HEMISPHERX BIOPHARMA INC
Form 424B3
April 13, 2004

Filed Pursuant to Rule 424(b)(3)
Registration Nos. 333-108645, 333-111135 and 333-113796

HEMISPHERX BIOPHARMA, INC.

12,998,647 Shares of Common Stock

This prospectus relates to the resale of 12,998,647 shares of our common stock that may be offered and sold from time to time by selling shareholders, consisting of: (1) 135% of 1,682,664 shares of common stock issuable upon the conversion, redemption or other payments relating to our 6% Senior Convertible Debentures Due January 2006 ("January 2004 Debentures") and as payment of interest thereon and 135% of 790,514 shares of common stock issuable upon the exercise of the related warrants ("2009 Warrants"); (2) 135% of 813,970 shares of common stock issuable upon the conversion, redemption or other payments relating to our January 2004 Debentures and as payment of interest thereon, which January 2004 Debentures are issuable upon exercise of Additional Investment Rights held by the holders of the January 2004 Debentures; (3) 135% of 1,585,978 shares of common stock issuable upon the conversion, redemption or other payments relating to our 6% Senior Convertible Debentures Due October 2005 ("October Debentures") and as payment of interest thereon and 135% of 410,134 shares of common stock issuable upon the exercise of the related warrants ("October 2008 Warrants"); (4) 135% of 1,137,650 shares of common stock issuable upon the conversion, redemption or other payments relating to our 6% Senior Convertible Debentures Due July 2005 ("July Debentures") and as payment of interest thereon and 135% of 507,102 shares of common stock issuable upon the exercise of the related warrants ("July 2008 Warrants") and 135% of 1,000,000 shares of common stock issuable upon the exercise of warrants issued to the Debenture holders in June 2003 ("June 2008 Warrants"); (5) 1,302,410 shares of common stock issuable upon exercise of other warrants; and (6) 993,420 shares of common stock to be sold by certain of the selling stockholders listed on page 64 of this prospectus. We are registering these shares of common stock pursuant to commitments to register the securities with the selling stockholders.

We will not receive any proceeds from the sale of the shares of common stock by the selling stockholders other than payment of the exercise price of the warrants.

Our common stock is listed on the American Stock Exchange under the symbol HEB. The reported last sale price on the American Stock Exchange on April 6, 2004 was $3.66.

Please see the risk factors beginning on page 6 to read about certain factors you should consider before buying shares of common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined that this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is April 9, 2004

PROSPECTUS SUMMARY

In the following summary, we have highlighted information that we believe is the most important about us. However, because this is a summary, it may not contain all information that may be important to you. You should read this entire prospectus, including the information incorporated by reference and the financial data and related notes, before making an investment decision. When used in this prospectus, the terms "we," "our" and "us" refer to Hemispherx and not to the selling stockholders.

About Hemispherx

In the course of almost three decades, we have established a strong foundation of laboratory, pre-clinical and clinical data with respect to the development of nucleic acids to enhance the natural antiviral defense system of the human body and the development of therapeutic products for the treatment of chronic diseases. Our strategy is to obtain the required regulatory approvals which will allow the progressive introduction of Ampligen(R) (our proprietary drug) for treating Myalgic Encephalomyelitis/ Chronic Fatigue Syndrome ("ME/CFS"), HIV, Hepatitis C ("HCV") and Hepatitis B ("HBV") in the U.S., Canada, Europe and Japan. Ampligen(R) is currently in the open label portion of phase III clinical trials in the U.S. for use in treatment of ME/CFS and is in Phase IIb Clinical Trials in the U.S. for the treatment of newly emerging multi-drug resistant HIV, and for the induction of cell mediated immunity in HIV patients that are under control using potentially toxic drug cocktails.

Our proprietary drug technology utilizes specifically configured ribonucleic acid ("RNA") and is protected by more than 350 patents worldwide, with over 60 additional patent applications pending to provide further proprietary protection in various international markets. Certain patents apply to the use of Ampligen(R) alone and certain patents apply to the use of Ampligen(R) in combination with certain other drugs. Some compositions of matter patents pertain to other new RNA compounds, which have a similar mechanism of action.

In March 2003 we obtained from Interferon Sciences, Inc. ("ISI") all of its raw materials, work-in-progress and finished product ALFERON N Injection(R), together with a limited license to sell ALFERON N Injection(R), a natural alpha interferon that has been approved for commercial sale for the intralesional treatment of refractory or recurring external condylomata acuminata ("genital warts") in patients 18 years of age or older in the United States. In March 2004, we acquired from ISI the balance of ISI's rights to its product as well as ISI's production facility. We are marketing the ALFERON N Injection(R) in the United States through sales facilitated via third party marketing agreements. Additionally, we intend to implement studies testing the efficacy of ALFERON N Injection(R) in multiple sclerosis and other chronic viral diseases. In this regard, the FDA recently authorized a Phase II clinical study designed to investigate the activity and safety of Alferon LDO(R) in early stage HIV positive patients.

We were incorporated in Maryland in 1966 under the name HEM Research, Inc., and originally served as a supplier of research support products. Our business was redirected in the early 1980's to the development of nucleic acid pharmaceutical technology and the commercialization of RNA drugs. We were reincorporated in Delaware and changed our name to HEM Pharmaceutical Corp., in 1991 and to Hemispherx Biopharma, Inc., in June 1995. We have three domestic subsidiaries `BioPro Corp., BioAegean Corp., and Core BioTech Corp., all of which are incorporated in Delaware. Our foreign subsidiaries include Hemispherx Biopharma Europe N.V./S.A. established in Belgium in 1998 and Hemispherx Biopharma Europe S.A. ("Hemispherx, S.A.") incorporated in Luxembourg in 2002.

Our principal executive offices are located at One Penn Center, 1617 JFK

Boulevard, Philadelphia, Pennsylvania 19103, and its telephone number is 215-988-0080.

THE OFFERING

Common stock to be offered by the selling stockholders	12,998,647 Shares
Common stock outstanding prior to this offering	41,617,249 Shares
Use of Proceeds	We will not receive any of the proceeds from the sale of the shares of common stock because they are being offered by the selling stockholders and we are not offering any shares for sale under this prospectus, but we may receive proceeds from the exercise of warrants held by certain of the selling stockholders. We will apply such proceeds, if any, toward funding our research and development efforts, working capital and, possibly, acquisitions. See "Use of Proceeds."
American Stock Exchange symbol	HEB

The 12,998,647 shares of our common stock offered consist of:

- 135% of 1,682,664 shares of common stock issuable upon the conversion, redemption or other payments relating to our 6% Senior Convertible Debentures Due January 2006 ("January 2004 Debentures") and as payment of interest thereon;
- 135% of 790,514 shares of common stock issuable upon the exercise of the related warrants ("2009 Warrants");
- 135% of 813,970 shares of common stock issuable upon the conversion, redemption or other payments relating to our January 2004 Debentures and as payment of interest thereon, which January 2004 Debentures are issuable upon exercise of Additional Investment Rights held by the holders of the January 2004 Debentures;
- 135% of 1,585,978 shares of common stock issuable upon the conversion, redemption or other payments relating to our 6% Senior Convertible Debentures Due October 2005 ("October Debentures") and as payment of interest thereon;
- 135% of 410,134 shares of common stock issuable upon the exercise of the related warrants ("October 2008 Warrants"); o 135% of 1,137,650 shares of common stock issuable upon the conversion, redemption or other payments relating to our 6% Senior Convertible Debentures Due July 2005 ("July Debentures") and as payment of interest thereon;
- 135% of 507,102 shares of common stock issuable upon the exercise of the related warrants ("July 2008 Warrants");
- 135% of 1,000,000 shares of common stock issuable upon the exercise of warrants issued to the Debenture holders in June 2003 ("June 2008

Warrants");

- 1,302,410 shares of common stock issuable upon exercise of other warrants; and

- 993,420 shares of common stock owned by certain of the selling stockholders.

We are registering these shares of common stock pursuant to commitments to register the securities with the selling stockholders.

Summary Consolidated Financial Data

In the table below, we provide you with our summary historical financial data. We have prepared this information using our audited financial statements for each of the five years in the period ended December 31, 2003.

It is important that you read this summary historical financial data in conjunction with our historical financial statements and related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing elsewhere in this prospectus.

(in thousands except share and per share data)
Year ended December 31,

Consolidated Statements of Operations Data:	1999	2000	2001	2002	2003
Revenues:					
Sale of Products	$ --	$ --	$ --	$ --	$
Clinical Treatment Programs	678	788	390	341	
License Fees Income	--	--	--	563	
Total Revenues	678	788	390	904	
Cost & Expenses:					
Production Costs/ Costs of Goods Sold					
Research & Development	4,737	6,136	5,780	4,946	3
General & Administrative(1)	8,721	3,695	3,412	2,015	4
Total Cost and Expenses	13,458	9,831	9,192	6,961	7
Interest and Other Income	482	572	284	103	
Interest Expense	--	--	--	--	
Financing Costs(3)	--	--	--	--	(7
Other Expense	--	(81)	(565)	(1,470)	

Net Loss	$(12,298)	$(8,552)	$(9,083)	$(7,424)	$(14
Basic and Diluted Loss Per Share	$ (.47)	$ (.29)	$ (.29)	$ (.23)	$
Basic and Diluted	26,380,351		31,443,208		35,234
Weighted Average Shares Outstanding		29,251,846		32,095,776	

Other Cash Flow Data					
Cash Used in Operating Activities	$(6,990)	$(8,074)	$(7,281)	$(6,409)	$(7,022)
Capital Expenditures	(251)	(171)	--	--	19

Balance Sheet Data:	December 31,					Pro Forma Adju For Asset Acqui
	1999	2000	2001	2002	2003	2003(4)(5
						(unaudite
Working Capital	$ 9,507	$ 7,550	$ 7,534	$2,925	$ 7,000	$ 7,000
Total Assets	14,168	13,067	12,035	6,040	13,404	15,070
Shareholders' Equity	12,657	11,572	10,763	3,630	9,248	9,462

(1) General and Administrative expenses include stock compensation expense totaling $4,618, $397, $673, $132 and $237for the years ended December 31, 1999, 2000, 2001, 2002 and 2003, respectively.

(2) For information concerning recent acquisitions of certain assets of Interferon Sciences, Inc. ("ISI") and related financing see notes 1, 4 and 7 to our consolidated financial statements for the year ended December 31, 2003, contained elsewhere in this prospectus.

(3) In accounting for the March 12, 2003, July 10, 2003, and October 29, 2003 issuances of 6% Senior Convertible Debentures in the principal amounts of $5,426,000, $5,426,000, and $4,142,357, respectively, and related embedded conversion features and warrant issuances, we recorded debt discounts of approximately $11.3 million which, in effect, reduced the carrying value of the debt to $1.6 million. Excluding the application of related accounting standards, our debt outstanding as of December 31, 2003 totaled approximately $6.6 million. Through December 31, 2003, we have recorded charges of approximately $7.3 million for amortization of original issue discount and other related debt costs. Such amounts have been reflected as financing costs in the statement of operations. For additional information refer to note 7 to our consolidated financial statements for the year ended December 31, 2003.

(4) The unaudited Pro Forma consolidated statements of operations data for the year ended December 31, 2003 have been prepared giving effect to the

acquisition of certain assets of ISI and the related funding of the transaction, by our March 12, 2003 6% senior convertible debentures, as if they occurred on January 1, 2003.

The unaudited Pro Forma consolidated balance sheet data has been prepared as if the second portion of the acquisition of certain assets of ISI had occurred on December 31, 2003.

(5) Does not reflect the issuance of the January 26, 2004 $4,000,000 6% Senior Convertible Debenture resulting in net cash proceeds to us of $3,695,000.

RISK FACTORS

Special Note Regarding Forward-Looking Statements

Certain statements in this prospectus constitute "forwarding-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities and Exchange Act of 1995 (collectively, the "Reform Act"). Certain, but not necessarily all, of such forward-looking statements can be identified by the use of forward-looking terminology such as "believes," "expects," "may," "will," "should," or "anticipates" or the negative thereof or other variations thereon or comparable terminology, or by discussions of strategy that involve risks and uncertainties. All statements other than statements of historical fact, included in this prospectus regarding our financial position, business strategy and plans or objectives for future operations are forward-looking statements. Without limiting the broader description of forward-looking statements above, we specifically note that statements regarding potential drugs, their potential therapeutic effect, the possibility of obtaining regulatory approval, our ability to manufacture and sell any products, market acceptance or our ability to earn a profit from sales or licenses of any drugs or our ability to discover new drugs in the future are all forward-looking in nature.

Such forward-looking statements involve known and unknown risks, uncertainties and other factors, including but not limited to, the risk factors discussed below, which may cause the actual results, performance or achievements of Hemispherx and its subsidiaries to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements and other factors referenced in this prospectus. We do not undertake and specifically decline any obligation to publicly release the results of any revisions which may be made to any forward-looking statement to reflect events or circumstances after the date of such statements or to reflect the occurrence of anticipated or unanticipated events.

The following cautionary statements identify important factors that could cause our actual result to differ materially form those projected in the forward-looking statements made in this prospectus. Among the key factors that have a direct bearing on our results of operations are:

No assurance of successful product development

Ampligen(R) and related products. The development of Ampligen(R) and our other related products is subject to a number of significant risks. Ampligen(R) may be found to be ineffective or to have adverse side effects, fail to receive necessary regulatory clearances, be difficult to manufacture on a commercial scale, be uneconomical to market or be precluded from commercialization by proprietary right of third parties. Our products are in various stages of clinical and pre-clinical development and, require further clinical studies and

appropriate regulatory approval processes before any such products can be marketed. We do not know when, if ever, Ampligen(R) or our other products will be generally available for commercial sale for any indication. Generally, only a small percentage of potential therapeutic products are eventually approved by the U.S. Food and Drug Administration ("FDA") for commercial sale.

ALFERON N Injection(R). Although ALFERON N Injection(R) is approved for marketing in the United States for the intralesional treatment of refractory or recurring external genital warts in patients 18 years of age or older, to date it has not been approved for other indications. We face many of the risks discussed above, with regard to developing this product for use to treat other ailments such as multiple sclerosis and cancer.

Our drug and related technologies are investigational and subject to regulatory approval. If we are unable to obtain regulatory approval, our operations will be significantly affected.

All of our drugs and associated technologies other than ALFERON N Injection(R) are investigational and must receive prior regulatory approval by appropriate regulatory authorities for general use and are currently legally available only through clinical trials with specified disorders. At present, ALFERON N Injection(R) is only approved for the intralesional treatment of refractory or recurring external genital warts in patients 18 years of age or older. Use of ALFERON N Injection(R) for other indications will require regulatory approval. In this regard, Interferon Sciences, Inc. ("ISI"), the company from which we obtained our rights to ALFERON N Injection(R), conducted clinical trials related to use of ALFERON N Injection(R) for treatment of HIV and Hepatitis C. In both instances, the FDA determined that additional studies were necessary in order to fully evaluate the efficacy of ALFERON N Injection(R) in the treatment of HIV and Hepatitis C diseases. We have no obligation or immediate plans to conduct these additional studies at this time.

Our products, including Ampligen(R), are subject to extensive regulation by numerous governmental authorities in the U.S. and other countries, including, but not limited to, the FDA in the U.S., the Health Protection Branch ("HPB") of Canada, and the European Medical Evaluation Agency ("EMEA") in Europe. Obtaining regulatory approvals is a rigorous and lengthy process and requires the expenditure of substantial resources. In order to obtain final regulatory approval of a new drug, we must demonstrate to the satisfaction of the regulatory agency that the product is safe and effective for its intended uses and that we are capable of manufacturing the product to the applicable regulatory standards. We require regulatory approval in order to market Ampligen(R) or any other proposed product and receive product revenues or royalties. We cannot assure you that Ampligen(R) will ultimately be demonstrated to be safe or efficacious. In addition, while Ampligen(R) is authorized for use in clinical trials in the United States and other countries, we cannot assure you that additional clinical trial approvals will be authorized in the United States or in other countries, in a timely fashion or at all, or that we will complete these clinical trials. If Ampligen(R) or one of our other products does not receive regulatory approval in the U.S. or elsewhere, our operations most likely will be materially adversely affected.

We may continue to incur substantial losses and our future profitability is uncertain.

We began operations in 1966 and last reported net profit from 1985 through 1987. Since 1987, we have incurred substantial operating losses, as we pursued our clinical trial effort and expanded our efforts in Europe. As of December 31,

2003 our accumulated deficit was approximately $113,843,000. We have not yet generated significant revenues from our products and may incur substantial and increased losses in the future. We cannot assure that we will ever achieve significant revenues from product sales or become profitable. We require, and will continue to require, the commitment of substantial resources to develop our products. We cannot assure that our product development efforts will be successfully completed or that required regulatory approvals will be obtained or that any products will be manufactured and marketed successfully, or be profitable.

We may require additional financing which may not be available.

The development of our products will require the commitment of substantial resources to conduct the time-consuming research, preclinical development, and clinical trials that are necessary to bring pharmaceutical products to market. As of December 31, 2003, we had approximately $5.3 million in cash and short term investments. We believe that these funds plus 1) the $3,695,000 in net proceeds from the January Debenture placement, 2) the anticipated infusion of approximately $1.55 million in remaining net proceeds from the October Debentures, 3) the projected net cash flow from the sale of ALFERON N Injection(R), 4) the proceeds from licensing agreements and/or the expected infusion of $2,000,000 in

proceeds from our investors exercising their additional investment rights should be sufficient to meet our operating cash requirements including debt service during the 2004 fiscal year. We may need to raise additional funds through additional equity or debt financing or from other sources in order to complete the necessary clinical trials and the regulatory approval processes and begin commercializing Ampligen(R) products. There can be no assurances that we will raise adequate funds from these or other sources, which may have a material adverse effect on our ability to develop our products.

We have guaranteed the value of a number of shares issued as a result of our acquisition of assets from Interferon Sciences. If our share price is not above $1.59 per share 12 or 24 months after the dates of issuance of the guaranteed shares, our financial condition could be adversely affected.

In March 2004, when we consummated the second ISI asset acquisition, we issued 487,028 shares to ISI. In May 2003 we issued an aggregate of 581,761 shares to two of ISIs' creditors. We have guaranteed the value of all but 62,500 of these shares to be $1.59 per share on the relevant termination dates. As of March 18, 2004, 738,993 of the guaranteed shares have not been sold. The termination dates are 24 months after the dates of issuance and delivery of the guaranteed shares to ISI and 12 months after the date of issuance of the guaranteed shares to the American National Red Cross. The guarantee relates only to those shares still held by ISI and the American National Red Cross on the applicable termination date. If, within 30 days after the relevant termination date, holders of the guaranteed shares request that we honor the guarantees, we will reacquire the holders' remaining guaranteed shares and pay the holders $1.59 per share. By way of example, assuming that all remaining 738,993 shares are still held on the relevant termination dates, we would be obligated to pay to ISI $675,000 and the American National Red Cross $500,000. The reported last sale price for our common stock on the American Stock Exchange on April 6, 2004 was $3.66 per share. If, during the 31 days commencing on the relevant termination dates, the market price of our stock is not above $1.59 per share, we most likely would be requested and obligated to pay the guaranteed amount on the guaranteed shares outstanding on the relevant termination dates. We believe that the number of guaranteed shares still outstanding on the relevant

termination dates will be a factor of the market price and sales volume of our common stock during the 24 and 12 month periods prior to the relevant termination date.

If the holders of the guaranteed shares do not sell a significant amount of their guaranteed shares prior to the relevant termination dates and the price of our common stock during the 31 day period commencing on the relevant termination dates is not above $1.59 per share, we most likely will be required to repurchase a significant number of guaranteed shares and our financial condition could be materially and adversely affected.

We may not be profitable unless we can protect our patents and/or receive approval for additional pending patents.

We need to preserve and acquire enforceable patents covering the use of Ampligen(R) for a particular disease in order to obtain exclusive rights for the commercial sale of Ampligen(R) for such disease. If and when we obtain all rights to ALFERON N Injection(R), we will need to preserve and acquire enforceable patents covering its use for a particular disease too. Our success depends, in large part, on our ability to preserve and obtain patent protection for our products and to obtain and preserve our trade secrets and expertise. Certain of our know-how and technology is not patentable, particularly the procedures for the manufacture of our drug product which are carried out according to standard operating procedure manuals. We have been issued certain patents including those on the use of Ampligen(R) and Ampligen(R) in combination with certain other drugs for the treatment of HIV. We also have been issued patents on the use of Ampligen(R) in combination with certain other drugs for the treatment of chronic Hepatitis B virus, chronic Hepatitis C virus, and a patent which affords protection on the use of Ampligen(R) in patients with Chronic Fatigue Syndrome. We have not yet been issued any

patents in the United States for the use of Ampligen(R) as a sole treatment for any of the cancers, which we have sought to target. With regard to ALFERON N Injection(R), we have acquired from ISI its patents for natural alpha interferon produced from human peripheral blood leukocytes and its production process. We cannot assure that our competitors will not seek and obtain patents regarding the use of similar products in combination with various other agents, for a particular target indication prior to our doing such. If we cannot protect our patents covering the use of our products for a particular disease, or obtain additional patents, we may not be able to successfully market our products.

The patent position of biotechnology and pharmaceutical firms is highly uncertain and involves complex legal and factual questions.

To date, no consistent policy has emerged regarding the breadth of protection afforded by pharmaceutical and biotechnology patents. There can be no assurance that new patent applications relating to our products or technology will result in patents being issued or that, if issued, such patents will afford meaningful protection against competitors with similar technology. It is generally anticipated that there may be significant litigation in the industry regarding patent and intellectual property rights. Such litigation could require substantial resources from us and we may not have the financial resources necessary to enforce the patent rights that we hold. No assurance can be made that our patents will provide competitive advantages for our products or will not be successfully challenged by competitors. No assurance can be given that patents do not exist or could not be filed which would have a materially adverse effect on our ability to develop or market our products or to obtain or maintain any competitive position that we may achieve with respect to our products. Our

patents also may not prevent others from developing competitive products using related technology.

There can be no assurance that we will be able to obtain necessary licenses if we cannot enforce patent rights we may hold. In addition, the failure of third parties from whom we currently license certain proprietary information or from whom we may be required to obtain such licenses in the future, to adequately enforce their rights to such proprietary information, could adversely affect the value of such licenses to us.

If we cannot enforce the patent rights we currently hold we may be required to obtain licenses from others to develop, manufacture or market our products. There can be no assurance that we would be able to obtain any such licenses on commercially reasonable terms, if at all. We currently license certain proprietary information from third parties, some of which may have been developed with government grants under circumstances where the government maintained certain rights with respect to the proprietary information developed. No assurances can be given that such third parties will adequately enforce any rights they may have or that the rights, if any, retained by the government will not adversely affect the value of our license.

There is no guarantee that our trade secrets will not be disclosed or known by our competitors.

To protect our rights, we require certain employees and consultants to enter into confidentiality agreements with us. There can be no assurance that these agreements will not be breached, that we would have adequate and enforceable remedies for any breach, or that any trade secrets of ours will not otherwise become known or be independently developed by competitors.

If our distributors do not market our products successfully, we may not generate significant revenues or become profitable.

We have limited marketing and sales capability. We are dependent upon existing and, possibly future, marketing agreements and third party distribution agreements for our products in order to generate

significant revenues and become profitable. As a result, any revenues received by us will be dependent on the efforts of third parties, and there is no assurance that these efforts will be successful. Our agreement with Accredo offers the potential to provide some marketing and distribution capacity in the United States while agreements with Bioclones (Proprietary), Ltd , Biovail Corporation and Laboratorios Del Dr. Esteve S.A. should provide a sales force in South America, Africa, United Kingdom, Australia and New Zealand, Canada, Spain and Portugal.

We cannot assure that our domestic or foreign marketing partners will be able to successfully distribute our products, or that we will be able to establish future marketing or third party distribution agreements on terms acceptable to us, or that the cost of establishing these arrangements will not exceed any product revenues. The failure to continue these arrangements or to achieve other such arrangements on satisfactory terms could have a materially adverse effect on us.

There are no long-term agreements with suppliers of required materials. If we are unable to obtain the required raw materials, we may be required to scale back our operations or stop manufacturing ALFERON N Injection.

A number of essential materials are used in the production of ALFERON N Injection(R), including human white blood cells. We do not have long-term agreements for the supply of any of such materials. There can be no assurance we can enter into long-term supply agreements covering essential materials on commercially reasonable terms, if at all. If we are unable to obtain the required raw materials, we may be required to scale back our operations or stop manufacturing ALFERON N Injection(R). The costs and availability of products and materials we need for the commercial production of ALFERON N Injection(R) and other products which we may commercially produce are subject to fluctuation depending on a variety of factors beyond our control, including competitive factors, changes in technology, and FDA and other governmental regulations and there can be no assurance that we will be able to obtain such products and materials on terms acceptable to us or at all.

There is no assurance that successful manufacture of a drug on a limited scale basis for investigational use will lead to a successful transition to commercial, large-scale production.

Small changes in methods of manufacturing may affect the chemical structure of Ampligen(R) and other RNA drugs, as well as their safety and efficacy. Changes in methods of manufacture, including commercial scale-up may affect the chemical structure of Ampligen(R) and can, among other things, require new clinical studies and affect orphan drug status, particularly, market exclusivity rights, if any, under the Orphan Drug Act. The transition from limited production of pre-clinical and clinical research quantities to production of commercial quantities of our products will involve distinct management and technical challenges and will require additional management and technical personnel and capital to the extent such manufacturing is not handled by third parties. There can be no assurance that our manufacturing will be successful or that any given product will be determined to be safe and effective, capable of being manufactured economically in commercial quantities or successfully marketed.

We have limited manufacturing experience and capacity.

Ampligen(R) is currently produced only in limited quantities for use in our clinical trials and we are dependent upon certain third party suppliers for key components of our products and for substantially all of the production process. The failure to continue these arrangements or to achieve other such arrangements on satisfactory terms could have a material adverse affect on us. Also, to be successful, our products must be manufactured in commercial quantities in compliance with regulatory requirements and at acceptable costs. To the extent we are involved in the production process, our current facilities are not adequate for the production of our proposed products for large-scale commercialization, and we currently

do not have adequate personnel to conduct commercial-scale manufacturing. We intend to utilize third-party facilities if and when the need arises or, if we are unable to do so, to build or acquire commercial-scale manufacturing facilities. We will need to comply with regulatory requirements for such facilities, including those of the FDA and HPB pertaining to current Good Manufacturing Practices ("cGMP") regulations. There can be no assurance that such facilities can be used, built, or acquired on commercially acceptable terms, or that such facilities, if used, built, or acquired, will be adequate for our long-term needs.

The purified drug concentrate utilized in the formulation of ALFERON N Injection(R) is manufactured in ISI's facility and ALFERON N Injection(R) is

formulated and packaged at a production facility operated by Abbott Laboratories located in Kansas. In March 2004 we acquired ISI's New Brunswick, NJ facility. We still will be dependent upon Abbott Laboratories and/or another third party for product formulation and packaging.

We may not be profitable unless we can produce Ampligen(R) or other products in commercial quantities at costs acceptable to us.

We have never produced Ampligen(R) or any other products in large commercial quantities. Ampligen(R) is currently produced for use in clinical trials. We must manufacture our products in compliance with regulatory requirements in large commercial quantities and at acceptable costs in order for us to be profitable. We intend to utilize third-party manufacturers and/or facilities if and when the need arises or, if we are unable to do so, to build or acquire commercial-scale manufacturing facilities. If we cannot manufacture commercial quantities of Ampligen(R) or enter into third party agreements for its manufacture at costs acceptable to us, our operations will be significantly affected. Also, each production lots of Alferon N Injection(R) is subject to FDA review and approval prior to releasing the lots to be sold. This review and approval process could take considerable time, which would delay our having product in inventory to sell. Alferon N Injection(R) has a shelf life of 18 months after having been bottled.

Rapid technological change may render our products obsolete or non-competitive.

The pharmaceutical and biotechnology industries are subject to rapid and substantial technological change. Technological competition from pharmaceutical and biotechnology companies, universities, governmental entities and others diversifying into the field is intense and is expected to increase. Most of these entities have significantly greater research and development capabilities than us, as well as substantial marketing, financial and managerial resources, and represent significant competition for us. There can be no assurance that developments by others will not render our products or technologies obsolete or noncompetitive or that we will be able to keep pace with technological developments.

Our products may be subject to substantial competition.

Ampligen(R). Competitors may be developing technologies that are, or in the future may be, the basis for competitive products. Some of these potential products may have an entirely different approach or means of accomplishing similar therapeutic effects to products being developed by us. These competing products may be more effective and less costly than our products. In addition, conventional drug therapy, surgery and other more familiar treatments may offer competition to our products. Furthermore, many of our competitors have significantly greater experience than us in pre-clinical testing and human clinical trials of pharmaceutical products and in obtaining FDA, HPB and other regulatory approvals of products. Accordingly, our competitors may succeed in obtaining FDA, HPB or other regulatory product approvals more rapidly than us. There are no drugs approved for commercial sale with respect to treating ME/CFS in the United States. The dominant competitors with drugs to treat HIV diseases include Gilead Pharmaceutical, Pfizer, Bristol-Myers, Abbott Labs, Glaxo Smithkline, Merck and Schering-Plough Corp. These potential competitors are among the largest pharmaceutical companies

in the world, are well known to the public and the medical community, and have substantially greater financial resources, product development, and manufacturing and marketing capabilities than we have. Although we believe our

principal advantage is the unique mechanism of action of Ampligen(R) on the immune system, we cannot assure that we will be able to compete.

ALFERON N Injection(R). Many potential competitors are among the largest pharmaceutical companies in the world, are well known to the public and the medical community, and have substantially greater financial resources, product development, and manufacturing and marketing capabilities than we have. ALFERON N Injection(R) currently competes with Schering's injectable recombinant alpha interferon product (INTRON(R) A) for the treatment of genital warts. 3M Pharmaceuticals also received FDA approval for its immune-response modifier, Aldara(R), a self-administered topical cream, for the treatment of external genital and perianal warts. ALFERON N Injection(R) also competes with surgical, chemical, and other methods of treating genital warts. We cannot assess the impact products developed by our competitors, or advances in other methods of the treatment of genital warts, will have on the commercial viability of ALFERON N Injection(R). If and when we obtain additional approvals of uses of this product, we expect to compete primarily on the basis of product performance. Our potential competitors have developed or may develop products (containing either alpha or beta interferon or other therapeutic compounds) or other treatment modalities for those uses. In the United States, three recombinant forms of beta interferon have been approved for the treatment of relapsing-remitting multiple sclerosis. There can be no assurance that, if we are able to obtain regulatory approval of ALFERON N Injection(R) for the treatment of new indications, we will be able to achieve any significant penetration into those markets. In addition, because certain competitive products are not dependent on a source of human blood cells, such products may be able to be produced in greater volume and at a lower cost than ALFERON N Injection(R). Currently, our wholesale price on a per unit basis of ALFERON N Injection(R) is higher than that of the competitive recombinant alpha and beta interferon products.

General. Other companies may succeed in developing products earlier than we do, obtaining approvals for such products from the FDA more rapidly than we do, or developing products that are more effective than those we may develop. While we will attempt to expand our technological capabilities in order to remain competitive, there can be no assurance that research and development by others or other medical advances will not render our technology or products obsolete or non-competitive or result in treatments or cures superior to any therapy we develop.

Possible side effects from the use of Ampligen(R) or ALFERON N Injection(R) could adversely affect potential revenues and physician/patient acceptability of our product.

Ampligen(R). We believe that Ampligen(R) has been generally well tolerated with a low incidence of clinical toxicity, particularly given the severely debilitating or life threatening diseases that have been treated. A mild flushing reaction has been observed in approximately 15% of patients treated in our various studies. This reaction is occasionally accompanied by a rapid heart beat, a tightness of the chest, urticaria (swelling of the skin), anxiety, shortness of breath, subjective reports of "feeling hot," sweating and nausea. The reaction is usually infusion-rate related and can generally be controlled by slowing the infusion rate. Other adverse side effects include liver enzyme level elevations, diarrhea, itching, asthma, low blood pressure, photophobia, rash, transient visual disturbances, slow or irregular heart rate, decreases in platelets and white blood cell counts, anemia, dizziness, confusion, elevation of kidney function tests, occasional temporary hair loss and various flu-like symptoms, including fever, chills, fatigue, muscular aches, joint pains, headaches, nausea and vomiting. These flu-like side effects typically subside within several months. One or more of the potential side effects might deter usage of Ampligen(R) in certain clinical situations and therefore, could adversely affect potential revenues and physician/patient acceptability of our product.

ALFERON N Injection(R). At present, ALFERON N Injection(R) is only approved for the intralesional (within the lesion) treatment of refractory or recurring external genital warts in adults. In clinical trials conducted for the treatment of genital warts with ALFERON N Injection(R), patients did not experience serious side effects; however, there can be no assurance that unexpected or unacceptable side effects will not be found in the future for this use or other potential uses of ALFERON N Injection(R) which could threaten or limit such product's usefulness.

We may be subject to product liability claims from the use of Ampligen(R) or other of our products which could negatively affect our future operations.

We face an inherent business risk of exposure to product liability claims in the event that the use of Ampligen(R) or other of our products results in adverse effects. This liability might result from claims made directly by patients, hospitals, clinics or other consumers, or by pharmaceutical companies or others manufacturing these products on our behalf. Our future operations may be negatively affected from the litigation costs, settlement expenses and lost product sales inherent to these claims. While we will continue to attempt to take appropriate precautions, we cannot assure that we will avoid significant product liability exposure. Although we currently maintain product liability insurance coverage, there can be no assurance that this insurance will provide adequate coverage against product liability claims. A successful product liability claim against us in excess of our $1,000,000 in insurance coverage or for which coverage is not provided could have a negative effect on our business and financial condition.

The loss of Dr. William A. Carter's services could hurt our chances for success.

Our success is dependent on the continued efforts of Dr. William A. Carter because of his position as a pioneer in the field of nucleic acid drugs, his being the co-inventor of Ampligen(R), and his knowledge of our overall activities, including patents and clinical trials. The loss of Dr. Carter's services could have a material adverse effect on our operations and chances for success. We have secured key man life insurance in the amount of $2 million on the life of Dr. Carter and we have an employment agreement with Dr. Carter that, as amended, runs until May 8, 2008. However, Dr. Carter has the right to terminate his employment upon not less than 30 days prior written notice. The loss of Dr. Carter or other personnel, or the failure to recruit additional personnel as needed could have a materially adverse effect on our ability to achieve our objectives.

Uncertainty of health care reimbursement for our products.

Our ability to successfully commercialize our products will depend, in part, on the extent to which reimbursement for the cost of such products and related treatment will be available from government health administration authorities, private health coverage insurers and other organizations. Significant uncertainty exists as to the reimbursement status of newly approved health care products, and from time to time legislation is proposed, which, if adopted, could further restrict the prices charged by and/or amounts reimbursable to manufacturers of pharmaceutical products. We cannot predict what, if any, legislation will ultimately be adopted or the impact of such legislation on us. There can be no assurance that third party insurance companies will allow us to charge and receive payments for products sufficient to realize an appropriate return on our investment in product development.

There are risks of liabilities associated with handling and disposing of hazardous materials.

Our business involves the controlled use of hazardous materials, carcinogenic chemicals and various radioactive compounds. Although we believe that our safety procedures for handling and disposing of such materials comply in all material respects with the standards prescribed by applicable regulations, the risk of accidental contamination or injury from these materials cannot be completely eliminated. In the event

of such an accident or the failure to comply with applicable regulations, we could be held liable for any damages that result, and any such liability could be significant. We do not maintain insurance coverage against such liabilities.

The market price of our stock may be adversely affected by market volatility.

The market price of our common stock has been and is likely to be volatile. In addition to general economic, political and market conditions, the price and trading volume of our stock could fluctuate widely in response to many factors, including:

- announcements of the results of clinical trials by us or our competitors;
- adverse reactions to products;
- governmental approvals, delays in expected governmental approvals or withdrawals of any prior governmental approvals or public or regulatory agency concerns regarding the safety or effectiveness of our products;
- changes in U.S. or foreign regulatory policy during the period of product development;
- developments in patent or other proprietary rights, including any third party challenges of our intellectual property rights;
- announcements of technological innovations by us or our competitors;
- announcements of new products or new contracts by us or our competitors;
- actual or anticipated variations in our operating results due to the level of development expenses and other factors;
- changes in financial estimates by securities analysts and whether our earnings meet or exceed the estimates;
- conditions and trends in the pharmaceutical and other industries;
- new accounting standards; and
- the occurrence of any of the risks described in these "Risk Factors."

Our common stock is listed for quotation on the American Stock Exchange. For the 12-month period ended December 31, 2003, the price of our common stock has ranged from $1.33 to $2.96. We expect the price of our common stock to

remain volatile. The average daily trading volume of our common stock varies significantly. Our relatively low average volume and low average number of transactions per day may affect the ability of our stockholders to sell their shares in the public market at prevailing prices and a more active market may never develop.

In the past, following periods of volatility in the market price of the securities of companies in our industry, securities class action litigation has often been instituted against companies in our industry. If we face securities litigation in the future, even if without merit or unsuccessful, it would result in substantial costs and a diversion of management attention and resources, which would negatively impact our business.

Our stock price may be adversely affected if a significant amount of shares, primarily those registered herein and in a prior registration statement, are sold in the public market.

As of April 6, 2004, approximately 1,055,333 shares of our common stock, constituted "restricted securities" as defined in Rule 144 under the Securities Act of 1933. Substantially all of these shares are registered herein or in a prior registration statement pursuant to agreements between us and the holders of these shares. In addition, we have registered 12,006,977 shares issuable (i) upon conversion of approximately 135% of the Debentures issued in January 2004 (the "January 2004 Debentures"), the October Debentures, the July Debentures and the January 2004 Debentures issuable upon exercise of Additional Investment Rights (issued in conjunction with the January 2004 Debentures); (ii) as payment

of 135% of the interest on all of the Debentures; (iii) upon exercise of 135% of the 2009 Warrants issued in conjunction with the January 2004 Debentures, the October 2008 Warrants, the July 2008 Warrants and the June 2008 Warrants; (iv) upon exercise of certain other warrants and stock options and (v) shares issued to certain suppliers and service providers. Registration of the shares permits the sale of the shares in the open market or in privately negotiated transactions without compliance with the requirements of Rule 144. To the extent the exercise price of the warrants is less than the market price of the common stock, the holders of the warrants are likely to exercise them and sell the underlying shares of common stock and to the extent that the conversion price and exercise price of these securities are adjusted pursuant to anti-dilution protection, the securities could be exercisable or convertible for even more shares of common stock. We also may issue shares to be used to meet our capital requirements or use shares to compensate employees, consultants and/or directors. We are unable to estimate the amount, timing or nature of future sales of outstanding common stock. Sales of substantial amounts of our common stock in the public market could cause the market price for our common stock to decrease. Furthermore, a decline in the price of our common stock would likely impede our ability to raise capital through the issuance of additional shares of common stock or other equity securities.

Provisions of our Certificate of Incorporation and Delaware law could defer a change of our management which could discourage or delay offers to acquire us.

Provisions of our Certificate of Incorporation and Delaware law may make it more difficult for someone to acquire control of us or for our stockholders to remove existing management, and might discourage a third party from offering to acquire us, even if a change in control or in management would be beneficial to our stockholders. For example, our Certificate of Incorporation allows us to issue shares of preferred stock without any vote or further action by our stockholders. Our Board of Directors has the authority to fix and determine the

relative rights and preferences of preferred stock. Our Board of Directors also has the authority to issue preferred stock without further stockholder approval. As a result, our Board of Directors could authorize the issuance of a series of preferred stock that would grant to holders the preferred right to our assets upon liquidation, the right to receive dividend payments before dividends are distributed to the holders of common stock and the right to the redemption of the shares, together with a premium, prior to the redemption of our common stock. In this regard, in November, 2002 we adopted a shareholder rights plan and, under the Plan, our Board of Directors declared a dividend distribution of one Right for each outstanding share of Common Stock to stockholders of record at the close of business on November 29, 2002. Each Right initially entitles holders to buy one unit of preferred stock for $30.00. The Rights generally are not transferable apart from the common stock and will not be exercisable unless and until a person or group acquires or commences a tender or exchange offer to acquire, beneficial ownership of 15% or more of our common stock. However, for Dr. Carter, our chief executive officer, who already beneficially owns 12.3% of our common stock, the Plan's threshold will be 20%, instead of 15%. The Rights will expire on November 19, 2012, and may be redeemed prior thereto at $.01 per Right under certain circumstances.

Because the risk factors referred to above could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us, you should not place undue reliance on any such forward-looking statements. Further, any forward-looking statement speaks only as of the date on which it is made and we undertake no obligation to update any forward-looking statement or statements to reflect events or circumstances after the date on which such statement is made or reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. Our research in clinical efforts may continue for the next several years and we may continue to incur losses due to clinical costs incurred in the development of Ampligen(R) for commercial application. Possible losses may fluctuate from quarter to quarter as a result of differences in the timing of significant expenses incurred and receipt of licensing fees and/or cost recovery treatment revenues in Europe, Canada and in the United States.

USE OF PROCEEDS

Proceeds, if any, from stockholders exercising some or all of the Warrants will be used to fund our research and development efforts, working capital and possible acquisitions.

DIVIDEND POLICY

We have not paid any cash dividends since our inception and do not anticipate paying cash dividends in the foreseeable future.

PRICE RANGE OF COMMON STOCK

Since October 1997, our common stock has been listed and traded on the American Stock Exchange ("AMEX") under the symbol HEB. The following table sets forth the high and low sales prices for our Common Stock for the last two fiscal years as reported by the AMEX.

COMMON STOCK	High	Low

Year Ended December 31, 2002		
First Quarter	$4.95	$3.40
Second Quarter	4.00	2.30
Third Quarter	2.89	.75
Fourth Quarter	2.95	1.10
Year Ending December 31, 2003		
First Quarter	2.19	1.33
Second Quarter	3.35	1.33
Third Quarter	2.35	1.85
Fourth Quarter	2.94	1.83

On April 6, 2004, the closing sale price of our common stock as reported on the AMEX was $3.66 per share. As of April 6, 2004, there were approximately 267 holders of record of our common stock not including holders in street name. We estimate that there are some 3,300 holders if you include shares held in street name.

SELECTED CONSOLIDATED FINANCIAL DATA

Our selected historical consolidated financial information presented as of December 31, 1999, 2000, 2001, 2002 and 2003 and for each of the five years ended December 31, 2003 was derived from our audited consolidated financial statements.

This information should be read in conjunction with the historical financial statements and related notes included herein, and "Management's Discussion and Analysis of Financial Condition and Results of Operations."

(in thousands except share and per share data)

Consolidated Statements of Operations Data:	Year ended December 31,				
	1999	2000	2001	2002	2003
Revenues:					
Sale of Products	$ --	$ --	$ --	$ --	$
Clinical Treatment Programs	678	788	390	341	
License Fee Income	--	--	--	563	
Total Revenues	678	788	390	904	
Cost & Expenses:					
Production Costs/ Cost of Goods Sold	--	--	--	--	
Research & Development	4,737	6,136	5,780	4,946	
General & Administrative(1)	8,721	3,695	3,412	2,015	

Total Cost and Expenses	13,458	9,831	9,192	6,961	
Interest and Other Income	482	572	284	103	
Interest Expense	--	--	--	--	
Financing Costs(3)	--	--	--	--	(
Other Expense	--	(81)	(565)	(1,470)	
Net Loss	$(12,298)	$(8,552)	$(9,083)	$(7,424)	$(1
Basic and Diluted Loss Per Share	$ (.47)	$ (.29)	$ (.29)	$ (.23)	$
Basic and Diluted Weighted Average Shares Outstanding	26,380,351	29,251,846	31,443,208	32,095,776	35,23

Other Cash Flow Data						
Cash Used in Operating Activities	$(5,853)	$(6,990)	$(8,074)	$(7,281)	$(6,409)	$(7,022)
Capital Expenditures	(151)	(251)	(171)	--	--	(19)

Balance Sheet Data: December 31,

	1999	2000	2001	2002	2003
Working Capital	$ 9,507	$ 7,550	$ 7,534	$2,925	$ 7,000
Total Assets	14,168	13,067	12,035	6,040	13,404
Shareholders' Equity	12,657	11,572	10,763	3,630	9,248
Book value per share(4)	$.48	$.40	$.34	$.11	$.24

(1) General and Administrative expenses include stock compensation expense totaling $397, $673, $132, $132 and $237 for the years ended December 31, 1999, 2000, 2001, 2002 and 2003, respectively.

(2) For information concerning recent acquisitions of certain assets of ISI and related financing see notes 4 and 7 to our consolidated financial statements for the year ended December 31, 2003, contained elsewhere in this prospectus.

(3) In accounting for the March 12, 2003, July 10, 2003, and October 29, 2003 issuances of 6% Senior Convertible Debentures in the principal amounts of $5,426,000, $5,426,000, and $4,142,357, respectively, and related embedded conversion features and warrant issuances, we recorded debt discounts of approximately $11.3 million which, in effect, reduced the carrying value of the debt to $1.6 million. Excluding the application of related accounting standards, our debt outstanding as of December 31, 2003 totaled approximately $6.6 million. Through December 31, 2003, we have recorded charges of approximately $7.3 million for amortization of original issue

discount and other related debt costs. Such amounts have been reflected as financing costs in the statement of operations. For additional information refer to note 7 to our consolidated financial statements for the year ended December 31, 2003.

(4) Book value per share is computed by dividing shares outstanding into shareholders' equity as of the above date.

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

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our financial statements and related notes included elsewhere in this prospectus. This discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of a number of factors including, but not limited to, those set forth under "Risk Factors" and elsewhere in this prospectus.

Background

We have reported net income only from 1985 through 1987. Since 1987, we have incurred, as expected, substantial operating losses due to our conducting clinical testing.

We have established a strong foundation of laboratory and pre-clinical data with respect to the development of nucleic acid to enhance the natural antiviral defense system of the human body and the development of the therapeutic products for the treatment of chronic disease. Our strategy is to obtain the required regulatory approval which will allow the progressive introduction of Ampligen(R) (our proprietary drug) for treating Myalgic Encephalomyelitis Chronic Syndrome (ME/CFS"), HIV, hepatitis C ("HCV") and hepatitis B ("HBV") in the U.S., Canada, Europe and Japan. In February, 2004, we completed the double-blind segment of the AMP 516 Phase III clinical trial for use of Ampligen(R) in treating ME/CFS. The 14 remaining patients are enrolled in the open label portion of the trial and should complete this segment by June, 2004. With the conclusion of the double-blind segment we can finalize data collection and start date analysis in anticipation of preparing the NDA for submission to the FDA. Ampligen(R) is also in Phase IIb Clinical trials in the U.S. for the treatment of newly emerged multi-drug resistant HIV, and for the induction of Cell mediated immunity in HIV patients that are under control using potentially toxic drug cocktail.

Our proprietary drug technology utilizes specifically configured ribonucleic acid ("RNA") and is protected by more than 350 patents worldwide as well as over 80 additional patent applications pending to provide further proprietary protection in various international markets. Certain patents apply to the use of Ampligen(R) alone and certain patent apply to the use of Ampligen(R) in combination with certain other drugs. Some composition of matter patents pertain to other new medication, which have a similar mechanism of action.

In March, 2003, we acquired from ISI, all of ISI's raw materials, work-in-progress and finished product of Alferon N Injection(R), together with a limited license for the production, manufacture, use, marketing and sale of the product. Alferon N Injection(R) of. In March 2004, we acquired from ISI the balance of ISI's rights to its product as well as ISI's production facility. We

intend to market this product in the United States through sales facilitated via third party marketing agreements. Additionally, we intend to implement studies, beyond those conducted by ISI, for testing the potential treatment of HIV, Hepatitis C and other indications, including multiple sclerosis.

Result of Operations

Years Ended December 31, 2003 vs. 2002

During the year ended December 31, 2003, we 1) acquired certain assets and patent rights to ALFERON N Injection(R), 2) privately placed the March 2005, the July 2005, and October 2005, 6%

convertible debentures with an aggregate maturity value of $14,994,357 (gross proceeds of $12,850,000), 3) continued our efforts to develop Ampligen(R) for the treatment of patients afflicted with ME/CFS and HIV, 4) activated the ISI New Brunswick production facility to process doses of Alferon N and 5) produced some 21,000 doses of Alferon N for sale in 2003.

Net loss

Our net loss was approximately $14,770,000 for the year ended December 31, 2003 versus a net loss of $7,424,000 in 2002. Per share loss in 2003 was $0.42 cents versus a per share loss of $0.23 in 2002. This year-to-year increase in losses of $7,346,000 is primarily due to non-cash financing costs of $7,345,000 relating to our March 2005, July 2005, and October 2005 6% convertible debentures. These non-cash charges account for 48% of our net losses for the year ended December 31, 2003. In addition, our losses during this period include $957,000 in operating expenses relating to our new Alferon division. Solely for comparison purposes, excluding our 2003 losses for these two factors, our losses were $6,775,000 in 2003 compared to $7,424,000 in 2002 or a reduction totaling $649,000. This was primarily due to a decrease in research and development direct costs of $1,800,000 in 2003 due to reduced costs associated with the development of Ampligen(R) to treat ME/CFS patients. During 2002, our AMP 516 ME/CFS Phase III clinical trial was in full force and effect therefore increasing our manufacturing and clinical support expenses during that period (See "Research and Development Costs" below). This was offset by the recovery of certain legal expenses in 2002 of approximately $1,050,000 related to the Asensio lawsuit and trial from our insurance carrier. This recovery produced a one-time reduction in G&A Expenses for 2002 (See "General and Administrative Expenses" below).

Revenues

Our revenues were $657,000 in 2003 compared to revenues of $904,000 in 2002. Our 2002 revenues included a licensing fee payment of approximately $563,000 which was not repeated in 2003.

Revenues from our ME/CFS cost recovery treatment programs principally underway in the U.S., Canada and Europe were $148,000 in 2003 versus $341,000 in 2002. These clinical programs allow us to provide Ampligen(R) therapy at our cost to severely debilitated ME/CFS patients. Under this program the patients pay for the cost of Ampligen(R) doses infused. These costs total approximately $7,200 for a 24 weeks treatment program. In addition, since the March 11, 2003, acquisition of inventory from ISI, revenues from sales of ALFERON N totaled $509,000. Sales of Alferon N are anticipated to increase as we are producing more product and our marketing/sales programs are underway.

Revenues from the cost recovery treatment programs in 2002 were $341,000 or 57% higher than 2003 revenues. We expected revenues in the U.S. to decline due to our efforts to complete the AMP 516 ME/CFS Phase III trials and the focus of our clinical resources on the start up of the AMP 720 HIV clinical trials. The clinical data collected from treating patients under the cost recovery treatment programs will augment and supplement the clinical data collected in the U.S. AMP 516 Phase III ME/CFS trial.

In 2002, We received a licensing fee of 625,000 Euros ($563,000) from Laboratorios Del Dr. Esteve S.A. ("Esteve") pursuant to a sales and distribution agreement in which Esteve was granted the exclusive right to market Ampligen(R) in Spain, Portugal and Andorra for the treatment of ME/CFS in turn we provided to Esteve technical scientific and commercial information. The agreement terms require no additional performance by us.

Since acquiring the right to manufacture and market Alferon N in March 2003, we have focused on converting the work-in-progress inventory into finished goods. This work-in-progress inventory included

three production lots totaling the equivalent of approximately 55,000 vials (doses) at various stages of the manufacturing process. In August 2003, we released the first lot of product to Abbott Laboratories for bottling and realized some 21,000 vials of ALFERON N. Preliminary work has started on completing the second lot of approximately 16,000 vials. Our production and quality control personnel in the New Brunswick facility are involved in the extensive process of manufacturing and validation required by the FDA. Plans are underway for completing the third lot of some 18,000 vials now in very early stages of production.

Our marketing and sales plan for ALFERON N consists of engaging sales force contract organizations and supplementing their sales efforts with marketing support. This marketing support would consist of building awareness of ALFERON N with physicians as a successful and effective treatment of refractory on recurring external genital warts in patients of age 18 or older and to assist primary prescribers in expanding their practice.

On August 18, 2003, we entered into a sales and marketing agreement with Engitech, LLC. to distribute ALFERON N on a nationwide basis. The agreement stipulated that Engitech will deploy a sales force of 100 sales representatives within one year in the U.S. domestic market and further expand the sales team up to 250 sales representative in the second year and after that as many as it takes to continually drive market share. Engitech, Inc. is to develop and implement marketing plans including extensive scientific and educational programs for use in marketing ALFERON N.

Production costs

Production costs were $502,000 for the year ended December 31, 2003. These costs reflect approximately $240,000 for the cost of sales of ALFERON N Injection(R) during the period of April 1, 2003 through December 31, 2003. In addition, we recorded $262,000 of production costs at the New Brunswick facility. We ramped up the facility in April 2003 and started production on three lots of Alferon N Injection(R) work in process inventory of which one lot was completed and is ready to be sold.

Research and Development costs

Our overall research and development direct costs in 2003 were $3,150,000

compared to research and development direct costs in 2002 of $4,946,000. These costs primarily reflect the direct costs associated with our effort to develop our lead product, Ampligen(R), as a therapy in treating chronic diseases and cancers. At this time, this effort consists of on-going clinical trials involving patients with HIV. Our research and development direct costs are $1,796,000 lower in 2003 due to reduced costs associated with the development of Ampligen(R) to treat ME/CFS patients. During 2002, our AMP 516 ME/CFS Phase III clinical trial was in full force and effect, therefore, increasing our manufacturing and clinical support expenses during that period.

Our strategy is to develop our lead compound, the experimental immunotherapeutic Ampligen(R), to treat chronic diseases for which there is currently no adequate treatment available. We seek the required regulatory approval, which will allow the commercial introduction of Ampligen for ME/CFS and HIV/AIDS in the U.S., Canada, Europe and Japan.

We recently completed the double-blind segment of our AMP 516 ME/CFS Phase III clinical trial for use of Ampligen(R) in the treatment of ME/CFS. Ampligen is also currently in two Phase IIb studies for the treatment of HIV to overcome multi-drug resistance, virus mutation and toxicity associated with current HAART therapies. One study, the AMP-719, is a Salvage Therapy, conducted in the U.S. and evaluating the potential synergistic efficacy of Ampligen in multi-drug resistant HIV patients for immune enhancement. The second study, the AMP-720, is a clinical trial designed to evaluate the effect

of Ampligen under Strategic Treatment Intervention and is also conducted in the U.S. The AMP 719 study is presently on hold as we devote our efforts on the AMP 720 study.

AMP 516

Over 230 patients have participated in our ME/CFS Phase III clinical trial. Approximately 14 patients are in the open label phase of the clinical process. We have completed the randomized placebo controlled phase of this study and expect to complete data collection and start the data analysis process with the expectation of filing an NDA (New Drug Application) with the FDA by the end of 2004. As with any experimental drug being tested for use in treating human diseases, the FDA must approve the testing and clinical protocols employed and must render their decision based on the safety and efficacy of the drug being tested. Historically this is a long and costly process. Our ME/CFS AMP 516 clinical study is a Phase III study, which based on favorable results, will serve as the basis for us to file a new drug application with the FDA. The FDA review process could take 18-24 months and result in one of the following events; 1) approval to market Ampligen(R) for use in treating ME/CFS patients, 2) required more research, development, and clinical work, 3) approval to market as well as conduct more testing, or 4)reject our application. Given these variables, we are unable to project when material net cash inflows are expected to commence from the sale of Ampligen(R).

AMP 719 and AMP 720

We are currently focused on recruiting additional clinical investigators and HIV patients to participate in the AMP 720 HIV clinical trial. Our efforts to do this have been somewhat hampered in late 2003 as most of our clinical resources have been directed to completing the AMP 516 ME/CFS clinical trial. Now that the AMP 516 patients have completed the randomized segment of the clinical trial, we expect to devote more resources toward the AMP 720 HIV clinical trial. Our AMP 719 HIV clinical trial has been put on hold at this

time.

In July 2003, Dr. Blick, a principal investigator in our HIV studies, presented updated results on our Amp 720 HIV study at the 2nd IAS CONFERENCE ON HIV PATHOGENESIS AND TREATMENT in Paris France. In this study using Strategic Treatment Interruption (STI), patients' antiviral HAART regimens are interrupted and Ampligen(R) is substituted as mono-immunotherapy. Ampligen(R) is an experimental immunotherapeutic designed to display both antiviral an immune enhancing characteristics. Prolonged use of Highly Active Antiretroviral Therapy (HAART) has been associated with long-term, potentially fatal, toxicities. The clinical study AMP 720 is designed to address these issues by evaluating the administration of our lead experimental agent, Ampligen(R), a double stranded RNA drug acting potentially both as an immunomodulator and antiviral. Patients, who have completed at least nine months of Ampligen(R) therapy, were able to stay off HAART for a total STI duration with a mean time of 29.0 weeks whereas the control group, which was also taken off HAART, but not given Ampligen(R), had earlier HIV rebound with a mean duration of 18.7 weeks. Thus, on average, Ampligen(R) therapy spared the patients excessive exposure to HAART, with its inherent toxicities, for more than 11 weeks. As more patients are enrolled, the related clinical costs will continue to increase with some offset to our overall expenses due to the diminishing cost of the ME/CFS clinical trial. It is difficult to estimate the duration or projected costs of these two clinical trials due to the many variables involved, i.e.: patient drop out rate, recruitment of clinical investigators, etc. The length of the study and costs related to our clinical trials cannot be determined at this time as such will be materially influenced by (a) the number of clinical investigators needed to recruit and treat the required number of patients, (b) the rate of accrual of patients and (c) the retention of patients in the studies and their adherence to the study protocol requirements. Under optimal conditions, the cost of completing the studies could be approximately $2.0 to $3.0 million. The rate of enrollment depends on patient availability and on other products being in clinical trials for the treatment of HIV, as there is competition for the same patient population. At present, more than 18 FDA approved drugs for HIV

treatment may compete for available patients. The length, and subsequently the expense of these studies, will also be determined by an analysis of the interim data, which will determine when completion of the ongoing Phase IIb is appropriate and whether a Phase III trial be conducted or not. In case a Phase III study is required; the FDA might require a patient population exceeding the current one which will influence the cost and time of the trial. Accordingly, the number of "unknowns" is sufficiently great to be unable to predict when, or whether, we may obtain revenues from our HIV treatment indications.

General and Administrative Expenses

General and Administrative expenses ("G&A") were $4,257,000 during the year ended December 31, 2003, which includes $957,000 of expenses relating to our new Alferon Division and $237,000 for a non cash stock compensation charge. Excluding the Alferon expenses, our G&A costs were $3,300,000 compared to $2,015,000 of expenses in 2002. This increase of $1,285,000 is primarily due to the recovery of certain legal expenses in 2002 of approximately $1,050,000 related to the Asensio lawsuit and trial from our insurance carrier. This recovery produced a one time reduction in G&A Expenses for 2002. Also, we recorded non-cash stock compensation expenses of $237,000 in 2003 as compared to $133,000 in 2002.

Equity Loss-Unconsolidated Affiliates

In the year ended December 31, 2002, we recorded a non-cash charge of $1,470,000 to operations with respect to our investments in unconsolidated affiliates. $1,074,000 of these charges were related to our investment in R.E.D. These charges were the result of our determination that R.E.D.'s business and financial position had deteriorated to the point that our investment had been permanently impaired.

We also recorded a non-cash charge of $292,000 with respect to our investment in Chronix Biomedical. This impairment reduced our carrying value in this investment to reflect a permanent decline in Chronix's market value based on its then proposed equity offerings.

These charges are reflected in the Consolidated Statements of Operations under the caption "Equity loss in unconsolidated affiliate." Please see "Research And Development/Collaborative Agreements" in "Our Business" for more details on these transactions.

Other Income/Expense

Interest and other income totaled $80,000 in 2003 compared to $103,000 recorded in 2002. Lower cash available for investment basically accounted for the difference as interest rates remained relatively low in 2003. All funds in excess of our immediate need are invested in short-term high quality securities.

Interest Expense and Financing Costs

Interest expense and financing costs were $7,598,000 in 2003. Non-cash financing costs consist of $581,000 for the amortization of debenture closing costs, $1,066,000 for the amortization of Original Issue Discounts and $5,698,000 for the amortization of costs associated with beneficial conversion features of the debentures and the fair value of the warrants relating to the January 2005, July 2005 and October 2005 6% convertible debentures. These charges are reflected in the Consolidated Statements of Operations under the caption "Financing Costs." Please see Note 16 in the consolidated financial statements contained herein for more details on these transactions.

Years Ended December 31, 2002 vs. 2001

Net loss

Our net loss was approximately $7,424,000 for the year ended December 31, 2002 versus a net loss of $9,083,000 in 2001. Per share loss in 2002 was $0.23 versus a per share loss of $0.29 in 2001. This year to year decrease in losses of $1,659,000 was primarily due to higher revenues and lower costs in 2002. Revenues were up $514,000 in 2002 and total expenses were down by $2,231,000 offset by a write down in the carrying value of our investments in the amount of $1,366,000 for a net cost decrease of $865,000.

Revenues

Our revenues came from our ME/CFS cost recovery treatment programs principally underway in the U.S., Canada and Europe. These clinical programs allow us to provide Ampligen(R) therapy at our cost to severely debilitated ME/CFS patients. Under this program the patients pay for the cost of Ampligen(R) doses infused. These costs total approximately $7,200 for a 24 weeks treatment program. Revenues from cost recovery treatment programs totaled some $341,000 in 2002. In 2001, these revenues were $390,000 or 14% higher than 2002 revenues. We expected revenues in the U.S. to decline due to the focus of our clinical

resources on conducting and completing the AMP 516 ME/CFS Phase III clinical trial as well as the start up of the AMP 719 and AMP 720 HIV clinical trials. The clinical data collected from treating patients under the cost recovery treatment programs will augment and supplement the data collected in the U.S. Phase III ME/CFS trial.

We received a licensing fee of 625,000 Euros (some $563,000) from Esteve pursuant to a sales and distribution agreement in which Esteve was granted the exclusive right to market Ampligen(R) in Spain, Portugal and Andorra for the treatment of ME/CFS in turn we provided to Esteve technical scientific and commercial information. The agreement terms require no additional performance by us. Our total revenues, including this licensing fee, in 2002 was $904,000 compared to revenues of $390,000 in 2001.

Research and Development costs

Our strategy is to develop our lead compound, the experimental immunotherapeutic Ampligen(R), to treat chronic diseases for which there is currently no adequate treatment available. We seek the required regulatory approval, which will allow the commercial introduction of Ampligen for ME/CFS and HIV/AIDS in the U.S., Canada, Europe and Japan.

At December 31, 2002, Ampligen was being tested in a Phase III clinical trial, in the U.S., for use in treatment of ME/CFS, the so-called AMP-516 study. It also was in two Phase IIb studies for the treatment of HIV to overcome multi-drug resistance, virus mutation and toxicity associated with current HAART therapies. One study, the AMP-719, is a Salvage Therapy, conducted in the U.S. and evaluating the potential synergistic efficacy of Ampligen in multi-drug resistant HIV patients for immune enhancement. The second study, the AMP-720, is a clinical trial designed to evaluate the effect of Ampligen under Strategic Treatment Intervention and is also conducted in the U.S.

AMP 516

As of December, 2002, the AMP 516 clinical trial was fully enrolled with more than the targeted 230 patients in order to potentially compensate for "drop outs". The last patients completed the randomized segment of this clinical trial in February, 2004. The next stage of the program is final data

collection, quality assurance of the data to insure its accuracy and analysis of the data according to regulatory guidelines to facilitate the New Drug Application (NDA), expected to be filed by the end of 2004. The date of potential commercial approval depends on whether we receive Fast Track Status from the FDA. In case of Fast Track the FDA approval time is maximum six months. If we are not granted Fast Track Designation, the approval time can take substantially longer, depending on the progress made by the FDA in review of the application. The FDA may deny full commercial approval to the drug at any time, including after Fast Track Status has been awarded.

As with any experimental drug being tested for use in treating human diseases, the FDA must approve the testing and clinical protocols employed and must render their decision based on the safety and efficacy of the drug being tested. Historically this is a long and costly process. Our ME/CFS AMP 516 clinical study is a Phase III study, which based on favorable results, will serve as the basis for us to file a new drug application with the FDA. The FDA review process could take 18-24 months and result in one of the following events; 1) approval to market Ampligen(R) for use in treating ME/CFS patients, 2) require more research, development, and clinical work, 3) approval to market

as well as conduct more testing, or 4) reject our application. Given these variables, we are unable to project when material net cash inflows are expected to commence from the sale of Ampligen(R).

AMP 719 and AMP 720

As of December 2002, approximately 55 patients had been enrolled in both studies combined and they were being treated in approximately 10 different active sites around the U.S.

The length of the study and the costs related to these trials cannot be determined at this time as it will be materially influenced by (a) the number of clinical investigators needed to fulfill the required number of patients, (b) the rate of accrual of patients and (c) the retention of patients on the protocol and their adherence to the protocol requirements. See "AMP 719 and AMP 720" in "Result of Operations; Years Ended December 31, 2003 vs. 2002; Research and Development costs" above.

Our overall research and development direct costs in 2002 were $4,946,000 compared to direct research and development costs in 2001 of $5,780,000 and $6,136,000 in 2000. We estimate that 80% of these expenditures to be related to our ME/CFS research and development and 20% related to our HIV studies.

General and Administrative Expenses

Excluding stock compensation expense, general and administrative expenses were approximately $1,882,000 in 2002 versus $2,741,000 in 2001. This decease in expenses of $859,000 in 2002, is due to several factors including the recovery of certain legal expenses of approximately $1,050,000 relating to the Asensio lawsuit from our insurance carrier and lower overall legal expenses due to less litigation, partially offset by higher Insurance premiums.

Stock compensation expenses was $133,000 or $538,000 lower than recorded in the year 2001. The compensation reflects the imputed non-cash expense recorded to reflect the cost of warrants granted to outside parties for services rendered to us.

Equity Loss-Unconsolidated Affiliates

During the three months ended June 2002 and December 2002, we recorded a non-cash charge of $678,000 and $396,000 respectively, to operations with respect to our $1,074,000 investment in R.E.D. These charges were the result of our determination that R.E.D.'s business and financial position had

deteriorated to the point that our investment had been permanently impaired. Please see "Research And Development/Collaborative Agreements" in "Our Business" for more details on these transactions.

In May 2000, we acquired an equity interest in Chronix Biomedical Corp. ("Chronix") for $700,000. During the quarter ended December 31, 2002, we recorded a noncash charge of $292,000 with respect to our investment in Chronix. This impairment reduces our carrying value to reflect a permanent decline in Chronix's market value based on its then proposed equity offerings. Please see "Research And Development/Collaborative Agreements" in "Our Business" for more details on these transactions.

In April, 1999 we acquired a 30% equity position in the California Institute of Molecular Medicine ("CIMM") for $750,000. During the fourth quarter

of 2001 we recorded a non-cash charge of $485,000 with respect to our investment in CIMM. This was a result of our determination that CIMM's operations have not yet evolved to the point where the full carrying value of our investment could be supported based on that company's financial position and operating results. This amount represented the unamortized balance of goodwill included as part of our investment. During 2002, CIMM continued to suffer significant losses resulting in a deterioration of its financial condition. The $485,000 written off during 2001 represented the un-amortized balance of goodwill included as part of our investment. Additionally, during 2001 we reduced our investment in CIMM based on our percentage interest in CIMM's continued operating losses. Our remaining investment at December 12, 2002 in CIMM, representing a 30% interest in CIMM's equity at such date, was completely written off during 2002. Such amount was not material.

These charges are reflected in the Consolidated Statements of Operations under the caption "Equity loss in unconsolidated affiliate." Please see "Research And Development/Collaborative Agreements" in "Our Business" for more details on these transactions.

Interest and Other Income

Interest and other income totaled $103,000 in 2002 compared to $284,000 recorded in 2001. Significantly lower interest rates on money market accounts and lower cash available for investment basically account for the difference. All funds in excess of our immediate need are invested in short term high quality securities, which earned much lower interest income in 2002.

Liquidity And Capital Resources

Cash used in operating activities for the twelve months ended December 31, 2003 was $7,022,000. Cash provided by financial activities for twelve months ended December 31, 2003 amounted to $10,317,000, substantially from proceeds from debentures (see below). As of December 31, 2003, we had approximately $5,260,000 in cash, cash equivalents and short term investments. We believe that these funds plus the net proceeds of approximately $3.7 million from the recently placed January 2004 Debentures, 2) the potential receipt of the $1.55 million of proceeds held back pending the acquisition of the ISI facility and pledging of such facility as additional security under the Debentures), 3) potential licensing fee income, 4) the $2,000,000 in proceeds we expect when the investors exercise their additional investment rights, and 5) and the projected revenue from the acquisition of the ALFERON N Injection(R) business will be sufficient to meet our operating requirements including debt service during the 2004 fiscal year. Sales of ALFERON N Injection(R) could be greater than expected which would improve our cash position during the next twelve months. Also, we have the ability to curtail discretionary spending, including some research and development activities, if required to conserve cash. If we do not timely complete the second ISI asset acquisition, our financial condition could be adversely affected (see the risk factor "If we do not complete the second Interferon Sciences asset acquisition, our ability to generate revenues from the sales of ALFERON N Injection(R) and our financial condition will be adversely affected").

On March 12, 2003, we issued an aggregate of $5,426,000 in principal amount of 6% Senior Convertible Debentures due January 2005 (the "March Debentures") and an aggregate of 743,288 warrants to two investors in a private placement for aggregate gross proceeds of $4,650,000. Pursuant to the terms of the March Debentures, $1,550,000 of the proceeds from the sale of the March Debentures were to have been held back and released to us if, and only if, we

acquired ISI's facility within a set timeframe. These funds were released to us in June 2003 although we had not acquired ISI's facility at that time. The March Debentures were to mature on January 31, 2005 and bore interest at 6% per annum, payable quarterly in cash or, subject to satisfaction of certain conditions, common stock. Any shares of common stock issued to the investors as payment of interest were valued at 95% of the average closing price of the common stock during the five consecutive business days ending on the third business day immediately preceding the applicable interest payment date. Pursuant to the terms and conditions of the March Debentures, we pledged all of our assets, other than our intellectual property, as collateral and were subject to comply with certain financial and negative covenants, which include but were not limited to the repayment of principal balances upon achieving certain revenue milestones.

The March Debentures were convertible at the option of the investors at any time through January 31, 2005 into shares of our common stock. The conversion price under the March Debentures was fixed at $1.46 per share, subject to adjustment for anti-dilution protection for issuance of common stock or securities convertible or exchangeable into common stock at a price less than the conversion price then in effect.

The investors also received Warrants to acquire at any time through March 12, 2008 an aggregate of 743,288 shares of common stock at a price of $1.68 per share. On March 12, 2004, the exercise price of the Warrants was to reset to the lesser of the exercise price then in effect or a price equal to the average of the daily price of the common stock between March 13, 2003 and March 11, 2004 (but in no event less than $1.176 per share). The exercise price (and the reset price) under the Warrants also is subject to similar adjustments for anti-dilution protection. All of these warrants have been exercised.

We entered into a Registration Rights Agreement with the investors in connection with the issuance of the March Debentures and the Warrants. The Registration Rights Agreement requires that we register the shares of common stock issuable upon conversion of the Debentures, as interest shares under the Debentures and upon exercise of the Warrants. In accordance with this agreement, we have registered these shares for public sale.

As of December 31, 2003 the investors had converted the total $5,426,000 principal of the March Debentures into 3,716,438 shares of our common stock. The total interest on the debenture was $111,711 of which $17,290 was paid in cash and $94,421 was paid by the issuance of shares of our common stock. The investor exercised 742,288 warrants in July 2003 which produced proceeds in the amount of $1,248,724.

On July 10, 2003, we issued an aggregate of $5,426,000 in principal amount of 6% Senior Convertible Debentures due July 31, 2005 (the "July Debentures") and an aggregate of 507,103 Warrants (the "July 2008 Warrants") to the same investors who purchased the March 12, 2003 Debentures, in a private placement for aggregate anticipated proceeds of $4,650,000. Pursuant to the terms of the July Debentures, $1,550,000 of the proceeds from the sale of the July Debentures were to have been held back and released to us if, and only if, we acquired ISI's facility with in a set timeframe. These funds were released to us in October 2003 although we had not acquired ISI's facility at that time. The July Debentures mature on July 31, 2005 and bear interest at 6% per annum, payable quarterly in cash or, subject to satisfaction of certain conditions, common stock. Any shares of common stock issued to the investors as payment of interest shall be valued at 95% of the average closing price of the common stock during the five consecutive business days ending on the third business day immediately preceding the applicable interest payment date.

The July Debentures are convertible at the option of the investors at any time through July 31, 2005 into shares of our common stock. The conversion price under the July Debentures was fixed at $2.14 per share; however, as part of the new debenture placement closed on October 29, 2003 (see below), the conversion price under the July Debentures was lowered to $1.89 per share. The conversion price is subject to adjustment for anti-dilution protection for issuance of common stock or securities convertible or exchangeable into common stock at a price less than the conversion price then in effect. In addition, in the event that we do not pay the redemption price at maturity, the Debenture holders, at their option, may convert the balance due at the lower of (a) the conversion price then in effect and (b) 95% of the lowest closing sale price of our common stock during the three trading days ending on and including the conversion date.

The July 2008 Warrants received by the investors, as amended, are to acquire at any time commencing on July 26, 2004 through January 31, 2009 an aggregate of 507,102 shares of common stock at a price of $2.46 per share. On July 10, 2004, the exercise price of these July 2008 Warrants will reset to the lesser of the exercise price then in effect or a price equal to the average of the daily price of the common stock between July 11, 2003 and July 9, 2004 (but in no event less than $2.14 per share). The exercise price (and the reset price) under the July 2008 Warrants also is subject to similar adjustments for anti-dilution protection.

We entered into a Registration Rights Agreement with the investors in connection with the issuance of the July Debentures and the July 2008 Warrants. The Registration Rights Agreement requires that we register on behalf of the holders the shares of common stock issuable upon conversion of the Debentures, as interest shares under the Debentures and upon exercise of the July 2008 Warrants. These shares have been registered for public sale.

On June 25, 2003, we issued to each of the March 12, 2003 Debenture holders a warrant to acquire at any time through June 25, 2008 an aggregate of 500,000 shares of common stock at a price of $2.40 per share. On June 25, 2004, the exercise price of these June 2008 Warrants will reset to the lesser of the exercise price then in effect or a price equal to the average of the daily price of the common stock between June 26, 2003 and June 24, 2004 (but in no event less than $1.68 per share). The exercise price (and the reset price) under the June 2008 Warrants also is subject to adjustments for anti-dilution protection similar to those in the July 2008 Warrants. Pursuant to our agreement with the Debenture holders, we have registered the shares issuable upon exercise of these June 2008 Warrants for public sale.

On October 29, 2003, we issued an aggregate of $4,142,357 in principal amount of 6% Senior Convertible Debentures due October 31, 2005 (the "October Debentures") and an aggregate of 410,134 Warrants (the "October 2008 Warrants") in a private placement for aggregate anticipated gross proceeds of $3,550,000. Pursuant to the terms of the October Debentures, $1,550,000 of the proceeds from the sale of the October Debentures have been held back and will be released to us if, and only if, we acquired ISI's facility within 90 days of January 26, 2004 and provide a mortgage on the facility as further security for the October Debentures. In March 2004, we acquired the facility and we are in the process of mortgaging the facility to the Debenture holders. The October Debentures mature on October 31, 2005 and bear interest at 6% per annum, payable quarterly in cash or, subject to satisfaction of certain conditions, common stock. Any shares of common stock issued to the investors as payment of interest shall be valued at 95% of the average closing price of the common stock during the five consecutive business days ending on the third business day immediately preceding the applicable interest payment date.

Upon completing the sale of the October Debentures, we received $3,275,000

in net proceeds consisting of $1,725,000 from the October Debentures and $1,550,000 that had been withheld from the July Debentures. As noted above, $1,550,000 of the proceeds from the October Debentures have been held back pending our mortgaging of the ISI facility to the Debenture holders. We are in the process of providing this mortgage.

The October Debentures are convertible at the option of the investors at any time through October 31, 2005 into shares of our common stock. The conversion price under the October Debentures is fixed at $2.02 per share, subject to adjustment for anti-dilution protection for issuance of common stock or securities convertible or exchangeable into common stock at a price less than the conversion price then in effect. In addition, in the event that we do not pay the redemption price at maturity, the Debenture holders, at their option, may convert the balance due at the lower of (a) the conversion price then in effect and (b) 95% of the lowest closing sale price of our common stock during the three trading days ending on and including the conversion date.

The October 2008 Warrants, as amended, received by the investors are to acquire at any time commencing on July 26, 2004 through April 30, 2009 an aggregate of 410,134 shares of common stock at a price of $2.32 per share. On October 29, 2004, the exercise price of these October 2008 Warrants will reset to the lesser of the exercise price then in effect or a price equal to the average of the daily price of the common stock between October 29, 2003 and October 27, 2004 (but in no event less than $2.19 per share). The exercise price (and the reset price) under the October 2008 Warrants also is subject to similar adjustments for anti-dilution protection.

As of March 18, 2004, the investors had converted $12,133,690 of debt from the March, July and October Debentures into 7,221,838 shares of our common stock. The remaining principal balance on the debentures is convertible into shares of our stock at the option of the investors at any time, through the maturity date. In addition, we have paid $1,300,000 into the debenture cash collateral account as required by the terms of the October Debentures. The amounts paid through December 31, 2003 have been accounted for as advances receivable and are reflected as such on the accompanying balance sheet as of December 31, 2003. The cash collateral account provides partial security for repayment of the March, July and October 2003 and January 2004 Debentures in the event of default.

We entered into a Registration Rights Agreement with the investors in connection with the issuance of the October Debentures and the October 2008 Warrants. The Registration Rights Agreement requires that we register on behalf of the holders the shares of common stock issuable upon conversion of the October Debentures, as interest shares under the October Debentures and upon exercise of the 2008 Warrants. These shares have been registered for public sale. If, subject to certain exceptions, sales of all shares required to be registered cannot be made pursuant to the registration statement, then we will be required to pay to the investors their pro rata share of $3,635 for each day such conditions exists.

On January 26, 2004, we issued an aggregate of $4,000,000 in principal amount of 6% Senior Convertible Debentures due January 31, 2006 (the "January 2004 Debentures"), an aggregate of 790,514 warrants (the "2009 Warrants") and 158,103 shares of common stock, and Additional Investment Rights (to purchase up to an additional $2,000,000 principal amount of January 2004 Debentures commencing in six months) in a private placement for aggregate net proceeds of $3,695,000. The January 2004 Debentures mature on January 31, 2006 and bear interest at 6% per annum, payable quarterly in cash or, subject to satisfaction

of certain conditions, common stock. Any shares of common stock issued to the investors as payment of interest shall be valued at 95% of the average closing price of the common stock during the five consecutive business days ending on the third business day immediately preceding the applicable interest payment date. Commencing six months after issuance, we are required to start repaying the then outstanding principal amount under the January 2004 Debentures in monthly installments amortized over 18 months in cash or, at our option, in shares of common stock. Any shares of common stock issued to the investors as installment payments shall be valued at 95% of the average closing price of the common stock during the 10-day trading period commencing on and including the eleventh trading day immediately preceding the date that the installment is due.

The January 2004 Debentures are convertible at the option of the investors at any time through January 31, 2006 into shares of our common stock. The conversion price under the January 2004 Debentures is fixed at $2.53 per share, subject to adjustment for anti-dilution protection for issuance

of common stock or securities convertible or exchangeable into common stock at a price less than the conversion price then in effect. In addition, in the event that we do not pay the redemption price at maturity, the Debenture holders, at their option, may convert the balance due at the lower of (a) the conversion price then in effect and (b) 95% of the lowest closing sale price of our common stock during the three trading days ending on and including the conversion date.

There are two classes of July 2009 warrants received by the Investors: Class A and Class B. The Class A warrants are to acquire any time from July 26, 2004 through July 26, 2009 an aggregate of up to 395,257 shares of common stock at a price of $3.29 per share. The Class B warrants are to acquire any time from July 26, 2004 through July 26, 2009 an aggregate of up to 395,257 shares of common stock at a price of $5.06 per share. On January 27, 2005, the exercise price of these July 2009 Class A and Class B Warrants will reset to the lesser of their respective exercise price then in effect or a price equal to the average of the daily price of the common stock between January 27, 2004 and January 26, 2005 (but in no event less than $2.58 per share with regard to the Class A warrants and $3.54 per share with regard to the Class B warrants). The exercise price (and the reset price) under the July 2009 Warrants also is subject to similar adjustments for anti-dilution protection.

We also issued to the investors Additional Investment Rights pursuant to which the investors have the right to acquire up to an additional $2,000,000 principal amount of January 2004 Debentures from us. These Debentures are identical to the January 2004 Debentures except that the conversion price is $2.58. The Additional Investment Rights are exercisable commencing on July 26, 2004 (the "Trigger" date) for a period of 90 days from the Trigger Date or 90 days from the date which the registration statement registering the shares issuable upon the conversion of the January 2004 Debentures to be issued pursuant to the Additional Investment Rights is declared effective, whichever is longer.

We entered into a Registration Rights Agreement with the investors in connection with the issuance of the January 2004 Debentures (including any Debentures issued pursuant to the Additional Investment Rights), the shares, and the January 2009 Warrants. The Registration Rights Agreement requires that we register on behalf of the investors the shares issued to the investors and 135% of the shares issuable upon conversion of the Debentures (including payment of interest thereon) and upon exercise of the January 2009 Warrants. If the Registration Statement containing these shares is not filed within the time period required by the agreement, not declared effective within the time period

required by the agreement or, after it is declared effective and subject to certain exceptions, sales of all shares required to be registered thereon cannot be made pursuant thereto, then we will be required to pay to the investors their pro rata share of $3,635 for each day any of the above conditions exist with respect to this Registration Statement.

By agreement between us and the investors, the date upon which all warrants previously issued to the investors may become exercisable is now July 26, 2004 and the exercise periods of these warrants have been extended accordingly.

By agreement with Cardinal Securities, LLC, for general financial advisory services and in conjunction with the private debenture placements in March, July and October 2003 and in January 2004, we paid Cardinal Securities, LLC an investment banking fee equal to 7% of the investments made by the two Debenture holders and issued to Cardinal certain warrants. A portion of the investment banking fee was paid with the issuance of 30,000 shares of our common stock. Cardinal also received 612,000 warrants to purchase common stock, of which 112,500 are exercisable at $1.74 per share, 112,500 are exercisable at $2.57 per share, 200,000 are exercisable at $2.50 per share, 87,500 are exercisable at $2.42 per share and 100,000 are exercisable at $3.04 per share. The $1.74 warrants expire on July 10, 2008, the $2.57 and $2.50 warrants expire on March 12, 2008, the $2.42 warrants expire on October 30, 2008 and the $3.04 warrants expire on January 5, 2009. By agreement with Cardinal, we have registered 542,500 shares for public sale and have agreed to register the balance.

In connection with the debenture agreements, we have outstanding letters of credit of $1 million as additional collateral.

On March 11, 2003, we acquired from ISI, ISI's inventory of ALFERON N Injection(R), a pharmaceutical product used for intralesional treatment of refractory or recurring external genital warts in patients 18 years of age or older, and a limited license for the production, manufacture, use, marketing and sale of this product. As partial consideration, we issued 487,028 shares of our common stock to ISI Pursuant to our agreements with ISI, we registered these shares for public sale and ISI has reported that it has sold all of these shares. We also agreed to pay ISI 6% of the net sales of ALFERON N Injection(R).

On March 11, 2003, we also entered into an agreement to purchase from ISI all of its rights to the product and other assets related to the product including, but not limited to, real estate and machinery. For these assets, we agreed to issue to ISI an additional 487,028 shares and to issue 314,465 shares and 267,296 shares, respectively to The American National Red Cross and GP Strategies Corporation, two creditors of ISI. We have guaranteed the market value of all but 62,500 of these shares to be $1.59 per share on the termination date. GP Strategies reports that it has sold all of its shares. The termination date for the remaining guarantees is 24 months after the date of issuance and delivery of the additional 487,028 guaranteed shares to ISI and 12 months after the date of issuance of the guaranteed shares to the American National Red Cross. These stockholders are permitted to periodically sell certain amounts of their shares. If, within 30 days after the respective termination date, one or more of these stockholders requests that we honor the guarantee, we will be obligated to reacquire their remaining guaranteed shares and pay them $1.59 per share. Please see "We have guaranteed the value of a number of shares issued and to be issued as a result of our acquisition of assets from Interferon Sciences. If our share price is not above $1.59 per share 12 or 24 months after the dates of issuance of the guaranteed shares, our financial condition could be adversely affected" in "Risk Factors," above.

We also agreed to satisfy other liabilities of ISI which are past due and secured by a lien on ISI's real estate and to pay ISI 6% of the net sales of products containing natural alpha interferon.

In March 2004, we issued 487,028 shares to ISI to complete the acquisition of the balance of ISI's rights to market its product as well its production facility in New Brunswick, New Jersey.

On May 30, 2003, we issued the shares to GP Strategies and the American National Red Cross. Pursuant to our agreements with ISI and these two creditors, we have registered the foregoing shares for public sale. As noted above, GP Strategies had sold all of its shares.

In addition, as of December 31, 2003, we have $200,000 in restricted cash under other letter of credit agreements required by our insurance carrier. Prior to our annual meeting of stockholders in September 2003, we had a limited number of shares of Common Stock authorized but not issued or reserved for issuance upon conversion or exercise or outstanding convertible and exercisable securities a such as debentures, options and warrants. Prior to the meeting, to permit consummation of the sale of the July 2005 Debentures and the related warrants, Dr. Carter agreed that he would not exercise his warrants or options unless and until our stockholders approve an increase in our authorized shares of common stock. For Dr. Carter's waiver of his right to exercise certain options and warrants prior to approval of the increase in our authorized shares, we agreed to compensate Dr. Carter. See "Executive Compensation; Employment Agreements" for details related to how Dr. Carter has been compensated with respect to this matter.

On November 6, 2003 we acquired some of the outstanding ISI property tax lien certificates in the aggregate amount of $456,839 from certain investors. These tax liens were issued for property taxes and utilities due for 2000, 2001 and 2002.

Because of our long-term capital requirements, we may seek to access the public equity market whenever conditions are favorable, even if we do not have an immediate need for additional capital at that time. Any additional funding may result in significant dilution and could involve the issuance of securities with rights, which are senior to those of existing stockholders. We may also need additional funding earlier than anticipated, and our cash requirements, in general, may vary materially from those now planned, for reasons including, but not limited to, changes in our research and development programs, clinical trials, competitive and technological advances, the regulatory process, and higher than anticipated expenses and lower than anticipated revenues from certain of our clinical trials for which cost recovery from participants has been approved.

Contractual Obligations

	(dollars in thousands) Obligations Expiring by Period			
Contractual Cash Obligations	Total	2004	2005-2006	2007-2008
Operating Leases	$ 784	$286	$ 433	$65

Convertible Debentures July 10, 2003 5,426,000 6% Senior Convertible Debenture	4,257	--	4,257	--
October 29, 2003 $4,142,000 6% Senior Convertible Debenture	2,334	--	2,334	--
Total	$7,375	$286	$7,024	$65

New Accounting Pronouncements

In November, 2002, the FASB issued Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, including Indirect Guarantees of Indebtedness of Others" ("Interpretation No. 45"). Interpretation No. 45 elaborates on the existing disclosure requirements for most guarantees, including loan guarantees such as standby letters of credit. It also clarifies that at the time a company issues a guarantee, the company must recognize an initial liability for the fair market value of the obligations it assumes under the guarantee and must disclose that information in its interim and annual financial statements. The initial recognition and measurement provisions of Interpretation No. 45 apply on a prospective basis to guarantees issued or modified after December 31, 2002. Interpretation No. 45 did not have an effect on our financial statements.

In December 2002, the FASB issued Statement No. 148, "Accounting for Stock-Based Compensation-Transition and Disclosure", and amendment of FASB Statement No. 123 ("SFAS"). SFAS 148 amends FASB Statement No. 123, Accounting for Stock-Based Compensation, to provide alternative method of transition for an entity that voluntarily changes to the fair value based of accounting for stock-based employee compensation. It also amends the disclosure provisions of that Statement to require prominent disclosure about the effects on reported net income of an entity's accounting policy decisions with respect to stock-based employee compensation. Finally, this Statement amends Accounting Principles Board ("APB") Opinion No. 28, Interim Financial Reporting to require disclosure about those effects in

interim financial information. SFAS 148 is effective for financial statements for fiscal years ending after December 15, 2002. We will continue to account for stock-based compensation using the intrinsic value method of APB Opinion No. 25, "Accounting for Stock Issued to Employees," but have adopted the enhanced disclosure requirements of SFAS 148.

In January 2003, the FASB issued Interpretation No. 46, "Consolidation of Variable Interest Entities" ("Interpretation No. 46"), that clarifies the application of Accounting Research Bulletin No. 51, Consolidated Financial Statements, "to certain entities in which equity investors do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. Interpretation No. 46 is applicable immediately for variable interest entities created after January 31, 2003. For variable interest entities created prior to January 31, 2003, the provisions of Interpretation No. 46 have been deferred to the first quarter of 2004. This Interpretation did not have an effect on our consolidated financial statements.

In May 2003, the FASB issued Statement No. 150, "Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity" ("SFAS 150"). SFAS 150 requires an issuer to classify certain financial instruments, such as mandatory redeemable shares and obligations to repurchase the issuers equity shares, as liabilities. The guidance is effective for financial instruments entered into or modified subsequent to May 31, 2003, and is otherwise effective at the beginning of the first interim period after June 15, 2003. SFAS 150 did not have an impact on our financial condition or results of operations.

Disclosure About Off-Balance Sheet Arrangements

Prior to our annual meeting of stockholders in September 2003, we had a limited number of shares of Common Stock authorized but not issued or reserved for issuance upon conversion or exercise of outstanding convertible and exercisable securities such as debentures, options and warrants. Prior to the meeting, to permit consummation of the sale of the July 2005 Debentures and the related warrants, Dr. Carter agreed that he would not exercise his warrants or options unless and until our stockholders approve an increase in our authorized shares of common stock. For Dr. Carter's waiver of his right to exercise certain options and warrants prior to approval of the increase in our authorized shares, we have agreed to compensate Dr. Carter. See "Executive Compensation; Employment Agreements" for details related to how Dr. Carter has been compensated with respect to this matter.

In connection with the debenture agreements, we have outstanding letters of credit of $1,000,000 as additional collateral.

Critical Accounting Policies

Financial Reporting Release No. 60 requires all companies to include a discussion of critical accounting policies or methods used in the preparation of financial statements. Our significant accounting policies are described in Notes to the Consolidated Financial Statements. The significant accounting policies that we believe are most critical to aid in fully understanding our reported financial results are the following:

Revenue

Revenues for non-refundable license fees are recognized under the Performance Method-Expected Revenue. This method considers the total amount of expected revenue during the performance

period, but limits the amount of revenue recognized in a period to total non-refundable cash received to date. This limitation is appropriate because future milestone payments are contingent on future events.

Upon receipt, the upfront non-refundable payment is deferred. The non-refundable upfront payments plus non-refundable payments arising from the achievement of defined milestones are recognized as revenue over the performance period based on the lesser of (a) percentage of completion or (b) non-refundable cash earned (including the upfront payment).

This method requires the computation of a ratio of cost incurred to date to total expected costs and then apply that ratio to total expected revenue. The amount of revenue recognized is limited to the total non-refundable cash received to date.

Revenue from the sale of Ampligen(R) under cost recovery clinical treatment protocols approved by the FDA is recognized when the treatment is provided to the patient.

Revenues from the sale of product are recognized when the product is shipped, as title is transferred to the customer. We have no other obligation associated with our products once shipment has occurred.

Patents and Trademarks

Effective October 1, 2001, we adopted a 17 year estimated useful life for the amortization of our patents and trademark rights in order to more accurately reflect their useful life. Prior to October 1, 2001, we were using a ten year estimated useful life.

Patents and trademarks are stated at cost (primarily legal fees) and are amortized using the straight line method over the life of the assets. We review our patents and trademark rights periodically to determine whether they have continuing value. Such review includes an analysis of the patent and trademark's ultimate revenue and profitability potential on an undiscounted cash basis to support the realizability of our respective capitalized cost. In addition, management's review addresses whether each patent continues to fit into our strategic business plans.

Concentration of Credit Risk

Financial instruments that potentially subject us to credit risks consist of cash equivalents and accounts receivable.

Our policy is to limit the amount of credit exposure to any one financial institution and place investments with financial institutions evaluated as being credit worthy, or in short-term money markets, which are exposed to minimal interest rate and credit risks. At times, we have bank deposits and overnight repurchase agreements that exceed federally insured limits.

Concentration of credit risk, with respect to receivables, is limited through our credit evaluation process. We do not require collateral on our receivables. Our receivables consist principally of amounts due from wholesale drug companies as of December 31, 2003.

Quantitative And Qualitative Disclosures About Market Risk

We had $5.2 million in cash, cash equivalents and short term investments at December 31, 2003. To the extent that our cash and cash equivalents exceed our near term funding requirements, the excess cash

was invested in three (3) to six (6) month high quality financial instruments. We employ established policies and procedures to manage any risks with respect to any investment exposure.

OUR BUSINESS

We were founded in the early 1970s as a contract researcher for the National Institutes of Health (NIH). Dr. William A. Carter, M.D., joined us in 1976 and ultimately become our CEO in 1988. He has focused us on exploring, understanding and mastering the mechanism of nucleic acid technology to produce a promising new class of drugs for treating chronic viral diseases and disorders of the immune system. In the course of almost three decades, we have established

a strong foundation of laboratory, pre-clinical and clinical data with respect to the development of nucleic acids to enhance the natural antiviral defense system of the human body and the development of therapeutic products for the treatment of chronic diseases. Our strategy is to use our proprietary drug, Ampligen(R), to treat diseases for which adequate treatment is not available. We seek the required regulatory approvals which will allow the progressive introduction of Ampligen(R) for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome ("ME/CFS"), HIV, Hepatitis C ("HCV") and Hepatitis B ("HBV") in the U.S., Canada, Europe and Japan. Ampligen(R) is currently in the open label portion of phase III clinical trials in the U.S. for use in treatment of ME/CFS and is in Phase IIb clinical development in the U.S. for the treatment of patients with HIV infection.

In March, 2003, we acquired from Interferon Sciences Inc. ("ISI"), all of ISI's raw materials, work-in-progress and finished product of Alferon N Injection(R), together with a limited license for the production, manufacture, use, marketing and sale of the product. Alferon N Injection(R) [interferon alfa-n3 (human derived)] is a natural alpha interferon that has been approved by the U.S. Food and Drug Administration ("FDA") for commercial sale for the intralesional treatment of refractory or recurring external genital warts in patients 18 years of age or older. We intend to market this product in the United State through sales facilitated via third party marketing agreements. In the future, we expect to implement studies, beyond those conducted by ISI, for testing the potential treatment of HIV, Hepatitis C and other indications, including multiple sclerosis.

In March, 2003, we entered into an agreement with ISI subject to certain events that would grant us global rights to sell Alferon N Injection(R) as well as acquire certain other assets of ISI which include but are not limited to real estate and property, plant and equipment. We acquired these assets in March 2004.

We outsource certain components of our research and development, manufacturing, marketing and distribution while maintaining control over the entire process through our quality assurance group and our clinical monitoring group.

Ampligen(R)

Our proprietary drug technology includes Ampligen(R) and utilizes specially configured ribonucleic acid ("RNA") and is protected by more than 300 patents worldwide with over 60 additional patent applications pending to provide further proprietary protection in various international markets. Certain patents apply to the use of Ampligen(R) alone and certain patents apply to the use of Ampligen(R) in combination with certain other drugs. Some composition of matter patents pertain to other new medications which have a similar mechanism of action. The main U.S. ME/CFS treatment patent (#6130206) expires January 23, 2015. Our main patents covering HIV treatment (#4795744, #4820696, #5063209, and #5091374) expire on August 26, 2006, September 30, 2008, August 10, 2010, and May 6, 2011, respectively; Hepatitis treatment coverage is conveyed by U.S. patent #5593973 which expires on October 5, 2014. The U.S. Ampligen(R) Trademark (#1,515,099) expires on December 6, 2008 and can be renewed thereafter for an additional 10 years. The U.S. FDA has granted us "orphan drug status" for our nucleic acid-

derived therapeutics for ME/CFS, HIV, and renal cell carcinoma and malignant melanoma. Orphan drug status grants us protection against competition for a period of seven years following FDA approval, as well as certain federal tax

incentives, and other regulatory benefits.

Nucleic acid compounds represent a potential new class of pharmaceutical products that are designed to act at the molecular level for treatment of human diseases. There are two forms of nucleic acids, DNA and RNA. DNA is a group of naturally occurring molecules found in chromosomes, the cell's genetic machinery. RNA is a group of naturally occurring informational molecules which orchestrate a cell's behavior and which regulate the action of groups of cells, including the cells, which comprise the body's immune system. RNA directs the production of proteins and regulates certain cell activities including the activation of an otherwise dormant cellular defense against virus and tumors. Our drug technology utilizes specially configured RNA. Our double-stranded RNA drug product, trademarked Ampligen(R), which is administered intravenously, is (or has been) in human clinical development for various disease indications, including treatment for ME/CFS, HIV, renal cell carcinoma and malignant melanoma. Further studies are planned in cancer treatment but initiation dates have not been set.

Based on the results of published, peer reviewed pre-clinical studies and clinical trials, we believe that Ampligen(R) may have broad-spectrum anti-viral and anti-cancer properties. Over 500 patients have received Ampligen(R) in clinical trials authorized by the FDA at over twenty clinical trial sites across the U.S., representing the administration of more than 45,000 doses of this drug.

Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS)

ME/CFS is a debilitating disease that is difficult to diagnose and for which, at present, there is no cure. People suffering from this illness experience, among other symptoms, a constant tiredness, recurring dull headaches, joint and muscle aches, a feeling of feverishness and chills, low grade fever, depression, difficulty in concentrating on tasks, and tender lymph glands. With progression of the disease they can become bed-ridden, lose their jobs and become dependent upon the state for support and medical care.

ME/CFS has been given official recognition by the U.S. Social Security Administration, and some European nations, rendering ME/CFS patients eligible for disability benefits and heightening awareness of this debilitating disease in the medical community. A further scientific publication by independent academicians on the accurate laboratory diagnosis of ME/CFS appeared in a peer-reviewed journal (American Journal of Medicine) in February 2000. The U.S. Centers for Disease Control ("CDC") reconfirmed its research commitment to ME/CFS following an audit by the U.S. Government Accounting Office ("GAO") which was announced July 28, 1999.

Estimates of ME/CFS patient numbers in the Unites States range from a low of 500,000 (1995-Centers for Disease Control, Atlanta, GA) to a high of 1,000,000 (1999-DePaul University study). Estimates of patient numbers in Europe range from 600,000 to 2,200,000 as reported in the British Medical Journal in January 2000. It is believed worldwide patient totals may be as high as ten million.

In 1989, we received FDA authorization to conduct a Phase II study of Ampligen(R) for ME/CFS. In 1991, we completed a 24-week, 92 patient, randomized, placebo-controlled, double-blinded, multi-center trial of Ampligen(R) for treating patients with ME/CFS. The results, published in a peer review journal in 1994, suggested enhanced physical performance, greater cognitive functions and improved ability to perform daily living activities. Patients required reduced medications, while suffering little or no significant adverse side effects. The FDA raised certain issues with respect to this clinical trial, which required further study. These issues were reviewed and satisfactorily resolved.

In February 1993, we presented results of our Phase II study of Ampligen(R) for ME/CFS to a FDA Advisory Committee and these results were published in early 1994 in Clinical Infectious Diseases, a peer reviewed medical journal, which emphasizes the understanding and potential treatment of infectious diseases. The results suggested that patients on Ampligen(R), in contrast to those receiving a placebo, showed significant improvement in physical capacity as determined by performance on treadmill testing. The Ampligen(R) treated patient group also required less pain medication than did the placebo group.

In 1998, we were authorized by the FDA to initiate a Phase III multicenter, placebo-controlled, randomized, double blind clinical trial to treat 230 patients with ME/CFS in the U.S. The objective of this Phase III, clinical study, denoted as Amp 516, is to evaluate the safety and efficacy of Ampligen(R) as a treatment for ME/CFS. Over the course of the study, we engaged the services of twelve (12) clinical investigators at Medical Centers in California, New Jersey, Florida, North Carolina, Wisconsin, Pennsylvania, Nevada, Illinois, Utah and Connecticut. These clinical investigators are medical doctors with special knowledge of ME/CFS who have recruited, prescreened and enrolled ME/CFS patients for inclusion in the Phase III Amp 516 ME/CFS clinical trial. This clinical trial has enrolled and randomized over 230 ME/CFS patients and is now fully enrolled. The patients complete a stage I, forty week, double-blind, randomized, placebo-controlled portion of the clinical trial. This stage I has now been completed with the final patients receiving their last blinded dose in February 2004. Following Stage I, the 14 remaining patients then move into the stage II or the open label treatment portion of the clinical trial. We anticipate that this segment should be completed by June 2004. To date there have been no reported serious adverse events definitely related to the study medication. The next stage in our program is the completion of stage II and the final data collection, quality assurance of data to insure its accuracy and analysis of the data according to regulatory guidelines to facilitate filing for commercial approval to sell.

Human Immunodeficiency Virus (HIV)

Over fifteen antiviral drugs are currently approved by the FDA for the treatment of HIV infection. Most target the specific HIV enzymes, reverse transcriptase ("RT") and protease. The use of various combinations of three or more of these drugs is often referred to as Highly Active Anti-Retroviral Therapy ("HAART"). HAART involves the utilization of several antiretrovirals with different mechanisms of action to decrease viral loads in HIV-infected patients. The goal of these combination treatments is to reduce the amount of HIV in the body ("viral load") to as low as possible. Treatments include different classes of drugs, but they all work by stopping parts of the virus so the virus cannot reproduce. Experience has shown that using combinations of drugs from different classes is a more effective strategy than using only one or two drugs. HAART has provided dramatic decreases in morbidity and mortality of HIV infection. Reduction of the viral load to undetectable levels in patients with wild type virus (i.e., non-drug-resistant virus) is routinely possible with the appropriate application of HAART. HIV mainly infects important immune system cells called CD4 cells. After HIV has infected a CD4 cell, the CD4 cell becomes damaged and is eventually destroyed. Fewer CD4 cells means more damage to the immune system and, ultimately, results in AIDS. Originally, reduction of HIV loads was seen as possibly allowing the reconstitution of the immune system and led to early speculation that HIV might be eliminated by HAART.

Subsequent experience has provided a more realistic view of HAART and the

realization that chronic HIV suppression using HAART, as currently practiced, would require treatment for life with resulting significant cumulative toxicities. The various reverse transcriptase and protease inhibitor drugs that go into HAART have significantly reduced the morbidity and mortality connected with HIV; however there has been a significant cost due to drug toxicity. It is estimated that 50% of HIV deaths are from the toxicity of the drugs in HAART. Current estimates suggest that it would require as many as 60 years of HAART for elimination of HIV in the infected patient. Thus the toxicity of HAART drugs and the enormous cost of treatment makes this goal impractical.

Although more potent second generation drugs are under development that target the reverse transcriptase and protease genes as well as new HIV targets, such as HIV integrase and HIV fusion inhibitors, the problem of drug toxicities, the complex interactions between these drug classes, and the likelihood of life-long therapy will remain a serious drawback to their usage.

Failure of antiretroviral therapies over time and the demonstration of resistance have stimulated intensive searches for appropriate combinations of agents, or sequential use of different agents, that act upon the same or different viral targets. This situation has created interest in our drug technology, which operates by a different mechanism.

We believe that the concept of Strategic Therapeutic Interruption ("STI") of HAART provides a unique opportunity to minimize the current deficiencies of HAART while retaining the HIV suppression capacities of HAART. STI is the cessation of HAART until HIV again becomes detectable (i.e., rebounds) followed by resumption of HAART with subsequent suppression of HIV. By re-institution of HAART, HIV may be suppressed before it can inflict damage to the immune system of the patient. Based on recent publications (AIDS 2001,15: F19-27 and AIDS 2001, 15:1359-1368) in peer reviewed medical literature, it is expected that in just 30 days after stopping HAART approximately 80% to 90%, of the patients will suffer a relapse evidencing detectable levels of HIV. We believe that Ampligen(R) combined with the STI approach may offer a unique opportunity to retain HAART's superb ability to suppress HIV while potentially minimizing its deficiencies. All present approved drugs block certain steps in the life cycles of HIV. None of these drugs address the immune system, as Ampligen(R) potentially does, although HIV is an immune-based disease.

By using Ampligen(R) in combination with STI of HAART, we will undertake to boost the patients' own immune system's response to help them control their HIV when they are off of HAART. Our minimum expectation is that Ampligen(R) has potential to lengthen the HAART-free time interval with a resultant decrease in HAART-induced toxicities. The ultimate potential, which of course requires full clinical testing to accept or reject the hypothesis, is that Ampligen(R) may potentiate STI of HAART to the point that the cell mediated immune system will be sufficient to eliminate requirement for HAART. Clinical results of using our technology has been presented at several International AIDS Scientific Forums in 2003, including the XVI International Conference on Antiviral Research in Savannah, Georgia in April 2003 and the 2nd IAS Conference on HIV Pathogenesis and Treatment in Paris, France in July 2003.

Our AMP 720 HIV clinical trial is being conducted with individuals infected with HIV who are responding well to HAART at the moment. Patients in this study are required to meet minimum immune system requirements of CD4 cell levels greater than 400, maximum HIV infection levels of less that 50 copies/ml, and a HAART regimen containing at least one anti-viral drug showing therapeutic synergy with Ampligen(R) based on recently reported ex vivo study in a peer-reviewed scientific journal (Reference: Robinson W. McDougall B and Essay

R. Mixed Dose Effect Analysis of a Biological Response Modifier (Ampligen) with 14 FDA-approved anti-HIV Agents. Antiviral Res, 46:A48, No. 46, 2000). All patients are chronically HIV infected and will have been receiving the indicated HAART regimen prior to starting the STI. The trial applies strategic treatment interruption of HAART based on the hypothesis that careful management of HIV rebound following STI may have potential to result in the development of protective immune responses to HIV in order to achieve control of HIV replication. We believe that the addition of Ampligen(R), with its potential immunomodulatory properties, may reasonably achieve this outcome. Half of the participants in the trial are given 400 mg of Ampligen(R) twice a week and once they start the STI will remain off of HAART until such time as their HIV rebounds. The other half of the participants (the control group) are on STI, but they are given no Ampligen(R) during the "control" portion of the clinical test.

The targeted enrollment in the AMP 720 Clinical Trial is 120 HIV-infected persons who meet the criteria. We expect to have 60 people on STI with Ampligen(R) and 60 people on STI without Ampligen(R). Presently, this study is approximately 35% enrolled at approximately ten medical centers around the U.S.

Other Diseases

We are evaluating potential novel clinical programs which would involve using Ampligen(R) to treat both HCV and HIV when they coexist on the same patient. We expect to commence these studies in collaboration with one or more prospective corporate partners. A collaborative Clinical study in Europe, in conjunction with Laboratorios Del Dr. Esteve S.A., is expected to commence in 2004.

We have acquired a series of patents on Oragen(TM), potentially a set of oral broad spectrum antivirals, immunological enhancers through a licensing agreement with Temple University in Philadelphia, PA. We were granted an exclusive worldwide license from Temple for the Oragen(TM) products. Pursuant to the arrangement, we are obligated to pay royalties of 2% on sales of Oragen(TM), depending on how much technological assistance is required of Temple. We currently pay minimum royalties of $30,000 per year to Temple. These compounds have been evaluated in various academic laboratories for application to chronic viral and immunological disorders. Research and development of Oragen(TM) may start in 2004 dependent on the availability of funding provided by various branches of the U.S. Government, including the Department of Defense where oral forms of broad spectrum immunotherapuetics may have high value.

An FDA authorized Phase I/II study of Ampligen(R) in cancer, including patients with renal cell carcinoma was completed in 1994. The results of this study indicated that patients receiving high doses (200-500mg) twice weekly experienced an increase in medium survival compared to the low dose group and as compared to an historical control group. We received authorization from the FDA to initiate a Phase II study using Ampligen(R) to treat patients with metastatic renal cell carcinoma. Patients with metastatic melanoma were included in the Phase I/II study of Ampligen(R) in cancer. The FDA has authorized us to conduct a Phase II clinical trial using Ampligen(R) in melanoma. We do not expect to devote any significant resources to funding these studies in the near future and are seeking strategic partnerships to expand these promising studies.

ALFERON N INJECTION(R)

Interferons are a group of proteins produced and secreted by cells to combat diseases. Researchers have identified four major classes of human interferon: alpha, beta, gamma and omega. The ALFERON N Injection(R) product

contains a multi-species form of alpha interferon. The worldwide market for injectable alpha interferon-based products has experienced rapid growth and various alpha interferon injectable products are approved for many major medical uses worldwide.

Alpha interferons are manufactured commercially in three ways: by genetic engineering, by cell culture, and from human white blood cells. All three of these types of alpha interferon are or were approved for commercial sale in the U.S. Our natural alpha interferon is produced from human white blood cells.

The potential advantages of natural alpha interferon over recombinant interferon may be based upon their respective molecular compositions. Natural alpha interferon is composed of a family of proteins containing many molecular species of interferon. In contrast, recombinant alpha interferon each contain only a single species. Researchers have reported that the various species of interferons may have differing antiviral activity depending upon the type of virus. Natural alpha interferon presents a broad complement of species, which we believe may account for its higher activity in laboratory studies. Natural alpha interferon is also glycosylated (partially covered with sugar molecules). Such glycosylation is not present on the currently U.S. marketed recombinant alpha interferons. We believe that the absence of glycosylation may

be, in part, responsible for the production of interferon-neutralizing antibodies seen in patients treated with recombinant alpha interferon. Although cell culture-derived interferon is also composed of multiple glycosylated alpha interferon species, the types and relative quantity of these species are different from our natural alpha interferon.

On October 10, 1989, the FDA approved ALFERON N Injection(R) for the intralesional (within lesions) treatment of refractory (resistant to other treatment) or recurring external genital warts in patients 18 years of age or older. Certain types of human papillomaviruses ("HPV") cause genital warts, a sexually transmitted disease ("STD"). A published report estimates that approximately eight million new and recurrent causes of genital warts occur annually in the United States alone.

Basically, our interest in acquiring Alferon N Injection(R) was driven by two factors;

(1) Our belief that the use of Alferon N in combination with Ampligen(R) has the potential to increase the positive therapeutic responses in chronic life threatening viral diseases. Combinational therapy is evolving to the standard of acceptable medical care based on a detailed examination of the Biochemistry of the body's natural antiviral immune response; and

(2) New knowledge about the competitive products in the interferon arena that we believe implies a large untapped market and potential new therapeutic indication for Alferon N Injection(R) which could accelerate its revenues in the near term. Specifically, the recombinant DNA derived alpha interferon are now reported to have decreased effectiveness after one year, probably due to antibody formation and other severe toxicities. These detrimental effects have not been reported with Alferon N Injection which could allow this product to assume a much larger market share. These revenues would provide operational capital to complete the Phase III clinical trials of our experimental drug, Ampligen(R) in a more cost effective, non-dilutive manner on a shareholder's equity.

Alferon N Injection(R) [Interferon alfa-n3 (human leukocyte derived)] is a highly purified, natural-source, glycosylated, multispecies alpha interferon product. There are essentially no antibodies observed against natural interferon to date and the product has a relatively low side-effect profile. Alferon is the only natural-source, multispecies alpha interferon currently sold in the U.S.

The Alferon N Injection(R) targeted market consists of urologists, proctologists, dermatologists, and Obstetricians/Gynecologists. These physicians normally see patients with papilloma concondylomas (genital warts) in their practice. For our marketing plans, see "Marketing/Distribution" below.

According to the NIH, there are one million new cases of venereal warts every year.

Pipeline Products (Alpha Interferon)

The following products, together with other assets were acquired in March 2004, upon the closing of the second ISI agreement.

ALFERON N Injection(R) -Other Applications

ALFERON N Injection(R) has been approved by the U.S. FDA for the intralesional treatment of refractory or recurring external genital warts in patients 18 years of age or older and has been studied for

the potential treatment of HIV, Hepatitis C and other indications. ISI, the company from which we obtained our rights to ALFERON N Injection(R) has conducted clinical trials with regard to the use of ALFERON N Injection(R) in the treatment of HIV and Hepatitis C. While ISI found the results to be encouraging, in both instances, the FDA determined that additional trials were necessary.

We anticipate initiating clinical trials to evaluate the use of Alferon N Injection(R) to treat west Nile Virus infections and SARS that is dependent on NIH providing the funds needed.

ALFERON LDO

ALFERON LDO is an experimental low-dose, oral liquid formulation of Natural Alpha Interferon. Two Phase 2 clinical trials using ALFERON LDO for the treatment of HIV-infected patients have been completed. We are entering an active phase of Alferon LDO research. The FDA has recently authorized a new Phase II clinical study designed to investigate the activity and safety of Alferon LDO(R) in HIV positive subjects in early stage disease. The endpoints of the study include an increase or upregulation of expression of genes known to be mediators of the natural immune response using cutting edge gene chip technology, as well as, absolute CD4 cell counts and plasma HIV RNA level.

There can be no assurance that any of these proposed products will be cost-effective, safe, and effective or that we will be able to obtain FDA approval for such use. Furthermore, even if such approval is obtained, there can be no assurance that such products will be commercially successful or will produce significant revenues or profits for us.

European Operations

Our European operations were set up to prepare for the introduction of

Hemispherx products and to accelerate market penetration into the European market once full approval is obtained from the European Medicine Evaluation Agency ("EMEA"). The EMEA is the equivalent of the United States FDA. From a regulatory point of view the member countries of the European Economic Union ("EEU") represent a common market under the jurisdiction of the EMEA. However, from a practical point of view, every country is different regarding developing relations with the medical community, patient associations and obtaining reimbursement for treatment from the equivalent of Social Security Agencies and insurance carriers. This program will be integrated into our new commercial asset, ALFERON N Injection(R), as well.

Our European operations have assisted the growth of a number of patient/physician educational associations. The French Chronic Fatigue Syndrome Association has grown from ten members in the year 2000 to 800 currently. Every major country now has an active educational association with substantial numbers of members who regularly meet and "network". These programs have been modeled on the successful experience in the U.S. of conducting twice a year meetings on ME/CFS with Health and Human Services, FDA, NIH and Centers for Disease Control.

We maintain contact with the EMEA, keeping the agency aware of our activities, as well as the health ministries in numerous countries in the European Union. In early 2001, our application for "orphan" drug status for the use of Ampligen(R) in ME/CFS was rejected because the Board found that the prevalence of ME/CFS was significantly above the five person per 10,000 limit required to grant orphan drug status in the European Union. Although no applications are on file currently with the EEU, we are exploring various ways to accelerate the commercial availability of our products in the various nations of the EEU, including potential appreciation of the "foreign import" rule for accepting products already approved in the U.S.

Limited number of ME/CFS patients were treated during 2003 with Ampligen(R) in the United Kingdom, Austria and Belgium under existing regulatory procedures in these countries, which allow the

therapeutic use of an experimental drug under certain conditions. These procedures allowed us to recover the cost of Ampligen(R) used as well as to collect additional clinical data. Corresponding procedures are being considered in several other countries at the request of locally based physicians.

Our European operations are considering implementing clinical trials in Europe for the use of Ampligen(R) in the treatment of HIV/AIDS on the basis of the new U.S. Protocols involving the use of the drug either in combination with "cocktail" therapies or as part of a strategic interruption of the "cocktail" therapies. We presented results of one these programs (AMP 720) at the LAS Conference on HIV Pathogenesis and Treatment in Paris, France, in July 2003.

The efforts of our European operation have started to produce results. In March 2002, our European subsidiary Hemispherx Biopharma Europe, S.A. ("Hemispherx, S.A.") entered into a Sales and Distribution Agreement with Laboratorios Del Dr. Esteve S.A. ("Esteve"). Pursuant to the terms of the Agreement, Esteve was granted the exclusive right to market Ampligen(R) in Spain, Portugal and Andorra ("Territory") for the treatment of ME/CFS. In addition to other terms and other projected payments, Esteve paid an initial and non-refundable fee of 625,000 Euros (approximately $563,000) to Hemispherx, S.A. on April 24, 2002. Esteve is to pay a fee of 1,000,000 Euros after U.S. FDA approval of Ampligen(R) for the treatment of ME/CFS and a fee of 1,000,000 Euros upon Spain's approval of the final marketing authorization for using Ampligen(R) for the treatment of ME/CFS. The agreement runs for the longer of ten years from the date of first

arms-length sale in the Territory, the expiration of the last Hemispherx patent exploited by Esteve or the period of regulatory data protection for Ampligen(R) in the applicable territory. Pursuant to the terms of the agreement Esteve is to conduct clinical trials using Ampligen(R) to treat patients with both HCV and HIV and is required to purchase certain minimum annual amounts of Ampligen(R) following regulatory approval. The agreement is terminable by either party if Ampligen(R) is withdrawn from the territory for a specified period due to serious adverse health or safety reasons, bankruptcy, insolvency or related issues of one of the parties; or material breach of the agreement. Hemispherx may transform the agreement into a non-exclusive agreement or terminate the agreement in the event that Esteve does not meet specified percentages of its annual minimum purchase requirements under the agreement. Esteve may terminate the agreement in the event that Hemispherx fails to supply Ampligen(R) to the territory for a specified period of time or certain clinical trials being conducted by Hemispherx are not successful.

We executed a Memorandum of Understanding in January 2004 with Fujisawa Deutschland GmbH, ("Fuji"), a major pharmaceutical corporation, granting them an exclusive option for a limited number of months to enter a Sales and Distribution Agreement with exclusive rights to market Ampligen(R) for ME/CFS in Germany, Austria and Switzerland. The option period ends 12 weeks after Fuji has had a chance to review the report on the results of our Amp 516 clinical trial and meet with the trial's principal investigators. We received an initial fee of 400,000 Euros (approximately $500,000US). If we do not provide Fuji with the full report by May 31, 2004 we will be required to repay half of this fee and if we do not provide them with the report by December 31, 2004, we will be required to refund the entire fee. If Fuji exercises the option, Fuji would be required to pay us an additional 1,600,000 Euros upon execution of the Sales and Distribution agreement, purchase Ampligen(R) exclusively from us and meet certain annual minimum purchase quotas. We would be required to file an application with the EMEA for commercial sale of Ampligen(R) for ME/CFS on or before December 31, 2005. Upon our filing of that application, we would receive an additional 1,000,000 Euros and, upon approval by the EMEA, an additional 2,000,000 Euros. If we failed to meet the December 31, 2005 filing deadline, we would be required to return 40% of all payments that we had received from Fuji. We would be required to sell Ampligen(R) to Fuji at a 20% price discount until the aggregate amount of the discount reached $1,000,000 Euros (representing 50% of the initial 2,000,000 fee paid to us on and prior to execution of the definitive agreement). The foregoing is a summary of the memorandum of understanding. We cannot assure that we can prepare and issue the AMP 516 report within the time frames noted or that Fuji will

exercise the option or that the proposed terms of the Sales and Distribution Agreement will not change materially.

We continue negotiations with other prospective partners for the marketing and distribution of Ampligen(R) in other European territories.

Manufacturing

Historically, we outsourced the manufacturing of Ampligen(R) to certain contractor facilities in the United States and South Africa while maintaining full quality control and supervision of the process. Nucleic Acid polymers constitute the raw material used in the production of Ampligen(R). We acquire our raw materials from Ribotech, Ltd. ("Ribotech") located in South Africa. Ribotech, is jointly owned by us (24.9%) and Bioclones (Proprietary), Ltd. (75.1%). Bioclones manages and operates Ribotech. There are a limited number of manufacturers in the United States available to provide the polymers if Ribotech

is unable to supply our needs based on product specifications and pricing. Sourcing our needs from U.S. suppliers could result in a cost increase for our raw materials.

Until 1999, we distributed Ampligen(R) in the form of a freeze-dried powder to be formulated by pharmacists at the site of use. We perfected a production process to produce ready to use liquid Ampligen(R) in a dosage form, which will mainly be used upon commercial approval of Ampligen(R). At the present time, we have engaged the services of Schering-Plough Products to mass produce ready-to-use Ampligen(R) doses. There are other pharmaceutical processing companies that can supply our production needs.

Bioclones (PTY) Ltd. is headquartered in South Africa and is the majority owner in Ribotech, Ltd. (we own 24.9%) which produces most of the polymers used to date in manufacturing Ampligen(R). The licensing agreement with Bioclones presently includes South Africa, South America, Ireland, Australia, New Zealand and the United Kingdom. The agreement imposes certain clinical trial requirements on Ribotech, as well as, certain GMP standards on their facilities. We plan to consult and work with Bioclones in 2004 to assure GMP compliance of a new manufacturing facility. Bioclones has conducted limited clinical studies in patients with ME/CFS in Australia and South Africa.

We currently occupy and use the New Brunswick, New Jersey laboratory and production facility that we acquired from ISI. This facility is approved by the FDA for the manufacture of Alferon N Injection(R).

GMP's require that a product be consistently manufactured to an identical potency (strength) and purity with each lot, and that the manufacturing facility itself and all the equipment therein, be certified to operate within a strict set of performance standards. Our facilities in New Jersey (Alferon) and Maryland (Ampligen) meet these performance standards.

Marketing/Distribution

Our marketing strategy for Ampligen(R) reflects the differing health care systems around the world, and the different marketing and distribution systems that are used to supply pharmaceutical products to those systems. In the U.S., we expect that, subject to receipt of regulatory approval, Ampligen(R) will be utilized in four medical arenas: physicians' offices, clinics, hospitals and the home treatment setting. We currently plan to use a service provided in the home infusion (non-hospital) segment of the U.S. market to execute direct marketing activities, conduct physical distribution of the product and handle billing and collections. Accordingly, we are developing marketing plans to facilitate the product distribution and medical support for indication, if and when they are approved, in each arena. We believe that this approach will facilitate the generation of revenue without incurring the substantial costs associated with a sales force.

Furthermore, management believes that the approach will enable us to retain many options for future marketing strategies. In February 1998, we and Accredo Health Services (formerly Gentiva Health Services) entered into a Distribution/Specialty Agreement for the distribution of Ampligen(R) for the treatment of ME/CFS patients under the U.S. treatment protocols.

In Europe, we plan to adopt a country-by-country and, in certain cases, an indication-by-indication marketing strategy due to the heterogeneity regulation and alternative distribution systems in these areas. We also plan to adopt an indication-by-indication strategy in Japan. Subject to receipt of regulatory

approval, we plan to seek strategic partnering arrangements with pharmaceutical companies to facilitate introductions in these areas. The relative prevalence of people from target indications for Ampligen(R) varies significantly by geographic region, and we intend to adjust our clinical and marketing planning to reflect the specialty of each area. We have a marketing arrangement with Bioclones pursuant to the Bioclones Agreement that covers South America, the United Kingdom, Ireland, Africa, Australia, Tasmania, New Zealand, and certain other countries and territories. In Spain, Portugal and Andorra we have entered into a Sales Distribution Agreement with Esteve, and, in Germany, Austria and Switzerland, we have entered into a memorandum of understanding with Fuji (see "European Operations" above).

Our marketing and distribution plan for Alferon N Injection(R) is focused on increasing the sales of Alferon N Injection(R) for the intralesional treatment of refractory and recurring external genital warts in adults. We will reach out to a targeted audience of physicians consisting of OB/GYNs, Urologists, Proctologists and Dermatologists and simultaneously create product awareness in the patient population through several media and health organizations. Different regional meetings and seminars are scheduled during which guest speakers will explain the therapeutic benefits and safety profile of Alferon. Additional exposure will be created by exhibiting at several STD related conferences, expanded web presence, mailings and publications. We also have engaged a contract sales organization in order to build up a nationwide network of dedicated representatives in the U.S. We obtained the foreign marketing rights to Alferon N Injection(R) at the second asset closing in March 2004 and we expect to amend the current marketing/distribution agreements with Biovail, Esteve, Bioclones and Fujisawa to include Alferon N Injection(R). For more information about our arrangements with Accredo Health Services, Inc., Bioclones, Esteve and Biovails, see "Research And Development/Collaborative Agreements" below.

In August 2003, we entered into a non exclusive Sales and Marketing agreement with Engitech, a pharmaceutical contract sales organization, to launch Alferon N Injection(R) on a nationwide scale in the United States. The agreement stipulates that Engitech will deploy a sales force of 100 sales representatives within one year in the U.S. domestic market and further expand the sales team up to 250 sales representatives in the second year and after that as many as it takes to continually drive market share. As of February 25, 2004 Engitech has 93 sales representatives on board, leading us to believe that Engitech will reach the target of 100 sales representatives as stated in the agreement. Engitech will also develop and implement a strategic and tactical marketing action plan as well as organize a scientific and educational program towards a targeted audience of physicians and consumers. Engitech has been in business since 1987. This privately held company has several clients in the pharmaceutical industry.

Competition

Our potential competitors are among the largest pharmaceutical companies in the world, are well known to the public and the medical community, and have substantially greater financial resources, product development, and manufacturing and marketing capabilities than we have.

These companies and their competing products may be more effective and less costly than our products. In addition, conventional drug therapy, surgery and other more familiar treatments will offer competition to our products. Furthermore, our competitors have significantly greater experience than we

do in pre-clinical testing and human clinical trials of pharmaceutical products

and in obtaining FDA, EMEA Health Protection Branch ("HPB") and other regulatory approvals of products. Accordingly, our competitors may succeed in obtaining FDA, EMEA and HPB product approvals more rapidly than us. If any of our products receive regulatory approvals and we commence commercial sales of our products, we will also be competing with respect to manufacturing efficiency and marketing capabilities, areas in which we have no experience. Our competitors may possess or obtain patent protection or other intellectual property rights that prevent, limit or otherwise adversely affect our ability to develop or exploit our products.

The major competitors with drugs to treat HIV diseases include Gilead Pharmaceutical, Pfizer, Bristol-Myers, Abbott Labs, Glaxo Smithkline, Merck and Schering-Plough Corp. ("Schering"). ALFERON N Injection(R) currently competes with a product produced by Schering for treating genital warts. 3M Pharmaceutical also has received FDA approval for its immune response modifier product for the treatment of genital and perianal warts.

Government Regulation

Regulation by governmental authorities in the U.S. and foreign countries is and will be a significant factor in the manufacture and marketing of ALFERON N products and our ongoing research and product development activities. Ampligen(R) and the products developed from the ongoing research and product development activities will require regulatory clearances prior to commercialization. In particular, new human drug products for humans are subject to rigorous preclinical and clinical testing as a condition for clearance by the FDA and by similar authorities in foreign countries. The lengthy process of seeking these approvals, and the ongoing process of compliance with applicable statutes and regulations, has required, and will continue to require the expenditure of substantial resources. Any failure by us or our collaborators or licensees to obtain, or any delay in obtaining, regulatory approvals could materially adversely affect the marketing of any products developed by us and our ability to receive product or royalty revenue. We have received orphan drug designation for certain therapeutic indications, which might, under certain conditions, accelerate the process of drug commercialization. ALFERON N Injection(R) is only approved for use in intralesional treatment of refractory or recurring external genital warts in patients 18 years of age or older. Use of Alferon N Injection(R) for other applications requires regulatory approval.

A "Fast-Track" designation by the FDA, while not affecting any clinical development time per se, has the potential effect of reducing the regulatory review time by fifty percent (50%) from the time that a commercial drug application is actually submitted for final regulatory review. Regulatory agencies may apply a "Fast Track" designation to a potential new drug to accelerate the approval and commercialization process. Criteria for "Fast Track" include: a) a devastating disease without adequate therapy and b) laboratory or clinical evidence that the candidate drug may address the unmet medical need. As of this date, we have not received a Fast-Track designation for any of our potential therapeutic indications although we have received "Orphan Drug Designation" for both ME/CFS and HIV/AIDS in the U.S. We will continue to present data from time to time in support of obtaining accelerated review. We have not yet submitted any New Drug Application (NDA) for Ampligen(R) or any other drug to a North American regulatory authority. Assuming the results are positive, we expect to finalize the data of our double-blind, placebo controlled AMP516 ME/CFC Phase III clinical trial and submit an NDA by year end 2004. There are no assurances that such designation will be granted, or if granted, there are no assurances that Fast Track designation will materially increase the prospect of a successful commercial application. In 2000 we submitted an emergency treatment protocol for clinically-resistant HIV patients, which was withdrawn by us during the statutory 30 day regulatory review period in favor of a set of individual physician-generated applications. There are no assurances that authorizations to commence such treatments will be granted by any

regulatory authority or that the resultant treatments, if any, will support drug efficacy and safety. In 2001, we did

receive FDA authorization for two separate Phase IIb HIV treatment protocols in which our drug is combined with certain presently available antiretroviral agents. Interim results were presented in 2002 and 2003 at various international scientific meetings.

We are subject to various federal, state and local laws, regulations and recommendations relating to such matters as safe working conditions, laboratory and manufacturing practices, the experimental use of animals and the use of and disposal of hazardous or potentially hazardous substances, including radioactive compounds and infectious disease agents, used in connection with our research work. We believe that our Rockville, Maryland manufacturing and quality assurance/control facility is in substantial compliance with all material regulations applicable to these activities as advanced by the European Union Inspections team which conducted detailed audits in year 2000. The laboratory and production facility in New Brunswick, New Jersey, which we acquired from ISI, is approved for the manufacture of Alferon N Injection(R) and we believe it is in substantial compliance with all material regulations. However, we cannot give assurances that facilities owned and operated by third parties, including those operated by Bioclones Ltd. and Ribotech, Ltd., that are utilized in the manufacture of our products, are in substantial compliance, or if presently in substantial compliance, will remain so. These third party facilities include manufacturing operations in San Juan, Puerto Rico; Cape Town, South Africa; Columbia, Maryland, and Melbourne, Australia.

Research And Development/Collaborative Agreements

In 1994, we entered into a licensing agreement with Bioclones (Proprietory) limited ("Bioclones") for manufacturing and international market development in Africa, Australia, New Zealand, Tasmania, the United Kingdom, Ireland and certain countries in South Africa, of Ampligen(R) and Oragen(TM). Bioclones is to pursue regulatory approval in the areas of its franchise and is required to conduct Hepatitis clinical trials, based on international GMP and GLP standards. Thus far, these Hepatitis studies have not yet commenced to a meaningful level. Bioclones has been given the first right of refusal, subject to pricing, to manufacture that amount of polymers utilized in the production of Ampligen(R) sufficient to satisfy at least one-third of the worldwide sales requirement of Ampligen(R) and other nucleic acid-derived drugs. Pursuant to this arrangement, we received: 1) access to worldwide markets, 2) commercial-scale manufacturing resources, 3) a $3 million cash payment in 1995 from Bioclones, 4) a 24.9% ownership in Ribotech, Ltd., a company set up by Bioclones to develop and manufacture RNA drug compounds, and 5) royalties of 8% on Bioclones nucleic acid-derived drug sales in the licensed territories. The agreement with Bioclones terminates three years after the expiration of the last of the patents supporting the license granted to Bioclones, subject to earlier termination by the parties for uncured defaults under the agreement, or bankruptcy or insolvency of either party. The last patent expires on December 22, 2012.

In August, 1998, we entered into a strategic alliance with Accredo develop certain marketing and distribution capacity for Ampligen(R) in the United States. Accredo is one of the nation's largest home health care companies with over 400 offices and sixty thousand caregivers nationwide. Pursuant to the agreement, Accredo assumed certain responsibilities for distribution of Ampligen(R) for which they received a fee. Through this arrangement, Hemispherx may mitigate the necessity of incurring certain up-front costs. Accredo has also

worked with us in connection with the Amp 511 ME/CFS cost recovery treatment program, Amp 516 ME/CFS Phase III clinical trial and the Amp 719 (combining Ampligen with other antiviral drugs in HIV-salvage therapy and Amp 720 HIV Phase IIb clinical trials now under way). There can be no assurances that this alliance will develop a significant commercial position in any of its targeted chronic disease markets. The agreement had an initial one year term from February 9, 1998 with successive additional one year terms unless either party notifies the other not less than 180 days prior to the anniversary date of its intent to terminate the agreement. Also, the agreement may be terminated for the uncured defaults, or bankruptcy, or insolvency of either party and will automatically terminate upon our receiving an NDA for Ampligen(R) from the FDA, at which time, a new agreement will need to be negotiated with

Accredo or another major drug distributor. There were no initial fees and subsequent fees paid under this agreement total approximately $15,000 for services performed in 2003.

We have acquired a series of patents on Oragen(TM), potentially an oral broad spectrum antiviral, immunological enhancer through a licensing agreement with Temple University. We were granted an exclusive worldwide license from Temple for the Oragen(TM) products. Pursuant to the arrangement, we are obligated to pay royalties of 2% to 4% on sales of Oragen(TM), depending on how much technological assistance is required of Temple. There were no initial fees and we currently pay minimum royalties of $30,000 per year to Temple. These compounds have been evaluated in various academic laboratories for application to chronic viral and immunological disorders. This agreement is to remain in effect until the date that the last licensed patent expires unless terminated sooner by mutual consent or default due to royalties not being paid. The last Oragen(TM) patent expires on August 22, 2015.

In December, 1999, we entered into an agreement with Biovail Corporation International ("Biovail"). Biovail is an international full service pharmaceutical company engaged in the formulation, clinical testing, registration and manufacture of drug products utilizing advanced drug delivery systems. Biovail is headquartered in Toronto, Canada. The agreement grants Biovail the exclusive distributorship of our product in the Canadian territories subject to certain terms and conditions. In return, Biovail agrees to conduct certain pre-marketing clinical studies and market development programs, including without limitation, expansion of the Emergency Drug Release Program in Canada with respect to our products. In addition, Biovail agrees to work with us in preparing and filing a New Drug Submission with Canadian Regulatory Authorities at the appropriate time. Biovail invested $2,250,000 in Hemispherx equity at prices above the then current market price and agreed to make an additional investment of $1,750,000 based on receiving approval to market Ampligen(R) in Canada from the appropriate regulatory authorities in Canada. The agreement requires Biovail to buy exclusively from us and penetrate certain market segments at specific rates in order to maintain market exclusivity. The agreement terminates on December 15, 2009, subject to successive two year extensions by the parties and subject to earlier termination by the parties for uncured defaults under the agreement, bankruptcy or insolvency of either party, or withdrawal of our product from Canada for a period of more than ninety days for serious adverse health or safety reasons.

In 1998, we invested $1,074,000 for a 3.3% equity interest in R.E.D. Laboratory ("R.E.D."). R.E.D. is a privately held biotechnology company for the development of diagnostic markers for Chronic Fatigue Syndrome and other chronic immune diseases. Primarily, R.E.D.'s research and development is based on certain technology owned by Temple University and licensed to R.E.D. We have an

informal collaboration arrangement with R.E.D. to assist in this development. We have supplied scientific data with respect to ME/CFS and engaged R.E.D. to conduct certain blood tests for our ME/CFS clinical trials. We have no other obligations to R.E.D. R.E.D. is headquartered in Belgium. The investment was recorded at cost in 1998. During the three months ended June 2002 and December 2002 respectively, we recorded a non-cash charge of $678,000 and $396,000, respectively, to operations with respect to our investment in R.E.D. These charges were the result of our determination that R.E.D.'s business and financial position had deteriorated to the point that our investment had been permanently impaired.

In May 2000, we acquired an interest in Chronix Biomedical Corp. ("CHRONIX"). Chronix focuses upon the development of diagnostics for chronic diseases. We issued 100,000 shares of common stock to Chronix toward a total equity investment of $700,000. Pursuant to a strategic alliance agreement, we provided Chronix with $250,000 to conduct research in an effort to develop intellectual property on potential new products for diagnosing and treating various chronic illnesses such as ME/CFS. The strategic alliance agreement provides us certain royalty rights with respect to certain diagnostic technology developed from this research and a right of first refusal to license certain therapeutic technology developed from this research. The strategic alliance agreement provides us with a royalty payment of 10% of all net sales of diagnostic technology developed by Chronix for diagnosing Chronic Fatigue Syndrome, Gulf War

Syndrome and Human Herpes Virus-6 associated diseases. The royalty continues for the longer of 12 years from September 15, 2000 or the life of any patent(s) issued with regard to the diagnostic technology. The strategic alliance agreement also provides us with the right of first refusal to acquire an exclusive worldwide license for any and all therapeutic technology developed by Chronix on or before September 14, 2012 for treating Chronic Fatigue Syndrome, Gulf War Syndrome and Human Herpes Virus-6 associated diseases. During the quarter ended December 31, 2002, we recorded a noncash charge of $292,000 with respect to our investment in Chronix. This impairment reduces our carrying value to reflect a permanent decline in Chronix's market value based on its then proposed equity offerings.

In April, 1999 we acquired a 30% equity position in the California Institute of Molecular Medicine ("CIMM") for $750,000. CIMM'S research is focused on developing therapies for use in treating patients affected by Hepatitis C ("HCV"). We use the equity method of accounting with respect to this investment. During the fourth quarter of 2001 we recorded a non-cash charge of $485,000 with respect to our investment in CIMM. This was a result of our determination that CIMM's operations have not yet evolved to the point where the full carrying value of our investment could be supported based on that company's financial position and operating results. During 2002, CIMM continued to suffer significant losses resulting in a deterioration of its financial condition. The $485,000 written off during 2001 represented the unamortized balance of goodwill included as part of our investment. Additionally, during 2001 we reduced our investment in CIMM based on our percentage interest in CIMM's continued operating losses. Our remaining investment at December 31, 2001 in CIMM, representing our 30% interest in CIMM's equity at such date, was not deemed to be permanently impaired, but was completely written off during 2002. Such amount was not material. These charges are reflected in the Consolidated Statements of Operations under the caption "Equity loss in unconsolidated affiliate". We still believe CIMM will succeed in their efforts to advance therapeutic treatment of HCV. We believe that CIMM's Hepatitis C diagnostic technology has great promise and will fill a long-standing global void in the collective abilities to

diagnose and treat Hepatitis C infection at an early stage of the disorder.

In March 2002, our European subsidiary Hemispherx S.A. entered into a Sales and Distribution agreement with Esteve. Pursuant to the terms of the Agreement, Esteve was granted the exclusive right to market Ampligen(R) in Spain, Portugal and Andorra for the treatment of ME/CFS. In addition to other terms and other projected payments, Esteve agreed to conduct certain clinical trials using Ampligen(R) in the patient population coinfected with hepatitis C and HIV viruses. The Agreement runs for the longer of ten years from the date of first arms-length sale in the Territory, the expiration of the last Hemispherx patent exploited by Esteve or the period of regulatory data protection for Ampligen(R) in the applicable territory. Pursuant to the terms of the agreement Esteve is to conduct clinical trials using Ampligen(R) to treat patients with both HCV and HIV and is required to purchase certain minimum annual amounts of Ampligen(R) following regulatory approval. We expect Esteve to start HIV clinical trials in Spain in 2004. The agreement is terminable by either party if Ampligen(R) is withdrawn from the territory for a specified period due to serious adverse health or safety reasons; bankruptcy, insolvency or related issues of one of the parties; or material breach of the agreement. Hemispherx may transform the agreement into a non-exclusive agreement or terminate the agreement in the event that Esteve does not meet specified percentages of its annual minimum purchase requirements under the agreement. Esteve may terminate the agreement in the event that Hemispherx fails to supply Ampligen(R) to the territory for a specified period of time or certain clinical trials being conducted by Hemispherx are not successful. The last patent with respect to this agreement expires on June 5, 2012.

The development of our nucleic acid based products requires the commitment of substantial resources to conduct the time-consuming research, preclinical development, and clinical trials that are necessary to bring pharmaceutical products to market and to establish commercial-scale production and marketing capabilities. During our last three fiscal years, we have directly spent approximately $13,876,000 in research and development, of which approximately $3,150,000 was expended in the year

ended December 31, 2003. These direct costs do not include the overhead and administrative costs necessary to support the research and development effort. Our European subsidiary has an exclusive license on all the technology and support from us concerning Ampligen(R) for the use of ME/CFS and other applications for all countries of the European Union (excluding the UK where Bioclones has a marketing license) and Norway, Switzerland, Hungary, Poland, the Balkans, Russia, Ukraine, Romania, Bulgaria, Slovakia, Turkey, Iceland and Liechtenstein. As mentioned above, Hemispherx S.A. entered into a Sales and Distribution Agreement with Esteve. Pursuant to the terms of this agreement, Esteve has been granted the exclusive right in Spain, Portugal and Andorra to market Ampligen(R) for the treatment of ME/CFS. See "European Operations", above for more detailed information.

Human Resources

As of April 6, 2004, we had 38 personnel working on the development of Ampligen(R) consisting of 19 full time employees, six regulatory/research medical personnel on a part-time basis, and 13 clinical investigators. Part time personnel are paid on a per diem or monthly basis. 22 personnel are engaged in our research, development, clinical, and manufacturing effort. Five of our personnel perform regulatory, general administration, data processing, including bio-statistics, financial and investor relations functions.

In addition to the foregoing personnel, pursuant to our agreement with ISI, we added personnel from ISI to our payroll consisting of five part-time and 12 full-time employees.

We believe that the combination of Hemispherx and ISI Scientific employees has 1) significantly strengthened our overall organization, 2) added expertise to monitor and complete our ongoing clinical trials and 3) improved our data management and system administration.

While we have been successful in attracting skilled and experienced scientific personnel, there can be no assurance that we will be able to attract or retain the necessary qualified employees and/or consultants in the future.

Scientific Advisory Board

We reestablished a Scientific Advisory Board in October 2003 consisting of individuals who we believe have particular scientific and medical expertise in Virology, Cancer, Immunology, Biochemistry and related fields. These individuals will advise us about current and long term scientific planning including research and development. The Scientific Advisory Board will hold periodic meetings as needed by the clinical studies in progress by us. In addition, individual Scientific Advisory Board Members sometimes will consult with, and meet informally with our employees. All members of the Scientific Advisory are employed by others and may have commitments to and/or consulting agreements with other entities, including our potential competitors. Members of the Scientific Advisory Board are compensated at the rate of $1,000 per meeting attended or per day devoted to our affairs.

In January 2004 a meeting was held in Philadelphia where certain Scientific Advisory Board members from Cornell University, University of Virginia and the Pasteur Institute gathered to review and make suggestions pertaining to our clinical and research programs in 2004. A member of our Board of Directors, Dr. William Mitchell of Vanderbilt University, also attended the meeting.

Facilities

We currently lease and occupy a total of approximately 18,850 square feet of laboratory and office space in two states and some office space in Paris, France. Our headquarters is located in Philadelphia, Pennsylvania consisting of a suite of offices of approximately 15,000 square feet. We also lease space of

approximately 3,850 square feet in Rockville, Maryland for research and development, our pharmacy, packaging, quality assurance and quality control laboratories, as well as additional office space. Approximately 2,000 square feet are dedicated to the pharmacy, packaging, quality assurance and control functions. We believe that our Rockville facilities will meet our requirements, for planned clinical trials and treatment protocols through 2004 and possibly longer after which time we may need to increase our Rockville facilities either through third parties or by building or acquiring commercial-scale facilities.

We currently occupy and use the New Brunswick, New Jersey laboratory and production facility that we acquired from ISI. These facilities consists of two buildings located on 2.8 acres. One building is a two story facility consisting of a total of 31,300 square feet. This facility has offices, laboratories and production space and shipping and receiving areas. Building Two has 11,670 square feet consisting of offices, laboratories and warehouse space. The property has parking space for approximately 100 vehicles.

We also have a 24.9% interest in Ribotech, Ltd. located in South Africa. Ribotech was established by Bioclones to develop and operate a manufacturing facility. Manufacturing at the pilot facility commenced in 1996. We expect that Ribotech will start construction on a new commercial production facility in the future, although no assurance can be given that this will occur. We have no obligation to fund this construction. Our interest in Ribotech, is a result of the marketing and manufacturing agreement executed with Bioclones in 1994.

Legal Proceedings

On September 30, 1998, we filed a multi-count complaint against Manuel P. Asensio, Asensio & Company, Inc. ("Asensio"). The action included claims of defamation, disparagement, tortuous interference with existing and prospective business relations and conspiracy, arising out of Asensio's false and defamatory statements. The complaint further alleged that Asensio defamed and disparaged us in furtherance of a manipulative, deceptive and unlawful short-selling scheme in August and September, 1998. In 1999, Asensio filed an answer and counterclaim alleging that in response to Asensio's strong sell recommendation and other press releases, we made defamatory statements about Asensio. We denied the material allegations of the counterclaim. In July 2000, following dismissal in federal court for lack of subject matter jurisdiction, we transferred the action to the Pennsylvania State Court. In March 2001, the defendants responded to the complaints as amended and a trial commenced on January 30, 2002. A jury verdict disallowed the claims against the defendants for defamation and disparagement and the court granted us a directed verdict on the counterclaim. On July 2, 2002 the Court entered an order granting us a new trial against Asensio for defamation and disparagement. Thereafter, Asensio appealed the granting of a new trial. This appeal is now pending in the Superior Court of Pennsylvania.

In June 2002, a former ME/CFS clinical trial patient and her husband filed a claim in the Superior Court of New Jersey, Middlesex County, against us, one of our clinical trial investigators and others alleging that she was harmed in the ME/CFS clinical trial as a result of negligence and breach of warranties. We believe the claim is without merit and we are defending the claim against us through our product liability insurance carrier.

In June 2002, a former ME/CFS clinical trial patient in Belgium filed a claim in Belgium, against Hemispherx Biopharma Europe, NV/SA, our Belgian subsidiary, and one of our clinical trial investigators alleging that she was harmed in the Belgium ME/CFS clinical trial as a result of negligence and breach of warranties. We believe the claim is without merit and we are defending the claim against us through our product liability insurance carrier.

On September 16, 2003, we filed and subsequently served and moved for expedited proceedings on, a complaint filed in the Court Of Chancery of the State of Delaware, New Castle County, against ISI.

The Complaint sought specific performance, and declaratory and injunctive relief related to the first and second asset acquisition agreements with ISI. Specifically, we alleged that ISI has delayed its performance pursuant to the agreements and, as a result, the second asset purchase did not close within 180 days of the date of the agreements. Paragraph 7.7 of the second asset purchase agreement states that either party to the agreement may terminate the agreement if there is no closing within 180 days of the date of the agreement. We requested that the Court require ISI to specifically perform its obligations under the agreement or, in the alternative, that paragraph 7.7 of the agreement be eliminated or reformed to eliminate ISI's ability to terminate pursuant to

that paragraph. We also requested that ISI, as a result of its conduct, not be permitted to terminate the agreements pursuant to paragraph 7.7 or due to the passage of time. At a hearing held on September 29, 2003, the Court set a trial of our case for January 6-7, 2004, which was postponed, and accepted the agreement of the parties pursuant to which the date on which ISI may exercise its termination right is extended until no earlier than two weeks following trial. The second asset acquisition agreement closed on March 17, 2004 and we are in the process of having the complaint dismissed.

MANAGEMENT

The following sets forth biographical information about each of our directors and executive officers as of the date of this prospectus:

Name	Age	Position
William A. Carter, M.D.	65	Chairman, Chief Executive Officer, and President
Robert E. Peterson	66	Chief Financial Officer
David R. Strayer, M.D.	58	Medical Director, Regulatory Affairs
Mei-June Liao, Ph.D.	53	Vice President of Regulatory Affairs, Quality Control and Research and Development
Robert Hansen	60	Vice President of Manufacturing
Carol A. Smith, Ph.D.	54	Director of Process Development
Richard C. Piani	77	Director
William M. Mitchell, M.D.	69	Director
Ransom W. Etheridge	64	Director, Secretary and General Counsel
Eraj Kiani	58	Director
Antoni Esteve	45	Director

Each director has been elected to serve until the next annual meeting of stockholders, or until his earlier resignation, removal from office, death or incapacity. Each executive officer serves at the discretion of the Board of Directors, subject to rights, if any, under contracts of employment.

WILLIAM A. CARTER, M.D., the co-inventor of Ampligen, joined us in 1978, and has served as: (a) our Chief Scientific Officer since May 1989; (b) the Chairman of our Board of Directors since January

1992; (c) our Chief Executive Officer since July 1993; (d) our President since April, 1995; and (e) a director since 1987. From 1987 to 1988, Dr. Carter served as our Chairman. Dr. Carter was a leading innovator in the development of human interferon for a variety of treatment indications including various viral diseases and cancer. Dr. Carter received the first FDA approval to initiate clinical trials on a beta interferon product manufactured in the U.S. under his supervision. From 1985 to October 1988, Dr. Carter served as our Chief Executive Officer and Chief Scientist. He received his M.D. degree from Duke University

and underwent his post-doctoral training at the National Institutes of Health and Johns Hopkins University. Dr. Carter also served as Professor of Neoplastic Diseases at Hahnemann Medical University, a position he held from 1980 to 1998. Dr. Carter served as Director of Clinical Research for Hahnemann Medical University's Institute for Cancer and Blood Diseases, and as a professor at Johns Hopkins School of Medicine and the State University of New York at Buffalo. Dr. Carter is a Board certified physician and author of more than 200 scientific articles, including the editing of various textbooks on anti-viral and immune therapy.

ROBERT E. PETERSON has served as our Chief Financial Officer since April, 1993 and served as an Independent Financial Advisor to us from 1989 to April, 1993. Also, Mr. Peterson has served as Vice President of the Omni Group, Inc., a business consulting group based in Tulsa, Oklahoma since 1985. From 1971 to 1984, Mr. Peterson worked for PepsiCo, Inc. and served in various financial management positions including Vice President and Chief Financial Officer of PepsiCo Foods International and PepsiCo Transportation, Inc. Mr. Peterson is a graduate of Eastern New Mexico University.

DAVID R. STRAYER, M.D. who served as Professor of Medicine at the Medical College of Pennsylvania and Hahnemann University, has acted as our Medical Director since 1986. He is Board Certified in Medical Oncology and Internal Medicine with research interests in the fields of cancer and immune system disorders. Dr. Strayer has served as principal investigator in studies funded by the Leukemia Society of America, the American Cancer Society, and the National Institutes of Health. Dr. Strayer attended the School of Medicine at the University of California at Los Angeles where he received his M.D. in 1972.

MEI-JUNE LIAO, Ph.D. has served as Vice President of Regulatory Affairs, Quality and Research & Development since October 2003 and as Vice President of Research & Development since March 2003 with responsibilities for the regulatory, quality control and product development of Alferon(R). Before the acquisition of certain assets of ISI, Dr. Liao was Vice President of Research and Development from 1995 to 2003 and held senior positions in the Research and Development Department of ISI from 1983 to 1994. Dr. Liao received her Ph.D. from Yale University in 1980 and completed a three year postdoctoral appointment at the Massachusetts Institute of Technology under the direction of Nobel Laureate in Medicine, Professor H. Gobind Khorana. Dr. Liao has authored many scientific publications and invention disclosures.

ROBERT HANSEN joined us as Vice President of Manufacturing in 2003 upon the acquisition of certain assets of ISI. He is responsible for the manufacture of Alferon N(R). Mr. Hansen had been Vice President of Manufacturing for ISI since 1997, and served in various capacities in manufacturing since joining ISI in 1987. He has a B.S. degree in Chemical Engineering from Columbia University in 1966.

CAROL A. SMITH, Ph.D. is Director of Process Development and has served as our Director of Manufacturing and Process Development since April 1995, as Director of Operations since 1993 and as the Manager of Quality Control from 1991 to 1993, with responsibility for the manufacture, control and chemistry of Ampligen(R). Dr. Smith was Scientist/Quality Assurance Officer for Virotech International, Inc. from 1989 to 1991 and Director of the Reverse Transcriptase and Interferon Laboratories and a Clinical Monitor for Life Sciences, Inc. from 1983 to 1989. She received her Ph.D. from the University of South Florida College of Medicine in 1980 and was an NIH post-doctoral fellow at the Pennsylvania State University College of Medicine.

RICHARD C. PIANI has been a director since 1995. Mr. Piani has been employed as a principal delegate for Industry to the City of Science and Industry, Paris, France, a billion dollar scientific and educational complex. Mr. Piani provided consulting to us in 1993, with respect to general business strategies for our European operations and markets. Mr. Piani served as Chairman of Industrielle du Batiment-Morin, a building materials corporation, from 1986 to 1993. Previously Mr. Piani was a Professor of International Strategy at Paris Dauphine University from 1984 to 1993. From 1979 to 1985, Mr. Piani served as Group Director in Charge of International and Commercial Affairs for Rhone-Poulenc and from 1973 to 1979 he was Chairman and Chief Executive Officer of Societe "La Cellophane", the French company which invented cellophane and several other worldwide products. Mr. Piani has a Law degree from Faculte de Droit, Paris Sorbonne and a Business Administration degree from Ecole des Hautes Etudes Commerciales, Paris.

RANSOM W. ETHERIDGE has been a director since October 1997, and presently serves as our secretary and general counsel. Mr. Etheridge first became associated with us in 1980 when he provided consulting services to us and participated in negotiations with respect to our initial private placement through Oppenheimer & Co., Inc. Mr. Etheridge has been practicing law since 1967, specializing in transactional law. Mr. Etheridge is a member of the Virginia State Bar, a Judicial Remedies Award Scholar, and has served as President of the Tidewater Arthritis Foundation. He is a graduate of Duke University, and received his Law degree from the University of Richmond School of Law.

WILLIAM M. MITCHELL, M.D., Ph.D. has been a director since July 1998. Dr. Mitchell is a Professor of Pathology at Vanderbilt University School of Medicine. Dr. Mitchell earned a M.D. from Vanderbilt and a Ph.D. from Johns Hopkins University, where he served as an Intern in Internal Medicine, followed by a Fellowship at its School of Medicine. Dr. Mitchell has published over 200 papers, reviews and abstracts dealing with viruses and anti-viral drugs. Dr. Mitchell has worked for and with many professional societies, including the International Society for Interferon Research, and committees, among them the National Institutes of Health, AIDS and Related Research Review Group. Dr. Mitchell previously served as one of our directors from 1987 to 1989.

IRAJ E. KIANI, M.B.A., Ph.D., was appointed to the Board of Directors on May 1, 2002. Dr. Kiani is a citizen of England and resides in Newport, California. Dr. Kiani served in various local government position including the Governor of Yasoi, Capital of Boyerahmand, Iran. In 1980, Dr. Kiani moved to England, where he established and managed several trading companies over a period of some 20 years. Dr. Kiani is a planning and logistic specialist who is now applying his knowledge and experience to build a worldwide immunology network, which will use our proprietary technology. Dr. Kiani received his Ph.D. degree from the University of Warwick in England.

ANTONI ESTEVE became a member of our Board of Directors in November 2003. Dr. Esteve is a Member of the Executive Committee and Director of Scientific and Commercial Operations for Laboratorios del Dr. Esteve S.A. He has been engaged at Laboratorios del Dr. Esteve since 1984. Since 1986 he is Professor at the Autonomous University of Barcelona, School of Pharmacy. In 2001 he was elected as member of the Advisory Board for R&D of the Spanish Ministry of Science and Technology. Since 2002 he also has been President of Centre de Transfussio i Banc de Teixits (the Transfusion and Tissues Bank Center of Catalonia). Dr. Esteve received a degree in Pharmacy from the University of Barcelona, Faculty of Pharmacy, in 1981 and a Ph.D. in Pharmaceutical Science in 1990.

Committees of the Board

The board of directors maintains the following committees:

Audit Committee. Our Audit Committee of the Board of Directors consists of Richard Piani, Committee Chairman, William Mitchell, M.D. and Iraj-

Eqhbal Kiani. Mr. Piani, Dr. Mitchell and Iraj-Eqhbal Kiani are Independent Directors. We do not have a financial expert as defined in Securities and Exchange Commission rules on the committee in the true sense of the description. However, Mr. Piani is a Businessman and has 40 years of experience of working with budgets, analyzing financials and dealing with financial institutions. We believe Mr. Piani, Dr. Mitchell and Iraj-Eqhbal Kiani to be independent of management and free of any relationship that would interfere with their exercise of independent judgment as members of this committee. Our audit committee is responsible for annually recommending independent accountants, preparing the reports or statements as may be required by AMEX or the securities laws, and reviewing: (i) the adequacy of our system of internal accounting controls; (ii) our audited financial statements and reports and discussing the statements and reports with management, including any significant adjustments, management judgments and estimates, new accounting policies and disagreements with management; and (iii) disclosures by independent accountants concerning relationships with our company and the performance of our independent accountants

Executive Committee. The Executive Committee is composed of William A. Carter, Chief Executive Officer and President, Ransom W. Etheridge, Secretary and Iraj-Eqhbal Kiani. The Executive Committee makes recommendations to management regarding general business matters of Hemispherx.

Compensation Committee. The Compensation Committee is composed of Ransom W. Etheridge, Secretary and director, and Richard C. Piani, director. The Compensation Committee makes recommendations concerning salaries and compensation for employees of and consultants to Hemispherx.

Nominating Committee. The nominating committee is composed of William Mitchell, Iraj Kiani and Richard Piani, all independent directors, and is responsible for recommending to the Board the slate of nominees to be put forth for election by the stockholders at our annual meeting. This committee also reviews proposals for nominations from stockholders that are submitted in accordance with the procedures published in our proxy statement.

Compensation of Directors

The compensation package for members of the Board of Directors was changed on September 9, 2003. Board member compensation consists of an annual retainer of $100,000 to be paid 50% in cash and 50% in our common stock. In addition, all non-employee directors received some compensation in 2003 for special project work performed on our behalf. All directors have been granted options to purchase common stock under our 1990 Stock Option Plan and/or Warrants to purchase common stock. We believe such compensation and payments are necessary in order for us to attract and retain qualified outside directors.

EXECUTIVE COMPENSATION

The summary compensation table below sets forth the aggregate compensation paid or accrued by us for the fiscal years ended December 31, 2003, 2002 and 2001 to (i) our Chief Executive Officer and (ii) our four most highly paid

executive officers other than the CEO who were serving as executive officers at the end of the last completed fiscal year and whose total annual salary and bonus exceeded $100,000 (collectively, the "Named Executives").

EXECUTIVE COMPENSATION
SUMMARY COMPENSATION TABLE

Name and Principal Position	Year	Salary ($)	Restricted Stock Awards	Warrants & Options Awards	All Other Compens
William A. Carter	2003	(4) $582,461	--	(5) 1,450,000	$37,
Chairman of	2002	(4) 565,514	--	(8) 1,000,000	25,
the Board and CEO	2001	(4) 551,560	--	(2) 386,650	22,
Robert E. Peterson	2003	(9) $230,450	--	--	
Chief Financial	2002	151,055	--	(8) 200,000	
Officer	2001	146,880	--	(3) 40,000	
David R. Strayer, M.D.	2003	(6) $190,096	--	--	
Medical Director	2002	(6) 178,594	--	(8) 50,000	
	2001	(6) 174,591	--	(7) 10,000	
Carol A. Smith, Ph.D.	2003	$140,576	--	--	
Director of	2002	128,346	--	(8) 20,000	
Manufacturing	2001	124,800	--	(7) 10,000	
Robert Hansen, V.P. of	2003	(10) $104,500	--	--	
Manufacturing	2002	--	--	--	
	2001	--	--	--	

---

(1) Consists of insurance premiums paid by us with respect to term life and disability insurance for the benefit of the named executive officer.

(2) Consists of 188,325 warrants to purchase common stock at $6.00 per share and 188,325 warrants to purchase common stock at $9.00 per share. Also includes a stock option grant of 10,000 shares exercisable at $4.03 per share.

(3) Consist of a stock option grant of 10,000 shares exercisable at $4.03 per share and 30,000 warrants to purchase common stock at $5.00 per share.

(4) Includes bonuses of $94,952, $96,684, and $99,481 in 2001, 2002 and 2003, respectively. Also includes funds previously paid to Dr. Carter by Hahnemann Medical University where he served as a professor until 1998. This compensation was continued by us and totaled $79,826 in 2001, $82,095 in 2002 and $84,776 in 2003.

(5) Represents warrants to purchase common stock exercisable at $2.20 per share.

(6) Includes $98,926 paid by Hahnemann Medical University where Dr. Strayer served as a professor until 1998. This compensation was continued by us in 2001, 2002 and 2003.

(7) Consist of stock option grant of 10,000 shares exercisable at $4.03 per share.

(8) Represents number of warrants to purchase shares of common stock at $2 per share.

(9) 2003 includes a bonus of $74,464 paid in 2004.

(10) Compensation since March 2003. Employed by ISI prior to that

The following table sets forth certain information regarding stock warrants granted during 2003 to the executive officers named in the Summary Compensation Table.

	Individual Grants				
Name	Number Of Securities Underlying Warrants Granted (1)	Percentage Of Total Warrants Granted To Employees In Fiscal Year 2002(2)	Exercise Price Per Share (3)	Expiration Date	Potential Realiza At Assumed Ra Stock Price Appr For Warrants 5% (4)
Carter, W.A.	1,450,000	100%	$2.20	9/8/08	$4,071,338

(1) These warrants became exercisable on March 17, 2004 when the second ISI asset acquisition was completed.

(2) Total warrants issued to employees in 2003 were 1,450,000.

(3) The exercise price is equal to the closing price of our common stock at the date of issuance.

(4) Potential realizable value is based on an assumption that the market price of the common stock appreciates at the stated rates compounded annually, from the date of grant until the end of the respective option term. These values are calculated based on requirements promulgated by the Securities and Exchange Commission and do not reflect our estimate of future stock price appreciation.

The following table sets forth certain information regarding the stock options held as of December 31, 2003 by the individuals named in the above Summary Compensation Table.

AGGREGATED OPTION EXERCISES IN LAST FISCAL YEAR

AND FISCAL YEAR-END OPTION VALUE

Name	Shares Acquired on Exercise (#)	Value Realized ($)	Securities Underlying Unexercised Warrants/ Options at Fiscal Year End Numbers		Value of U In-the-Mon At Fiscal Dollars
			Exercisable	Unexercisable	Exercisabl
William Carter	--	--	3,805,378(2)	1,950,000(3)	$367,150
Robert Peterson	--	--	403,750(4)	0	52,000
David Strayer	--	--	130,000(5)	0	13,000
Carol Smith	--	--	41,791(6)	0	5,200

---

(1) Computation based on $2.26, the December 31, 2003 closing bid price for the common stock on the American Stock Exchange.

(2) Consist of (i) 500,000 warrants exercisable at $2.00 per share expiring on August 13, 2007 (ii) 188,325 warrants exercisable at $6.00 per share expiring on February 22, 2006 (iii) 188,325 warrants exercisable at $9.00 per share expiring on February 22, 2006 (iv) 100,000 warrants exercisable at $6.25 per share expiring on April 8, 2004 (v) 25,000 warrants exercisable at $6.50 per share expiring on September 17, 2004 (vi) 25,000 warrants exercisable at $8.00 per share expiring on September 17, 2004 (vii) 10,000 stock option exercisable at $4.03 per share expiring on January 3, 2011 and (viii) 73,728 stock options exercisable at $2.71 per share until exercised. Also include 2,695,000 warrants and options held in the name of Carter Investments, L.C. of which W.A. Carter in the principal beneficiary. These securities consist of (i) 340,000 warrants exercisable at $4.00 per share expiring on January 1, 2008,(ii) 170,000 warrants exercisable at $5.00 per share expiring on January 1, 2005,(iii) 300,000 warrants exercisable at $6.00 per share expiring on January 1, 2005 (iv) 20,000 warrants exercisable at $4.00 per share expiring on 2008,(v) 465,000 warrants exercisable at $1.75 expiring on June 3, 2005, and 1,400,000 warrants exercisable at $3.50 per share expiring on October 16, 2004.

(3) Consists of (i) 500,000 warrants exercisable at $2.00 per share expiring on August 13, 2007 and (ii) 1,450,000 warrants exercisable at $2.20 per share expiring on September 8, 2008.

(4) Consists of (i) 10,000 stock options exercisable at $4.03 per share expiring on January 3, 2011 (ii) 13,750 stock options exercisable at $3.50 per share expiring on January 22, 2007, (iii) 200,000 warrants exercisable at $2.00 per share expiring on August 13, 2007, (iv) 50,000 warrants exercisable at $3.50 expiring on March 1, 2006, (v) 100,000 warrants exercisable at $5.00 per share

expiring on April 14, 2006 and (vi) 30,000 warrants exercisable at $5.00 per share expiring on February 28, 2009.

(5) Consists of (i) 50,000 warrants exercisable at $2.00 per share expiring on August 13, 2007, (ii) 50,000 warrants exercisable at $4.00 per share expiring on February 28, 2008, (iii) 10,000 stock options exercisable at $4.03 expiring on January 3, 2011 and (iv) 20,000 stock options exercisable at $3.50 per share expiring on January 22, 2007.

(6) Consists of (i) 20,000 warrants exercisable at $2.00 per share expiring on August 13, 2007, (ii) 5,000 warrants exercisable at $4.00 per share expiring on June 7, 2008, (iii) 10,000 stock options exercisable at $4.03 per share expiring on January 3, 2016, and (iv) 6,791 stock options exercisable at $3.50 per share expiring on January 22, 2007.

The following table gives information about our Common Stock that may be issued upon the exercise of options, warrants and rights under all of our equity compensation plans as of December 31, 2003.

Plan Category	Number of Securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average Exercise price of Outstanding options, warrants and rights	Number of sec Remaining ava future issuan equity compen plans (exclud securities re column (a))
	(a)	(b)	(c
Equity compensation plans approved by security holders:	433,134	$ 3.16	-
Equity compensation plans not approved by security holders:	--	--	-
Total	433,134	$ 3.16	-

In September, 2003 our Board of Directors changed the non-employee Board Member compensation to be 50% cash and 50% stock. The Board's stock compensation is to be paid on the first day of each calendar quarter. The number of shares paid shall have a value of $12,500 with the value of the shares being determined by the closing price of our common stock on the American Stock Exchange on the last trading day of the preceding quarter. In no event shall the number of shares issued under this plan exceed 1,000,000 shares over a ten year period.

Employment Agreements

We entered into an amended and restated employment agreement with our President and Chief Executive Officer, Dr. William A. Carter, dated as of December 3, 1998, as amended in August 2003, which provided for his employment until May 8, 2008 at an initial base annual salary of $361,586, subject to annual cost of living increases. In addition, Dr. Carter could receive an annual performance bonus of up to 25% of his base salary, at the sole discretion of the board of directors. Dr. Carter will not participate in any discussions

concerning the determination of his annual bonus. Dr. Carter is also entitled to an incentive bonus of 0.5% of the gross proceeds received by us from any joint venture or corporate partnering arrangement, up to an aggregate maximum incentive bonus of $250,000 for all such transactions. Dr. Carter's agreement also provides that he be paid a base salary and benefits through May 8, 2004 if he is terminated without "cause", as that term is defined in the agreement. This agreement was extended to May 8, 2008. Pursuant to his original agreement, as amended on August 8, 1991, Dr. Carter was granted options to purchase 73,728 shares of our common stock at an exercise price of $2.71 per share.

We entered into an amended and restated engagement agreement with Robert E. Peterson dated April 1, 2001 which provides for Mr. Peterson's employment as our Chief Financial Officer until December 31, 2003 which has been extended six months, at an annual base salary of $155,988 per year, subject to annual cost of living increases. In addition, Mr. Peterson shall receive bonus compensation upon Federal Drug Administration approval of Ampligen based on the number of years of his employment by us up to the date of such approval. Mr. Peterson's agreement also contains a provision for severance pay equal to nine months compensation.

1990 Stock Option Plan

Our 1990 Stock Option Plan, as amended ("1990 Plan"), provides for the grant of options to our employees, directors, officers, consultants and advisors for the purchase of up to an aggregate of 460,798 shares of common stock. The 1990 plan is administered by the Compensation Committee of the board of directors, which has complete discretion to select eligible individuals to receive and to establish the terms of option grants. The number of shares of common stock available for grant under the 1990 Plan is subject to adjustment for changes in capitalization. As of December 31, 2003, no options were available for grants under the 1990 plan. This plan remains in effect until terminated by the Board of Directors or until all options are issued.

401(K) Plan

In December 1995, we established a defined contribution plan, effective January 1, 1995, entitled the Hemispherx Biopharma employees 401(K) Plan and Trust Agreement. All of our full time employees are eligible to participate in the 401(K) plan following one year of employment. Subject to certain limitations imposed by federal tax laws, participants are eligible to contribute up to 15% of their salary (including bonuses and/or commissions) per annum. Participants' contributions to the 401(K) plan may be matched by Hemispherx at a rate determined annually by the board of directors. Each participant immediately vests in his or her deferred salary contributions, while our contributions will vest over one year. In 2003 we provided matching contributions to each employee for up to 6% of annual pay for a total of $34,000 for all eligible employees.

PRINCIPAL STOCKHOLDERS

The following table sets forth as of April 6, 2004, the number and percentage of outstanding shares of common stock beneficially owned by:

- Each person, individually or as a group, known to us to be deemed the beneficial owners of five percent or more of our issued and outstanding common stock;
- each of our directors and the Named Executives; and

o all of our officers and directors as a group.

This table is based upon information supplied by Schedules 13D and 13G, if any, filed with the Securities and Exchange Commission, and information obtained from our directors and named executives. For purposes of this table, a person or group of persons is deemed to have "beneficial ownership" of any shares of common stock which such person has the right to acquire within 60 days of April 6, 2004. For purposes of computing the percentage of outstanding shares of common stock held by each person or group of persons named in the table, any security which such person or persons has or have the right to acquire within such date is deemed to be outstanding but is not deemed to be outstanding for the purpose of computing the percentage ownership of any other person. Except as indicated in the footnotes to this table and pursuant to applicable community property laws, we believe, based on information supplied by such persons, that the persons named in this table have sole voting and investment power with respect to all shares common stock which they beneficially own. As of April 6, 2004, 41,617,249 shares of our common stock were outstanding. Unless otherwise noted, the address of each of the principal stockholders is care of us at One Penn Center, 1617 JFK Boulevard, Philadelphia, Pennsylvania 19103.

Name and Address of Beneficial Owner	Shares Beneficially Owned	% Of Share Beneficially Owned
William A. Carter, M.D.	5,760,028(1)	12.3%
Robert E. Peterson	404,250(2)	*
Ransom W. Etheridge 2610 Potters Rd. Virginia Beach, VA 23452	414,316(3)	1.0
Richard C. Piani 97 Rue Jeans-Jaures Levaillois-Perret France 92300	196,747(4)	*
William M. Mitchell, M.D. Vanderbilt University Department of Pathology Medical Center North 21st and Garland Nashville, TN 37232	196,861(5)	*

Antoni Esteve Laboratorios Del Dr. Esteve S.A. AV. Mare de Deu de Montserat Barcelona, 08041, Spain	347,446(6)	*
David R. Strayer, M.D.	144,746(7)	*
Carol A. Smith	41,791(8)	*
Iraj-Eqhbal Kiani Orange County Immune Institute 18800 Delaware Street Huntingdon Beach, CA 92648	12,000(9)	*
Mei-June Liao, Ph.D.	0	0

Robert Hansen	0	0
All directors and executive officers as a group (11 persons)	7,518,185	15.6%

---

* Less than 1%

(1) Includes (i) an option to purchase 73,728 shares of common stock from Hemispherx at an exercise price of $2.71 per share and expiring on August 8, 2004, (ii) Rule 701 Warrants to purchase 1,400,000 shares of common stock at a price of $3.50 per share, originally expiring on September 30, 2002 was extended to September 30,2007; (iii) warrants to purchase 465,000 shares of common stock at $1.75 per share issued in connection with the 1995 Standby Financing Agreement and expiring on June 30, 2005; (iv) 340,000 common stock warrants exercisable at $4.00 per share and originally expiring on January 1, 2003 was extended to January 1, 2008; (v) 170,000 common stock warrants exercisable at $5.00 per share and expiring on January 2, 2005;(vi) 25,000 warrants to purchase common stock at $6.50 per share and expiring on September 17, 2004;(vii) 25,000 warrants to purchase common stock at $8.00 per share and expiring on September 17, 2004;(viii) 100,000 warrants to purchase common stock at $6.25 per share and expiring on April 8, 2004; (ix) 20,000 warrants to purchase common stock at $4.00 per share originally expiring January 1, 2003 was extended to January 1, 2008, (x) 188,325 common stock warrants exercisable at $6.00 per share and expiring on February 22, 2006; (xi) 188,325 common stock warrants exercisable at $9.00 per share and expiring on February 22, 2006 (xii) 300,000 common stock warrants granted in 1998 that are exercisable at $6.00 per share and expiring on January 1, 2006 (xiii) options to purchase 10,000 shares of common stock at $4.03 per share and expiring on January 3, 2011 (xiv) 500,000 warrants exercisable $2.00 per share in August 13, 2007 (xv) 1,450,000 warrants exercisable at $2.20 per share expiring on September 9, 2008 and (xvi) 504,650 shares of common stock. Does not include warrants that are not vested consisting of 500,000 warrants exercisable at $2.00 per share expiring on August 13, 2007.

(2) Includes (i) 13,750 options to purchase common stock at an exercise price of $3.50 per share, expiring on January 7, 2007; (ii) warrants to purchase 50,000 shares of Common stock at an exercise price of $3.50 per share, expiring on March 1, 2006; (iii) warrants to purchase 100,000 shares of common stock at $5.00 per share, expiring on April 14, 2006; (iv) 30,000 warrants to purchase

common stock at $5.00 per share an expiring on February 28, 2009 (v) options to purchase 10,000 shares at $4.03 per share that expire on January 3, 2011 (vi) 200,000 warrants exercised at $2.00 per share expiring on November 13, 2007 and (vii) 500 shares of common stock.

(3) Includes 20,000 warrants to purchase common stock at $4.00 per share, originally expiring on January 1, 2003 and was extended to January 1, 2008; 25,000 warrants to purchase common stock at $6.50 per share; 25,000 warrants to purchase common stock at $8.00 per share, all expiring on September 12, 2004; 100,000 warrants exercisable $2.00 per share expiring on August 13, 2007; 200,000 stock options exercisable at $2.75 per share and expiring on December 4, 2013 and 44,316 shares of common stock.

(4) Includes (i) 20,000 warrants to purchase common stock at $4.00 per share;

(ii) warrants to purchase 25,000 shares of common stock at $6.50 per share; (iii) 25,000 warrants to purchase common stock at $8.00 per share, all expiring on September 17, 2004;(vi) 100,000 warrants exercisable at $2.00 per share expiring on August 13, 2007, (vi) 8,847 shares of common stock owned by Mr. Piani (vi) 12,900 shares of common stock owned jointly by Mr. and Mrs. Piani; and (vii) 5000 shares of common stock owned by Mrs. Piani.

(5) Includes (I) warrants to purchase 12,000 shares of common stock at $6.00 per share, expiring on August 25, 2008; (ii) 25,000 warrants to purchase common stock at $6.50 per share; (iii) 25,000 warrants to purchase common stock at $8.00 per share all expiring on September 17, 2004; (iv) 100,000 warrants exercisable at $2.00 per share expiring in August 13, 2007 and 34,861 shares of common stock.

(6) Consists of 347,446 shares of our common stock owned by Provesan S.A., an affiliate of Laboratorios del Dr. Esteve S.A. Dr. Antoni Esteve is a member of the executive committee and director of Scientific and Commercial Operations of Laboratorios del Dr. Esteve S.A.

(7) Includes (i) stock options to purchase 20,000 shares of common stock at $3.50 per share; (ii) 50,000 warrants to purchase common stock at $4.00 per share; (iii) 10,000 stock options exercisable at $4.03 per share and expiring on January 3, 2011; 50,000 warrants to purchase common stock at $2.00 per share and expiring on August 13, 2007 and; (iv) 14,746 shares of common stock.

(8) Consists of 5,000 warrants to purchase common stock at $4.00 per share expiring June 7, 2008; 6,791 stock options exercisable at $3.50 expiring January 22, 2007 20,000 warrants exercisable at $2.00 per share expiring in August 13, 2007 and options to purchase 10,000 shares of common stock at $ 4.03 per share expiring on January 3, 2011.

(9) Consist of 12,000 warrants exercisable at $3.86 per share expiring on April 30, 2005.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Ransom W. Etheridge, one of our directors, is an attorney in private practice who has rendered corporate legal services to us from time to time, for which he has received fees. Richard Piani, another of our director, lives in Paris, France and assists our European subsidiary in their dealings with medical institutions and the European Medical Evaluation Authority. William Mitchell, M.D. another of our directors, works with David Strayer, M.D. (our Medical Director) in establishing clinical trial protocols as well as performing other scientific work for us from time to time. For these services, these Directors were paid an aggregate of $100,100 in the year 2003. Mr. Etheridge was the only Director to exceed $60,000 for his professional services.

William A. Carter, our Chief Executive Officer, received an aggregate of $12,106 in short term advances which were repaid as of December 31, 2002. We loaned $60,000 to Ransom W. Etheridge, one of our directors in November 2001 for the purpose of exercising 15,000 class A redeemable warrants. This loan bears interest at 6% per annum. Dr. Carter's short term advances and Mr. Etheridge's loan were approved by the board of Directors.

We paid $57,750, $33,450 and $18,800 for the years ending December 31, 2001, 2002 and 2003 respectively to Carter Realty for the rent of property used

at various times in years 2001, 2002 and 2003 by us. The property is owned by others and managed by Carter Realty. Carter Realty is owned by Robert Carter, the brother of William A. Carter.

Antoni Esteve, one of our directors, is a Member of the Executive Committee and Director of Scientific and Commercial Operations of Laboratorios Del Dr. Esteve S.A. In March 2002, our European subsidiary Hemispherx S.A. entered into a Sales and Distribution Agreement with Laboratorios Del Dr. Esteve S.A. For more information about our activities with Laboratorios Del Dr. Esteve S.A. see "European Operations" in "Our Business" above. In addition, in March 2003, we issued 347,445 shares of our common stock to Provesan SA, an affiliate of Laboratorios Del Dr. Esteve S.A., in exchange for 1,000,000 Euros of convertible preferred equity certificates of Hemispherx S.A., owned by Laboratorios Del Dr. Esteve S.A.

SELLING STOCKHOLDERS

We have registered all 12,998,647 shares of common stock covered by this prospectus on behalf of the selling stockholders named in the table below. We issued the shares, the Debentures convertible into shares, and the warrants exercisable for shares to the selling stockholders in private transactions. We have registered the shares to permit the selling stockholders and their respective transferees, assignees or other successors-in-interest that receive their shares from a selling stockholder to resell the shares, from time to time, when they deem appropriate.

The table below identifies the selling stockholders who will be offering shares and other information regarding the beneficial ownership of the common stock held by each of the selling stockholders. For the Debenture holders (the first two stockholders listed below), the second column lists the number of shares of common stock beneficially owned by each selling stockholder as of April 6, 2004, based on each selling stockholder's ownership of shares of common stock, Debentures, warrants and additional investment rights, and assumes the conversion of all the Debentures, the payment of all interest in stock and the exercise of all warrants and additional investment rights. Because the conversion price of the Debentures and the exercise price of the warrants are subject to adjustment for anti-dilution protection, the interest on the Debentures may be paid in cash or common stock, and the value attributed to any shares issued to the investors as interest (the "Interest Shares") depends on the average closing price of the common stock during the five consecutive business days ending on the third business day immediately preceding the applicable interest payment date, and the number of repayment shares depends on the amount of our consolidated revenues, the numbers listed in the second column may change. For the other selling stockholders, the second column lists the number of shares of common stock beneficially owned by the selling stockholder as of April 6, 2004, based on each selling stockholder's ownership of shares of common stock, and, except as set forth in the relevant footnotes, does not assume the conversion of any of the Debentures, the exercise of any warrants or additional investment rights or the payment of any interest on the Debentures in the form of common stock rather than cash.

The third column lists each selling stockholder's portion, based on agreements with us, of the 12,998,647 shares of common stock being offered by this prospectus. With regard to the first two selling stockholders, the number of shares being offered by this prospectus was determined in accordance with

the terms of the registration rights agreements with them, in which we agreed to register the resale of an aggregate of 158,103 shares and 135% of (w) the number

of shares of common stock issuable upon conversion of the July, October and January 2004 Debentures (including the January 2004 Debentures issuable upon exercise of the additional investment rights), plus (x) the number of shares of common stock issuable upon exercise of the related July 2008, October 2008 and 2009 Warrants, plus (y) an estimate of the number of Interest Shares that may be issued to the selling stockholders as interest payments on the July, October and January 2004 Debentures (including the January 2004 Debentures issuable upon exercise of the additional investment rights) and assuming interest is paid exclusively in Interest Shares over the full term of these debentures, rather than in cash, plus (z) the number of shares of common stock issuable upon exercise of the June 2008 Warrants. As we stated above, the number of shares that will actually be issued may be more or less than the 12,998,647 shares being offered by this prospectus.

Under the terms of the foregoing debentures and related warrants, no selling stockholder who owns any of these securities may convert any of their debentures or exercise any of the foregoing warrants to the extent that the conversion or exercise would cause the selling stockholder, together with its affiliates, to beneficially own more than 4.99% of the shares of our then outstanding common stock following such conversion or exercise. For purposes of making this determination, shares of common stock issuable upon conversion of those debentures which have not been converted and upon exercise of the warrants which have not been exercised are excluded. The number of shares in the second and third columns does not reflect this limitation.

Any selling stockholder may sell all, some or none of its respective shares in this offering. See "How The Shares May Be Distributed" below.

Selling Stockholder	Common Stock Owned Prior To Offering	No. of Shares Being Offered	Common Stock Owned After The Offering
Portside Growth & Opportunity Fund	3,128,225(1)	4,195,436	--
Leonardo L.P.	4,957,891(2)	6,665,484	--
The American National Red Cross	316,510	314,465(3)	--
Cardinal Securities LLC	511,250(4)	511,250(4)	--
H. David Coherd	511,250(5)	511,250(5)	--
Robert L. Rosenstein	513,000(5)	511,250(5)	--
Scott Koch	511,250(5)	511,250(5)	--
Interferon Sciences, Inc.	487,028	487,028(3)	--
Bridge Ventures, Inc.	380,160(6)	380,160(3)	--
Sharon Will	401,000(7)	296,000(3)	--
Saggi Capital	105,000(7)	105,000(3)	--
CEOCast, Inc.	15,000(8)	15,000	--
Christopher Chipman	10,000(9)	10,000(9)	--
Fried Epstein & Rettig LLP	5,000(10)	5,000	--
Peter W. Adolph	237,591(11)	4,255	233,336

Business Asia Consultants, Inc.	3,563(12)	3,563	--
Marc E. Komorsky	237,591(11)	4,255	233,336

(1) Represents (a) up to 4,971 shares of common stock issuable upon conversion of the July Debentures, (b) up to 253,551 shares of common stock issuable upon exercise of the July 2008 Warrants, (c) up to 500,000 shares of common stock issuable upon exercise of the June 2008 Warrants, (d) up to 442,010 shares of common stock issuable upon conversion of the October

Debentures, (e) up to 205,067 shares of common stock issuable upon exercise of the October 2008 Warrants) (f) up to 1,248,317 shares of common stock issuable upon conversion of the January 2004 Debentures (including the debentures issuable upon exercise of the additional investment rights), (g) up to 395,257 shares of common stock issuable upon exercise of the 2009 Warrants and (h) 79,052 shares. Ramius Capital Group, LLC ("Ramius Capital") is the investment adviser of Portside Growth & Opportunity Fund ("Portside") and consequently has voting control and investment discretion over securities held by Portside. Ramius Capital disclaims beneficial ownership of the shares held by Portside. Peter A. Cohen, Morgan B. Stark, Thomas W. Strauss and Jeffrey M. Solomon are the sole managing members of C4S& Co., LLC, the sole managing member of Ramius Capital. As a result, Messrs. Cohen, Stark, Strauss and Solomon may be considered beneficial owners of any shares deemed to be beneficially owned by Ramius Capital. Messrs. Cohen, Stark, Strauss and Solomon disclaim beneficial ownership of these shares.

(2) Represents (a) up to 1,132,679 shares of common stock issuable upon conversion of the July Debentures, (b) up to 253,551 shares of common stock issuable upon exercise of the July 2008 Warrants (c) up to 500,000 shares of common stock issuable upon exercise of the June 2008 Warrants, (d) up to 1,143,968 shares of common stock issuable upon conversion of the October Debentures, (e) up to 205,067 shares of common stock issuable upon exercise of the October 2008 Warrants, (f) up to 1,248,317 shares of common stock issuable upon conversion of the January 2004 Debentures (including the debentures issuable upon exercise of the additional investment rights), (g) up to 395,257 shares of common stock issuable upon exercise of the 2009 Warrants and (h) 79,052 shares. Angelo, Gordon & Co., L.P. ("Angelo, Gordon") is the sole director of the general partner of Leonardo, L.P. ("Leonardo") and consequently has voting control and investment discretion over securities held by Leonardo. Angelo, Gordon disclaims beneficial ownership of the shares held by Leonardo. Mr. John M. Angelo, the Chief Executive Officer of Angelo, Gordon, and Mr. Michael L. Gordon, the Chief Operating Officer of Angelo, Gordon, are the sole general partners of AG Partners, L.P., the sole general partner of Angelo, Gordon. As a result, Messrs. Angelo and Gordon may be considered beneficial owners of any shares deemed to be beneficially owned by Angelo, Gordon. Messrs. Angelo and Gordon disclaim beneficial ownership of these shares.

(3) These Selling Stockholders have agreed to certain periodic limitations on the number of shares that they sell.

(4) Represents up to 511,250 shares of common stock issuable upon exercise of warrants owned by Cardinal of which (i) 11,250 are exercisable at a price of $1.74 per share, (ii)112,500 are exercisable at a price of $2.57 per share, (iii) 200,000 shares of common stock issuable upon exercise of

additional warrants at an exercise price of $2.50 per share, (iv) 87,500 exercisable at $2.42 per share, and (v) 100,000 are exercisable at $3.04 per share. The members of Cardinal, who share voting control and investment discretion, are H. David Coherd, Robert Rosenstein and Scott Koch. Excludes 1,750 unsold shares issued to Robert Rosenstein.

(5) The selling stockholder is one of the three members of Cardinal Securities LLC. Accordingly, the shares beneficially owned by Cardinal are deemed to be beneficially owned by each of Cardinal's members. In the second column, represents (x) 1,750 shares of common stock owned by Mr. Rosenstein, no shares owned by Mr. Koch and no shares owned by Mr. Coherd plus, for each of these stockholders (y) up to 511,250 shares of common stock issuable upon exercise of warrants owned by Cardinal of which (i) 11,250 are exercisable at a price of $1.74 per share, (ii)112,500 are exercisable at a price of $2.57 per share, (iii) 200,000 shares of common stock issuable upon exercise of additional warrants at an exercise price of $2.50 per share, (iv) 87,500

shares of common stock exercisable at $2.42 per share and (v) 100,000 are exercisable at $3.04 per share. The third column includes all of the shares issuable upon exercise of the warrants owned by Cardinal.

(6) In the second column, represents 280,000 shares issuable upon exercise of warrants exercisable at $1.75 per share expiring on June 30, 2005; 95,160 shares issuable upon exercise of warrants exercisable at $3.50 expiring on October 15, 2004; and 5,000 shares of stock owned of record by Bridge Ventures. The principal shareholders, officers and directors of Bridge Ventures are Harris Freedman and Annelies Freedman.

(7) Sharon Will is the sole shareholder, officer and director of Saggi Capital Corp. For Sharon Will, represents 285,000 shares issuable upon exercise of warrants exercisable at $1.75 per shares expiring on June 30, 2005 and 11,000 shares of stock owned of record by Sharon Will, plus 105,000 shares issuable upon exercise of warrants exercisable at $3.50 per share expiring on October 15, 2004 owned by Saggi Capital Corp. The numbers for Saggi Capital Corp. do not include the shares issuable upon exercise of the Will warrants.

(8) Messrs. Ken Sgrow and Steven Glicksman share voting control and investment discretion over the shares. CEOCast provides investor relations consulting services to the Company.

(9) Represents 5,000 shares issuable upon exercise of warrants exercisable at $3.91 per shares expiring on February 28, 2009 and 5,000 shares issuable upon exercise of warrants exercisable at $4.25 per shares expiring on January 31, 2009. Mr. Chipman provides us with financial and accounting consulting services.

(10) Represents shares issued to Fried Epstein & Rettig LLP, a law firm, for legal services provided to us. The three named partners share voting control and investment discretion over the shares.

(11) For each stockholder, the second column includes an aggregate of 233,336 shares issuable upon the exercise of outstanding warrants in each of their names. These stockholders, together, provide financial consulting and investment banking services to us.

(12) Business Asia Consultants, Inc. provides consulting services related to

obtaining distribution channels in China. It is owned by Lawrence Kronick.

THE SELLING STOCKHOLDERS HAVE NOT BEEN EMPLOYED BY, HELD OFFICE IN, OR HAD ANY OTHER MATERIAL RELATIONSHIP WITH US OR ANY OF OUR AFFILIATES WITHIN THE PAST THREE YEARS EXCEPT AS DESCRIBED ABOVE IN THE FOOTNOTES ABOVE.

HOW THE SHARES MAY BE DISTRIBUTED

The shares to be sold in this offering have been or are in the process of being listed on the American Stock Exchange, subject to official notice of issuance. In the event that the American Stock Exchange determines not to list some of the shares issued or to be issued to the first two Selling Stockholders because the exchange takes the position that its rules require that our stockholders approve the issuance of such shares, the selling stockholders will not be able to sell these shares unless and until our stockholders approve them. In such event, we have agreed to promptly seek stockholder approval. The selling stockholders may sell their shares of common stock from time to time in various ways and at various prices. The shares may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices.

These sales may be effected in transactions that may involve crosses or block transactions. Some of the methods by which the selling stockholders may sell the shares include:

- on any national securities exchange or quotation service on which the shares may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- through the writing of options, whether such options are listed on an options exchange or otherwise;
- ordinary brokerage transactions and transactions in which the broker solicits purchasers;
- privately negotiated transactions;
- block trades in which the broker or dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction; o purchases by a broker or dealer as principal and resale by that broker or dealer for the selling stockholder's account under this prospectus;
- sales under Rule 144 rather than by using this prospectus;
- through the settlement of short sales;
- a combination of any of these methods of sale; or
- any other legally permitted method.

In connection with sales of the shares or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares in the course of hedging in

positions they assume. The selling stockholders may also sell shares short and deliver shares to close out short positions, provided that the selling stockholders may not close out short positions entered into prior to the effective date of the registration statement of which this prospectus is a part with any shares included in this prospectus. The selling stockholders may also pledge their shares as collateral for a margin loan under their customer agreements with their brokers. If there is a default by the selling stockholders, the brokers may offer and sell the pledged shares from time to time under this prospectus or an amendment to this prospectus under Rule 424(b)(3) or other applicable provisions of the Securities Act amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus.

Brokers or dealers may receive commissions or discounts from the selling stockholders (or, if the broker-dealer acts as agent for the purchaser of the shares, from that purchaser) in amounts to be negotiated. These commissions may exceed those customary in the types of transactions involved.

We cannot estimate at the present time the amount of commissions or discounts, if any, that will be paid by the selling stockholders in connection with sales of the shares.

The selling stockholders and any broker-dealers or agents that participate with the selling stockholders in sales of the shares may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In that event, any commissions received by the broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The selling stockholders have advised us that they have not entered into any agreements, understandings or arrangements with any underwriters or broker-dealers regarding the sale of the shares. There is no underwriter or coordinating broker acting in connection with the proposed sale of shares by the selling stockholders. In addition, each of the selling stockholders who is a registered broker-dealer or is affiliated with a registered broker-dealer has advised us that:

- it purchased the shares in the ordinary course of business; and
- at the time of the purchase of the shares to be resold, it had no agreements or understandings, directly or indirectly, with any person to distribute the shares.

Under the securities laws of certain states, the shares may be sold in those states only through registered or licensed broker-dealers. In addition, the shares may not be sold unless they have been registered or qualified for sale in the relevant state or unless they qualify for an exemption from registration or qualification.

We do not know whether any selling stockholder will sell any or all of the shares registered by the shelf registration statement of which this prospectus forms a part.

We have agreed to pay all fees and expenses incident to the registration of the shares, including certain fees and disbursements of counsel to certain of the selling stockholders. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

Certain of the selling stockholders have also agreed to indemnify us, our

directors, officers, agents and representatives against certain liabilities, including certain liabilities under the Securities Act.

The selling stockholders and other persons participating in the distribution of the shares offered under this prospectus are subject to the applicable requirements of Regulation M promulgated under the Exchange Act in connection with sales of the shares.

We have agreed with the selling stockholders to keep the registration statement of which this prospectus is a part effective until all the shares registered under the registration statement have been resold.

DESCRIPTION OF SECURITIES BEING REGISTERED

The following section does not purport to be complete and is qualified in all respects by reference to the detailed provisions of our certificate of incorporation and by-laws, as amended, copies of which have been filed with the Securities and Exchange Commission.

Our authorized capital stock consist of: (i) 100,000,000 shares of common stock, $.001 par value; and (ii) 5,000,000 shares of preferred stock, $.01 par value. 41,617,249 shares of common stock were issued and outstanding as of the date of this prospectus.

Common Stock

Shares of our common stock are entitled to one vote per share, either in person or by proxy, on all matters that may be voted upon by the owners of our shares at meetings of our stockholders. There is no provision for cumulative voting with respect to the election of directors by the holders of common stock. Therefore, the holder of more than 50% of our shares of outstanding common stock can, if they choose to do so, elect all of our directors. In this event, the holders of the remaining shares of common stock will not be able to elect any directors.

The holders of common stock:

- have equal rights to dividends from funds legally available therefore, when and if declared by our board of directors;
- are entitled to share ratably in all of our assets available for distribution to holders of common stock upon liquidation, dissolution or winding up of our affairs; and
- do not have preemptive rights, conversion rights, or redemption of sinking fund provisions.

The outstanding shares of our common stock are duly authorized, validly issued, fully paid and nonassessable.

Anti-Takeover Provisions

Delaware Law

We are subject to the provisions of Section 203 of the Delaware General Corporation Law, as amended, which restricts certain business combinations with interested stockholders even if such a combination would be beneficial to all stockholders. In general, Section 203 would require a two-thirds vote of

stockholders for any business combination (such as a merger or sale of all or substantially all of our assets) between us and an "interested stockholder" unless such transaction is approved by a majority of the disinterested directors or meets certain other requirements. An "interested stockholder" is a person who, together with affiliates and associates, owns (or within three years, did own) 15% or more of our voting stock. These provisions could deprive stockholders of an opportunity to receive a premium for their common stock as part of a sale of us or may otherwise discourage a potential acquirer from attempting to obtain control of us.

Certificate of Incorporation

Provisions of our Certificate of Incorporation may make it more difficult for someone to acquire control of us or for our stockholders to remove existing management, and might discourage a third party from offering to acquire us, even if a change in control or in management would be beneficial to our stockholders. For example, our Certificate of Incorporation allows us to issue shares of preferred stock without any vote or further action by our stockholders. Our Board of Directors has the authority to fix and determine the relative rights and preferences of preferred stock. Our Board of Directors also has the authority to issue preferred stock without further stockholder approval. As a result, our Board of Directors could authorize the issuance of a series of preferred stock that would grant to holders the preferred right to our assets upon liquidation, the right to receive dividend payments before dividends are distributed to the holders of common stock and the right to the redemption of the shares, together with a premium, prior to the redemption of our common stock.

Shareholder rights plan

In November, 2002 we adopted a shareholder rights plan and, under the Plan, our Board of Directors declared a dividend distribution of one Right for each outstanding share of Common Stock to stockholders of record at the close of business on November 29, 2002. Each Right initially entitles holders to buy one unit of preferred stock for $30.00. The Rights generally are not transferable apart from the common stock and will not be exercisable unless and until a person or group acquires or commences a tender or exchange offer to acquire, beneficial ownership of 15% or more of our common stock. However, for William A. Carter, M.D., our chief executive officer, who already beneficial owns 12.3% of our common stock, the Plan's threshold will be 20%, instead of 15%. The Rights will expire on November 19, 2012, and may be redeemed prior thereto at $.01 per Right under certain circumstances.

The rights have certain anti-takeover effects. The rights will cause substantial dilution to a person or group that attempts to acquire us on terms not approved by our Board of Directors. The rights should not interfere with any merger or business combination approved by the Board of Directors.

Transfer Agent And Registrar

The transfer agent and registrar for our common stock and warrants is Continental Stock Transfer and Trust Co., 17 Battery Place, 8th Floor, New York, New York 10004.

LEGAL MATTERS

The validity of the common stock offered in this prospectus has been passed upon for us by Silverman Sclar Shin & Byrne PLLC, 381 Park Avenue South,

Suite 1601, New York, New York 10016.

EXPERTS

Our consolidated financial statements included in this prospectus have been audited by BDO Seidman, LLP, independent certified public accountants, to the extent and for the periods set forth in their report appearing elsewhere herein, and are included in reliance upon such report given upon the authority of said firm as experts in auditing and accounting.

The consolidated financial statements and schedule of Interferon Sciences, Inc. as of December 31, 2002 and 2001 and for each of the years in the three year period ended December 31, 2002 included in this prospectus have been so included in reliance on the report (which contains an explanatory paragraph relating to substantial doubt about Interferon Sciences, Inc. ability to continue as a going concern) of Eisner LLP, independent auditors, given on authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the Securities and Exchange Commission a registration statement (which contains this prospectus) on Form S-1 under the Securities Act of 1933. The registration statement relates to the shares offered by the selling stockholders. This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules to the registration statement. Please refer to the registration statement and its exhibits and schedules for further information with respect to us, the common stock and the Warrants. Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete and, in each instance, we refer you to the copy of that contract or document filed as an exhibit to the Registration Statement. You may read and obtain a copy of the registration statement and its exhibits and schedules from the SEC, as described below.

We file annual, quarterly and special reports, proxy statements and other information with the Securities and Exchange Commission. You may read and copy any document we file at the Securities and Exchange Commission's public reference rooms at 450 Fifth Street, N.W., Washington, D.C. 20549. Please call the Securities and Exchange Commission at 1-800-SEC-0330 for further information on the public reference rooms. Many of our Securities and Exchange Commission filings are also available to the public from the Securities and Exchange Commission's Website at "http://www.sec.gov."

HEMISPHERX BIOPHARMA, INC.
AND SUBSIDIARIES

Index to Financial Section

Item	Page No.
Financials for the Year Ended December 31, 2001, 2002, and 2003 for Hemispherx	F-2
Financials for the Year Ended December 31, 2001 and 2002 for Interferon Sciences, Inc. and subsidiaries ("ISI")	F-36

Unaudited Proforma Financial F-66
Statements Related to the
Acquisition of Certain Assets of ISI
by Hemispherx

HEMISPHERX BIOPHARMA, INC.
AND SUBSIDIARIES

Index to Consolidated Financial Statements - 2003

Report of Independent Certified Public Accountants F-3

Consolidated Balance Sheets at December 31, 2002 and 2003 ..... F-4

Consolidated Statements of Operations for each of the years
in the three-year period ended December 31, 2003 ..... F-5

Consolidated Statements of Changes in Stockholders' Equity
and Comprehensive (Loss) for each of the years
in the three-year period ended December 31, 2003 ..... F-6

Consolidated Statements of Cash Flows for each of the years
in the three-year period ended December 31, 2003 ..... F-7

Notes to Consolidated Financial Statements F-9

Report of Independent Certified Public Accountants

The Board of Directors and Stockholders
Hemispherx Biopharma, Inc.

We have audited the accompanying consolidated balance sheets of Hemispherx Biopharma, Inc. and subsidiaries as of December 31, 2002 and 2003 the related consolidated statements of operations, changes in stockholders' equity and comprehensive loss and cash flows for each of the three years in the period ended December 31, 2003. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. 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 consolidated financial statements referred to above present fairly, in all material respects, the financial position of Hemispherx Biopharma, Inc. and subsidiaries as of December 31, 2002 and 2003 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2003 in conformity with accounting principles

generally accepted in the United States of America.

/s/ BDO SEIDMAN, LLP

Philadelphia, Pennsylvania
February 13, 2004

HEMISPHERx BIOPHARMA, INC. AND SUBSIDIARIES
Consolidated Balance Sheets
December 31, 2002 and 2003
(in thousands)

	December 31,	
	2002	2003
ASSETS		
Current assets:		
Cash and cash equivalents	$ 2,256	$ 3,764
Short term investments (Note 5)	555	1,495
Inventory (Note 3)	--	2,896
Accounts and other receivables (Note 15)	1,507	282
Prepaid expenses and other current assets	71	170
Total current assets	4,389	8,607
Property and equipment, net	155	94
Patent and trademark rights, net	995	1,027
Investment	408	408
Deferred acquisition costs (Note 4)	--	1,546
Deferred financing costs	--	393
Advance receivable (Note 7)	--	1,300
Other assets	93	29
Total assets	$ 6,040	$ 13,404
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 786	$ 488
Accrued expenses (Note 6)	678	1,119
Total current liabilities	1,464	1,607
Long-Term Debt-net of current portion (Note 7)	--	2,058
Commitments and contingencies (Notes 10, 12, 13 and 15)		
Minority Interest in subsidiary (Note 8c)	946	--
Redeemable common stock (Note 4)	--	491
Stockholders' equity (Note 8):		
Common stock	33	39
Additional paid-in capital	107,155	123,054
Accumulated other comprehensive income	35	--
Accumulated deficit	(99,073)	(113,843)

Treasury stock	(4,520)	(2)
Total stockholders' equity	3,630	9,248
Total liabilities and stockholders' equity	$ 6,040	$ 13,404

See accompanying notes to consolidated financial statements.

HEMISPHERX BIOPHARMA, INC. AND SUBSIDIARIES
Consolidated Statements of Operations
For each of the years in the three-year period ended December 31, 2003
(in thousands, except share and per share data)

	December 31,		
	2001	2002	2003
Revenues:			
Sales of product net	$ --	$ --	$ 509
Clinical treatment programs	390	341	148
License Fee income (Note 12)	--	563	--
Total Revenues:	390	904	657
Costs and expenses:			
Production/cost of goods sold	--	--	502
Research and development	5,780	4,946	3,150
General and administrative	3,412	2,015	4,257
Total costs and expenses	9,192	6,961	7,909
Equity loss and write offs of investments in unconsolidated affiliates (Note 2c)	(565)	(1,470)	--
Interest and other income	284	103	80
Interest expense	--	--	(253)
Financing costs (Note 7)	--	--	(7,345)
Net loss	$ (9,083)	$ (7,424)	$ (14,770)
Basic and diluted loss per share	$ (.29)	$ (.23)	$ (.42)
Weighted average shares outstanding	31,433,208	32,085,776	35,234,526

See accompanying notes to consolidated financial statements.

HEMISPHERx BIOPHARMA, INC. AND SUBSIDIARIES

Consolidated Statements of Changes in Stockholders' Equity and Comprehensive (loss) For each of the years in the three-year period ended December 31, 2003

(in thousands except share data)

	Common Stock Shares	Common Stock .001 Par Value
Balance at December 31, 2000	$ 30,367,888	$ 30
Common stock issued	2,155,900	3
Purchase of equity investment	12,000	--
Treasury stock purchased	--	--
Note issued for purchase of stock	--	--
Stock issued in settlement of debt	21,198	--
Stock and stock warrant compensation expense	19,000	--
Net comprehensive (loss)		
Balance at December 31, 2001	32,575,986	33
Common stock issued	25,800	--
Treasury stock Purchased	--	--
Stock issued in settlement of debt	48,392	--
Stock and stock warrant compensation expense	--	--
Net comprehensive (loss)	--	--
Balance at December 31, 2002	32,650,178	33
Debt conversion and interest payments	4,334,916	4
Fair value ascribed to debenture beneficial conversion features and related warrants issued		
Warrants exercised	790,745	1
Common stock issued in connection with ISI acquisition (Note 4)	1,068,789	1
Reclassification of redeemable Common Stock in connection with ISI acquisition (Note 4)		
Treasury stock purchased		
Treasury Stock retired	(339,543)	
Conversion of minority interest of subsidiary into common stock (Note (8c)	347,445	
Stock issued in settlement of debt	215,047	

Stock warrant compensation expense		
Net comprehensive loss		
Balance December 31, 2003	39,067,577	$ 39

	Accumulated deficit	Treasury stock shares
Balance at December 31, 2000	$ (82,566)	395,646
Common stock issued	--	--
Purchase of equity investment	--	--
Treasury stock purchased	--	120,060
Note issued for purchase of stock	--	--
Stock issued in settlement of debt	--	--
Stock and stock warrant compensation expense	--	--
Net comprehensive (loss)	(9,083)	
Balance at December 31, 2001	(91,649)	515,706
Common stock issued	--	--
Treasury stock Purchased	--	27,500
Stock issued in settlement of debt	--	--
Stock and stock warrant compensation expense	--	--
Net comprehensive (loss)	(7,424)	--
Balance at December 31, 2002	(99,073)	543,206
Debt conversion and interest payments		
Fair value ascribed to debenture beneficial conversion features and related warrants issued		
Warrants exercised		
Common stock issued in connection with ISI acquisition (Note 4)		
Reclassification of redeemable Common Stock in connection with ISI acquisition (Note 4)		
Treasury stock purchased		43,000

Treasury Stock retired		(339,543)
Conversion of minority interest of subsidiary into common stock (Note (8c)		
Stock issued in settlement of debt		(246,220)
Stock warrant compensation expense		
Net comprehensive loss	(14,770)	
Balance December 31, 2003	$(113,843)	443

See accompanying notes to consolidated financial statements

HEMISPHERx BIOPHARMA, INC. AND SUBSIDIARIES
Consolidated Statements of Cash Flows
for each of the years in the three-year period ended December 31, 2003

(in thousands)

	December 31,		
	2001	2002	2003
Cash flows from operating activities:			
Net loss	$(9,083)	$(7,424)	$(14,770)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation of property and equipment	127	91	80
Amortization of patent and trademark rights	397	206	122
Amortization of deferred financing costs	--	--	7,345
Equity loss and write offs of investments in unconsolidated affiliates	565	1,470	--
Stock option and warrant compensation and service expense	673	132	237
Changes in assets and liabilities:			
Inventory	--	--	(1,429)
Accounts and other receivables	52	(1,293)	1,225
Prepaid expenses and other current assets	202	104	(98)
Accounts payable	(271)	(67)	(298)
Accrued expenses	139	385	558
Other assets	(82)	(13)	6
Net cash used in operating activities	(7,281)	(6,409)	(7,022)
Cash flows from investing activities:			

Purchase of property and equipment	--	--	(19)
Additions to patent and trademark rights	(218)	(176)	(154)
Maturity of short term investments	4,613	5,293	520
Purchase of short term investments	(5,293)	(520)	(1,496)
Investments in unconsolidated affiliates	(22)	--	--
Deferred acquisition cost	--	--	(638)
Net cash (used in) provided by investing activities	(920)	4,597	(1,787)

(CONTINUED)
HEMISPHERX BIOPHARMA, INC. AND SUBSIDIARIES
Consolidated Statements of Cash Flows (Continued)

(in thousands)

	December 31,		
	2001	2002	2003
Cash flows from financing activities:			
Proceeds from stock subscriptions and issuance of common stock, net	$ 72	$ 65	$ --
Deferred financing costs	--	--	(835)
Proceeds from issuance of preferred stock certificates of Subsidiary	--	946	--
Proceeds from long-term borrowing	--	--	11,300
Advance receivable	--	--	(1,300)
Proceeds from exercise of stock warrants	8,075	--	1,235
Purchase of treasury stock	(560)	(50)	(83)
Net cash provided by financing activities	7,587	961	10,317
Net increase (decrease) in cash and cash equivalents	(614)	(851)	1,508
Cash and cash equivalents at beginning of year	3,721	3,107	2,256
Cash and cash equivalents at end of year	$ 3,107	$ 2,256	$ 3,764
Supplemental disclosures of cash flow information:			
Issuance of common stock for accrued expenses	$ 91	$ 154	$ 931
Issuance of common stock for note receivable	$ 60	$ --	$ --
Issuance of Common Stock for Acquisition of ISI assets, including deferred acquisition costs	$ --	$ --	$ 1,668

Common Stock Issued for Compensation	$ 637	$ 132	$ 237
Issuance of Common Stock for Debt Conversion and Interest Payments	$ --	$ --	$ 6,741
Common Stock Issued for Conversion of Minority Interest in Subsidiary	--	--	$ 946

See accompanying notes to consolidated financial statements.

HEMISPHERX BIOPHARMA, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(1) Business

Hemispherx Biopharma, Inc. and subsidiaries (the Company) is a pharmaceutical company using nucleic acid technologies to develop therapeutic products for the treatment of viral diseases and certain cancers. The Company's drug technology uses specially configured ribonucleic acid (RNA). The Company's double-stranded RNA drug product, trademarked Ampligen(R), is in human clinical development for various therapeutic indications. The potential efficacy and safety of Ampligen(R) is being evaluated clinically for three anti-viral indications: myalgic encephalomyelitis, also known as chronic fatigue syndrome ("ME/CFS"), human immunodeficiency virus (HIV) associated disorders, and chronic hepatitis C (HVC) virus infection. The Company also has clinical experience with Ampligen(R) used in treating patients with certain cancers including renal cell carcinoma (kidney cancer) and metastatic malignant melanoma. The Company has other compounds to be evaluated.

On March 11, 2003, we acquired from Interferon Sciences, Inc. ("ISI") ISI's inventory of ALFERON N Injection(R), a pharmaceutical product used for the treatment of certain types of genital warts, and a limited license for the production, manufacturing, use, marketing and sale of this product.

On March 11, 2003, we also entered into an agreement to purchase from ISI all of its rights to the product and other assets related to the product including, but not limited to, real estate and machinery. This purchase is contingent on us receiving appropriate ISI shareholder approval for the real estate transaction.

The consolidated financial statements include the financial statements of Hemispherx BioPharma, Inc. and its wholly-owned subsidiaries BioPro Corp., BioAegean Corp. and Core BioTech Corp. which were incorporated in September 1994, and are inactive, and Hemispherx Biopharma-Europe N.V./S.A. which was incorporated in 1998 and Hemispherx Biopharma Europe S.A., which was incorporated during 2002. All significant intercompany balances and transactions have been eliminated in consolidation.

On May 1, 1997, the Company received permission from the U.S. Food and Drug Administration ("FDA") to recover the cost of Ampligen(R) from patients enrolled in the Company's AMP-511 ME/CFS open-label treatment protocol. The cost of Ampligen(R) to the patient is $2,100 for the first eight weeks of treatment and $2,400 for each additional eight-week period thereafter.

In 1998, the Company initiated the recruitment of clinical investigators to enroll ME/CFS patients in the confirmatory Phase III double blind

placebo-controlled clinical study of Ampligen(R). This clinical trial was approved by the FDA in 1998 and is designed to test the safety and efficiency of Ampligen(R) in treating ME/CFS.

We recently completed the double-blind segment of our AMP 516 ME/CFS Phase III clinical trial for use of Ampligen(R) in the treatment of ME/CFS. Ampligen is also currently in two Phase IIb studies for the treatment of HIV to overcome multi-drug resistance, virus mutation and toxicity associated with current HAART therapies. One study, the AMP-719, is a Salvage Therapy, conducted in the U.S. and evaluating the potential synergistic efficacy of Ampligen in multi-drug resistant HIV patients for immune enhancement. The second study, the AMP-720, is a clinical trial designed to evaluate the effect of Ampligen under Strategic Treatment Intervention and is also conducted in the U.S.

The ME/CFS Cost Recovery Treatment Program in Belgium was started in 1994 with the approval of the Belgian Regulatory authorities. Since its inception, over 150 patients have participated in this program. Clinical data collected in the treatment of these ME/CFS patients will be used to support the Company's European Medical Evaluation Agency ("EMEA") Drug Approval Application and in applications in other regulatory jurisdictions. A similar program underway in Austria is undergoing expansion.

(2) Summary of Significant Accounting Policies

(a) Cash and Cash Equivalents

Cash equivalents consist of money market certificates and overnight repurchase agreements collateralized by money market securities with original maturities of less than three months, with both a cost and fair value of $2,256,000 and $3,764,000 at December 31, 2002 and 2003, respectively.

(b) Short-term Investments

Investments with original maturities of more than three months and marketable equity securities are considered available for sale. The investments classified as available for sale include debt securities and equity securities carried at estimated fair value of $555,000 and $1,495,000 at December 31, 2002 and 2003 respectively. The unrealized gains and losses are recorded as a component of shareholders' equity.

(c) Investments in unconsolidated affiliates

Investments in companies in which the Company owns 20% or more and not more than 50% are accounted for using the equity method of accounting.

Investments in companies in which the Company owns less than 20% of and does not exercise a significant influence are accounted for using the cost method of accounting.

In 1998, the Company invested $1,074,000 for a 3.3% equity interest in R.E.D. Laboratory ("R.E.D."). R.E.D. is a privately held biotechnology company for the development of diagnostic markers for Chronic Fatigue Syndrome and other chronic immune diseases. We have a research collaboration agreement with R.E.D. to assist in this development. R.E.D. is headquartered in Belgium. The investment was recorded at cost. During the three months ended June 30, 2002 and December 31, 2002 we recorded non-cash charges of $678,000 and $396,000 respectively, to operations with respect to our investment in R.E.D. These charges were the result of our determination that R.E.D.'s business and financial position had

deteriorated to the point that our investments had been permanently impaired.

In April, 1999 we acquired a 30% equity position in the California Institute of Molecular Medicine ("CIMM") for $750,000 and entered into a research and development arrangement. CIMM'S research is focused on developing therapies for use in treating patients affected by Hepatitis C ("HCV"). We use the equity method of accounting with respect to this investment. During the fourth quarter of 2001 we recorded a non-cash charge of $485,000 with respect to our investment in CIMM. This was a result of our determination that CIMM's operations have not yet evolved to the point where the full carrying value of our investment could be supported based on that company's financial position and operating results. During 2002, CIMM continued to suffer significant losses resulting in a deterioration of its financial condition. The $485,000 written off during 2001 represented the unamortized balance of goodwill included as part of the Company's investment. Additionally, during 2001 the Company reduced its investment in CIMM based on its percentage interest in CIMM's continued operating losses. The Company's remaining investment at December 31, 2001 in CIMM, representing its 30% interest in CIMM's equity at such date, was not deemed to be permanently impaired, but was completely written off during 2002. Such amount was not material. These charges are reflected in the Consolidated Statements of Operations under the caption "Equity loss in unconsolidated affiliates". We still believe CIMM will succeed in their efforts to advance therapeutic treatment of HCV. We believe that CIMM's Hepatitis C diagnostic technology has great promise and fills a long-standing global void in the collective abilities to diagnose and treat Hepatitis C infection at an early stage of the disorder.

The Company's investment in Ribotech, Ltd. is also accounted for using the equity method of accounting. The Company received 24.9% of Ribotech, Ltd. as partial compensation under the license agreement described in note 12. Ribotech, Ltd. has incurred net losses since inception. The Company does not share in those losses in accordance with the licensing agreement and is not obligated to fund such losses. The net investment in Ribotech is zero at all year end periods

presented. During 2000, the Company prepaid $500,000 to Ribotech, Ltd. for raw material purchases. $110,000 of materials were delivered in 2000 and the balance of $390,000 was applied towards the purchase of materials during 2001.

Investments include an initial equity investment of $290,625 in Chronix Biomedical ("Chronix"). Chronix focuses upon the development of diagnostics for chronic diseases. This initial investment was made in May 31, 2000 by the issuance of 50,000 shares of Company common stock from the treasury. On October 12, 2000, the Company issued an additional 50,000 shares of its common stock and on March 7, 2001 the Company issued 12,000 more shares of its common stock from the treasury to Chronix for an aggregate equity investment of $700,000. The percentage ownership in Chronix is approximately 5.4% and is accounted for under the cost method of accounting. During the quarter ended December 31, 2002, we recorded a non cash charge of $292,000 with respect to our investment in Chronix. This impairment reduces our carrying value to reflect a permanent decline in Chronix's market value based on its then proposed investment offerings.

During 2000, pursuant to a strategic alliance agreement, the Company provided Chronix with $250,000 to conduct research in an effort to develop intellectual property on potential new products for diagnosing and treating various chronic illnesses including chronic fatigue syndrome. The strategic alliance agreement provides the Company certain royalty rights with respect to certain diagnostic technology developed from this research and a right of first refusal to license

certain therapeutic technology developed from this research. The payment of $250,000 was charged to research and development expense during 2000.

(d) Property and Equipment

	(000 omitted) December 31,	
	2002	2003
Furniture, fixtures, and equipment	$760	$779
Leasehold improvements	85	85
Total property and equipment	845	864
Less accumulated depreciation	690	770
Property and equipment, net	$155	$ 94

Property and equipment consists of furniture, fixtures, office equipment, and leasehold improvements and is recorded at cost. Depreciation and amortization is computed using the straight-line method over the estimated useful lives of the respective assets, ranging from five to seven years. Depreciation and amortization expense was $127,000, $91,000 and $80,000 for 2001, 2002 and 2003, respectively. In 2002, fully depreciated equipment in the amount of $418,000 and fully depreciated leasehold improvements in Europe in the amount of $12,000 were written-off due to the closing of European offices.

(e) Patent and Trademark Rights

Effective October 1, 2001, the Company adopted a 17 year estimated useful life for amortization of its patent and trademark rights in order to more accurately reflect their useful life. Prior to October 1, 2001, the Company was using a 10 year estimated useful life. The adoption of the 17 year life has been accounted for as a change in accounting estimate.

Patents and trademarks are stated at cost (primarily legal fees) and are amortized using the straight line method over the life of the assets. The Company reviews its patents and trademark rights periodically to determine whether they have continuing value. Such review includes an analysis of the patent and trademark's ultimate revenue and profitability potential on an undiscounted cash flow basis to support the realizability of its respective capitalized cost. Management's review addresses whether each patent continues to fit into the Company's strategic business plans. During the years ended December 31, 2001, 2002 and 2003, the Company decided not to pursue the technology in certain countries for strategic reasons and recorded charges of $38,000 $5,000, and $5,000 respectively. Amortization expense was $359,000, $201,000 and

$122,000 in 2001, 2002 and 2003, respectively. The accumulated amortization as of December 31, 2002 and 2003 is $2,096,000 and $2,150,000, respectively.

As of December 31, 2003, the weighted average remaining life of the patents and trademarks was 8.6 years. Amortization of patents and trademarks for each of the next five is as follows: 2004 - $96,000, 2005 - $94,000, 2006 - $90,000, 2007 - $89,000 and 2008 - $87,000.

(f) Revenue and License Fee Income

On March 20, 2002 our European Subsidiary Hemispherx Biopharma Europe, S.A. ("Hemispherx, S.A.") entered into a Sales and Distribution agreement with Laboratorios del Dr. Esteve S.A. ("Esteve"). Pursuant to the terms of the Agreement, Esteve was granted the exclusive right to market Ampligen(R)in Spain, Portugal and Andorra for the treatment of Myalgic Encephalitis/Chronic Fatigue Syndrome ("ME/CFS"). Esteve paid the initial and non refundable fee of 625,000 Euros (approximately $563,000) to Hemispherx S.A. on April 24, 2002.

The terms of the agreement granting the licensee marketing rights for Ampligen(R) for the treatment of myalgic/chronic fatigue syndrome ("ME/CFS") in Spain, Portugal and Andorra require the Company to provide the licensee with technical, scientific and commercial information. The Company fulfilled the requirements during the first quarter of 2002. The agreement terms required no additional performance on the part of the Company.

The agreement also requires the licensee to pay of 1,000,000 Euros after FDA approval of Ampligen(R) for the treatment of ME/CFS and a fee of 1,000,000 after issuance in Spain of final marketing approval authorization for Ampligen(R) for the treatment of ME/CFS.

Revenues for non-refundable license fees are recognized under the Performance Method-Expected Revenue. This method considers the total amount of expected revenue during the performance period, but limits the amount of revenue recognized in a period to total non-refundable cash received to date. This limitation is appropriate because future milestone payments are contingent on future events.

Upon receipt, the upfront non-refundable payment is deferred. The non-refundable upfront payments plus non-refundable payments arising from the achievement of defined milestones are recognized as revenue over the performance period based on the lesser of (a) percentage of completion or (b)non-refundable cash earned (including the upfront payment).

This method requires the computation of a ratio of cost incurred to date to total expected costs and then apply that ratio to total expected revenue. The amount of revenue recognized is limited to the total non-refundable cash received to date.

The percentage of expenses incurred to date to total expected expenses in connection with the research and development project, exceed the percentage of license fees received compared to total license fees to be earned per the agreement. Therefore the amount of revenue recognized by the Company was limited to the total non-refundable cash received to date of approximately $563,000.

Revenue from the sale of Ampligen(R) under cost recovery clinical treatment protocols approved by the FDA is recognized when the treatment is provided to the patient.

Revenues from the sale of Alferon N Injection(R) are recognized when the product is shipped, as title is transferred to the customer. The Company has no other obligation associated with its products once shipment has occurred.

During the years ending December 31, 2001, 2002 and 2003 the Company did not receive any grant monies from local, state and or Federal Agencies.

(g) Net Loss Per Share

Basic and diluted net loss per share is computed using the weighted average

number of shares of common stock outstanding during the period. Equivalent common shares, consisting of stock options and warrants, are excluded from the calculation of diluted net loss per share since their effect is antidilutive.

(h) Accounting for Income taxes

Deferred income tax assets and liabilities are determined based on differences between the financial statement reporting and tax bases of assets and Liabilities and are measured using the enacted tax rates and laws in effect when the differences are expected to reverse. The measurement of deferred income tax assets is reduced, if necessary, by a valuation allowance for any tax benefits, which are not expected to be realized. The effect on deferred income tax assets and liabilities of a change in tax rates is recognized in the period that such tax rate changes are enacted.

(i) Comprehensive (loss)

Comprehensive (loss) consists of net loss and net unrealized gains (losses) on securities and is presented in the consolidated statements of changes in stockholders' equity and comprehensive (loss).

(j) Use of Estimates

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

(k) Foreign currency translations

Assets and liabilities of the Company's foreign operations are generally translated into U.S. dollars at current exchange rates as of balance sheet date. Revenues and expenses are translated at average exchange rates during each period. Transaction gains and losses that arise from exchange rate fluctuations are included in the results of operations as incurred. The resulting translation adjustments are immaterial for all years presented.

(l) Recent Accounting Standard and Pronouncements:

In November, 2002, the FASB issued Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, including Indirect Guarantees of Indebtedness of Others" ("Interpretation No. 45"). Interpretation No. 45 elaborates on the existing disclosure requirements for most guarantees, including loan guarantees such as standby letters of credit. It also clarifies that at the time a company issues a guarantee, the company must recognize an initial liability for the fair market value of the obligations it assumes under the guarantee and must disclose that information in its interim and annual financial statements. The initial recognition and measurement provisions of Interpretation No. 45 apply on a prospective basis to guarantees issued or modified after December 31, 2002. Interpretation No. 45 did not have an effect on our financial statements.

In December 2002, the FASB issued Statement No. 148, "Accounting for Stock-Based Compensation-Transition and Disclosure", and amendment of FASB Statement No. 123 ("SFAS"). SFAS 148 amends FASB Statement No. 123, Accounting for Stock-Based Compensation, to provide alternative method of transition for an

entity that voluntarily changes to the fair value based of accounting for stock-based employee compensation. It also amends the disclosure provisions of that Statement to require prominent disclosure about the effects on reported net income of an entity's accounting policy decisions with respect to stock-based employee compensation. Finally, this Statement amends Accounting Principles Board ("APB") Opinion No. 28, Interim Financial Reporting to require disclosure about those effects in interim financial information. SFAS 148 is effective for financial statements for fiscal years ending after December 15, 2002. The Company will continue to account for stock-based compensation using the intrinsic value method of APB Opinion No. 25, "Accounting for Stock Issued to Employees, "but has adopted the enhanced disclosure requirements of SFAS 148.

In January 2003, the FASB issued Interpretation No. 46, "Consolidation of Variable Interest Entities" ("Interpretation No. 46"), that clarifies the application of Accounting Research Bulletin No. 51, Consolidated Financial Statements, "to certain entities in which equity investors do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties. Interpretation No. 46 is applicable immediately for variable interest entities created after January 31, 2003. For variable interest entities created prior to January 31, 2003, the provision of Interpretation No. 46 have been deferred to the first quarter of 2004. This Interpretation did not have an effect on the consolidated financial statements.

In May 2003, the FASB issued Statement No. 150, "Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity" ("SFAS 150"). SFAS 150 requires an issuer to classify certain financial instruments, such as mandatory redeemable shares and obligations to repurchase the issuers equity shares, as liabilities. The guidance is effective for financial instruments entered into or modified subsequent to May 31, 2003, and is otherwise effective at the beginning of the first interim period after June 15, 2003. SFAS 150 did not have an impact on our financial condition or results of operations.

(m) Research and Development Costs

Research and development related to both future and present products are charged to operation as incurred.

(n) Stock Based Compensation

The Company follows Statement of Financial Accounting Standards (SFAS) No. 123, "Accounting for Stock-Based Compensation." We chose to apply Accounting Principal Board Opinion 25 and related interpretations in accounting for stock options granted to our employees.

The Company provides pro forma disclosures of compensation expense under the fair market value method of SFAS No. 123, "Accounting for Stock-Based Compensation," and SFAS No. 148, "Accounting for Stock-Based Compensation - Transition and Disclosure."

The weighted average assumptions used for the years presented are as follows:

	December 31,		
	2001	2002	2003
Risk-free interest rate	4.23%	5.23%	5.23%

Expected dividend yield	--	--	--
Expected lives	3.0 yrs	2.5 yrs	2.5 yrs
Expected volatility	74.9%	63.17%	98.07%

Had compensation cost for the Company's option plan been determined using the fair value method at the grant dates, the effect on the Company's net loss and loss per share for the years ended December 31, 2001, 2002, and 2003 would have been as follows:

(In Thousands except for per share data)

For the years ended December 31,	2001	2002	2003
Net (loss)as reported	$(9,083)	$(7,424)	$(14,770)
Add: Stock based compensation included in net loss as reported, net of related tax effects	--	--	--
Deduct: Stock based compensation determined under fair value based method for all awards, net of related tax effects	(632)	(1,085)	(1,825)
Pro forma - net loss	$(9,715)	$(8,509)	$(16,595)
Basic and diluted loss per share - as reported	$ (.29)	$ (.23)	$ (.42)
Basic and diluted loss per share - pro forma	$ (.31)	$ (.27)	$ (.47)

For stock warrants granted to non-employees, the Company measures fair value of the equity instruments utilizing the Black-Scholes method if that value is more reliably measurable than the fair value of the consideration or service received. The Company amortizes such cost over the related period of service.

The exercise price of all stock warrants granted was equal to the fair market value of the underlying common stock as defined by APB 25 on the date of the grant.

(0) Accounts Receivable

Concentration of credit risk, with respect to accounts receivable, is limited due to the Company's credit evaluation process. The Company does not require collateral on its receivables. The Company's receivables primarily consist of amounts due from the wholesale drug companies as of December 31, 2003.

(3) Inventories

The Company uses the lower of first-in, first-out ("FIFO") cost or market method of accounting for inventory.

Inventories consist of the following:

	December 31, 2003

Raw materials and work in process	$1,729
Finished goods	1,167
	$2,896

(4) ACQUISITION OF ASSETS OF INTEFERON SCIENCES, INC.

On March 11, 2003, we acquired from Interferon Sciences, Inc.'s ("ISI") inventory of ALFERON N Injection, a pharmaceutical product used for the treatment of certain types of genital warts, and a limited license for the production, manufacture, use, marketing and sale of this product. As consideration, we issued 487,028 shares of our common stock, assumed certain liabilities and agreed to pay ISI 6% of the net sales of product. Pursuant to our agreements with ISI, we have registered the foregoing shares for public sale.

Except for 62,500 of the shares issued to ISI, we have guaranteed the market value of the shares retained by ISI as of March 11, 2005, the termination date, to be $1.59 per share. ISI is permitted to periodically sell certain amounts of its shares. If, within 30 days after the termination date, holders of the guaranteed shares request that we honor the guarantee, we will be obligated to reacquire the holders' remaining guaranteed shares and pay the holders $1.59 per share for a total of $675,000. Accordingly, certain shares issued in connection with this transaction were initially recorded as redeemable common stock outside of stockholders' equity. As of February 10, 2004, ISI had sold the 427,528 guaranteed shares at prices in excess of $1.59 per share.

On March 11, 2003, we also entered into an agreement to purchase from ISI all of its rights to the product and other assets related to the product including, but not limited to, real estate and machinery. For these assets, we agreed to issue to ISI an additional 487,028 shares and to issue 314,465 shares and 267,296 shares, respectively to The American National Red Cross and GP Strategies, two creditors of ISI, to continue to pay royalties of 6% on net sales of Alferon N and other consideration, e.g., paying off a third creditor and paying a real estate tax liability.

On May 30, 2003, we issued the shares to GP Strategies and the American National Red Cross. Pursuant to our agreements with ISI and these two creditors, we have agreed to register the foregoing shares for public sale. The acquisition of the real estate and machinery is contingent on our receiving appropriate ISI stockholder approval. The value of these guaranteed shares totaled $925,000 and these shares are redeemable under certain conditions, accordingly they were initially reflected as redeemable common stock and deferred acquisition costs on the accompanying financial statements as of December 31, 2003. As of February 10, 2004 GP Strategies had sold their 247,296 shares. Additionally other liabilities associated with the real estate in the

amount of $621,000 have been recorded as deferred acquisition costs. It is expected that ISI stockholder approval will be obtained in March 2004 with substantially the entire amount of the deferred purchase price being allocated to real estate.

As of December 31, 2003 all but 314,465 guaranteed shares had been sold. As a result, the remaining liability for redeemable stock was $491,000.

Except for 62,500 of the 487,028 shares to be issued to ISI at closing of this second asset acquisition, we have guaranteed the market value of the shares

retained by ISI on terms substantially similar to those for the guaranteed shares issued to ISI on the first acquisition of ISI assets. Pursuant to our agreement with ISI, we plan to register the foregoing shares for public sale.

We will account for these transactions as a Business Combination under Statement of Financial Accounting Standards ("SFAS") No. 141 Accounting for Business Combinations.

As a result of the first agreement, the following table summarizes the estimated fair value of the assets and liabilities assumed at the initial acquisition date.

	At March 11, 2003
Inventory	$ 1,840,762
Fair Value of liabilities Assumed	(1,081,041)
Fair Value of Common Shares Issued	$ 759,721

The following table represents the Unaudited pro forma results of operations as though the acquisition, described in the first agreement, of certain net assets of ISI occurred on January 1, 2002.

	Years Ended December 31,	
	2002	2003
	(in thousands except for share data)	
Net revenues	$ 2,830	$ 899
Expenses	(14,699)	(16,215)
Net Loss	$ (11,869)	$ (15,316)
Basic and diluted loss per share	$ (.36)	$ (.43)
Weighted average shares outstanding	32,572,804	35,326,594

In giving effect to the additional shares that would be issued as a result of the second agreement with ISI the weighted average shares outstanding during the Years Ending December 31, 2002 and 2003 would have been 33,641,593 and 36,055,994 resulting in a pro forma loss per share as adjusted of $(.36) and $(.45) for said periods respectively.

(5) Short-term investments:

Securities classified as available for sale consisted of General Motors commercial paper at December 31, 2003 where its cost approximated its market value of $1,495,000 and matures in April and May 2004, and Calamos Mutual Market at December 31, 2002 where its carrying value of $555,000 exceeded its cost by $34,000.

(6) Accrued Expenses

Accrued expenses at December 31, 2002 and 2003 consists of the following:

	(000's omitted) December 31,	
	2002	2003
Compensation	$ 6	$ 366
Interest	--	158
Commissions and royalties	--	100
Professional fees	--	126
Other expenses	222	369
Fees associated with litigation settlement	450	--
	$ 678	$1,119

(7) Debenture Financing

On March 12, 2003, we issued an aggregate of $5,426,000 in principal amount of 6% Senior Convertible Debentures due January 2005 (the "March Debentures") and an aggregate of 743,288 warrants to two investors in a private placement for aggregate proceeds of $4,650,000. Pursuant to the terms of the March Debentures, $1,550,000 of the proceeds from the sale of the March Debentures were to have been held back and released to us if, and only if, we acquired ISI's facility within a set timeframe. Although we had not acquired ISI's facility, these funds were released to us in June 2003. The March Debentures were to mature on January 31, 2005 with interest at 6% per annum, payable quarterly in cash or, subject to satisfaction of certain conditions, common stock. Any shares of common stock issued to the investors as payment of interest were valued at 95% of the average closing price of the common stock during the five consecutive business days ending on the third business day immediately preceding the applicable interest payment date. Pursuant to the terms and conditions of the March Debentures, we pledged all of our assets, other than our intellectual property, as collateral and were subject to comply with certain financial and negative covenants, which include but was not limited to the repayment of principal balances upon achieving certain revenue milestones.

The March Debentures were convertible at the option of the investors at any time through January 31, 2005 into shares of our common stock. The conversion price under the March Debentures was fixed at $1.46 per share, subject to adjustment for anti-dilution protection for issuance of common stock or securities convertible or exchangeable into common stock at a price less than the conversion price then in effect.

The investors also received Warrants to acquire at any time through March 12, 2008 an aggregate of 743,288 shares of common stock at a price of $1.68 per share. On March 12, 2004, the exercise price of the Warrants was to reset to the lesser of the exercise price then in effect or a price equal to the average of the daily price of the common stock between March 13, 2003 and March 11, 2004 (but in no event less than $1.176 per share). The exercise price (and the reset price) under the Warrants also was subject to similar adjustments for anti-dilution protection. All of these warrants have been exercised.

We entered into a Registration Rights Agreement with the investors in connection with the issuance of the March Debentures and the Warrants. The Registration Rights Agreement requires that we register the shares of common

stock issuable upon conversion of the Debentures, as interest shares under the Debentures and upon exercise of the Warrants. In accordance with this agreement, we have registered these shares for public sale.

As of December 31, 2003 the investors had converted the $5,426,000 principal of the March Debentures into 3,716,438 shares of our common stock. The total imputed interest on the debenture was $111,711 of which $17,290 was paid in cash and $94,421 was paid by the issuance of 39,080 shares of common stock. The investors exercised the 743,288 warrants in July 2003 which produced proceeds in the amount of $1,248,724

On July 10, 2003, we issued an aggregate of $5,426,000 in principal amount of 6% Senior Convertible Debentures due July 31, 2005 (the "July Debentures") and an aggregate of 507,102 Warrants (the "July 2008 Warrants") to the same investors who purchased the March 12, 2003 Debentures, in a private placement for aggregate anticipated gross proceeds of $4,650,000. Pursuant to the terms of the July Debentures, $1,550,000 of the proceeds from the sale of the July Debentures were to have been held back and will be released to us if, and only if, we acquired ISI's facility within a set timeframe. Although we had not acquired ISI's facility, these funds were released to us in October 2003. The July Debentures mature on July 31, 2005 and bear interest at 6% per annum, payable quarterly in cash or, subject to satisfaction of certain conditions, common stock. Any shares of common stock issued to the investors as payment of interest shall be valued at 95% of the average closing price of the common stock during the five consecutive business days ending on the third business day immediately preceding the applicable interest payment date.

The July Debentures are convertible at the option of the investors at any time through July 31, 2005 into shares of our common stock. The conversion price under the July Debentures was fixed at $2.14 per share; however, as part of the debenture placement closed on October 29, 2003 (see below), the conversion price under the July Debentures was lowered to $1.89 per share. The conversion price is subject to adjustment for anti-dilution protection for issuance of common stock or securities convertible or exchangeable into common stock at a price less than the conversion price then in effect.

The July 2008 Warrants received by the investors, as amended, are to acquire at any time commencing on July 26, 2004 through January 31, 2009 an aggregate of 507,102 shares of common stock at a price of $2.46 per share. On July 10, 2004, the exercise price of these July 2008 Warrants will reset to the lesser of the exercise price then in effect or a price equal to the average of the daily price of the common stock between July 11, 2003 and July 9, 2004 (but in no event less than $2.14 per share). The exercise price (and the reset price) under the July 2008 Warrants also is subject to similar adjustments for anti-dilution protection.

We entered into a Registration Rights Agreement with the investors in connection with the issuance of the July Debentures and the July 2008 Warrants. The Registration Rights Agreement requires that we register on behalf of the holders the shares of common stock issuable upon conversion of the Debentures, as interest shares under the Debentures and upon exercise of the July 2008 Warrants. These shares have been registered for public sale.

On June 25, 2003, we issued to each of the March 12, 2003 Debenture holders a warrant to acquire at any time through June 25, 2008 an aggregate of 500,000 shares of common stock at a price of $2.40 per share. On June 25, 2004, the exercise price of these June 2008 Warrants will reset to the lesser of the

exercise price then in effect or a price equal to the average of the daily price of the common stock between June 26, 2003 and June 24, 2004 (but in no event less than $1.68 per share). The exercise price (and the reset price) under the June 2008 Warrants also is subject to adjustments for anti-dilution protection similar to those in the July 2008 Warrants. Pursuant to our agreement with the Debenture holders, we have registered the shares issuable upon exercise of these June 2008 Warrants for public sale.

On October 29, 2003, we issued an aggregate of $4,142,357 in principal amount of 6% Senior Convertible Debentures due October 31, 2005 (the "October Debentures") and an aggregate of 410,134 Warrants (the "October 2008 Warrants") in a private placement for aggregate anticipated gross proceeds of $3,550,000. Pursuant to the terms of the October Debentures, $1,550,000 of the proceeds from the sale of the October Debentures have been held back and will be released to us if, and only if, we acquired ISI's facility within 90 days of October 29, 2003 and provide a mortgage on the facility as further security for the October Debentures. The debenture holders have extended the deadline to 90 days after January 26, 2004. The October Debentures mature on October 31, 2005 and bear interest at 6% per annum, payable quarterly in cash or, subject to satisfaction of certain conditions, common stock. Any shares of common stock issued to the investors as payment of interest shall be valued at 95% of the average closing price of the common stock during the five consecutive business days ending on the third business day immediately preceding the applicable interest payment date.

Upon completing the sale of the October Debentures, we received $3,275,000 in net proceeds consisting of $1,725,000 from the October Debentures and $1,550,000 that had been withheld from the July Debentures. As noted above, $1,550,000 of the proceeds from the October Debentures have been held back pending our completing the acquisition of the ISI facility.

The October Debentures are convertible at the option of the investors at any time through October 31, 2005 into shares of our common stock. The conversion price under the October Debentures is fixed at $2.02 per share, subject to adjustment for anti-dilution protection for issuance of common stock or securities convertible or exchangeable into common stock at a price less than the conversion price then in effect.

The October 2008 Warrants, as amended, received by the investors are to acquire at any time commencing on July 26, 2004 through April 30, 2009 an aggregate of 410,134 shares of common stock at a price of $2.32 per share. On October 29, 2004, the exercise price of these October 2008 Warrants will reset to the lesser of the exercise price then in effect or a price equal to the average of the daily price of the common stock between October 29, 2003 and October 27, 2004 (but in no event less than $2.19 per share). The exercise price (and the reset price) under the October 2008 Warrants also is subject to similar adjustments for anti-dilution protection.

We entered into a Registration Rights Agreement with the investors in connection with the issuance of the October Debentures and the October 2008 Warrants. The Registration Rights Agreement requires that we register on behalf of the holders the shares of common stock issuable upon conversion of the October Debentures, as interest shares under the October Debentures and upon exercise of the 2008 Warrants. If, subject to certain exceptions, sales of all shares required to be registered cannot be made pursuant to the registration statement, then we will be required to pay to the investors their pro rata share of $3,635 for each day such conditions exist.

On January 26, 2004, we issued an aggregate of $4,000,000 in principal amount of 6% Senior Convertible Debentures due January 31, 2006 (the "January 2004

Debentures"), an aggregate of 790,514 warrants (the "2009 Warrants") and 158,103 shares of common stock, and Additional Investment Rights (to purchase up to an additional $2,000,000 principal amount of January 2004 Debentures commencing in six months) in a private placement for aggregate anticipated net proceeds of $3,695,000. The January 2004 Debentures mature on January 31, 2006 and bear interest at 6% per annum, payable quarterly in cash or, subject to satisfaction of certain conditions, common stock. Any shares of common stock issued to the investors as payment of interest shall be valued at 95% of the average closing price of the common stock during the five consecutive business days ending on the third business day immediately preceding the applicable interest payment date. Commencing six months after issuance, the Company is required to start repaying the then outstanding principal amount under the January 2004 Debentures in monthly installments amortized over 18 months in cash or, at the Company's option, in shares of common stock. Any shares of common stock issued to the investors as installment payments shall be valued at 95% of the average closing price of the common stock during the 10-day trading period commencing on and including the eleventh trading day immediately preceding the date that the installment is due.

The January 2004 Debentures are convertible at the option of the investors at any time through January 31, 2006 into shares of our common stock. The conversion price under the January 2004 Debentures is fixed at $2.53 per share, subject to adjustment for anti-dilution protection for issuance of common stock or securities convertible or exchangeable into common stock at a price less than the conversion price then in effect.

There are two classes of July 2009 warrants received by the Investors: Class A and Class B. The Class A warrants are to acquire any time from July 26, 2004 through July 26, 2009 an aggregate of up to 395,257 shares of common stock at a price of $3.29 per share. The Class B warrants are to acquire any time from July 26, 2004 through July 26, 2009 an aggregate of up to 395,257 shares of common stock at a price of $5.06 per share. On January 27, 2005, the exercise price of these July 2009 Class A and Class B Warrants will reset to the lesser of their respective exercise price then in effect or a price equal to the average of the daily price of the common stock between January 27, 2004 and January 26, 2005 (but in no event less than $2.58 per share with regard to the Class A warrants and $3.54 per share with regard to the Class B warrants). The exercise price (and the reset price) under the July 2009 Warrants also is subject to similar adjustments for anti-dilution protection.

The Company also issued to the investors Additional Investment Rights pursuant to which the investors have the right to acquire up to an additional $2,000,000 principal amount of January 2004 Debentures from the Company. These Debentures are identical to the January 2004 Debentures except that the conversion price is $2.58. The Additional Investment Rights are exercisable commencing on July 26, 2004 (the "Trigger" date) for a period of 90 days from the Trigger Date or 90 days from the date which the registration statement registering the shares issuable upon the conversion of the January 2004 Debentures to be issued pursuant to the Additional Investment Rights is declared effective, whichever is longer.

The Company entered into a Registration Rights Agreement with the investors in connection with the issuance of the January 2004 Debentures (including any Debentures issued pursuant to the Additional Investment Rights), the shares,

and the January 2009 Warrants. The Registration Rights Agreement requires that the Company register on behalf of the investors the shares issued to the investors and 135% of the shares issuable upon conversion of the Debentures (including payment of interest thereon) and upon exercise of the January 2009 Warrants. If the Registration Statement containing these shares is not filed within the time period required by the agreement, not declared effective within the time period required by the agreement or, after it is declared effective and subject to certain exceptions, sales of all shares required to be registered thereon cannot be made pursuant thereto, then we will be required to pay to the investors their pro rata share of $3,635 for each day any of the above conditions exist with respect to this Registration Statement.

By agreement between the Company and the investors, the date upon which all warrants previously issued to the investors may become exercisable is now July 26, 2004 and the exercise periods of these warrants have been extended accordingly.

By agreement with Cardinal Securities, LLC, for general financial advisory services and in conjunction with the private debenture placements in March, July and October 2003 and in January 2004, we paid Cardinal Securities, LLC an investment banking fee equal to 7% of the investments made by the two Debenture holders and issued to Cardinal certain warrants. A portion of the investment banking fee was paid with the issuance of 30,000 shares of our common stock. Cardinal also received 612,500 warrants to purchase common stock, of which 112,500 are exercisable at $1.74 per share, 112,500 are exercisable at $2.57 per share, 200,000 are exercisable at $2.50 per share, 87,500 are exercisable at $2.42 per share and 100,000 are exercisable at $3.04 per share. The $1.74 warrants expire on July 10, 2008, the $2.57 and $2.50 warrants expire on March 12, 2008, the $2.42 warrants expire on October 30, 2008 and the $3.04 warrants expire on January 25, 2009. By agreement with Cardinal, we have registered 542,500 shares for public sale and have agreed to register the balance.

In connection with the debenture agreements, we have outstanding letters of credit of $1 Million as additional collateral.

As of December 31, 2003, the investors have converted $6,595,000 of debt from the March and July Debentures into 4,334,916 shares of our common stock. The March Debentures have been fully converted. The remaining principal balance on the remaining debentures is convertible into shares of our stock at the option of the investors at any time, through the maturity date. In addition, we have paid $1,300,000 into the debenture cash collateral account as required by the terms of the October Debentures. The amounts paid through December 31, 2003 have been accounted for as advances receivable and are reflected as such on the accompanying balance sheet as of December 31, 2003. The cash collateral account provides partial security for repayment of the July and October 2003 and January 2004 Debentures in the event of default.

The March, July, and October 2003 debenture issuances of $5,426,000, $5,426,000, and $4,142,357, respectively, and warrant issuances, were accounted for in accordance with EITF 98-5: Accounting for convertible securities with beneficial conversion features or contingency adjustable conversion and with EITF No. 00-27: Application of issue No. 98-5 to Certain convertible instruments. The Company determined the fair values to be ascribed to detachable warrants issued with the convertible debentures utilizing the Black-Scholes method.

As a result, the Company recorded debt discounts of approximately $11.8 million for the 2003 debenture issuances which, in effect, reduced the carrying value of our debt. As debt is converted to common stock, the remaining unamortized debt discount is charged to finance costs. These costs

were initially deferred and charged to finance costs over the life of the debentures. As of December 31, 2003, the amount of debt discount amortized to finance cost totaled approximately $7.3 million.

Costs associated with the financings aggregated approximately $1.3 million. These costs are also deferred and expensed as finance costs over the life of the debentures.

Excluding the application of related accounting standards, and remaining debt discounts of $4.5 million, the Company's outstanding debt as of December 31, 2003 totaled $6.6 million and is due during 2005.

(8) Stockholders' Equity

(a) Preferred Stock

The Company is authorized to issue 5,000,000 shares of $.01 per value preferred stock with such designations, rights and preferences as may be determined by the board of directors. There were no preferred shares issued and outstanding at December 31, 2002 and 2003.

(b) Common Stock

On July 31, 2003, we had approximately 104,000 shares of our $.001 authorized shares of $.001 par value Common Stock that were not issued or reserved for issuance. In order to accommodate the shares needed for the July Debenture, Dr. Carter, our Chief Executive Officer and Cardinal Capital, the placement agent, agreed that they would not exercise their warrants or options unless and until our stockholders approved an increase in our authorized shares of common stock (see note 11). This action freed up 3,206,650 shares. One of the proposals for the annual meeting of our stockholders that was held in September 2003 was an amendment to our certificate of incorporation to increase the authorized shares of common stock from 50,000,000 to 100,000,000 (the "Proposal"). We could not be assured that the Proposal would be approved.

Our stockholders approved an amendment to our corporate charter at the Annual Shareholder meeting held in Philadelphia, PA on September 10, 2003. This amendment increased our authorized shares from 50,000,000 to 100,000,000.

As of December 31, 2002 and 2003, 32,106,972 and 39,067,134 shares, net of shares held in the treasury, were outstanding, respectively.

(c) Minority Shareholder Interest

On March 20, 2002 our European Subsidiary Hemispherx Biopharma Europe, S.A. ("Hemispherx, S.A.") entered into a Sales and Distribution agreement with Laboratorios del Dr. Esteve S.A. ("Esteve"). Pursuant to the terms of the Agreement, Esteve was granted the exclusive right to market Ampligen(R) in Spain Portugal and Andorra for the treatment of Myalgic Encephalitis/Chronic Fatigue Syndrome ("ME/CFS"). In addition to other terms and other projected payments, Esteve paid an initial and non refundable fee of 625,000 Euros (approximately $563,000) to Hemispherx S.A. on April 24, 2002 as the first part of a series of milestone based payments.

During March 2002, Hemispherx Biopharma Europe, S.A. (Hemispherx S.A.) was authorized to issue up to 22,000,000 Euros of seven percent (7%) convertible preferred securities. Such securities will be guaranteed by the parent company and will be converted into a specified number of shares of Hemispherx S.A. pursuant to the securities agreement. Conversion is to occur on the earlier of an initial public offering of Hemispherx S.A. on a European stock exchange or

September 30, 2003.

Esteve purchased 1,000,000 Euros of Hemispherx Biopharma Europe S.A.'s convertible preferred equity certificates on May 23, 2002. During 2002, the terms and conditions of these securities were changed so that these preferred equity certificates could be converted into the common stock of Hemispherx Biopharma, Inc. (HEB) in the event that a European IPO is not completed by September 30, 2003. The conversion rate is to be 300 shares of Hemispherx Biopharma, Inc.'s common shares for each 1,000 Euro convertible preferred certificate. As a result the Company recorded approximately $946,000 as minority interest in subsidiary on its balance sheet at December 31, 2002.

On December 18, 2002, we proposed that Esteve convert their convertible preferred equity certificates into Hemispherx common stock pursuant to the terms of the agreement and all unpaid dividends at the market price on that conversion date. On January 9, 2003, Esteve accepted our proposal and we registered these shares for public sale.

On March 13, 2003, we issued 347,445 shares of our common stock to Provesan SA, an affiliate of Esteve S.A., in exchange for 1,000,000 Euros of convertible preferred equity certificates and any unpaid dividends. As a result of the exchange, the minority interest in subsidiary was transferred to stockholders' equity on such date.

The contingent conversion price was more than the then market value of the parent company's or subsidiaries' common stock at each of the respective measurement dates. As a result and in accordance with Emerging Issues Task Force (EITF) No. 00-27 "Application of Issue No. 98-5 (Accounting for Convertible Securities with Beneficial Conversion Features or Contingently Adjustable Conversion Ratios) to Certain Convertible Instruments", the Company did not ascribe any value to any contingent conversion feature.

(d) Common Stock Options and Warrants

(i) Stock Options

The 1990 Stock Option Plan provides for the grant of options to purchase up to 460,798 shares of the Company's Common Stock to employees, directors, and officers of the Company and to consultants, advisors, and other persons whose contributions are important to the success of the Company. The recipients of options granted under the 1990 Stock Option Plan, the number of shares to be converted by each option, and the exercise price, vesting terms, if any, duration and other terms of each option shall be determined by the Company's board of directors or, if delegated by the board, its Compensation Committee. No option is exercisable more than 10 years and one month from the date as of which an option agreement is executed. These shares become vested through various periods not to exceed four years from the date of grant. The option price represents the fair market value of each underlying share of Common Stock at the date of grant, based upon the public trading price.

Information regarding the options approved by the Board of Directors under the 1990 Stock Option Plan is summarized below:

	2001	2002	
	Weighted	Weighted	

		Option	Average		Option	Average		O
	Shares	Price	Exercise Price	Shares	Price	Exercise Price	Shares	P
Outstanding, beginning of year	218,567	$1.06-6.81	$3.45	306,263	$1.06-4.34	$3.58	294,665	$1
Granted	94,000	$4.03	$4.03	--	--	--	200,000	
Canceled	(6,304)	$4.34-6.81	$5.91	(11,598)	$3.00-4.34	$3.71	(61,531)	$3
Exercised	--	--	--	--	--	--	--	
							--	
Outstanding, end of year	306,263	$1.06-4.34	$3.58	294,665	$1.06-4.34	$3.57	433,134	$1
Exercisable	234,263	$1.06-4.34	$4.67	252,746	$1.06-4.34	$3.50	433,134	$1
Weighted average remaining contractual life (years)	3.57 years			3.68 years			3.37 years	
Exercised in current and prior years	(37,791)			(37,791)			(37,791)	
Available for future grants	116,744			128,342			-0-	

In December 1992, the Board of Directors approved the 1992 Stock Option Plan (the 1992 Stock Option Plan) which provides for the grant of options to purchase up to 92,160 shares of the Company's Common Stock to employees, directors, and officers of the Company and to consultants, advisers, and other persons whose contributions are important to the success of the Company. The recipients of the options granted under the 1992 Stock Option Plan, the number of shares to be covered by each option, and the exercise price, vesting terms, if any, duration and other terms of each option shall be determined by the Company's board of directors. No option is exercisable more than 10 years and one month from the date as of which an option agreement is executed. To date, no options have been granted under the 1992 Stock Option Plan.

The Company's 1993 Employee Stock Purchase Plan (the 1993 Purchase Plan) was approved by the board of directors in July 1993. The outline of the 1993 Purchase Plan provides for the issuance, subject to adjustment for capital changes, of an aggregate of 138,240 shares of Common Stock to employees.

The 1993 Purchase Plan is administered by the Compensation Committee of the board of directors. Under the 1993 Purchase Plan, Company employees are eligible to participate in semi-annual plan offerings in which payroll deductions may be used to purchase shares of Common Stock. The purchase price for such shares is

equal to the lower of 85% of the fair market value of such shares on the date of grant or 85% of its fair market value of such shares on the date such right is exercised. There have been no offerings under the 1993 Purchase Plan to date and no shares of Common Stock have been issued thereunder.

During 2003, the Company issued options to acquire 200,000 shares to its general counsel under the 1990 plan for services rendered. As a result, the Company charged operating expenses in the amount of $237,000.

(ii) Stock warrants

Number of warrants exercisable into shares of common stock

	2001			2002			
	Shares	Option Price	Weighted Average Exercise Price	Shares	Option Price	Weighted Average Exercise Price	Shares
Outstanding beginning of year	11,624,168	$1.75-12.00	$4.05	6,927,110	$1.75-16.00	$4.77	7,967,81
Granted	856,650	$5.00-16,00	$9.89	1,802,000	$2.00-6.00	$2.07	4,623,02
Canceled	(3,396,508)	$2.50-4.00	$3.89	(750,000)	$3.50-6.00	$3.72	(276,00
Exercised	(2,157,200)	$1.75-4.00	$3.75	(11,300)	$1.75-7.50	$3.30	(812,03
Outstanding end of year	6,927,110	$1.75-16.00	$4.77	7,967,810	$1.75-16.00	$3.18	11,502,79
Exercisable	6,927,110	$1.75-16.00	$4.77	6,345,810	$1.75-16.00	$3.48	8,635,56
Weighted average remaining contractual life (years)	4.05 years			4.03 years			4.04 year
Years exercisable	2002-2006			2003-2008			2004-200

The following table summarizes information about stock warrants outstanding at December 31, 2003:

	Exercise price range		
	$1.74-$5.00	$6.00-$9.00	$10.00-$16.00
Outstanding warrants			
Number outstanding	9,545,346	1,357,450	600,000
Weighted average remaining contractual life(years)	4.84	1.51	1.46
Weighted average exercise price	$2.56	$6.77	$12.33
Exercisable warrants			
Number outstanding	6,678,110	1,357,450	600,000
Weighted average exercise price	$2.70	$6.77	$12.33

Certain of the stock warrants outstanding are subject to adjustments for stock splits and dividends.

Warrants issued to stockholders

At December 31, 2000, there were 305,160 warrants remaining. In 2001, 73,000 were converted to common stock. At December 31, 2001 there were 232,160 warrants remaining. In 2002, 10,000 were converted to common stock. At December 31, 2002 and 2003 there were 222,160 warrants remaining. These warrants have an exercise price of $3.50 per share and expire in October 2004.

Other stock warrants

In addition, the Company has other issued warrants outstanding - totaling 11,280,636 which consists of the following:

In November 1994, the Company granted Rule 701 Warrants to purchase an aggregate of 2,080,000 shares of Common Stock to certain officers and directors. These Warrants are exercisable at $3.50 per share and, if not exercised, were to expire in September, 1999. On February 19, 1999 the Board of Directors extended the expiration date for three more years. In 1999 235,000 warrants were exercised and 5,000 warrants were exercised in 2000. At

December 31, 2000, there were 1,840,000 Rule 701 warrants remaining. In 2001 20,000 of these warrants expired, leaving a balance of 1,820,000 in warrants outstanding at December 31, 2001. During 2002, 420,000 warrants expired and the Company extended the expiration date of the remaining balance of 1,400,000 for a period of five years to now expire on September 30, 2007. These stock warrants have an exercise price of $3.50. In accordance with FASB Interpretation No. 44, Accounting for Certain Transactions involving Stock Compensation, no compensation expense was recognized as the exercise price at the extension date exceeded the fair value of the underlying common stock.

In May 1995, the Company and certain officers, directors and shareholders entered into a standby finance agreement pursuant to which the parties agreed to provide an aggregate of $5,500,000 in financing to the Company during 1995 in the event that existing and additional financing was insufficient to cover the cash needs of the Company through December 31, 1996. In exchange, the Company

issued warrants to purchase an aggregate of 2,750,000 shares of Common Stock at $1.75 per share to the parties. In 1999, 290,000, in 2000, 216,500, in 2001, 200,000, 2002, 1,300 and in 2003 35,000 of these warrants were exercised, leaving a balance of these warrants of 1,415,200. These warrants expire June 30, 2005.

In the years 2001, 2002 and 2003, the Company issued 450,000, 25,000 and no warrants, respectively, exclusive of warrants issued in connection with the Company's 2003 Debenture issuances (see below), to investment banking firms for services performed on behalf of the Company. Accordingly, the Company recorded stock compensation of 637,000, 133,000 and none for the years 2001, 2002 and 2003, respectively. These warrants have various vesting dates and exercisable prices ranging from $4.00 to $16.00 per share. 1,193,800 warrants were outstanding at December 31, 2002. In 2003, 225,000 of these warrants expired leaving a balance of 968,800 warrants at December 31, 2003. These warrants are exercisable in five years from the date of issuance.

In 2001, 2002 and 2003 the Company had non-public warrants outstanding of 2,254,650, 3,701,650 and 5,100,650 respectively. These warrants are exercisable at rates of $2.20 to $10.00 per share of common stock. The exercise price was equal to the fair market value of the stock on the date of grant. During 2003 the company granted 1,450,000 warrants to employees with an exercise price of $2.20 for services performed and 51,000 warrants expired. During 2002, the Company granted 1,777,000 warrants to employees for services performed. These warrants have a weighted average exercise price of $2.07 per share, and have been included in the pro-forma loss calculation in note 2(n). During 2001, 370,000 of the non public warrants were exercised and 415,000 expired without being exercised. 2,254,650 of the non-public warrants were outstanding at December 31, 2001. During 2002, none of these warrants were exercised and 750,000 expired. 3,701,650 of the non-public warrants were outstanding at December 31, 2002. During 2002 the Company also extended the expiration date of 322,000 of these warrants for a period of five years to now expire in the years ending 2007 and 2008. These stock warrants have exercise prices ranging from $3.50 to $4.00 In accordance with FASB Interpretation No. 44, Accounting for Certain Transactions involving Stock Compensation, no compensation expense was recognized as the exercise price at the extension date exceeded the fair value of the underlying common stock.

In 2003 the company issued warrants to acquire 3,173,024 shares in connection with the financing of the purchase of the assets of Interferon Sciences, Inc. During 2003, 777,038 of these warrants were exercised leaving a balance of 2,395,986 at December 31, 2003.

(e) Stock Repurchase

The Company's repurchases of shares of common stock are recorded as "Treasury Stock" and result in a reduction of "Stockholders' equity." When treasury

shares are reissued, the Company uses a first-in, first-out method and the excess of repurchase cost over reissuance price is treated as a reduction of "Additional paid-in capital." At December 31, 2003 there were 443 shares in the treasury. During 2003 most of the then existing treasury shares were either re-issued or retired.

(f) Rights offering

On November 19, 2002, the Board of Directors of Hemispherx Biopharma, Inc. (the "Company") declared a dividend distribution of one Right for each outstanding

share of Common Stock to stockholders of record at the close of business on November 29, 2002 (the "Record Date"). Each Right entitles the registered holder to purchase from the Company a unit consisting of one one-hundredth of a share (a "Unit") of Series A Junior Participating Preferred Stock, par value $.01 per share (the "Series A Preferred Stock") at a Purchase Price of $30.00 per Unit, subject to adjustment. The description and terms of the Rights are set forth in a Rights Agreement (the "Rights Agreement") between the Company and Continental Stock Transfer & Trust Company, as Rights Agent.

Initially, the Rights are attached to all Common Stock certificates representing shares then outstanding, and no separate Rights Certificates will be distributed. Subject to certain exceptions specified in the Rights Agreement, the Rights will separate from the Common Stock and a Distribution Date will occur upon the earlier of (i) 10 days following a public announcement that a person or group of affiliated or associated persons (an "Acquiring Person") has acquired beneficial ownership of 15% or more (or 20% or more for William A. Carter, M.D.) of the outstanding shares of Common Stock (the "Stock Acquisition Date"), other than as a result of repurchases of stock by the Company or certain inadvertent actions by institutional or certain other stockholders or (ii) 10 business days (or such later date as the Board shall determine) following the commencement of a tender offer or exchange offer that would result in a person or group becoming an Acquiring Person. Until the Distribution Date, (i) the Rights will be evidenced by the Common Stock certificates and will be transferred with and only with such Common Stock certificates, (ii) new Common Stock certificates issued after the Record Date will contain a notation incorporating the Rights Agreement by reference and (iii) the surrender for transfer of any certificates for Common Stock outstanding will also constitute the transfer of the Rights associated with the Common Stock represented by such certificate. Pursuant to the Rights Agreement, the Company reserves the right to require prior to the occurrence of a Triggering Event (as defined below) that, upon any exercise of Rights, a number of Rights be exercised so that only whole shares of Preferred Stock will be issued.

(9) Segment and Related Information

The Company operates in one segment, which performs research and development activities related to Ampligen(R) and other drugs under development, and sales and marketing of Alferon(R).

The following table presents revenues by country based on the location of the use of the product services.

	(000's omitted)		
	2001	2002	2003
United States	$274	$237	$655
Belgium	107	74	2
Other	9	30	--
	$390	$341	$657

In addition, in 2002, the Company recorded License Fee Income in the amount of $563,000 from a Company located in Europe. The Company employs an insignificant amount of net property and equipment in its foreign operations.

(10) Research, Consulting and Supply Agreements

In December, 1999, the Company entered into an agreement with Biovail Corporation International ("Biovail"). Biovail is an international full service pharmaceutical company engaged in the formulation, clinical testing, registration and manufacture of drug products utilizing advanced drug delivery systems. Biovail is headquartered in Toronto, Canada. The agreement grants Biovail the exclusive distributorship of the Company's product in the Canadian territories subject to certain terms and conditions. In return, Biovail agrees to conduct certain pre-marketing clinical studies and market development programs, including without limitation, expansion of the Emergency Drug Release Program in Canada with respect to the Company' products. Biovail agrees to work with the Company in preparing and filing of a New Drug Submission with Canadian Regulatory Authorities. Biovail invested $2.25 million in Hemispherx equity at prices above the then current market price and agreed to make further payments based on reaching certain regulatory milestones. The Agreement requires Biovail to penetrate certain market segments at specific rates in order to maintain market exclusivity.

The Company has entered into agreements for consulting services, which are performed at medical research institutions and by medical and clinical research individuals. The Company's obligation to fund these agreements can be terminated after the initial funding period, which generally ranges from one to three years or on an as-needed monthly basis. During the year ending December 31, 2001, 2002 and 2003 the Company incurred approximately $595,000, $395,000 and $389,000 respectively, of consulting service fees under these agreements. These costs are charged to research and development expense as incurred.

(11) 401(K) Plan

The Company has a defined contribution plan, entitled the Hemispherx Biopharma Employees 401(K) Plan and Trust Agreement (the 401(K) Plan). Full time employees of the Company are eligible to participate in the 401(K) Plan following one year of employment. Subject to certain limitations imposed by federal tax laws, participants are eligible to contribute up to 15% of their salary (including bonuses and/or commissions) per annum. Participants' contributions to the 401(K) Plan may be matched by the Company at a rate determined annually by the Board of Directors.

Each participant immediately vests in his or her deferred salary contributions, while Company contributions will vest over one year. In 2001, 2002 and 2003 the Company provided matching contributions to each employee for up to 6% of annual pay aggregating $48,000, $38,000 and $34,000 respectively.

(12) Royalties, License, and Employment Agreements

The Company also has entered into a licensing agreement with a group of individuals and Hahnemann University relating to their contributions to the development of certain compounds, including Ampligen(R), and to obtain exclusive information and regulatory rights relating to these compounds. Under this agreement, the Company will pay 2% of net sales proceeds of Ampligen(R) not to exceed an aggregate amount of $6 million per year through 2005.

In August 1988, the Company entered into a pharmaceutical use license agreement with Temple University (the Temple Agreement). In July, 1994, Temple terminated the Temple Agreement. In November 1994, the Company filed suit against Temple in the Superior Court of the State of Delaware seeking a declaratory judgment that the agreement was unlawfully terminated by Temple and therefore remained in full force and effect. Temple filed a separate suit against the Company seeking a

declaratory judgment that its agreement with the Company was properly terminated. These legal actions have now been settled. Under the settlement, the parties have entered into a new pharmaceutical use license agreement (New Temple Agreement) that is equivalent in duration and scope to the previous license. Under the terms of the New Temple Agreement, Temple granted the Company an exclusive world-wide license for the term of the agreement for the commercial sale of Oragen products using patents and related technology held by Temple, which license is exclusive except to the extent Temple is required to grant a license to any governmental agency or non-profit organization as a condition of funding for research and development of the patents and technology licensed to the Company.

In October 1994, the Company entered into a licensing agreement with Bioclones (Propriety) Limited (SAB/Bioclones) with respect to co-development of various RNA drugs, including Ampligen(R), for a period ending three years from the expiration of the last licensed patents. The licensing agreement provides SAB/Bioclones with an exclusive manufacturing and marketing license for certain southern hemisphere countries (including certain countries in South America, Africa and Australia as well as the United Kingdom and Ireland (the licensed territory). In exchange for these marketing and manufacturing rights, the licensing agreement provides for: (a) a $3 million cash payment to the Company, all of which was received during the year ended December 31, 1995; (b) the formation and issuance to the Company of 24.9% of the capital stock of Ribotech, Ltd., a company which developed and operates a new manufacturing facility that produces raw material components of Ampligen(R) and (c) royalties of 6% to 8% of net sales of the licensed products in the licensed territories as defined, after the first $50 million of sales. SAB/Bioclones will be granted a right of first refusal to manufacture and supply to the Company licensed products for not less than one third of its world-wide sales of Ampligen(R), excluding SAB/Bioclones related sales. In addition, SAB/Bioclones will have the right of first refusal for oral vaccines in the licensed territory. In 2000, the Company paid to Ribotech a total of $500,000 for the current and future purchases and delivery of polymers. Of the $500,000 advanced in 2000, a balance of $390,000 was included in other assets in 2000 and was used for purchases of polymers in 2001. In 2002, $262,000 was paid to Ribotech for delivery of Polymers.

In October 1994, the Board of Directors granted a director of the Company the right to receive 3% of gross proceeds of any licensing fees received by the Company pursuant to the SAB/Bioclones licensing agreement, a fee of .75% of gross proceeds in the event that SAB Bioclones makes a tender offer for all or substantially all of the Company's assets, including a merger, acquisition or related transaction, and a fee of 1% on all products manufactured by SAB Bioclones. The Company may prepay in full its obligation to provide commissions within a ten year period.

On March 20, 2002, our European subsidiary Hemispherx Biopharma Europe, S.A. ("Hemispherx S.A.") entered into a sales and Distribution agreement with Laboratories Del Dr. Esteve S.A. ("Esteve"). Pursuant to the terms of the agreement, Esteve was granted the exclusive right to market Ampligen(R) in Spain, Portugal and Andorra for the treatment of Myalgic/Chronic Fatigue Syndrome ("ME/CFS"). In addition to other terms and other projected payments, Esteve paid an initial and non-refundable fee of 625,000 Euros (approximately $563,000) to Hemispherx S.A. on April 24, 2002. Esteve is to pay a fee of 1,000,000 Euros after U.S. Food and Drug Administration approval of Ampligen(R) for the treatment of ME/CFS and a fee of 1,000,000 Euros upon Spain's approval of the final marketing authorization for using Ampligen(R) for the treatment of ME/CFS.

In connection with the two agreements entered into with ISI, the Company is obligated to pay ISI a 6% royalty on the net sales of the Alferon N Injection product.

The Company has contractual agreements with two of its officers. The aggregate annual base compensation under these contractual agreements for 2001, 2002 and 2003 was $603,000, $620,000 and $637,000 respectively. In addition, certain of these officers are entitled to receive performance bonuses of up to 25% of the annual base salary (in addition to the bonuses described below). In 2001 and 2002 no performance bonuses were granted. In 2003, bonuses of $266,100 were granted. In 2001, certain officers were granted warrants and options to purchase 426,650 shares of Common Stock at $4.01 per share. In 2002, certain officers were granted warrants and option to purchase 1,220,000 shares of common stock at $2.00 - $4.03 per share. In 2003, the Chief Executive Officer of the Company was granted warrants to purchase 1,450,000 shares of common stock at $2.20 per share. The Chief Executive Officer's employment agreement provides for bonuses based on gross proceeds received by the Company from any joint venture or corporate partnering agreement.

In order to facilitate the Company's need to obtain financing and prior to our shareholders approving an amendment to our corporate charter to merge the number of authorized shares, Dr. Carter, the Company's Chief Executive Officer, agreed to waive his right to exercise certain warrants and options unless and until our shareholder approved an increase in our authorized shares of Common Stock.

In October 2003, in recognition of this action as well as Dr. Carter's prior and on-going efforts relating to product development securing critically needed financing and the acquisition of a new product line, the Compensation Committee determined that Dr. Carter be awarded bonus compensation in 2003 consisting of $196,636 and a grant of 1,450,000 stock warrants with an exercise price of $2.20 per share. This additional compensation was reviewed by an independent valuation firm and found to be fair and reasonable within the context of total compensation paid to chief executive officers of comparable biotechnology companies. These warrants vest upon the earlier of the second ISI Asset closing or the filing by the Company with the U.S. Food and Drug Administration of a new drug application. Upon the occurrence of either of these events, the Company will expense the intrinsic value, if any, of the warrants.

(13) Leases

The Company has several noncancelable operating leases for the space in which its principal offices are located and certain office equipment.

Future minimum lease payments under noncancelable operating leases are as follows:

Year ending December 31,	(000's omitted) Operating leases
2004	286
2005	240
2006	193
2007	65
Total minimum lease payments	$ 784

Rent expense charged to operations for the years ended December 31, 2001, 2002 and 2003 amounted to approximately $294,000, $307,000 and $266,000 respectively. The term of the lease for the Rockville, Maryland facility is through June, 2005

with an average rent of $8,000 per month, plus applicable taxes and charges. The term of the lease for the Philadelphia, Pennsylvania offices is through April, 2007 with an average rent of $15,000 per month, plus applicable taxes and charges.

(14) Income Taxes

As of December 31, 2003, the Company has approximately $73,000,000 of federal net operating loss carryforwards (expiring in the years 2004 through 2024) available to offset future federal taxable income. The Company also has approximately $17,000,000 of state net operating loss carryforwards (expiring in the years 2004 through 2008) available to offset future state taxable income. The utilization of certain state net operating loss carryforwards may be subject to annual limitations.

Under the Tax Reform Act of 1986, the utilization of a corporation's net operating loss carryforward is limited following a greater than 50% change in ownership. Due to the Company's prior and current equity transactions, the Company's net operating loss carryforwards may be subject to an annual limitation generally determined by multiplying the value of the Company on the date of the ownership change by the federal long-term tax exempt rate. Any unused annual limitation may be carried forward to future years for the balance of the net operating loss carryforward period.

Deferred income taxes reflect the net tax effects of temporary differences between carrying amounts of assets and liabilities for financial reporting purposes and the carrying amounts used for income tax purposes. In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which temporary differences representing net future deductible amounts become deductible. Due to the uncertainty of the Company's ability to realize the benefit of the deferred tax asset, the deferred tax assets are fully offset by a valuation allowance at December 31, 2002 and 2003.

The components of the net deferred tax asset of December 31, 2002 and 2003 consists of the following:

	(000,s omitted)	
Deferred tax assets:	2002	2003
Net operating losses	$ 22,440	$ 24,700
Accrued Expenses and Other	(16)	12
Capitalized Research and development costs	3,763	2,825
	26,187	27,537
Less: Valuation Allowance	(26,187)	(27,537)
Balance	$ -0-	$ -0-

(15) Contingencies

On September 30, 1998, we filed a multi-count complaint against Manuel P. Asensio, Asensio & Company, Inc. ("Asensio"). The action included claims of

defamation, disparagement, tortuous interference with existing and prospective business relations and conspiracy, arising out of the Asensio's false and defamatory statements. The complaint further alleged that Asensio defamed and disparaged us in furtherance of a manipulative, deceptive and unlawful short-selling scheme in August and September, 1998. In 1999, Asensio filed an answer

and counterclaim alleging that in response to Asensio's strong sell recommendation and other press releases, we made defamatory statements about Asensio. We denied the material allegations of the counterclaim. In July 2000, following dismissal in federal court for lack of subject matter jurisdiction, we transferred the action to the Pennsylvania State Court. In March 2001, the defendants responded to the complaints as amended and a trial commenced on January 30, 2002. A jury verdict disallowed the claims against the defendants for defamation and disparagement and the court granted us a directed verdict on the counterclaim. On July 2, 2002 the Court entered an order granting us a new trial against Asensio for defamation and disparagement. Thereafter, Asensio appealed the granting of a new trial. This appeal is now pending in the Superior Court of Pennsylvania.

In June 2002, a former ME/CFS clinical trial patient and her husband filed a claim in the Superior Court of New Jersey, Middlesex County, against us, one of our clinical trial investigators and others alleging that she was harmed in the ME/CFS clinical trial as a result of negligence and breach of warranties. We believe the claim is without merit and we are defending the claim against us through our product liability insurance carrier.

In June 2002, a former ME/CFS clinical trial patient in Belgium filed a claim in Belgium, against Hemispherx Biopharma Europe, NV/SA, our Belgian subsidiary, and one of our clinical trial investigators alleging that she was harmed in the Belgium ME/CFS clinical trial as a result of negligence and breach of warranties. We believe the claim is without merit and we are defending the claim against us through our product liability insurance carrier.

In July 2002, we filed suit in the United States District Court for the Eastern District of Pennsylvania against our insurance company seeking (1) a judicial order declaring our rights and the obligations of our insurance carrier under the insurance policy our insurance carrier sold to us (2) monetary damage for breach of contract resulting from our insurance carrier refusal to fully defend us in connection with the Asensio litigation (3) monetary damages to compensate us for our insurance carrier breach of its fiduciary duty faith and dealing and (4) monetary damages, interest, cost, and attorneys fees to compensate us for violation of the Pennsylvania Bad Faith Statute. On March 31, 2003 we settled our outstanding claim with our insurance carrier for $1,500,000 relating to reimbursement of expenses in connection with our Asensio law suits. We realized approximately $1,050,000 of this amount after payment of expenses related to the settlement. Such amount was recorded during the fourth quarter 2002 as a reduction in General and Administrative expenses in our statement of operations.

On September 16, 2003, HEB filed and subsequently served and moved for expedited proceedings on, a complaint filed in the Court Of Chancery of the State of Delaware, New Castle County, against ISI. The Complaint seeks specific performance, and declaratory and injunctive relief related to the Inventory and Asset Purchase Agreements with ISI. Specifically, HEB alleges that ISI has delayed its performance pursuant to the Inventory and Asset Purchase Agreement and, as a result, the Asset Purchase Agreement did not close within 180 days of the date of the execution of the agreements. Paragraph 7.7 of the Asset Purchase Agreement states that either party to the agreement may terminate the agreement

if there is no closing within 180 days of the date of the agreement. HEB requested that the Court require ISI to specifically perform its obligations under the agreement or, in the alternative, that paragraph 7.7 of the agreement be eliminated or reformed to eliminate ISI's ability to terminate pursuant to that paragraph. HEB also requested that ISI, as a result of its conduct, not be permitted to terminate the Asset Purchase Agreement pursuant to paragraph 7.7 or due to the passage of time. At a hearing held on September 29, 2003, the Court set a trial of the case for January 6-7, 2004 which has been postponed at the request of both parties until March 4-5, 2004. The parties have agreed that neither party shall have the right to terminate the Asset Purchase Agreement pursuant to paragraph 7.7

until the date which is at least two weeks following trial, and only then, unless the Court has ruled, upon five days written notice to the other party.

The current court date of March 4 and 5, 2004 will be rescheduled to allow for the ISI shareholders to meet on March 9, 2004 as now scheduled. The results of the Shareholders Meeting and subsequent actions of ISI management will determine if we proceed with this lawsuit.

(16) Related Party Transactions

We have employment agreements with certain of our executive officers and have granted such officers and directors of the Company options and warrants to purchase common stock of the Company, as discussed in Notes 2(n) and 9.

A director of the Company, is an attorney in private practice, who has rendered corporate legal services to us from time to time, for which he has received fees and options to purchase Company stock valued at $237,000 using the Black Scholes pricing model and recorded as stock compensation expense. A Director of the Company, lives in Paris, France and assists our European subsidiaries in their dealings with medical institutions and the European Medical Evaluation Authority. A Director of the Company, assists us in establishing clinical trial protocols as well as performs other scientific work for us from time to time. For these services, these Directors were paid an aggregate of $144,955, $170,150 and $100,100 for the years ending December 31, 2001, 2002 and 2003 respectively.

Through November 2002, William A. Carter, Chief Executive Officer of the Company, received an aggregate of $12,106 in short term advances which were repaid as of December 31, 2002. All advances bore interest at 6% per annum. The Company loaned $60,000 to, a Director of the Company in November, 2001 for the purpose of exercising 15,000 class A redeemable warrants. This loan bears interest at 6% per annum.

We paid $57,750, $33,450 and $18,800 for the years ending December 31, 2001, 2002 and 2003, respectively to Carter Realty for the rent of property used at various times in years 2001, 2002 and 2003 by us. The property is owned by others and managed by Carter Realty. Carter Realty is owned by Robert Carter, the brother of William A. Carter.

(17) Concentrations of credit risk

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist principally of cash, cash equivalents and investments. The Company places its cash with high-quality financial institutions. At times, such amount may be in excess of Federal Deposit Insurance Corporation insurance limits of $100,000.

(18) Quarterly Results of Operation (unaudited)

(in thousand except per share data)

	2003 (1)				
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Revenue	$ 66	$ 94	$ 194	$ 303	$ 657
Costs and expenses	1,658	1,730	1,960	2,561	7,909
Net loss	(1,617)	(3,689)	(5,422)	(4,042)	(14,770)
Basic and diluted loss per share	$ (.05)	$ (.11)	$ (.15)	$ (.11)	$ (.42)

(1) During the fourth quarter 2003, the Company recorded stock compensation of $237,000.

	2002 (2)				
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Revenues and license fee income	$ 613	$ 134	$ 79	$ 78	$ 904
Costs and expenses	2,121	2,097	1,961	782	6,961
Net loss	(1,488)	(2,634)	(1,891)	(1,411)	(7,424)
Basic and diluted loss per share	$ (.05)	$ (.08)	$ (.06)	$ (.04)	$ (.23)

(2) During the fourth quarter of 2002, the Company recorded write offs of certain investments in unconsolidated affiliates of approximately $688,000. (See note 2(c)). Additionally, during the fourth quarter of 2002, the Company recorded as a reduction of general and administrative expenses, an amount of $1,050,000 representing the net settlement with its insurance carrier. (See Note 12)

Interferon Sciences, Inc.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

	Page
Independent Auditors' Report	F-37
Financial Statements:	
Consolidated Balance Sheets - December 31, 2002 and 2001	F-38
Consolidated Statements of Operations - Years ended	

December 31, 2002, 2001 and 2000 F-40

Consolidated Statements of Changes in Stockholders' Equity Capital Deficiency - Years ended December 31, 2002, 2001 and 2000 F-41

Consolidated Statements of Cash Flows - Years ended December 31, 2002, 2001 and 2000 F-43

Notes to Consolidated Financial Statements F-44

INDEPENDENT AUDITOR'S REPORT

The Board of Directors and Stockholders
Interferon Sciences, Inc.

We have audited the accompanying consolidated balance sheets of Interferon Sciences, Inc. and subsidiary as of December 31, 2002 and 2001 and the related consolidated statements of operations, changes in stockholders' equity capital deficiency and cash flows for each of the years in the three-year period ended December 31, 2002. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements 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 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 enumerated above present fairly, in all material respects, the consolidated financial position of Interferon Sciences, Inc. and subsidiary as of December 31, 2002 and 2001 and the consolidated results of their operations and their consolidated cash flows for each of the years in the three-year period ended December 31, 2002, in conformity with accounting principles generally accepted in the United States of America.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 3 to the financial statements, the Company has experienced significant net losses in each of the years in the three-year period ended December 31, 2002 and at December 31, 2002, has a capital deficiency and a negative working capital position. These factors raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 3. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

In connection with our audit of the financial statements referred to above, we audited Schedule II - Valuation and Qualifying Accounts for 2002. In our opinion, this schedule, when considered in relation to the financial statements taken as a whole, presents fairly, in all material respects, the information stated therein.

Eisner LLP

New York, New York
June 10, 2003

INTERFERON SCIENCES, INC. AND SUBSIDIARY
CONSOLIDATED BALANCE SHEETS

	December 31,	
	2002	2001
		As Restated (See Note 4)
ASSETS		
Current assets		
Cash and cash equivalents	$ 378,663	$ 1,184,889
Accounts and other receivables	42,739	123,389
Inventories, net of reserves of $4,678,659 and $5,538,413, respectively	28,489	109,913
Prepaid expenses and other current assets	12,179	17,608
Total current assets	462,070	1,435,799
Property, plant and equipment, at cost		
Land	140,650	140,650
Buildings and improvements	7,793,242	7,793,242
Equipment	4,920,942	4,920,942
	12,854,834	12,854,834
Less accumulated depreciation	(11,173,264)	(10,776,342)
	1,681,570	2,078,492
Patent costs, net of accumulated amortization of $388,974 and $360,819	132,187	160,342
Other assets	100	10,100
	$ 2,275,927	$ 3,684,733

The accompanying notes are an integral part of these consolidated financial statements.

INTERFERON SCIENCES, INC. AND SUBSIDIARY
CONSOLIDATED BALANCE SHEETS
(continued)

LIABILITIES AND CAPITAL DEFICIENCY		
Current liabilities		
Accounts payable	$ 1,387,462	$ 963,323
Accrued expenses	414,262	350,548
Due to American Red Cross	1,402,870	1,339,338

ISI stock subject to resale agreement and in-kind services due Metacine	1,700,000	1,700,000
Note payable and amount due GP Strategies	413,745	495,745
Convertible Notes payable, net of debt discount	281,863	
Total current liabilities	5,600,202	4,848,954
Commitments		
Capital deficiency		
Preferred stock, par value $.01 per share; authorized - 5,000,000 shares; none issued and outstanding		
Common stock, par value $.01 per share; authorized - 55,000,000 shares; issued and outstanding- 21,030,405 and 20,308,031 shares, respectively	210,304	203,080
Capital in excess of par value	136,810,618	136,239,499
Accumulated deficit	(140,345,197)	(137,606,800)
Total capital deficiency	(3,324,275)	(1,164,221)
	$ 2,275,927	$ 3,684,733

The accompanying notes are an integral part of these consolidated financial statements.

INTERFERON SCIENCES, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF OPERATIONS
YEARS ENDED DECEMBER 31,

	2002	2001
		As Restated (See Note 4)
Revenues		
ALFERON N Injection	$ 1,926,466	$ 1,498,603
Research products and other revenues		
Total revenues	1,926,466	1,498,603
Costs and expenses		
Cost of goods sold and excess/idle production costs	1,482,006	1,485,962
Research and development	1,514,286	2,286,300
General and administrative	1,818,194	2,646,734
Acquisition of in-process technology		2,341,418
Total costs and expenses	4,814,486	8,760,414
Loss from operations	(2,888,020)	(7,261,811
Interest income	7,122	108,351
Interest expense	(385,775)	(91,469
Equity in loss of Metacine		(158,582

Loss before income tax benefit	(3,266,673)	(7,403,511
Income tax benefit:		
Gain on sale of state net operating loss carryovers	528,276	968,553
Net loss	$ (2,738,397)	$ (6,434,958
Basic and diluted net loss per share	$ (.13)	$ (.33
Weighted average number of shares outstanding	20,575,948	19,576,312

The accompanying notes are an integral part of these consolidated financial statements.

INTERFERON SCIENCES, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY CAPITAL DEFICIENCY

	Common stock Shares	Amount	Capital in excess of par value	Accumulated deficit	Set S
Balance at January 1, 2000, previously stated	5,327,473	$ 53,275	$129,397,259	$(128,812,179)	$(
Cumulative effect of restating inventory reserves, and effect of correcting cost of sales, see Note 4			(1,156,000)	309,000	
Balance at January 1, 2000, as restated	5,327,473	$ 53,275	$128,241,259	$(128,503,179)	$
Net proceeds from sale of common stock	11,635,451	116,354	6,980,595		
Common stock issued as compensation	20,000	200	23,550		
Common stock issued under Company 401(k) plan	78,914	789	79,409		
Common stock issued as payment against accounts payable	870,000	8,700	(8,700)		
Employee stock option compensation			2,050		
Compensation paid in cash in settlement of obligation to issue common stock cash in settlement of obligation			282,506		
Forgiveness of amount due GP Strategies			129,886		
Settlement shares sold			382,515		

Net loss, as restated				(2,668,663)	
Balance at December 31, 2000	17,931,838	179,318	136,113,070	(131,171,842)	

The accompanying notes are an integral part of these consolidated financial statements.

INTERFERON SCIENCES, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY CAPITAL DEFICIENCY
(continued)

Common stock issued to Metacine	2,000,000	20,000	(20,000)		
Common stock issued as compensation	50,000	500	12,780		
Common stock issued under Company 401(k) plan	323,949	3,239	106,095		
Proceeds from exercise of common stock options	2,244	23	538		
Employee stock option compensation			5,553		
Settlement shares sold			21,463		
Net loss, as restated				(6,434,958)	
Balance at December 31, 2001,	20,308,031	203,080	136,239,499	(137,606,800)	
Common stock issued under Company 401(k) plan	722,374	7,224	71,119		
Fair value of warrants issued with convertible notes and value of beneficial conversion feature			500,000		
Net loss				(2,738,397)	
Balance at December 31, 2002	21,030,405	$210,304	$136,810,618	$(140,345,197)	$

The accompanying notes are an integral part of these consolidated financial statements.

INTERFERON SCIENCES, INC. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF CASH FLOWS

	YEARS ENDED DECEM

	2002	2001
		As Restated (See Note 4)
Cash flows from operating activities:		
Net loss	$(2,738,397)	$(6,434,958
Adjustments to reconcile net loss to net cash used for operating activities:		
Depreciation and amortization	425,077	507,507
Acquisition of in-process research and development		2,341,418
Equity in loss of Metacine		158,582
Gain on settlements of research-related liabilities		
Provision for notes receivable		87,500
Non-cash compensation expense	78,343	128,167
Debt discount	281,863	
Change in operating assets and liabilities:		
Accounts and other receivables	80,650	1,551,409
Inventories	81,424	(4,439
Prepaid expenses and other current assets	5,429	(120
Accounts payable and accrued expenses	551,385	95,845
Amount due to GP Strategies	18,000	29,106
Net cash used for operating activities	(1,216,226)	(1,539,983
Cash flows from investing activities:		
Additions to property, plant and equipment		(46,994
Investments in Metacine and other assets		(787,500
Reduction of other assets	10,000	
Net cash provided by (used for) investing activities	10,000	(834,494
Cash flows from financing activities:		
Proceeds from convertible notes payable	500,000	
Net proceeds from sale of common stock		
Repayment of note payable to GP Strategies	(100,000)	(100,000
Proceeds from exercise of common stock options		561
Net cash provided by (used for) financing activities	400,000	(99,439
Net increase (decrease) in cash and cash equivalents	(806,226)	(2,473,916
Cash and cash equivalents at beginning of year	1,184,889	3,658,805
Cash and cash equivalents at end of year	$ 378,663	$ 1,184,889

The accompanying notes are an integral part of these consolidated financial statements.

Note 1. Organization and Business

Interferon Sciences, Inc. (the "Company") is a biopharmaceutical company that operates in a single segment and is engaged in the study, manufacture, and sale of pharmaceutical products based on its highly purified, multispecies, natural source alpha interferon ("Natural Alpha Interferon"). The Company's ALFERON(R) N Injection (Interferon Alfa-n3) product has been approved by the United States Food and Drug Administration ("FDA") for the treatment of certain types of genital warts and the Company has studied its potential use in the treatment of HIV, hepatitis C, and other indications. Alferon N Injection is sold principally in the United States, however, a portion is sold in foreign countries. For the years ended December 31, 2002, 2001 and 2000, domestic sales totaled $1,926,466, $1,488,897, and $1,046,470, respectively, and foreign sales totaled zero, $9,706, and $21,001, respectively. All identifiable assets are located in the United States.

Subsequent to December 31, 2002, the Company sold its inventory and granted a license to its products to Hemispherx Biopharma, Inc. See Note 20.

Integrated Commercialization Solutions, Inc. ("ICS"), a subsidiary of AmerisourceBergen Corporation, is the sole United States distributor of ALFERON N Injection. ICS distributes ALFERON N Injection to a limited number of wholesalers throughout the United States.

Note 2. Summary of Significant Accounting Policies

Principles of consolidation -- The consolidated financial statements include the operations of the Company and Interferon Sciences Development Corporation ("ISD"), its wholly owned subsidiary. All significant intercompany transactions and balances have been eliminated. The transactions and balances of Metacine, Inc. are being accounted for under the equity method (see Note 7). The losses of Metacine from April 9, 2001, the date of the Company's acquisition of an 82% equity interest in Metacine through December 31, 2001, have been reflected in the accompanying statement of operations as equity in loss of Metacine to the extent of the Company's carrying value of the investment in Metacine. At December 31, 2001, the carrying value was written down to $-0-.

Cash and cash equivalents -- The Company considers all highly liquid instruments with maturities of three months or less from purchase date to be cash equivalents.

Property, plant and equipment -- Property, plant and equipment are carried at cost. Major additions and improvements are capitalized while maintenance and repairs, which do not extend the lives of the assets, are expensed.

Depreciation -- The Company provides for depreciation and amortization of plant and equipment following the straight-line method over the estimated useful lives of such assets as follows:

Class of Assets	Estimated Useful Lives
Buildings and Improvements	15 to 30 years
Equipment	5 to 10 years

Depreciation expense for the years ended December 31, 2002, 2001 and 2000 was $396,922, $478,082 and $472,101, respectively.

Patent costs -- The Company capitalizes costs to obtain patents and licenses. Patent costs are amortized over 17 years on a straight-line basis. To the extent a patent is determined to be worthless, the related net capitalized cost is immediately expensed.

Revenue recognition -- Title passes to the customer at the shipping point and revenue is therefore recognized when the product is shipped. The Company's product is also tested by its quality control department prior to shipment. The Company has no other obligation associated with its products once shipment has occurred.

Research and Development Costs -- Research and development are expensed when incurred. The types of costs included in research and development are: salaries, supplies, clinical costs, facility costs and depreciation. All of these expenditures were for Company sponsored research and development programs. During 2000, the Company settled amounts owed by the Company on various research related liabilities at a savings to the Company of approximately $457,000. The amount was credited against research and development expenses in 2000.

Inventories -- Inventories, consisting of raw materials, work in process and finished goods, are stated at the lower of cost or market on a FIFO basis. Inventory in excess of the Company's estimated usage requirements is written down to its estimated net realizable value. Inherent in the estimates of net realizable value is management estimates related to the Company's future manufacturing schedules, customer demand, possible alternative uses and ultimate realization of potentially excess inventory.

Long-Lived Assets -- The Company reviews long-lived assets and certain identifiable intangibles for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to future net cash flows expected to be generated by the assets. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the estimated fair value of the assets. Assets to be disposed of are reported at the lower of the carrying amount or estimated fair value less costs to sell.

Stock option plan -- The Company accounts for its stock-based compensation to employees and members of the Board of Directors in accordance with the provisions of Accounting Principles Board ("APB") Opinion No. 25, "Accounting for Stock Issued to Employees," and related interpretations. As such, compensation is recorded on the date of issuance or grant as the excess of the current market value of the underlying stock over the purchase or exercise price. Any deferred compensation is amortized over the respective vesting periods of the equity instruments, if any. The Company has adopted the disclosure provisions of Statement of Financial Accounting Standards No. 123 ("SFAS No. 123"), "Accounting for Stock-Based Compensation," and Statement of Financial Accounting Standards No. 148, "Accounting for Stock-Based Compensation - Transition and Disclosure," which was released in December 2002 as an amendment of SFAS 123. The following table illustrates the effect on net loss and loss per share if the fair value based method had been applied to all awards.

	Year Ended December 31,		
	2002	2001	2000
Reported net loss	$(2,738,397)	$(6,434,958)	$(2,668,663)

Stock-based employee compensation expense included in reported net loss, net of related tax effects	--	--	--
Stock based employee compensation determined under the fair value based method, net of related tax effects	(94,165)	(730,284)	(481,151)
Pro forma net loss	(2,832,562)	(7,165,242)	(3,149,814)
Loss per share (basic and diluted)			
As reported	$ (.13)	$ (.33)	$ (.22)
Pro forma	$ (.14)	$ (.37)	$ (.26)

During 2002 and 2001, the Company did not grant any stock options. The per share weighted-average fair value of stock options granted during 2000 was $.88 on the date of grant using the Black Scholes option-pricing model with the following weighted-average assumptions: expected dividend yield of 0.0%, risk-free interest rate of 6.1%, expected volatility of 142.4% and an expected life of 3.0 years.

Loss per share -- Basic loss per share (EPS) are based upon the weighted average number of common shares outstanding during the period. Diluted EPS are based upon the weighted average number of common shares outstanding during the period assuming the issuance of common shares for all dilutive potential common shares outstanding. At December 31, 2002, 2001 and 2000, the Company's options and warrants outstanding are anti-dilutive and therefore basic and diluted EPS are the same.

Use of Estimates in the Preparation of Financial Statements -- The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and disclosure of contingent assets and liabilities, at the date of the financial statements, and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Income taxes -- Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and for operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the results of operations in the period that includes the enactment date. At December 31, 2002 and 2001, the Company has recorded a full valuation allowance for the net deferred tax asset.

Recently Issued Accounting Standards

In June 2001, the FASB issued SFAS No. 141, Business Combinations, ("SFAS No. 141") and SFAS No. 142, Goodwill and Other Intangible Assets ("SFAS No.

142"). SFAS No. 141 requires that the purchase method of accounting be used for all business combinations. SFAS No. 141 specifies criteria that intangible assets acquired in a business combination must meet to be recognized and reported separately from goodwill. SFAS No. 142 requires that goodwill and intangible assets with indefinite useful lives no longer be amortized, but instead tested for impairment at least annually in accordance with the provisions of SFAS No. 142. SFAS No. 142 also requires that intangible assets with estimable useful lives be amortized over their respective estimated useful lives to their estimated residual values, and reviewed for impairment in accordance with SFAS No. 121 and subsequently, SFAS No. 144 after its adoption.

The Company adopted the provisions of SFAS No. 141 as of July 1, 2001, and SFAS No. 142 as of January 1, 2002.

Upon adoption of SFAS No. 142, the Company was required to reassess the useful lives and residual values of all intangible assets acquired, and make any necessary amortization period adjustments by the end of the first interim period after adoption. If an intangible asset was identified as having an indefinite useful life, the Company would be required to test the intangible asset for impairment in accordance with the provisions of SFAS No. 142 within the first interim period. Impairment is measured as the excess of carrying value over the fair value of an intangible asset with an indefinite life. Any impairment loss would be measured as of the date of adoption and recognized as the cumulative effect of a change in accounting principle in the first interim period.

As of the date of adoption of SFAS No. 142, the Company does not have any goodwill and has unamortized identifiable intangible assets of approximately $160,000, all of which is subject to the transition provisions of SFAS No. 142.

In August 2001, the FASB issued SFAS No. 144, Accounting for the Impairment or Disposal of Long-Lived Assets ("SFAS No. 144"). SFAS No. 144 addresses financial accounting and reporting for the impairment or disposal of long-lived assets. This Statement requires that long-lived assets be reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to future net cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the asset. SFAS No. 144 requires companies to separately report discontinued operations and extends that reporting to a component of an entity that either has been disposed of (by sale, abandonment, or in a distribution to owners) or is classified as held for sale. Assets to be disposed of are reported at the lower of the carrying amount or fair value less costs to sell. The Company adopted SFAS No. 144 on January 1, 2002.

In April 2002, the FASB issued SFAS No. 145, "Rescission of FAS Statements 4, 44 and 64, Amendment of FAS Statement 13 and Technical Corrections." SFAS No. 145 eliminates Statement 4 (and Statement 64, as it amends Statement 4), which required gains and losses from extinguishment of debt to be aggregated and, if material, classified as an extraordinary item, and thus, also the exception to applying Opinion 30 is eliminated as well. This statement is effective for fiscal years beginning after May 2002 for the provisions related to the rescission of Statements 4 and 64 and for all transactions entered into beginning May 2002 for the provision related to the amendment of Statement 13. The

Company does not expect that the adoption of SFAS No. 145 will have a material

impact on its results of operations or financial position.

In June 2002, the FASB issued SFAS No. 146, "Accounting for Costs associated with Exit or Disposal Activities." SFAS No. 146 requires recording costs associated with exit or disposal activities at their fair values when a liability has been incurred. Under previous guidance, certain exit costs were accrued upon management's commitment to an exit plan. The Company is required to adopt SFAS No. 146 on January 1, 2003. The Company does not expect the adoption of SFAS No. 146 will have a material impact on its results of operations or financial position.

In December 2002, the FASB issued SFAS No. 148, "Accounting for Stock-Based Compensation - Transition and Disclosure," an amendment to SFAS No. 123, "Accounting for Stock-Based Compensation." Provisions of this statement provide two additional alternative transition methods: modified prospective method and retroactive restatement method, for an entity that voluntary changes to the fair value based method of accounting for stock-based employee compensation. The statement eliminates the use of the original SFAS No. 123 prospective method of transition alternative for those entities that change to the fair value based method in fiscal years beginning after December 15, 2003. It also amends the disclosure provisions of SFAS No. 123 to require prominent annual disclosure about the effects on reported net income in the Summary of Significant Accounting Policies and also requires disclosure about these effects in interim financial statements. These provisions are effective for financial statements for fiscal years ending after December 15, 2002. Accordingly, the Company adopted the applicable disclosure requirements of this statement for year-end reporting. The transition provisions of this statement apply upon the adoption of the SFAS No. 123 fair value based method. The Company did not change its method of accounting for employee stock-based compensation from the intrinsic method to the fair value based alternative.

Note 3. Operations

The Company has experienced significant operating losses since its inception in 1980. As of December 31, 2002, the Company had an accumulated deficit of approximately $140 million. For the years ended December 31, 2002, 2001 and 2000, the Company had losses from operations of approximately $2.9 million, $7.3 million, and $4.2 million, respectively. Also, the Company has limited liquid resources. These factors raise substantial doubt about the Company's ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty. Although the Company received FDA approval in 1989 to market ALFERON N Injection in the United States for the treatment of certain genital warts, the Company has had limited success in generating revenue from the sale of ALFERON N Injection to date.

During the year ended December 31, 2002, the Company generated $1,926,466 in revenue from the sale of ALFERON N Injection and received $528,276 from the sale of the Company's New Jersey net operating tax loss carryovers. In addition, the Company completed a private placement of $500,000 of convertible notes to accredited investors. At December 31, 2002, the Company had approximately $379,000 of cash and cash equivalents, with which to support future operating activities and to satisfy its financial obligations as they become payable.

On March 11, 2003, the Company sold all its inventory related to its ALFERON N Injection product and granted a three-year license to sell the product to Hemispherx Biopharma, Inc. ("HEB"). In exchange for the inventory and license, the Company received HEB common stock with a guaranteed value of $675,000, an additional 62,500 shares of HEB common stock without a guaranteed value, and a royalty equal to 6% of the net sales of ALFERON N Injection. The HEB common stock will be subject

to selling restrictions. In addition, HEB assumed approximately $400,000 of the Company's payables and various other commitments. The Company and HEB also entered into another agreement pursuant to which the Company will sell to HEB, subject to regulatory approval, the Company's real estate property, plant, equipment, furniture and fixtures, rights to ALFERON N Injection and all of its patents, trademarks and other intellectual property related to its natural alpha interferon business. In exchange, the Company will receive $675,000 of HEB common stock with a guaranteed value, an additional 62,500 shares of HEB common stock without a guaranteed value and a royalty equal to 6% of the net sales of all products sold containing natural alpha interferon. HEB will assume approximately $2.3 million of the Company's indebtedness that currently encumbers its assets. In addition, HEB will fund the operating costs of the Company's facility pending the completion of this transaction. In the event the Company does not obtain regulatory approval prior to September 12, 2003, either the Company or HEB may terminate the agreement and not complete the transaction.

Based on the Company's sale to HEB, estimates of revenue, expenses, and the timing of repayment of creditors, management believes that the Company has sufficient resources to enable the Company to continue operations until the third quarter of 2003. However, actual results, may differ materially from such estimate, and no assurance can be given that additional funding will not be required sooner than anticipated or that such additional funding, whether from financial markets or from other sources, will be available when needed or on terms acceptable to the Company. Insufficient funds will require the Company to terminate operations.

Note 4. Restatement

At December 31, 1999, the balance of the inventory reserves has been increased to eliminate the effect of the $766,000 reversal of inventory previously written down. This retroactive adjustment results in increasing the Accumulated Deficit at December 31, 1999 by $766,000 and decreasing inventory and total assets by the same amount. In addition, a restatement was required to correct cost of sales and equity in loss of Metacine. The Net Loss and loss per share for the years ended December 31, 2000 and 2001 have also been similarly revised as follows:

	Year Ended December 31,	
	2000	2001
Net Loss as previously reported	$(2,981,672)	$(7,249,576)
Effect of reversing inventory write (up) down(1)	(71,300)	584,898
Effect of adjusting carrying value of inventory(2)	105,474	4,439
Elimination of adjustments for common stock held by Red Cross(3)	278,835	(65,713)
Effect of correcting equity in loss of Metacine(4)	--	290,994
Net Loss as restated	$(2,668,663)	$(6,434,958)

Basic and diluted Net Loss per share as previously stated	$ (.25)	$ (.37)
Effect of reversing inventory write down	--	.03
Effect of adjusting carrying value of inventory	.01	--
Elimination of adjustments for common stock held by Red Cross	.02	--
Effect of correcting equity in loss of Metacine	--	.01
Basic and diluted Net Loss per share as restated	$ (.22)	$ (.33)

(1) To adjust for reversal of inventory write (up) down.
(2) To adjust the carrying value of inventory for production costs not capitalized.
(3) To adjust cost of sales for the change in market value of common stock held by American Red Cross.
(4) To adjust for the equity in the loss of Metacine in excess of the carrying basis.

Note 5. Agreements with Hoffmann-LaRoche

F. Hoffmann-La Roche Ltd. and Hoffmann-LaRoche, Inc. (collectively, "Hoffmann") have been issued patents covering human alpha interferon in many countries throughout the world. In 1995, the Company obtained a non-exclusive perpetual license from Hoffmann (the "Hoffmann Agreement") that grants the Company the worldwide rights to make, use, and sell, without a potential patent infringement claim from Hoffmann, any formulation of Natural Alpha Interferon. The Hoffmann Agreement permits the Company to grant marketing rights with respect to Natural Alpha Interferon products to third parties, except that the Company cannot grant marketing rights with respect to injectable products in any country in which Hoffmann has patent rights covered by the Hoffmann Agreement (the "Hoffmann Territory") to any third party not listed on a schedule of approximately 50 potential marketing partners without the consent of Hoffmann, which consent cannot be unreasonably withheld.

Under the terms of the Hoffmann Agreement, the Company is obligated to pay Hoffmann an aggregate royalty on net sales (as defined) of Natural Alpha Interferon products by the Company in an amount equal to (i) 8% of net sales in the Hoffmann Territory, and 2% of net sales outside the Hoffmann Territory of products manufactured in the Hoffmann Territory, up to $75,000,000 of net sales in any calendar year and (ii) 9.5% of net sales in the Hoffmann Territory, and 2% of net sales outside the Hoffmann Territory of products manufactured in the Hoffmann Territory, in excess of $75,000,000 of net sales in any calendar year, provided that the total royalty payable in any calendar year shall not exceed $8,000,000. For the years ended December 31, 2002, 2001 and 2000, the Company recorded approximately $31,000, $60,000, and $42,000, in royalty expenses to Hoffmann, respectively. The Hoffmann Agreement can be terminated by the Company on 30 days notice with respect to the United States patent, any individual foreign patent, or all patents owned by Hoffmann. If the Hoffmann Agreement is terminated with respect to the patents owned by Hoffmann in a specified country, such country is no longer included in the Hoffmann Territory. Accordingly, the Company would not be permitted to market any formulation of alpha interferon in such country.

Note 6. Research and Development Agreement with Interferon Sciences Research Partners, Ltd.

In 1984, the Company organized ISD to act as the sole general partner of Interferon Sciences Research Partners, Ltd., a New Jersey limited partnership (the "Partnership"). The Company and the Partnership entered into a development contract whereby the Company received substantially all of the net proceeds ($4,414,475) of the Partnership's public offering of limited partnership interests. The Company used the proceeds to perform research, development and clinical testing on behalf of the Partnership for the development of ALFERON Gel containing recombinant interferon.

In connection with the formation of the Partnership, ISD agreed to make additional cash contributions for purposes of continuing development of ALFERON Gel if the Partnership exhausted its funds prior to development of such product. ISD is wholly dependent upon the Company for capital to fund such commitment. The Partnership exhausted its funds during 1986, and the Company contributed a total of $1,997,000 during the period from 1986 to 1990, for the continued development of ALFERON Gel. In 1987, the Company filed a Product License Application with the FDA for approval to market ALFERON Gel. In February 1990, the FDA indicated that additional process development and clinical trials would be necessary prior to approval of ALFERON Gel. The Company believed, at that time, that the costs to complete the required process development and clinical trials would be substantial, and there could be no assurance that the clinical trials would be successful.

As a result of the above events, in 1992, the Company withdrew its FDA Product License Application for ALFERON Gel containing recombinant interferon. In place of single species recombinant interferon, previously ALFERON Gel's active ingredient, the Company commenced, in 1992, further development of ALFERON Gel using the Company's natural source multi-species alpha interferon ("ALFERON N Gel"). However, at the present time, the Company is not actively pursuing development of ALFERON N Gel and the Company does not have an obligation to provide additional funding to the Partnership. Assuming successful development and commercial exploitation of ALFERON N Gel, which to date has not occurred, the Company may be obligated to pay the Partnership royalties equal to 4% of the Company's net sales of ALFERON N Gel and 15% of revenues received from sublicensing ALFERON N Gel.

Note 7. Agreement with Metacine, Inc.

On July 28, 2000, the Company acquired for $100,000 an option to purchase certain securities of Metacine, Inc. ("Metacine"), a company engaged in research using dendritic cell technology, on the terms set forth below.

On April 9, 2001, the Company exercised its option to acquire an 82% equity interest in Metacine. Pursuant to the agreement, as amended, the Company received 700,000 shares of Metacine common stock and a five-year warrant to purchase, at a price of $12.48 per share, 282,794 shares of Metacine common stock in exchange for $300,000 in cash, an obligation to pay Metacine $ 1,850,000 and $250,000 of services to be rendered by the Company by June 30, 2002. In addition, the Company issued Metacine 2,000,000 shares of the Company's common stock. The agreement contains certain restrictions on the ability of Metacine to sell the Company's shares and provides for the Company to make cash payments ("Deficiency Payments") to Metacine to the extent Metacine has not received from the sale of the Company's common stock, cumulative net proceeds of $1,850,000 by September 30, 2002 or $400,000 of net proceeds per quarter beginning with the period ending September 30, 2001 and $250,000 for the quarter ending September 30, 2002. On October 4, 2001, the Company made a Deficiency Payment to Metacine in the amount of $400,000 for the quarter ending September 30, 2001. The Company has not made the remainder of the Deficiency Payments in the aggregate amount of $1,450,000. If Metacine sells all of the 2,000,000

shares received and the cumulative proceeds from the sales and any Deficiency Payments are less than $1,850,000, the Company may issue to Metacine additional shares of common stock at

the Company's full discretion. These additional shares would be treated in the same manner as the original 2,000,000 shares. In the event that cumulative net proceeds to Metacine from the sale of the Company's common stock exceed $1,850,000, any Deficiency Payments previously made by the Company ($400,000 through December 31, 2002) would be repaid to the Company to the extent these proceeds exceed $1,850,000. All additional proceeds beyond the $1,850,000 and repayment of Deficiency Payments, if any, would be for the benefit of Metacine. The Company was required to put in escrow 100,000 Metacine shares to secure its obligations to render $250,000 of services to Metacine and 462,500 Metacine shares to secure its potential obligations to make Deficiency Payments. Since the Company has not made $1,450,000 in Deficiency Payments and has not rendered $250,000 of services to Metcine, Metacine could request 462,500 Metacine shares currently held in escrow to satisfy the Company's past due obligations.

Although the Company is the majority owner of Metacine, the Company must, on many matters, vote its shares of Metacine common stock in the same proportion as votes cast by the minority stockholders of Metacine, except for certain matters with respect for which the Company has protective rights. In accordance with EITF Issue No. 96-16, Investor's Accounting for an Investee When the Investor has a Majority of the Voting Interest but the Minority Shareholder or Shareholders have Certain Approval or Veto Rights, the minority holders have substantive participating rights which include controlling the selection, termination and setting of compensation for Metacine management who are responsible for implementing policies and procedures, making operating and capital decisions (including establishing budgets) for Metacine and most other ordinary operating matters, and therefore, the Company does not control Metacine. In addition, the Company only has one representative on a board of directors consisting of three directors. Accordingly, the acquisition is being accounted for under the equity method.

Of the $2.5 million consideration paid for Metacine, $2,341,418 was recorded as a charge for the acquisition of in-process research and development ("IPR&D") in 2001. The charge was recorded as the acquisition of IPR&D as Metacine's primary asset is technology that has not reached technological feasibility and has no alternative uses. The in-process research and development expenses relate to a patent portfolio consisting of six issued patents, eight pending patents and four invention disclosures related to the use of dendritic cells for the treatment of various diseases. While the patent portfolio, when viewed as a whole, represented a new approach to the treatment of various diseases utilizing cell therapy, the six issued patents had no independent commercial value. While the Company did not engage the services of an independent appraiser to assess the fair value of the purchased in process research and development, it considered the following factors: (i) any product or process utilizing dendritic cells as a treatment for any disease would regulated by the FDA and therefore would require extensive clinical testing prior to the time any revenue would be generate from the sale of a product or process, (ii) the cost of such clinical trials would be in excess of $ 50,000,000, (iii) it would take between seven to ten years to complete such clinical trials, (iv) there could be no assurance that even if Metacine could obtain the funding required to complete the clinical trials (which was well beyond Metacine's capability at the time Metacine acquired rights to the patent portfolio), that the clinical trials would have shown the product or process tested to be safe and effective. The Company's $1,850,000 obligation to Metacine, less the $400,000 Deficiency Payment made in October 2001, has been

recorded as a current liability at December 31, 2002 and 2001. The $250,000 of services to be provided has also been recorded as a current liability. Services rendered to Metacine to date were immaterial and as such, the liability remained unchanged at December 31, 2002 and 2001. The investment has been further reduced to zero at December 31, 2001, by the Company's equity in the loss of Metacine of $158,582 for the period from April 9, 2001 through December 31, 2001.

On April 1, 2003, the license granted by the University of Pittsburgh to Metacine covering Metacine's technology was terminated due to non-payment by Metacine.

Accordingly, the Company's has not reflected its share of its equity in the losses in Metacine for the years ended December 31, 2002 and 2001 in the amounts of $274,846 and $290,994, respectively.

The Company is currently in discussions with Metacine with respect to a full settlement of the Company's obligations to Metacine.

Note 8. Inventories

Inventories, consisting of material, labor and overhead, are classified as follows:

	December 31, 2002	2001 As Restated (See Note 4)
Finished goods	$ 322,518	$ 1,263,696
Work in process	3,052,070	3,052,070
Raw materials	1,332,560	1,332,560
Less reserve for excess inventory	(4,678,659)	(5,538,413)
	$ 28,489	$ 109,913

Finished goods inventory consists of vials of ALFERON N Injection, available for commercial and clinical use either immediately or upon final release by quality assurance.

In light of the results of the Company's Phase 3 studies of ALFERON N Injection in HIV and HCV-infected patients, the Company has recorded a reserve against its inventory of ALFERON N Injection to reflect its estimated net realizable value. The reserve was a result of the Company's assessment of anticipated near-term projections of product to be sold or utilized in clinical trials, giving consideration to historical sales levels. As a result, inventories at December 31, 2002 and 2001, reflect a reserve for excess inventory of $4,678,659 and $5,538,413, respectively.

Note 9. Convertible Notes Payable

In August 2002, the Company completed a private placement of $500,000 of convertible notes to accredited investors. Each note is convertible into the Company's common stock at a price of $.05 per share (subject to adjustment to 70% of the market price of the Company's common stock under certain circumstances) and bears interest at the rate of 10% per annum. $250,000 of the convertible notes is due January 31, 2003 and the other $250,000 of the

convertible notes is due December 31, 2003. For each $100,000 principal amount of notes issued, the investors received warrants to purchase an additional 10.2 million shares of the Company's common stock exercisable at $.01 per share. The warrants were valued at $400,000 and are amortized as interest expense over the terms of the respective notes. The transaction is subject to approval by the shareholders of the Company. In the event that shareholder approval is not obtained, the convertible noteholders could exercise their rights and call a default making the convertible notes immediately due and payable. In addition, these notes are convertible into common stock at a beneficial rate. The beneficial conversion feature is valued at $100,000 and accounted for as debt discount and is being amortized over the term of the notes.

Note 10. Income Taxes

As a result of the loss allocation rules contained in the Federal income tax consolidated return regulations, approximately $5,900,000 of net federal operating loss carryforwards, which expire from 2003 to 2006, are available to the Company upon ceasing to be a member of GP Strategies's consolidated return group in 1991. In addition, the Company has net federal operating loss carryforwards for periods

subsequent to May 31, 1991, and through December 31, 2002 of approximately $104,000,000 that expire from 2006 to 2022. In addition, the Company had state net operating loss carryforwards of approximately $32,000,000 that expire from 2005 to 2009.

The Company believes that the events culminating with the closing of its Common Stock Private Offering on November 6, 2000 may result in an "ownership change" under Internal Revenue Code, Section 382, with respect to its stock. The Company believes that as a result of the ownership change, the future utility of its pre-change net operating losses may be significantly limited. Further, the issuance of 51,000,000 warrants in August 2002 could also result in an ownership change and further limit use of the net operating losses carried forward.

The tax effects of temporary differences that give rise to deferred tax assets and liabilities consist of the following as of December 31, 2002 and 2001:

Deferred tax assets	2002	2001
Net operating loss carry-forwards	$ 39,530,000	$ 34,551,000
Tax credit carry-forwards	--	150,000
Inventory reserve	1,872,000	2,114,000
Property and equipment, principally due to differences in basis and depreciation	661,000	588,000
In-process technology costs	--	937,000
Gross deferred tax asset	42,063,000	38,340,000
Valuation allowance	(42,063,000)	(38,340,000)
Net deferred taxes	$ --	$ --

A valuation allowance is provided when it is more likely than not that some portion of the deferred tax asset will not be realized. The Company has determined, based on the Company's history of annual net losses, that a full valuation allowance is appropriate. The change in the valuation allowance for

2002 and 2001 was $3,723,000 and $2,411,000, respectively.

Based on the Company's net loss before income taxes in 2002, 2001 and 2000, the Company would have recorded a tax benefit. During each of these years, the Company recorded increases in the valuation allowance due to uncertainty regarding the realization of deferred taxes that reduced the Company's expected income tax benefit to zero in these years.

The Company participates in the State of New Jersey's corporation business tax benefit certificate transfer program (the "Program"), which allows certain high technology and biotechnology companies to transfer unused New Jersey net operating loss carryovers to other New Jersey corporation business taxpayers. During 1999, the Company submitted an application to the New Jersey Economic Development Authority (the "EDA") to participate in the Program and the application was approved. The EDA then issued a certificate certifying the Company's eligibility to participate in the Program and the amount of New Jersey net operating loss carryovers the Company has available to transfer. Since New Jersey law provides that net operating losses can be carried over for up to seven years, the Company may be able to transfer its New Jersey net operating losses from the last seven years. The Program requires that a purchaser pay at least 75% of the amount of the surrendered tax benefit.

During 2002, 2001 and 2000, the Company completed the sale of approximately $6.5 million, $12 million, and $19 million of its New Jersey tax loss carryovers and received $0.53 million, $0.97 million, and $1.48 million, which were recorded as a tax benefit from gains on sale of state net operating loss carryovers on its Consolidated Statement of Operations in 2002, 2001 and 2000, respectively.

Note 11. Common Stock, Stock Options, Warrants and Other Shares Reserved

The Company has a stock option plan (the "Plan"), which authorizes a committee of the Board of Directors to grant options, to purchase shares of Common Stock, to officers, directors, employees and consultants of the Company. Pursuant to the terms of the Plan, no option may be exercised after 10 years from the date of grant. The Plan permits options to be granted at a price not less than 85% of the fair market value, however, the options granted to date have been at fair market value of the common stock at the date of the grant.

Employee stock option activity for options under the Plan during the periods indicated is as follows:

	Number of Shares	Weighted-Average Exercise Price
Balance at December 31, 1999	1,887,260	$ .25
Granted	61,710	1.10
Forfeited	(2,580)	.25
Balance at December 31, 2000	1,946,390	.28
Exercised	(2,244)	.25
Forfeited	(13,525)	.35
Balance at December 31, 2001	1,930,621	.28

Forfeited	(22,546)	.41
Balance at December 31, 2002	1,908,075	.27

At December 31, 2002, the exercise prices and weighted-average remaining contractual life of outstanding options were:

	Number of Options	Life
$ .25 - $1.00	1,854,475	1 year
$1.01 - $1.25	53,600	1 year

At December 31, 2002, the number of options exercisable was 1,908,075, and the weighted-average exercise price of those options was $.27.

FASB Interpretation No. 44 provides guidance for applying APB Opinion No. 25, "Accounting for Stock Issued to Employees" ("FIN 44"). It applies prospectively to new awards, exchanges of awards in a business combination, modifications to outstanding awards, and changes in grantee status on or after July 1, 2000, except for provisions related to repricings and the definition of an employee that apply to awards issued after December 15, 1998. The Company has evaluated the financial impact of FIN 44 and has determined that the repricing of employee stock options on October 27, 1999 falls within the guidance of FIN 44. On October 27, 1999, the Company repriced 429,475 stock options to $.25 per share. On July 1, 2000, the implementation date of FIN 44, 352,823 shares of the 429,475 shares were fully vested (exercisable) and the closing price of the Company's common stock on such date was $1.63 per share. Beginning on and after July 1, 2000, the Company is required to record compensation expense on the repriced vested options only when the market price exceeds $1.63 per share and only on the amount in excess of $1.63 per share. For the repriced unvested stock options, the intrinsic value measured at the July 1, 2000 effective date that is attributable to the remaining vesting period will be recognized over that future period. The unvested stock options at July 1, 2000 (76,652) were fully vested on January 1, 2001. On December 31, 2002, the closing price of the Company's common stock was $.05 per share and accordingly, under FIN 44, no compensation expense was recorded on the repriced fully vested stock options of July 1, 2000 and on the repriced unvested stock options of July 1, 2000.

Information regarding all Options and Warrants

Changes in options and warrants outstanding during the years ended December 31, 2002, 2001 and 2000, and options and warrants exercisable and shares reserved for issuance at December 31, 2002 are as follows:

The following table includes all options and warrants including employee options (which are discussed above).

	Price Range Per Share	Number of Shares
Outstanding at December 31, 1999	$ .25 - $77.90	2,567,032
Granted	.56 - 1.50	14,631,279
Terminated	.25 - 77.90	(90,975)
Outstanding at December 31, 2000	.25 - 48.00	17,107,336

Exercised	.25	(2,244)
Terminated	.25 - 48.00	(77,938)
Outstanding at December 31,	.25 - 36.00	17,027,154
Warrants Issued	.01 - .01	51,000,000
Terminated	.25 - 36.00	(49,510)
Outstanding at December 31, 2002	.01 - 1.50	67,977,644
Exercisable:		
December 31, 2002	.25 - 1.50	16,977,644
Shares reserved for issuance:		
December 31, 2002		67,977,644

Options and warrants outstanding and exercisable, and shares reserved for issuance at December 31, 2002, include 500,000 shares under a warrant agreement with GP Strategies. The warrants are priced at $1.00 per share and expire on March 25, 2004.

Options and warrants outstanding and exercisable, and shares reserved for issuance at December 31, 2002, include 11,635,451 shares under warrant agreements with the purchasers of a 2000 private offering. The warrants are priced at $1.50 per share and expire on April 17, 2005.

Options and warrants outstanding and exercisable, and shares reserved for issuance at December 31, 2002, include 2,934,118 shares under a warrant agreement to purchase 1,467,059 units. Each unit consists of a share of common stock and a warrant to purchase an additional share of common stock at a price of $1.50 per share, exercisable at a price of $.66 per unit. The units were issued as compensation for services rendered to the Company in the 2000 private offering and expire on April 17, 2005.

Options and warrants outstanding and shares reserved for issuance, at December 31, 2002, include 51,000,000 shares under warrant agreements (subject to shareholder approval) with the purchasers of the convertible notes. The warrants are exercisable at $.01 per share upon shareholder approval and expire in 2007.

Note 12. Savings Plan

The ISI Savings Plan (the "Savings Plan") permits pre-tax contributions to the Savings Plan by participants pursuant to Section 401(k) of the Internal Revenue Code of up to 15% of base compensation. The Company will match up to the 6% level of the participants' eligible contributions. The Savings Plan matches 40% in cash and 60% in the Company's common stock up to the 6% level. For 2002, the Company's contribution to the Savings Plan, which was fully vested, was $131,000, consisting of $52,657 in cash and $78,343 in stock. For 2001, the Company's contribution to the Savings Plan was $176,000, consisting of $66,666 in cash and $109,334 in stock. For 2000, the Company's contribution to the Savings Plan was $124,000, consisting of $43,802 in cash and $80,198 in stock.

Note 13. Common Stock Compensation and Profit Sharing Plan

Common Stock Compensation Plan

Effective October 1, 1997, the Company adopted the Common Stock Compensation Plan (the "Stock Compensation Plan"), providing key employees with the opportunity of receiving the Company's common stock as additional compensation.

Pursuant to the terms of the Stock Compensation Plan, key employees were to receive, as additional compensation, a pre-determined amount of the Company's common stock in three equal installments on October 1, 1998, 1999 and 2000, provided that the key employees remain in the employ of the Company at each such installment date. As of October 1, 2000, 1999 and 1998, a deferred compensation liability of $289,920, $340,821 and $412,344, respectively, was accrued for these employees based on the common stock market price of October 1, 1997. On October 1, 2000, 1999 and 1998, the Company paid the compensation in cash in settlement of the Company's obligation to issue shares of common stock. Accordingly, cash of $7,414, $2,131, and $25,947, respectively, was paid in satisfaction of the accrued liability of $289,920, $340,821 and $412,344, respectively. The difference of $282,506, $338,690, and $386,397 was credited to additional paid in capital in 2000, 1999 and 1998, respectively.

Profit Sharing Plan

The Company has a Profit Sharing Plan (the "Profit Sharing Plan") providing key employees and consultants with an opportunity to share in the profits of the Company. The Profit Sharing Plan is administered by the Company's Compensation Committee.

Pursuant to the terms of the Profit Sharing Plan, the Compensation Committee, in its sole discretion, based upon the significance of the employee's contributions to the operations of the Company, selects certain key employees and consultants of the Company who are entitled to participate in the Profit Sharing Plan and determines the extent of their participation. The amount of the Company's profits available for distribution to the participants (the "Distribution Pool") is the lesser of (a) 10% of the Company's income before taxes and profit sharing expense and (b) an amount equal to 100% of the base salary for such year of all the participants in the Profit Sharing Plan.

The Compensation Committee may require as a condition to participation that a participant remain in the employ of the Company until the end of the fiscal year for which payment is to be made. Payments required to be made under the Profit Sharing Plan must be made within 10 days of the filing of the Company's tax return. To date, there have been no contributions by the Company under the Profit Sharing Plan.

Note 14. Related Party Transactions

GP Strategies owns less than 5% of the Company's common stock as of December 31, 2002. The Company was a party to a management agreement with GP Strategies, pursuant to which certain legal, financial and administrative services had been provided by employees of GP Strategies. The management agreement was terminated on March 27, 2000 (See Note 16).

See Note 16 for information with respect to royalty obligations to GP Strategies.

Note 15. Supplemental Statement of Cash Flow Information

The Company paid no income taxes or interest during the three-year period

ended December 31, 2002.

During the years ended December 31, 2002, 2001 and 2000 the following non-cash financing and investing activities occurred:

2002:

None

2001:

The Company issued 2,000,000 shares, with a guaranteed value of $1,850,000, of common stock and committed to provide $250,000 of services to be rendered by the Company to Metacine (see Note 7).

The Company reduced capital in excess of par value and the corresponding liability by $21,463 for settlement shares sold.

2000:

The Company issued 870,000 shares of common stock as payment related to accounts payable (see Note 16).

The Company credited capital in excess of par value for forgiveness of $129,886 of debt due GP Strategies.

The Company reduced capital in excess of par value and the corresponding liability by $382,515 for settlement shares sold.

Note 16. Commitments

The Company obtained human white blood cells used in the manufacture of ALFERON N Injection from several sources, including the Red Cross pursuant to a supply agreement dated April 1, 1997 (the "Supply Agreement"). The Company will not need to purchase more human white blood cells until such time as production of crude alpha interferon is resumed. Under the terms of the Supply Agreement, the Company was obligated to purchase a minimum amount of human white blood cells each month through March 1999 (the "Minimum Purchase Commitment"), with an aggregate Minimum Purchase Commitment during the period from April 1998 through March 1999 in excess of $3,000,000. As of November 23, 1998, the Company owed the Red Cross approximately $1.46 million plus interest at the rate of 6% per annum accruing from April 1, 1998 (the "Red Cross Liability") for white blood cells purchased pursuant to the Supply Agreement.

Pursuant to an agreement dated November 23, 1998, the Company granted the Red Cross a security interest in certain assets to secure the Red Cross Liability, issued to the Red Cross 300,000 shares of common stock and agreed to issue additional shares at some future date as requested by the Red Cross to satisfy any remaining amount of the Red Cross Liability. The Red Cross agreed that any net proceeds received by it upon sale of such shares would be applied against the Red Cross Liability and that at such time as the Red Cross Liability was paid in full, the Minimum Purchase Commitment would be deleted effective April 1,1998 and any then existing breaches of the Minimum Purchase Commitment would be waived. In January 1999 the Company granted the Red Cross a security interest (the "Security Interest") in, among other things, the Company's real estate, equipment inventory, receivables, and New Jersey net operating loss carryovers to secure repayment of the Red Cross Liability, and the Red Cross agreed to forbear from exercising its rights under the Supply Agreement,

including with respect to collecting the Red Cross Liability until June 30, 1999 (which was subsequently extended until December 31, 1999). On December 29, 1999, the Company, the Red Cross and GP Strategies entered in an agreement pursuant to which the Red Cross agreed that until September 30, 2000 it would forbear from exercising its rights under (i) the Supply Agreement, including with respect to collecting the Red Cross Liability, and (ii) the Security Interest. In connection with the Asset Sale Transactions, the Company, HEB and the Red Cross entered into a similar agreement pursuant to which the Red Cross agreed to forbear from exercising its rights until May 31, 2003 and the Red Cross agreed to accept HEB common stock with a guaranteed value of $500,000 in full settlement of all of the Company's obligations to the Red Cross. Under the terms of such agreement, if HEB does not make such payment, the Red Cross has the right to sell the Company's real estate.

During 1999, the Red Cross sold 27,000 of the Settlement Shares and sold the balance of such shares (273,000 shares) during the first quarter of 2000. As a result, the net proceeds from the sales of the Settlement Shares, $33,000 in 1999 and $368,000 in 2000, were applied against the liability to the Red Cross. The remaining liability to the Red Cross included in accounts payable on the consolidated balance sheet at December 31, 2002 and 2001 was approximately $1,403,000 and $1,339,000, respectively. On October 30, 2000, the Company issued an additional 800,000 shares to the Red Cross. The net proceeds from the sale of such shares by the Red Cross will be applied against the remaining liability of $1,403,000 owed to the Red Cross. However, there can be no assurance that the net proceeds from the sale of such shares will be sufficient to extinguish the remaining liability owed the Red Cross.

Pursuant to an agreement dated March 25, 1999, GP Strategies loaned the Company $500,000. In return, the Company granted GP Strategies (i) a first mortgage on the Company's real estate, (ii) a two-year option (which has expired) to purchase the Company's real estate, provided that the Company has terminated its operations and the Red Cross Liability has been repaid, and (iii) a two-year right of first refusal (which has expired) in the event the Company desires to sell its real estate. In addition, the Company issued GP Strategies 500,000 shares of Common Stock and a five-year warrant to purchase 500,000 shares of Common Stock at a price of $1 per share. The common stock and warrants issued to GP Strategies were valued at $500,000 and recorded as a financing cost and amortized over the original period of the GP Strategies Debt in 1999. Pursuant to the agreement, the Company has issued a note to GP Strategies representing the GP Strategies Debt, which note was originally due on September 30, 1999 (but extended to June 30, 2001) and bears interest, payable at maturity, at the rate of 6% per annum. In addition, at that time the Company negotiated a subordination agreement with the Red Cross pursuant to which the Red Cross agreed that its lien on the Company's real estate is subordinate to GP Strategies' lien. On March 27, 2000, the Company and GP Strategies entered into an agreement pursuant to which (i) the GP Strategies Debt was extended until June 30, 2001 and (ii) the Management Agreement between the Company and GP Strategies was terminated and all intercompany accounts between the Company and GP Strategies (other than the GP Strategies Debt) in the amount of approximately $130,000 were discharged which was recorded as a credit to capital in excess of par value. On August 23, 2001, the Company and GP Strategies entered into an agreement pursuant to which the GP Strategies Debt was extended to March 15, 2002. During 2001, the Company paid GP Strategies $100,000 to reduce the GP Strategies Debt. In addition, in January 2002, the Company paid GP Strategies $100,000 to further reduce the GP Strategies Debt. Interest expense accrued to GP Strategies was $18,000, $27,937 and $22,500 for the years ended December 31,2002, 2001 and 2000, respectively. In connection with the Asset Sale Transactions, the Company, HEB and GP Strategies entered into a similar

agreement pursuant to which GP Strategies agreed to forbear from exercising its rights until May 31, 2003 and GP Strategies agreed to accept HEB common stock with a guaranteed value of $425,000 in full settlement of all the Company's obligations to GP Strategies. Under the terms of such agreement, if HEB does not make such payment, GP Strategies has the right to sell the Company's real estate.

As consideration for the transfer to the Company of certain licenses, rights and assets upon the formation of the Company by GP Strategies, the Company agreed to pay GP Strategies royalties of $1,000,000, but such payments will be made only with respect to those years in which the Company has income before income taxes, and will be limited to 25% of such income. Through December 31, 2002, the Company has not generated income before taxes and therefore has not accrued or paid royalties to GP Strategies.

See Notes 5 and 6 for information relating to royalties payable to Hoffmann and the Partnership, respectively.

Note 17. Quarterly Financial Data (unaudited)

The following summarizes the Company's unaudited quarterly results for 2002 and 2001.

2002 Quarters	First	Second	Third	Fourth
	As Restated(2)	As Restated(2)	As Restated(2)	As Res
	Thousands of dollars except per share data			
Revenues	$ 784	$ 176	$ 687	$
Gross profit (loss)(1)	369	(149)	254	
Net loss	(693)	(949)	(639)	
Basic and diluted net loss per share	(.03)	(.05)	(.03)	

2001 Quarters	First	Second	Third	Four
	As Restated(2)	As Restated(2)	As Restated(2)	
	Thousands of dollars except per share data			
Revenues	$ 371	$ 344	$ 459	$
Gross profit (loss)(1)	(44)	22	98	
Net loss	(1,272)	(3,659)	(1,060)	
Basic and diluted net loss per share	(.07)	(.18)	(.05)	

(1) Gross profit (loss) is calculated as revenue less cost of goods sold and excess/idle production costs.

(2) Restatement

2002 Quarters	First	Second	Third
Gross profit (loss) as previously reported	$ (35)	$ (245)	$ 263
Effect of reversing inventory write(up) down(a)	252	--	--
Effect of adjusting carrying value of inventory(b)	(32)	(8)	(49)
Elimination of adjustments for common stock held by Red Cross(c)	184	104	40
Gross profit (loss) as restated	$ 369	$ (149)	$ 254
Net loss as previously stated	$(1,289)	$(1,429)	$ (655)
Net effect of gross profit adjustments from above	404	96	(9)
Effect of correcting equity in loss of Metacine(d)	112	124	39

Elimination of adjustments for common stock held by Metacine(e)	80	260	100
Amortization of Debt Discount(f)	--	--	(114)
Net loss as restated	$ (693)	$ (949)	$ (639)
Basic and diluted net loss per share as previously stated	$ (0.06)	$ (0.07)	$ (0.03)
Effect of gross profit adjustments	0.02	--	--
Effect of Metacine related adjustments	0.01	0.02	0.01
Effect of amortization of debt discount	--	--	(0.01)
Basic and diluted net loss per share as restated	$ (0.03)	$ (0.05)	$ (0.03)

(a) To adjust for reversal of inventory write (up) down.
(b) To adjust the carrying value of inventory for production costs not capitalized.
(c) To adjust cost of sales for the change in market value of common stock held by the American Red Cross.
(d) To adjust for the equity in the loss of Metacine in excess of the carrying basis.
(e) To adjust other expenses for the change in market value of common stock held by Metacine.
(f) To amortize debt discount on convertible notes issued during the year.

2001 Quarters	First	Second	Third	Fourth
Gross profit (loss) as previously reported	$ (270)	$ (56)	$ (267)	$ 81
Effect of reversing inventory write(up) down(a)	159	116	192	118
Effect of adjusting carrying value of inventory(b)	(15)	53	(19)	(14)
Elimination of adjustments for common stock held by Red Cross(c)	82	(91)	192	(248)

Gross profit (loss) as restated	$ (44)	$ 22	$ 98	$ (63)
Net loss as previously stated	$(1,498)	$(3,737)	$(1,665)	$ (350)
Net effect of gross profit adjustments from above	226	78	365	(144)
Effect of correcting equity in loss of Metacine(d)	--	--	--	290

Elimination of adjustments for common stock held by Metacine(e)	--	--	240	(240)
Net loss as restated	$(1,272)	$(3,659)	$(1,060)	$ (444)
Basic and diluted net loss per share as previously stated	$ (0.08)	$ (0.19)	$ (0.08)	$(0.02)
Effect of gross profit adjustments	0.01	--	0.02	--
Effect of Metacine related adjustments	--	--	0.01	--
Basic and diluted net loss per share as restated	$ (0.07)	$ (0.19)	$ (0.05)	$(0.02)

(a) To adjust for reversal of inventory write (up) down.
(b) To adjust the carrying value of inventory for production costs not capitalized.
(c) To adjust cost of sales for the change in market value of common stock held by the American Red Cross.
(d) To adjust for the equity in the loss of Metacine in excess of the carrying basis.
(e) To adjust other expenses for the change in market value of common stock held by Metacine.

Note 18. Fair Value of Financial Instruments

The carrying values of financial instruments, assuming the Company continues as a going concern, including cash and cash equivalents, accounts receivable, accounts payable, accrued expenses and note payable approximate fair values, because of the short term nature or interest rates that approximate current rates.

Note 19. Agreement with Mayo

In April 2001, the Company entered into a technology license agreement with Mayo Foundation for Medical Education and Research ("Mayo") under which the Company obtained certain technology rights. The Company has committed to fund approximately $400,000 of costs related to a clinical trial beginning in December 2001 and which is currently expected to take at least two years from the date hereof to complete. The Company paid Mayo $100,000 related to this clinical trial in 2001, incurred $101,565 in 2002 and will owe other amounts upon the completion of certain parts of the trial, with the last payment due upon receipt of the final written report on the trial. The Company can terminate this agreement up to 60 days after receipt of this report. After expiration of this ability to terminate, the Company must issue 25,000 shares of the Company's common stock to Mayo and must pay milestone payments upon certain regulatory or other events and royalties on future sales, if any. In addition, the Company paid $60,000 to Mayo related to the agreement in 2001. Under the terms of the

Asset Sales Transactions, the Company's right to continue this agreement and the obligation owed to Mayo was transferred to HEB. The Company did not generate any revenues from this agreement for each of the three years ended December 31, 2002.

Note 20. Subsequent Event

On March 11, 2003, the Company sold all its inventory related to its ALFERON N Injection product and granted a license to sell the product to Hemispherx Biopharma, Inc. ("HEB"). In exchange for the inventory and license, the Company received HEB common stock with a guaranteed value of $675,000, an additional 62,500 shares of HEB common stock without a guaranteed value, and a royalty equal to 6% of the net sales of ALFERON N Injection. The HEB common stock will be subject to selling restrictions. In addition, HEB assumed approximately $400,000 of the Company's payables and various other commitments. The Company and HEB also entered into another agreement pursuant to which the Company will sell to HEB, subject to regulatory approval, the Company's real estate property, plant, equipment, furniture and fixtures, rights to ALFERON N Injection and all of its patents, trademarks and other intellectual property related to its natural alpha interferon business. In exchange, the Company will receive $675,000 of HEB common stock with a guaranteed value, an additional 62,500 shares of HEB common stock without a guaranteed value and a royalty equal to 6% of the net sales of all products sold containing natural alpha interferon. HEB will assume approximately $1.5 million of the Company's indebtedness that currently encumbers its assets. In addition, HEB will fund the operating costs of the Company's facility pending the completion of this transaction. In the event the Company does not obtain regulatory approval prior to September 12, 2003, either the Company or HEB may terminate the agreement and not complete the transaction.

In March 2003, the Company sold 15,000,000 shares of its common stock in a private placement transaction to an investor for $150,000. In connection with this private placement, the Company also sold, for $1,000, 15,000,000 warrants exercisable at $.01 per share and expiring in March 2008.

INTERFERON SCIENCES, INC. AND SUBSIDIARY
SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS

Description	Balance at Beginning Of Period	Additions Charged to Costs, Provisions and Expenses	Deductions(a)	Balance at End of Period
Year ended December 31, 2002				
Valuation and qualifying accounts deducted from assets to which they apply:				

Reserve for excess inventory	$5,538,413	$	$ 859,754	$4,678,659
Year ended December 31, 2001				
Valuation and qualifying accounts deducted from assets to which they apply:				
Reserve for excess inventory	$6,123,311	$	$ 584,898	$5,538,413
Year ended December 31, 2000				
Valuation and qualifying accounts deducted from assets to which they apply:				
Reserve for excess inventory	$6,991,185	$	$ 867,874	$6,123,311

Notes:

Deductions are for the usage of a portion of the reserve for excess inventory.

Unaudited Pro Forma Consolidated Financial Statements

On March 11, 2003 the Company executed two agreements with Interferon Sciences, Inc. ("ISI") to purchase certain of its assets.

In the first agreement with ISI, the Company effectively acquired the operations of ISI including its inventory of Alferon N Injection(R), and a limited license for the production, manufacture use, marketing and sale of this product. This transaction was completed on March 11, 2003. For these assets, the Company:

i) Issued 487,028 shares of its common stock, and
ii) Agreed to pay ISI 6% of the net sales of the Product

The Company also is required to pay ISI a service fee and pay certain of ISI's obligation related to the product.

In the second agreement with ISI, effectively an asset acquisition, ISI agreed to sell to the Company all of ISI's rights to the product and other assets related to the product including, but not limited to, real estate and machinery. This transaction was completed on March 17, 2004. For these assets, the Company:

i) Issued on March 17, 2004 an additional 487,028 shares of its common stock; and will
ii) Continue to pay ISI 6% of the net sales of the product

Pro Forma Condensed Consolidated Statement of Operations (Unaudited) of the Company

The following unaudited pro forma consolidated statement of operations of the Company for the year ended December 31, 2003 presents the results of the Company assuming the above-mentioned two Agreements between the Company and ISI had occurred on January 1, 2003.

The unaudited pro forma consolidated statement of operations should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements of the Company, including the notes thereto. The pro forma data is for informational purposes only and may not necessarily reflect the Company's results of operations for the year ended December 31, 2003 had the Company consummated the two Agreements on January 1, 2003.

Hemispherx Biopharma, Inc. and Subsidiaries
Unaudited Pro Forma Consolidated Statement of Operations
Year Ended December 31, 2003
(in thousands, except per share data)

	(1) Hemispherx Biopharma, Inc. And Subsidiaries 2003	(2) Interferon Sciences, Inc. And Subsidiary 2003	(3) Pro Forma Adjustments For First Asset Acquisition	Pro Forma as Adjusted For First Asset Acquisition
Revenues:				
Sales of product	$ 509	$ 242	$	$ 751
Clinical treatment programs	148	--	--	148
Total Revenues	657	242	899	899
Costs and expenses:				
Production costs/Cost of Goods Sold	502	267	47 (a)	816
Research and development	3,150	176	(7) (a)	3,319
General and administrative	4,257	963	(675) (a)	4,545
Royalty Expense			45 (b)	45
Total cost and expenses	7,909	1,406	(590)	8,725
Interest and other income	80	13	(13) (a)	80
Interest Expense and Financing Costs	(7,598)	(274)	(68) (c) 274 (a)	(7,666)
Metacine Settlement		1,550	(1,550) (a)	
Service fee income		451	(451) (a)	
Other income		14	(14) (a)	
Bulk sale of Alferon inventory		1,149	(1,149) (a)	
Net loss	$(14,770)	$ 1,739	$ (2,381)	$(15,412)
Basic and diluted loss per share	$ (.42)			$ (.43)

Basic and diluted weighted Average common shares outstanding	35,235	35,327

See accompanying notes to consolidated statement of operations

NOTES TO UNAUDITED PROFORMA

CONSOLIDATED STATEMENT OF OPERATIONS

The following notes describe the column headings in the unaudited pro forma consolidated statement of operations and the pro forma adjustments that have been made to this statement:

(1) Reflects the unaudited consolidated historical statement of operations of Hemispherx Biopharma, Inc. and subsidiaries for the year ended December 31, 2003.

(2) Reflects the unaudited consolidated historical statement of operations for ISI for the period ended September 30, 2003, which date represents its most recent available financial statements.

(3) Reflects pro forma adjustments relating to the first acquisition on March 11, 2003 of certain assets of ISI and the related funding as follows:

(a) Adjustments to reflect the following:

Production cost related to sales of product by ISI are based on the Company's cost of inventory purchased from ISI in the First Asset Acquisition. A portion of the Company's total cost of the net assets was allocated to inventory in accordance with FASB 141.

ISI debt was not assumed by the Company, interest on the debt has been eliminated.

The ISI building was acquired in the Second Asset Acquisition. Depreciation expense related to the building has been included for the First Asset Acquisition adjustments. The depreciation of the building, based on the cost of the Second Asset Acquisition, is recorded in entry 4(e) below.

Service fee income paid to ISI by the Company, the gain on the bulk sale of the Alferon inventory to the Company and the Metacine settlement have been eliminated.

General and administrative expenses beyond March 11, 2003 have been eliminated because ISI's general and administrative expenses subsequent to that date are not related to the Alferon business. All expenses related to the Alferon business subsequent to March 11, 2003 have been included in the Company's historical results for the period from March 11, 2003 through December 31, 2003.

	Production Cost / Cost of Sold Goods	R&D	G&A	Other	Total
Inventory	$(109)				$(109)
Interest expense				$274	274
Interest income				(13)	(13)
Depreciation	62	$7	$7		76
Service fee income				(451)	(451)
Other income				(14)	(14)
Bulk sale of Alferon inventory				(1,149)	(1,149)
G&A after March 11, 2003			668		668
Metacine Settlement	--	--	--	(1,550)	(1,550)
Totals	$(47)	$7	$675	$(2,903)	$(2,268)

(b) Increase in general and administrative costs resulting from the recognition of 6% royalty charges on the net sales of the acquired ALFERON N injection product.

(c) Increase in interest for period from January 1, 2003 through March 11, 2003 for issuance of 6% Senior Convertible Debentures on March 12, 2003.

(4) Reflects pro forma adjustments relating to the second acquisition of certain assets of ISI as follows:

(d) Adjustments reflect depreciation expense relating to the acquired building as result of the second acquisition of certain assets of ISI.

Pro Forma Condensed Consolidated Balance Sheet (Unaudited) of the Company

The following unaudited pro forma condensed consolidated balance sheet of the Company as of December 31, 2003 presents the financial position of the Company assuming the asset sale had occurred on December 31, 2003. The unaudited pro forma condensed consolidated balance sheet should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements of the Company, including the notes thereto, and the consolidated financial statements for the year ended December 31, 2003. The pro forma data is for informational purposes only and may not necessarily reflect the Company's financial position or what the Company's financial position would have been had the Company consummated the asset sale on December 31, 2003.

Unaudited Pro Forma Consolidated Balance Sheet
December 31, 2003
(in thousands)

	(1) HEMISPHERX BIOPHARMA, INC. AND SUBSIDIARIES	(2) PRO FORMA ADJUSTMENTS FOR SECOND ASSET ACQUISITION	PRO FORMA AS ADJUSTED FOR SECOND ASSET ACQUISITION
ASSETS			
Current Assets:			
Cash and cash equivalents	$ 3,764	$ --	$ 3,764
Short term investments	1,495	--	1,495
Inventory	2,896	--	2,896
Accounts and other receivables	282	--	282
Prepaid and other current assets	170	--	170
Total current assets	8,607		8,607
Property, plant and equipment, net	94	3,212(2)	3,306
Patent and trademark rights, net	1,027		1,027
Investments in unconsolidated affiliates	408		408
Deferred financing costs	393		393
Deferred acquisition costs	1,546	(1,546)(2)	
Advance receivable	1,300		1,300
Other assets	29		29
Total assets	$ 13,404	$ 1,666	$ 15,070
LIABILITIES			
Current liabilities:			
Accounts payable	$ 488	$ --	$ 488
Accrued expenses	1,119	--	1,119
Total current liabilities	1,607	--	1,607
Long term debt-net of current portion	2,058		2,058
Redeemable common stock	491	1,452(2)	1,943
Stockholders' equity:			
Common stock	39		39
		214(2)	
Additional paid-in capital	123,054	1,769(3)	125,037
Accumulated deficit	(113,843)	(1,769)(3)	(115,612)
Treasury stock	(2)		(2)
Total stockholders' equity	9,248	214	9,462

Total liabilities and stockholders' equity	$ 13,404	$ 1,666	$ 15,070

See accompanying notes to consolidated balance sheet

NOTES TO UNAUDITED PROFORMA

CONSOLIDATED BALANCE SHEET

The following notes describe the column headings in the unaudited pro-forma consolidated balance sheet and the pro forma adjustments that have been made to this balance sheet:

(1)Reflects the consolidated balance sheet of Hemispherx Biopharma Inc. and subsidiaries as of December 31, 2003.

(2) Reflects pro forma adjustments for the second acquisition of certain assets of ISI totaling $3.1 million and the assumption of certain obligations, including those settled via the issuance of shares of the Company's common stock. The value of the common shares issued to ISI approximated $1.7 million, of which approximately $1.5 million is redeemable and reflected as such.

As a result of the acquisition, the following table summarizes the estimated fair values of the property acquired.

(AMOUNTS IN THOUSANDS)
Second Acquisition

Cost of Building and Equipment :		
Issued 487,028 shares to ISI		$1,666
Issued 581,761 shares to ISI Creditors	$907	
Assumed Liability for Tax Lien	639	1,546
Total Cost of Property Acquired		$3,212

The shares issued to ISI were valued at $3.42 per share which was the closing price of the Company's shares on the American Stock Exchange as of March 17, 2004. The shares issued to ISI creditors were values at $1.56 per share which was the closing price of the Company's shares on the American Stock Exchange as of March 12, 2003.

(3) Represents the estimated intrinsic value of 1,450,000 stock warrants granted to the Company's Chief Executive Officer during October 2003, that became vested upon the second acquisition of certain assets from ISI.

No dealer, salesman or any other person is authorized to give any information

or to represent anything not contained in this prospectus. You must not rely on any unauthorized information or representations. This prospectus is an offer to sell these securities and it is not a solicitation of an offer to buy these securities in any state where the offer or sale is not permitted. The information contained in this Prospectus is current only as of this date.

TABLE OF CONTENTS

	Page
Prospectus Summary	2
Risk Factors	6
Use of Proceeds	16
Dividend Policy	16
Price Range of Common Stock	16
Selected Consolidated Financial Data	16
Management's Discussion and Analysis of Financial Condition And Results of Operations	19
Our Business	35
Management	51
Executive Compensation	55
Principal Stockholders	60
Certain Relationships and Related Transactions	62
Selling Stockholders	63
How the Shares May Be Distributed	66
Description of Securities Being Registered	68
Legal Matters	70
Experts	70
Where you can find More information	70
Financial Statements	F-1

==========

12,998,647 SHARES OF

COMMON STOCK

HEMISPHERX BIOPHARMA, INC.

PROSPECTUS

April 9, 2004

==========