, we entered into a note purchase agreement (the "Note") with an existing stockholder in which we borrowed $200,000 to purchase inventory for our product, Normal Stool Formula ("NSF"). The loan was originally due and payable in May 2000, at an annual interest rate of 10.50%. The Note was secured by the inventory of our product, NSF and had an option to extend the loan for another six months. In April 2000, we exercised our option to extend the loan for another six months to December 2000. In consideration for extending the loan, we issued to the stockholder warrants to purchase 201,207 shares of common stock at an exercise price of $0.497 per share. In October 2000, we further amended the term of the loan to be due and payable in June 2001. In consideration for further extending the loan, we issued to the stockholder additional warrants to purchase 600,000 shares of common stock at $0.01 per share. These warrants are exercisable through December 2003. The issuance of such warrants gave rise a total of $132,000 non-cash interest charge due to the value of the warrants. On January 2, 2001, Shaman executed a Secured Promissory Note (the "IP Note") in the amount of $231,845 (including the extension of the existing $200,000 loan and accrued interest of $21,845) in favor of the stockholder. This IP Note bears interest at the annual rate of 6.3% per annum and is due and payable on or before June 20, 2001. Each IP Note is secured by a lien on certain assets of the Company. See Note 12 for further information.

In May 1997, we entered into a Loan Agreement with MMC/GATX Partnership No. 1 ("Loan Agreement") to obtain a $5.0 million term loan to pay off pre-existing debt, finance capital asset acquisitions and finance continued research and clinical development. The loan was payable in thirty-six equal monthly installments at an interest rate of 14.58%. The loan was secured by equipment and intellectual properties of Shaman. The lender was granted warrants to purchase 200 shares of common stock at $6,250.00 per share, exercisable over a ten-year period. We attributed a value of $648,000 to these warrants. This amount was recorded as a discount on the related debt and is being amortized as interest expense over the term of the loan.

In April 1999, we amended the Loan Agreement to permit us to issue the convertible promissory notes (discussed above) and delay principal payments under the terms until we closed the Series R Preferred Stock rights offering in August 1999. In connection with the amendment, we issued warrants to purchase 39,512 shares of Series R Preferred Stock at $15.00 per share. This warrant was exercisable commencing on August 23, 1999 and through the seventh anniversary of such date. The warrants were exercisable in common stock after February 1, 2000. We have attributed a value of $498,000 to the new warrants issued in 1999 and recorded this amount as interest expense in 1999. In February 2000, we further amended the Loan Agreement to permit Shaman to delay principal payments under the Loan Agreement. In connection with the amendment, we issued warrants to purchase 340,628 shares of common stock at an exercise price of $0.48387 per share. These warrants were exercisable in common



stock commencing on February 2, 2000 and through the tenth anniversary of such date. The issuance of these warrants gave rise to $450,000 non-cash interest expense in 2000.

We also acquired certain equipment and furniture pursuant to capital lease arrangements. The gross amount of equipment and furniture and the related accumulated amortization recorded under capital leases included in property and equipment are as follows:

| | 2000 | 1999 |
|---|---|---|

| | | 2000 | 1999 |
|---|---|---|---|
| At December 31, | | | |
| | Equipment and furniture | $ 1,343,691 | $ 1,343,691 |
| | Less accumulated amortization | (1,343,691) | (1,237,282) |
| | | $ | $ 106,409 |

Amortization of assets acquired under capital leases is included in depreciation and amortization expense.

In connection with the facility lease described in Note 7, we entered into an agreement with the former tenant of the facility to acquire approximately $1.5 million of tenant improvements by agreeing to make annual payments to the former tenant, including accrued interest of $540,000 in 2000 through 2002. The 1999 and 2000 payments have not yet been made.

**6. Fair Value of Long-Term Obligations**

The fair values of our long-term obligations are estimated using discounted cash flow analyses based on our current incremental borrowing rate for similar types of borrowing arrangements.

At December 31, 2000, outstanding borrowings are as follows:

| Description | Amount |
|---|---|
| Bridge Loans | $ 780,000 |
| Capital Leases | 311,454 |
| Leasehold Improvement Financing | 2,096,340 |
| Inventory Financing | 200,000 |
| Other | 214,186 |
| Total | $ 2,821,980 |

**7. Commitments and Contingencies**

We lease our research and office facility in South San Francisco, California under a noncancellable agreement expiring 2003, with options to renew for a total of ten years. We are required to pay operating costs, including property taxes, utilities, insurance and maintenance. In March 2001, the Bankruptcy Court approved the assignment of our master lease and we are no longer responsible for any future rental payments and operating costs under this operating lease. See Note 12 for further information.

Rent expense for each of the three years ended December 31, 2000, 1999 and 1998 was approximately $315,843, $961,000 and $1,189,000, respectively. Rental expenses are net of sublease income of which $917,558 and $486,000 were recognized in 2000 and 1999.



In February 1990, we entered into a License Agreement with Dr. Michael Tempesta. The maximum royalty claimed by Dr. Tempesta is two percent on net sales of a certain antiviral agent. In November 1996, a demand for arbitration was filed by Shaman to address a claim made by Dr. Tempesta over the scope and coverage, if any, of the License Agreement. On June 2, 1999, Shaman and Dr. Tempesta entered into a Settlement Agreement and Release pursuant to which, among other things, Shaman agreed to pay certain royalties on sales of certain pharmaceutical products derived from SP-303, under the license Agreement dated February 8, 1990 between Shaman and Dr. Tempesta, and (2) issued 16,667 shares of our Series R Preferred Stock to Dr. Tempesta in compromise of attorneys fees and costs incurred by Dr. Tempesta in connection with the arbitration proceeding. In December 2000, we entered into a new settlement agreement with Dr. Michael Tempesta, in which we agreed to pay certain royalties on sales of botanicals product derived from the SP-303 under the License Agreement dated February 8, 1990 between Shaman and Dr. Tempesta.

We are involved in a litigation and disputes which are incidental to our business. While it is not possible to predict or determine the outcome of such litigation and disputes, or to provide an estimate of the losses, if any, that may arise, we believe the costs associated with all of these

actions will not have a significant effect on our consolidated financial position or liquidity, but could possibly be significant to the consolidated results of operations.

Further, product liability claims may be asserted in the future relative to events not known to management at the present time. We have insurance coverage, which we believe is adequate to protect against such product liability losses as could materially affect our financial position.

**8. Contractual Agreements**

We have entered into license, clinical trial and supply agreements with research organizations and commercial companies. Certain of these agreements require payments of royalties on future sales of resulting products and may subject us to minimum annual payments to our contract partners. In addition, we signed an agreement in 1995, which could result in the payment of milestone installments if certain development objectives are achieved. To date, payments under these agreements have not been significant and, at December 31, 2000, related noncancellable commitments are insignificiant.

**9. Preferred Stock and Stockholders' Deficiency**

*Preferred Stock*

We are authorized to issue 2,000,000 shares of preferred stock (21,970 shares and 877,968 shares of which are issued and outstanding at December 31, 2000 and 1999, respectively). Our Board of Directors may set the rights and privileges of any preferred stock issued.

In August 1999, we completed the Series R Preferred Stock rights offering. In the rights offering, we issued 717,149 shares of Series R Convertible Preferred Stock at $15.00 per share to Shaman's common stockholders of record on July 14, 1999, raising net cash proceeds of approximately $5.7 million. Of the 717,149 shares issued, 175,968 shares of Series R Preferred Stock were delivered in payment of expenses to consultants and contractors and 133,334 shares were delivered to Lipha S.A. in partial settlement of claims. Each share of Series R Preferred Stock was to automatically convert on February 1, 2000 into shares of common stock at a conversion price equal to the lesser of (i) $5.00 or (ii) the price that is equal to 10% of the average closing sales price of our common stock for the 10 trading days ending three trading days prior to February 1, 2000. The conversion price of the Series R Preferred Stock was $0.497 (taking into effect the 1-for-50 reverse stock split effectuated on January 31, 2000) and each share of Series R Preferred Stock converted into 31 shares of common stock on February 1, 2000.



In November 1996, a demand for arbitration was filed by Shaman to address a claim made by Dr. Tempesta over the scope and coverage, if any, of the license agreement entered into in February 1990. On June 2, 1999, the Company and Michael Tempesta entered into a Settlement Agreement and Release pursuant to which, among other things, Shaman (1) agreed to pay certain royalties on sales of certain pharmaceutical products derived from SP-303, under the License Agreement dated February 8, 1990 between Shaman and Dr. Tempesta, and (2) issued 16,667 shares of Series R Convertible Preferred Stock to Dr. Tempesta in compromise of attorneys fees and costs incurred by Dr. Tempesta in connection with the arbitration proceeding.

In April 1999, we entered into a credit facility and note purchase agreement with certain investors, stockholders, key executives and members of the board of directors, pursuant to which we borrowed approximately $1.0 million in July 1999. The convertible promissory notes issued pursuant to the credit agreement were due and payable on the earlier of (i) 30 days subsequent to the completion of the public rights offering, or (ii) December 31, 1999. Interest on the convertible promissory notes was accrued at an annual rate of 12%. The convertible promissory notes were secured by certain assets of Shaman and were convertible into shares of Series R Preferred Stock, or into common stock if no public offering occurred prior to December 31, 1999. In connection with the credit agreement, we issued warrants to purchase shares of Series R Preferred Stock. The number of shares subject to these warrants is equal to 50% of the debt amount divided by $15, which was the per share sale price of the Series R Preferred Stock. These warrants are exercisable, on a cashless basis, commencing on April 5, 1999, and through the third anniversary date of the public offering. The conversion price of the convertible promissory notes and the exercise price of the warrants was $15, which was the per share offering price of the Series R Preferred Stock. In September 1999, a total of $649,275 of principal and interest under these notes was converted into 43,285 shares of Series R Preferred Stock and a total of $374,816 of principal and interest under these notes was repaid to the note holders.

On December 10, 1998, Shaman and certain institutional investors exchanged an aggregate of $4.8 million (including accrued interest) of the Senior Convertible Notes (the "Notes") for an aggregate of 4,784 shares of our Series D Convertible Preferred Stock. Each share of Series D Convertible Preferred Stock is entitled to receive, when, as, and if declared by the Board of Directors out of funds legally available for such purpose, cumulative dividends at the rate of $55 per annum. Dividends on the Series D Preferred Stock are payable in cash or shares of our common stock or any combination of cash and shares of common stock, at our option and are payable quarterly on February 1, May 1, August 1 and November 1 of each year. Each share of Series D Preferred Stock is convertible, at any time, into common stock at the lesser of

(a) $1,125.00 per share or (b) 90% of the low trading price during a designated time period prior to the conversion. In addition, the holders received an aggregate of 767 warrants to purchase additional shares of common stock in exchange for surrendering the redemption rights previously held by them under the Notes. The warrants were priced at 150% of the average closing price for the month of December 1998. We have attributed a value of $943,680 to these warrants. In connection with the issuance of the Series D Preferred Stock, we also recognized a non-cash charge in the amount of $1,063,605, representing the value attributed to the in-the-money conversion feature of the Series D Preferred Stock.

The delisting of our common stock from The Nasdaq National Market constituted an Optional Redemption Event (as defined in the Certificate of Designation of Series D Preferred Stock) for the Series D Preferred Stock. In connection therewith, on February 4, 1999, we issued a Control Notice (as defined in the Certificate of Designation of Series D Preferred Stock) that prevented the redemption of the Series D Preferred Stock. This Control Notice will remain in effect for as long as we are not listed on any of The Nasdaq National Market, The Nasdaq SmallCap Market, the American Stock Exchange or the New York Stock Exchange. Delivery of the Control Notice had the effect of increasing the annual dividend to $180 per share and adjusting the conversion price of the Series D Preferred Stock to 72% of the lowest trading price for a designated period prior to the conversion.



In October 1998, we completed the sale to the public of an aggregate of 140,880 shares of our Series C Convertible Preferred Stock for aggregate gross proceeds of $14.1 million. Each share of Series C Preferred Stock is entitled to receive cumulative dividends paid semi-annually to the holders of record of such shares as follows: (i) an annual stock-on-stock dividend, paid in arrears, in shares of common stock (calculated as the quotient of $10.00 divided by 85% of the average closing price of the common stock for the 10-day trading period ending three trading days prior to the date the dividend is paid); plus (ii) a cash amount equaling 0.00005% of our U.S. net sales of our SP-303/Provir product for the treatment of diarrhea, if any, for the preceding two calendar quarters less $5.00. If, under Delaware law, we are unable to pay the cash portion of the dividends, then the cash portion will be paid in shares of common stock (valued at 85% of the average closing price of the common stock for the 10-day trading period ending three trading days prior to the date on which the dividend is paid). Each share of the Series C Preferred Stock was convertible for a period of 30 days after the first issuance and will be convertible again commencing 12 months after the initial issuance date (August 18, 1998) at the election of each holder, and automatically on the sixth anniversary of the initial issuance date into greater of (a) 0.0167 shares of common stock or (b) such number of shares of common stock as equals $100 (the price paid per share of Series C Preferred Stock) divided by 85% of the average closing price of the common stock reported by Nasdaq for the 10-day trading period ending three trading days prior to the date of conversion. The common stock is currently trading on The Nasdaq OTC Bulletin Board. In connection with the issuance of the Series C Preferred Stock, we recognized a non-cash charge in the amount of $678,636. As of December 31, 2000, a total of 118,910 shares of the Series C Preferred Stock were converted into an aggregate of 5,602,370 shares of common stock. The holder of Series C Preferred Stock is entitled to a liquidation preference of $100 per share.

In June 1998, we entered into stock purchase agreements with certain of our stockholders pursuant to which we acquired the right to sell to these stockholders, subject to certain conditions up to an aggregate of 7,000 shares of Series B Custom Convertible Preferred Stock for an aggregate purchase price of $7,000,000. The stock purchase agreements were terminated upon the closing of the Series C Convertible Preferred Stock financing in October 1998. As consideration for entering into the stock purchase agreements, we issued to these stockholders warrants to purchase an aggregate of 350 shares of common stock. The warrants are exercisable for a period of five years at an exercise price per share equal to 115% of the average trading price of the common stock during specified measurement periods. We have attributed a value of $1.5 million to these warrants.

In July 1996, we closed a private placement pursuant to Regulation S under the Securities Act of 1933, as amended, in which we received gross proceeds of $3.3 million for the sale of 400,000 shares of Series A Convertible Preferred Stock and for the issuance of a six-year warrant to purchase 550 shares of common stock at an exercise price of $10,180 per share. The Preferred Stock does not carry a dividend obligation and was to convert into common stock no later than July 23, 1999 at a price per share between $6,000.00 and $8,150.00, depending on the market value of common stock during the period prior to conversion. On July 23, 1999, we issued 543 shares of common stock upon the conversion of 400,000 shares of Series A Preferred Stock.

*Stock Options*

***Adoption of Series R Preferred Stock Option Plan***

In September 1999, the Board of Directors of Shaman adopted the Series R Preferred Stock Option Plan (the "1999 Plan"). A total of 286,790 shares of Series R Preferred Stock have been reserved for issuance under the Series R Plan. The Series R Plan shall terminate in December 2009. Any options outstanding under the Series R Plan at the time of its termination shall remain outstanding until they expire by their terms. The purposes of the Series R Plan are to attract and retain the best available personnel for positions of substantial responsibility, to provide additional incentive for employees, directors and consultants of the Company and to promote the success of Shaman's

business. Options granted under the Series R Plan may be either incentive stock options or non-statutory options, with a maximum term of 10 years. The plan administrator has full power to select, from among the employees, directors and consultants of the Company eligible for grants, the individuals to whom options will be granted, and to determine the specific terms and conditions of each grant, including the number of shares subject to each option, to amend the terms of outstanding options granted under the Series R Plan. The plan also provides for automatic acceleration of the exercise period in the event of certain corporate transactions, including a merger, asset sale or change in control of the Company. Each share of Series R Preferred Stock was automatically converted into 31 shares of common stock on February 1, 2000.

A summary of stock option activity is as follows:

| | Options Outstanding | | | |
|---|---|---|---|---|
| | Number of Shares | Price Per Share | Weighted Average Exercise Price | At Grant Date Weighted Average Fair Value |
| **Balance at January 1, 1999** | | $ | $ | |
| Granted at fair value of stock | 7,930,234 | 0.33 | 0.33 | $ 0.25 |
| Exercised | | | | |
| Forfeited | | | | |
| **Balance at December 31, 1999** | 7,930,234 | 0.33 | 0.33 | |
| Granted | 12,526,134 | 0.01 - 0.03 | 0.025 | $ 0.07 |
| Exercised | (2,051,929) | 0.01 - 0.34 | 0.061 | |
| Forfeited | (12,657,184) | 0.03 - 0.34 | 0.217 | |
| **Balance at December 31, 2000** | 5,747,255 | $ 0.01 - $0.03 | $ 0.02 | |

The following table summarizes information regarding options outstanding under the 1999 Plan at December 31, 2000:

| Range of Exercise Prices | Option Shares Outstanding at December 31, 2000 | Weighted Average Remaining Contractual Life (Years) | Weighted Average Exercise Price | Shares Under Options Exercisable at December 31, 2000 | |
|---|---|---|---|---|---|
| | | | | Number | Weighted Average Exercise Price |
| $ 0.01 - $0.03 | 5,747,255 | 9.64 | $ 0.02 | 2,964,169 | $ 0.02 |
| $ 0.01 - $0.03 | 5,747,255 | 9.64 | $ 0.02 | 2,964,169 | $ 0.02 |

***Common Stock Option Plan***

In December 1992, we adopted the 1992 Stock Option Plan (the "Plan") as the successor plan to our 1990 Stock Option Plan. The Plan was amended in June 1999. The Plan will terminate on the earlier of December 31, 2008 or the date on which all shares available for issuance under the Plan have been issued or canceled. The Plan was amended again in June 2000 to increase the authorized shares by additional ten million shares. The Plan provides for two separate components: the Discretionary Option Grant Program and the Automatic Option Grant Program. The options under this Plan expire no later than ten years from the date of grant.

Under the Discretionary Option Grant Program, options granted may either be incentive options or non-statutory options. Incentive options may be granted to employees at a price not less than the fair market value of common stock on the grant date. Non-statutory options may be granted at a price determined by the plan administrator. Each option granted is exercisable as determined by the plan



administrator, with a term not to exceed ten years. The Plan also allows for the granting of options with repurchase rights and stock appreciation rights at the discretion of the plan administrator.

Under the Automatic Option Grant Program, each individual who becomes a non-employee board member on or after the effective date of the Plan is automatically granted a non-statutory stock option to purchase number of shares of common stock equal to one half of one percent (0.5%) of the number of voting shares of Shaman's capital stock outstanding as of February 1, 2000.

Both programs provide for automatic acceleration of the exercise period in the event of certain corporate transactions, including a merger, asset sale or change in control of the Company.

The 1990 Stock Option Plan provided for the granting of incentive and non-statutory stock options. Both types of options were immediately exercisable and expire ten years from the date of grant. Vesting of optioned shares was determined by the board of directors and generally occurred over a two- to four-year period from the date of grant. At December 31, 2000, all options to purchase common stock issued under this plan were vested.

A summary of stock option activity is as follows:

| | Options Outstanding | | | |
|---|---|---|---|---|
| | Number of Shares | Exercise Price Per Share | Weighted Average Exercise Price | At Grant Date Weighted Average Fair Value |
| **Balance at January 1, 1998** | 2,792 | $ 60 - $13,250 | $ 5,400 | |
| Granted at fair value | 4,420 | 1,281 - 4,937 | 1,489 | $ 1,490 |
| Exercised | (16) | 60 - 3,500 | 1,370 | |
| Forfeited | (2,783) | 1,281 - 13,250 | 5,542 | |
| **Balance at December 31, 1998** | 4,413 | 60 - 10,750 | 1,406 | |
| Granted at fair value | 21 | 1,680 | 1,688 | $ 1,688 |
| Exercised | (1) | 240 | 240 | |
| Forfeited | (4,103) | 60 - 10,750 | 1,403 | |
| **Balance at December 31, 1999** | 330 | 60 - 10,750 | 1,466 | |
| Granted | 13,924,728 | 0.03 - 0.109 | 0.042 | $ 0.08 |
| Exercised | | | | |
| Forfeited | (2,167,665) | 0.03 - 3,375 | 0.11 | |
| **Balance at December 31, 2000** | 11,757,393 | $ 0.03 - $7,500 | $ 0.07 | |



The following table summarizes information regarding options outstanding under the 1992 Plan at December 31, 2000:

| Range of Exercise Prices | Option Shares Outstanding at December 31, 2000 | Weighted Average Remaining Contractual Life (Years) | Weighted Average Exercise Price | Shares under Options Exercisable at December 31, 2000 | |
|---|---|---|---|---|---|
| | | | | Number | Weighted Average Exercise Price |
| $ 0.03 - $0.109 | 11,757,142 | 9.44 | $ 0.04 | ~~5,497,257~~ | $ 0.037 |
| 240 - 1,281 | 51 | 6.71 | 1,138 | 51 | 1,138 |
| 1,437 - 1500 | 182 | 7.67 | 1,439 | 172 | 1,439 |
| 3,625 - 4,125 | 12 | 4.47 | 3,708 | 12 | 3,708 |
| 5,250 - 7,500 | 6 | 4.91 | 6,375 | 6 | 6,375 |
| $ 0.03 - $7,500 | 11,757,393 | 9.44 | $ 0.07 | 5,497,498 | $ 0.11 |

During the year, we reissued options to certain employees and directors adjusting the pricing of the option, requiring variable accounting. The impact of this repricing was not considered significant.

**Pro Forma Information**

We have elected to follow Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees* ("APB 25"), and related interpretations in accounting for our employee stock options because, as discussed below, the alternative fair value accounting provided for under SFAS 123 requires use of option valuation models that were not developed for use in valuing employee stock options. Under APB 25, because the exercise price of our employee stock options equals the market price of the underlying stock on the date of grant, no compensation expense is recognized.

Pro forma information regarding net loss and net loss per share is required by SFAS 123, and has been determined as if we had accounted for our employee stock options granted subsequent to December 31, 1994 under the fair value method of SFAS 123. The fair value for these options was estimated at the date of grant using a Black-Scholes option pricing model with the following weighted-average assumptions:

| | 2000 | 1999 | 1998 |
|---|---|---|---|
| Risk-free interest rate | 6.16% | 6.04% | 4.57% |
| Dividend yield | 0 | 0 | 0 |
| Volatility factor | 2.32 | 1.46 | .75 |
| Weighted average expected life | 1.99 years | 2.68 years | 3.84 years |

The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options which have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions including the expected stock price volatility. Because our employee stock options have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in management's opinion, the existing models do not necessarily provide a reliable single measure of the fair value of our employee stock options.



For purposes of pro forma disclosures, the estimated fair value of the options is amortized to pro-forma net loss over the options' vesting periods. Our pro forma information follows (in thousands, except for net loss per share information):

| | 2000 | 1999 | 1998 |
|---|---|---|---|
| Net loss applicable to common stockholders | | | |
| Historical | $ (24,119) | $ (28,185) | $ (38,524) |
| Pro forma | $ (24,697) | $ (29,407) | $ (40,647) |
| Net loss per common share | | | |
| Historical | $ (0.35) | $ (140.71) | $ (1,916.60) |

| | 2000 | 1999 | 1998 |
|---|---|---|---|
| Pro forma | $ (0.36) | $ (146.81) | $ (2,025.00) |

**Reserved Shares**

At December 31, 2000, 47,736,503 shares of common stock were reserved for issuance upon exercise of outstanding options, warrants and options available for future grant. Does not include 21,970 shares of Series C Preferred Stock which is convertible to a certain number of shares of common stock, such number which shall be determined in accordance with Shaman's amended certificate of incorporation.

**Warrants**

A summary of outstanding warrants to purchase common stock at December 31, 2000 is as follows:

| Description | Number of Warrants | Exercise Price | Term in Years | Expiration |
|---|---|---|---|---|
| Lease financing arrangements | 54 | $2,400 - $10,830 | 7 | 2002 |
| Series A Convertible Preferred Stock | 550 | 10,184 | 6 | 2002 |
| Secured term loan | 340,828 | 0.48 - 6,250 | 10 | 2007 - 2010 |
| Senior convertible notes | 138 | 7,500 | 3 | 2001 |
| Series B Convertible Preferred Stock | 350 | 2,650 | 5 | 2003 |
| Series D Convertible Preferred Stock | 767 | 3,070 | 5 | 2003 |
| Convertible Promissory Notes (1999) | 27,697 | 0.48 | 3 | 2002 |
| Convertible Promissory Notes (2000) | 19,666,670 | 0.10 - 0.15 | 1 - 4 | 2001 - 2005 |
| Inventory Loan | 801,207 | 0.01 - 0.50 | 3 - 4 | 2003 |
| Bridge Loan | 4,000,000 | 0.01 | 4.5 | 2005 |
| | 24,838,261 | | | |

**10. Taxes**

As of December 31, 2000, we had federal net operating loss carryforwards of approximately $175 million. The net operating loss and credit carryforwards will expire at various dates beginning in 2004 through 2020, if not sooner utilized.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting and the amounts used for income tax purposes.



Significant components of our deferred tax assets and liabilities for federal and state income taxes as of December 31, 2000 and 1999 are as follows (in thousands):

| | 2000 | 1999 |
|---|---|---|
| Deferred tax assets: | | |
| Net operating loss carryforwards | $ 60,900 | $ 54,200 |
| Research credits (expiring in 2004 - 2020) | 3,200 | 3,000 |
| Capitalized research and development costs | 7,100 | 7,000 |
| Reserve for inventory obsolesence | 700 | |
| Other | 100 | 200 |
| Total deferred tax assets | 72,000 | 64,400 |
| Valuation allowance for deferred tax assets | (72,000) | (64,400) |

| | 2000 | 1999 |
|---|---|---|
| Net deferred tax asset | $ | $ |

The net valuation allowance increased by $7.6 million during the year ended December 31, 2000 and $6.7 million in 1999.

Utilization of the net operating losses and credits may be subject to a substantial annual limitation due to the "change in ownership" provisions of the Internal Revenue Code of 1986 and similar state provisions. The annual limitation may result in the expiration of net operating losses and credits before utilization. The increase is primarily because management believes that based on a number of factors, the available objective evidence creates sufficient uncertainty regarding the realizability of these assets.

Reconciliation between the expected tax rate of 34% and actual tax rate is primarily due to the change of the valuation allowance and state taxes.



**11. Quarterly Information** (unaudited)

| | First Quarter | Second Quarter | Third Quarter | Fourth Quarter | 2000 |
|---|---|---|---|---|---|
| Net Revenue | $ 52,869 | $ 29,757 | $ 69,447 | $ 143,809 | $ 295,882 |
| Gross Profit | 39,503 | 21,257 | (121,171) | (1,544,479) | (1,604,890) |
| Net Loss | (5,192,280) | (7,311,823) | (2,943,822) | (6,188,341) | (21,636,266) |
| Net Loss applicable to common stockholders | $ (7,670,800) | $ (7,313,362) | $ (2,943,822) | $ (6,191,593) | $ (24,119,577) |
| Basic and diluted net loss per common share(1) | (0.32) | (0.12) | (0.03) | (0.06) | (0.35) |
| Shares used in the calculation of basic and diluted net loss per common share | 24,217,000 | 61,662,884 | 89,174,794 | 97,734,000 | 68,335,000 |

| | First Quarter | Second Quarter | Third Quarter | Fourth Quarter | 1999 |
|---|---|---|---|---|---|
| Net Revenue | $ | $ | $ 362,608 | $ 687,408 | $ 1,050,016 |
| Gross Profit | | | 358,643 | 517,967 | 876,610 |
| Net Loss | (6,336,055) | (2,563,987) | (4,202,449) | (3,388,966) | (16,491,457) |
| Net Loss applicable to common stockholders | $ (8,609,669) | $ (2,563,987) | $ (6,923,343) | $ (10,087,641) | $ (28,184,640) |
| Basic and diluted net loss per common share(1) | (258.90) | (53.43) | (82.33) | (16.00) | (140.71) |
| Shares used in the calculation of basic and diluted net loss per common share | 33,255 | 47,987 | 84,092 | 630,596 | 200,300 |

(1) The sum of quarterly earnings per share does not equal total year earnings due to the effect of large conversions of debt and preferred stock into common shares during 2000 and 1999.

**12. Subsequent Events**

**Chapter 11 Reorganization Petition**

On January 5, 2001, Shaman filed a Chapter 11 Reorganization petition for protection under Federal Bankruptcy law. As part of the Reorganization, we have petitioned the Bankruptcy Court to sell certain tangible and intellectual property assets in order to generate sufficient funds to pay existing, qualified creditors and provide operating capital. Shaman anticipates receiving cash ranging from $1.5 million to $10.0 million from the sales of tangible and intellectual property assets. These amounts include the $1.0 million received in April 2001 from the assignment of our master lease. The high end of the range could be achieved if a "purchaser" of Shaman's public shell were able to realize and compensate Shaman for utilization of its approximately $175 million of Federal Net Operating Loss carryforwards.

**Secured Bridge Promissory Notes**

On January 2, 2001, Shaman executed Secured Bridge Promissory Notes (the "Bridge Notes") in the aggregate amount of $278,000 (including the extension of some existing indebtedness) in favor of certain of its officers, directors, stockholders and outside non-bankruptcy legal counsel. Each Bridge Note bears interest at the annual rate of 6.35% per annum and is due and payable on or before



March 5, 2001. Each Bridge Note is secured by a lien on certain assets of the Company. The Bridge Notes were re-paid in April 2001.

Also on January 2, 2001, Shaman executed Secured Promissory Notes (the "IP Notes") in the aggregate amount of $561,845 (including the extension of some existing indebtedness) in favor of certain of its officers, directors, and stockholders. Each IP Note bears interest at the annual rate of 6.3% per annum and is due and payable on or before June 20, 2001. Each IP Note is secured by a lien on certain assets of the Company. The proceeds of both the Bridge Notes and the IP Notes will be used to finance operations during the commencement of bankruptcy proceedings and to pay the costs of the bankruptcy.

On February 2, 2001, Shaman borrowed $188,000 from a related party. The note bears interest at the annual rate of 10% per annum and is due and payable on or before April 1, 2001. The note is secured by Shaman's SP-303 and Diabetes intellectual properties. The note was re-paid in April 2001.

**Assumption and Assignment Lease**

On March 19, 2001, Shaman entered into an agreement with Tularik, Inc. wherein Shaman agreed to assume and assign the Industrial Lease Agreement dated January 1, 1993, as amended (the "Lease") to Tularik. In April 2001, Tularik has paid Shaman approximately $1.1 million for the assumption and assignment of the Lease.

**License and Sales Agreement**

In March 2001, Shaman amended the License and Sale Agreement between Shaman and Metabolix, Inc. entered into in August 1999, whereby Metabolex Inc. will have additional commercialization rights, including the Nutritional Area but not including the area of Dietary Supplements with the exception of one previously licensed technology, October 1999, for which commercialization rights for dietary supplements was granted. Metabolex purchased, for $200,000, certain diabetes related assets of plants, extracts and compounds for research which they had previously licensed for certain territories in 1999. Metabolex did not purchase the patents related to the assets that they purchased.



**Schedule II Valuation and Qualifying Accounts**

| Allowance for Uncollectible Accounts | Balance, Beginning of Period | Charges to Revenues or Costs and Expenses | Deductions - Write-off Charges to Reserve | Balance, End of Period |
|---|---|---|---|---|
| Year Ended December 31, | | | | |
| 2000 | 116,000 | 230,000 | (346,000) | |
| 1999 | | 116,000 | | 116,000 |

**Accrued restructuring costs**

| Allowance for Uncollectible Accounts | Balance, Beginning of Period | Charges to Revenues or Costs and Expenses | Deductions - Write-off Charges to Reserve | Balance, End of Period |
|---|---|---|---|---|
| Year ended December 31, | | | | |
| 2000 | 1,010,000 | 790,000 | | 1,800,000 |
| 1999 | | 1,010,000 | | 1,010,000 |



## PART III

### Item 9. Changes In and Disagreements with Accountants on Accounting and Financial Disclosure

None.

### Item 10. Directors and Executive Officers of the Registrant

***Identification of Directors and Executive Officers***

The information required by this Item 10 concerning the directors and executive officers of the Company is incorporated by reference from the information under the captions "Proposal One Election of Directors Information With Respect to Nominees" and "Executive Compensation and Other Information Directors and Executive Officers" in our Definitive Proxy Statement to be filed with the Commission pursuant to Regulation 14A in connection with our 2001 Annual Meeting of Stockholders (the "Proxy Statement").

***Compliance with Section 16(a) of the Securities Exchange Act of 1934***

The information required by this Item 10 as to compliance with Section 16(a) of the Securities Exchange Act of 1934 is incorporated by reference from the information under the caption "Compliance with Section 16(a) of the Securities Exchange Act of 1934" in the Proxy Statement.

### Item 11. Executive Compensation

The information required by this Item 11 is incorporated by reference from the information under the caption "Executive Compensation and Other Information" in the Proxy Statement.

### Item 12. Security Ownership of Certain Beneficial Owners and Management

The information required by this Item 12 is incorporated by reference from the information under the caption "Security Ownership of Management and Certain Beneficial Owners" in the Proxy Statement.

### Item 13. Certain Relationships and Related Transactions

Information required by this Item 13 is incorporated by reference from the information under the caption "Executive Compensation and Other Information Certain Relationships and Related Transactions" in the Proxy Statement.

**PART IV**

**Item 14. Exhibits, Financial Statement Schedules and Reports on Form 8-K**

(a)

(1) *Financial Statements*

The following Financial Statements together with the Report of Independent Auditors are filed as part of this Form 10-K under Item 8 above:

Independent Auditors' Report

Report of Ernst & Young LLP, Independent Auditors

Statement of Net Assets in Liquidation as of December 31, 2000 and Balance Sheet as of December 31, 1999

Statements of Operations for each of the years ended December 31, 2000, 1999 and 1998

Stockholders' Equity (Deficiency) for each of the years ended December 31, 2000, 1999 and 1998

Cash Flows for each of the years ended December 31, 2000, 1999 and 1998

Notes to Financial Statements

(a)

(2) *Financial Statement Schedules*

No financial statement schedules are included because they are not required or the required information is included in the financial statements or notes thereto.

(b)

*Reports on Form 8-K*

A Report on Form 8-K, as amended, was filed on January 24, 2001 containing information required by Item 3, Bankruptcy and Item 5, Other Events.

(c)

*Exhibits*

| Exhibit Number | Description |
|---|---|
| 3.1(22) | Amended and Restated Certificate of Incorporation, as filed with the Delaware Secretary of State on June 22, 1999. |
| 3.2(9) | Amended and Restated Bylaws, as amended March 29, 1996. |
| 4.1(22) | Certificate of Designation of Preferences of Series R Preferred Stock of the Registrant, as filed with the Delaware Secretary of State of July 19, 1999. |
| 4.2(21) | Form of warrant, dated April 5, 1999, issued to certain investors of the Registrant. |
| 4.3(21) | Form of warrant, dated April 30, 1999, issued to MMC/GATX Partnership No.1 |
| 10.1(1)(19) | 401(k) Plan. |
| 10.2(1)(19) | Form of Stock Purchase Agreement. |

| Exhibit Number | Description |
|---|---|
| 10.3(1) | Form of Indemnification Agreement. |
| 10.4(1) | Form of Agreement with Scientific Strategy Team Members. |
| 10.5(1) | Form of Proprietary Information and Inventions Agreement Employees. |
| 10.6(1) | Form of Proprietary Information and Inventions Agreement Consultants. |



| | |
|---|---|
| 10.7(1)(18) | License Agreement dated February 8, 1990, between Shaman and Dr. Michael Tempesta. |
| 10.12(1) | Industrial Lease Agreement dated January 1, 1993, between Shaman and Grand/ Roebling Investment Company. |
| 10.14(4) | Common Stock Warrant dated September 30, 1993, issued to MMC/GATX Partnership No. I. |
| 10.15(4) | Common Stock Warrant dated October 5, 1993, issued to Meier Mitchell & Co. |
| 10.16(6)(18) | Joint Research and Product Development Agreement, dated May 24, 1995, by and between Ono Pharmaceutical Co., Ltd. and Registrant. |
| 10.17(a)(10) | Amendment Agreement, dated December 4, 1996, to the Joint Research and Product Development Agreement by and between Ono Pharmaceutical Co., Ltd. and Registrant. |
| 10.18(6)(18) | License Agreement, dated June 8, 1995, by and between Bayer AG and Registrant. |
| 10.20(9)(18) | Subscription Agreement dated July 25, 1996 by and between the Registrant and Fletcher International Limited. |
| 10.21(10)(18) | Joint Research and Product Development and Commercialization Agreement dated September 23, 1996, by and between Lipha, Lyonnaise Industrielle Pharmaceutique S.A. and the Registrant. |
| 10.22(10)(18) | Stock Purchase Agreement dated September 23, 1996, by and between Lipha, Lyonnaise Industrielle Pharmaceutique S.A. and the Registrant. |
| 10.23(11)(19) | Shaman Pharmaceuticals, Inc. 1992 Stock Option Plan (as Amended and Restated on February 14, 1997). |
| 10.24(3)(19) | Form of Notice of Grant with Stock Option Agreement. |
| 10.25(3)(19) | Form of Addendum to Stock Option Agreement (Special Tax Elections). |
| 10.26(3)(19) | Form of Addendum to Stock Option Agreement (Limited Stock Appreciation Rights). |
| 10.27(11)(19) | Form of Non-Employee Director Automatic Stock Option Agreement. |
| 10.28(12) | Masopracol License Agreement, dated as of March 19, 1997, by and between Access Pharmaceuticals, Inc. and the Registrant. |
| 10.29(12)(18) | Amended and Restated Masopracol License Agreement, dated as of April 1997, by and between Access Pharmaceuticals, Inc. and the Registrant. |
| 10.30(12) | Loan and Security Agreement, dated as of May 7, 1997, between MMC/GATX Partnership I and Registrant. |
| 10.30A(12) | Amendment No. 1 to Loan and Security Agreement, dated as of June 30, 1997, by and between Registrant and MMC/GATX Partnership No. I. |
| 10.30B(15) | Waiver letter dated July 16, 1998, executed by Shaman Pharmaceuticals, Inc. and approved by MMC/GATX |

Partnership No. I as to the payment of dividends on the Series C Preferred Stock.

10.30C(21) Amendment No. 2 to Loan and Security Agreement, dated as of April 30, 1999, by and between the Registrant and MMC/GATX Partnership No.1.



10.31(12) Secured Promissory Note, dated May 16, 1997, issued in favor of MMC/GATX Partnership No. I.

10.32(12) Warrant, granted May 7, 1997, in favor of MMC/GATX Partnership No. I.

10.33(12) Amendment to Warrants, dated May 7, 1997, MMC/GATX Partnership No. I and Registrant.

10.34(12) Engagement Agreement, dated April 7, 1997, by and between Registrant and Diaz & Altschul Capital, LLC.

10.35(12) Amended Engagement Agreement, dated June 30, 1997, by and between Registrant and Diaz & Altschul Capital, LLC.

10.36(12) Form of Note Purchase Agreement, dated as of June 30, 1997, by and between Registrant and certain investors.

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| 24.1* | Power of Attorney (included under the caption "Signatures"). |

* Filed herewith.

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(2) Intentionally omitted.

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(16) Incorporated by reference to exhibits filed with Registrant's Registration Statement on Form S-3, File No. 333-67023.

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(23) Incorporated by reference to exhibits filed with Registrant's Annual Report on Form 10-K for the year ended December 31, 1999.

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(26) Incorporated by reference to exhibits filed on January 24, 2001 with Registrant's Current Report on Form 8-K.

**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Dated: April 16, 2001 SHAMAN PHARMACEUTICALS, INC.

By: /s/ Lisa A. Conte

Lisa A. Conte
*President, Chief Executive Officer and Chief Financial Officer*

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints jointly and severally, Lisa A. Conte as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, each of the undersigned has executed this Power of Attorney as of the date indicated.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

| Signature | Title | Date |
|---|---|---|
| /s/ LISA A. CONTE<br>Lisa A. Conte | President, Chief Executive Officer, Chief Financial Officer and Director (principal executive and financial officer) | April 16, 2000 |
| /s/ ROBERT R. SCANNEL<br>Robert R. Scannel | Director | April 16, 2000 |
| /s/ M. DAVID TITUS<br>M. David Titus | Director | April 16, 2000 |
| /s/ NEZAM TOOLOEE<br>Nezam Tooloee | Director | April 16, 2000 |



**EXHIBIT INDEX**

| Exhibit Number | Description |
|---|---|
| 3.1(22) | Amended and Restated Certificate of Incorporation, as filed with the Delaware Secretary of State on June 22, 1999. |
| 3.2(9) | Amended and Restated Bylaws, as amended March 29, 1996. |
| 4.1(22) | Certificate of Designation of Preferences of Series R Preferred Stock of the Registrant, as filed with the Delaware Secretary of State of July 19, 1999. |
| 4.2(21) | Form of warrant, dated April 5, 1999, issued to certain investors of the Registrant. |
| 4.3(21) | Form of warrant, dated April 30, 1999, issued to MMC/GATX Partnership No.1 |
| 10.1(1)(19) | 401(k) Plan. |
| 10.2(1)(19) | Form of Stock Purchase Agreement. |
| 10.3(1) | Form of Indemnification Agreement. |
| 10.4(1) | Form of Agreement with Scientific Strategy Team Members. |
| 10.5(1) | Form of Proprietary Information and Inventions Agreement  Employees. |
| 10.6(1) | Form of Proprietary Information and Inventions Agreement  Consultants. |
| 10.7(1)(18) | License Agreement dated February 8, 1990, between Shaman and Dr. Michael Tempesta. |
| 10.12(1) | Industrial Lease Agreement dated January 1, 1993, between Shaman and Grand/ Roebling Investment Company. |
| 10.14(4) | Common Stock Warrant dated September 30, 1993, issued to MMC/GATX Partnership No. I. |
| 10.15(4) | Common Stock Warrant dated October 5, 1993, issued to Meier Mitchell & Co. |
| 10.16(6)(18) | Joint Research and Product Development Agreement, dated May 24, 1995, by and between Ono Pharmaceutical Co., Ltd. and Registrant. |
| 10.17(a)(10) | Amendment Agreement, dated December 4, 1996, to the Joint Research and Product Development Agreement by and between Ono Pharmaceutical Co., Ltd. and Registrant. |
| 10.18(6)(18) | License Agreement, dated June 8, 1995, by and between Bayer AG and Registrant. |
| 10.20(9)(18) | Subscription Agreement dated July 25, 1996 by and between the Registrant and Fletcher International Limited. |
| 10.21(10)(18) | Joint Research and Product Development and Commercialization Agreement dated September 23, 1996, by and between Lipha, Lyonnaise Industrielle Pharmaceutique S.A. and the Registrant. |
| 10.22(10)(18) | Stock Purchase Agreement dated September 23, 1996, by and between Lipha, Lyonnaise Industrielle Pharmaceutique S.A. and the Registrant. |
| 10.23(11)(19) | Shaman Pharmaceuticals, Inc. 1992 Stock Option Plan (as Amended and Restated on February 14, 1997). |
| 10.24(3)(19) | Form of Notice of Grant with Stock Option Agreement. |



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| 10.25(3)(19) | Form of Addendum to Stock Option Agreement (Special Tax Elections). |
| 10.26(3)(19) | Form of Addendum to Stock Option Agreement (Limited Stock Appreciation Rights). |

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| 10.27(11)(19) | Form of Non-Employee Director Automatic Stock Option Agreement. |
| 10.28(12) | Masopracol License Agreement, dated as of March 19, 1997, by and between Access Pharmaceuticals, Inc. and the Registrant. |
| 10.29(12)(18) | Amended and Restated Masopracol License Agreement, dated as of April 1997, by and between Access Pharmaceuticals, Inc. and the Registrant. |
| 10.30(12) | Loan and Security Agreement, dated as of May 7, 1997, between MMC/GATX Partnership I and Registrant. |
| 10.30A(12) | Amendment No. 1 to Loan and Security Agreement, dated as of June 30, 1997, by and between Registrant and MMC/GATX Partnership No. I. |
| 10.30B(15) | Waiver letter dated July 16, 1998, executed by Shaman Pharmaceuticals, Inc. and approved by MMC/GATX Partnership No. I as to the payment of dividends on the Series C Preferred Stock. |
| 10.30C(21) | Amendment No. 2 to Loan and Security Agreement, dated as of April 30, 1999, by and between the Registrant and MMC/GATX Partnership No.1. |
| 10.31(12) | Secured Promissory Note, dated May 16, 1997, issued in favor of MMC/GATX Partnership No. I. |
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