2004 Annual Report

embrex
AN OVO COMPANY

20 Years of In Ovo Technology

About Embrex,® Inc.

Embrex, Inc., The In Ovo Company,® is the world leader in providing *in ovo* solutions to the global poultry industry. The company's platform technology, the Inovoject® system, vaccinates chickens while they are still in the egg (*in ovo*), thereby eliminating the need for vaccination against certain diseases after hatch. Embrex's Inovoject® system has revolutionized the industry in the United States, Canada, Australia and Spain, while other countries' acceptance and implementation of *in ovo* injection continue to grow.

Financial Highlights *(in millions except per share data)*

Year Ended	2000	2001	2002	2003	2004	% change '03 to '04
Earnings per share	$ 0.77	$ 0.92	$ 0.82	$ 0.91	$ 0.40	(56%)
Net income	6.60	8.00	7.20	7.60	4.20	(10%)
Revenue	38.80	44.70	45.30	46.00	48.70	6%

To Our Shareholders

While 2004 was a good year for Embrex, we believe it would have been a *very* good year without some external influences that were beyond management's control. In this letter, I will review some of those influences, provide an update on our operations and progress with our various products and projects, and address the impact the Sarbanes-Oxley Act of 2002 had on our Company in 2004.

We saw revenues for 2004 grow 6% over 2003. While a larger increase would have been preferable, the underlying cause for the growth we achieved was encouraging. Sixty-one percent of the growth came from outside the United States, validating international growth as a key part of our business strategy. The remaining 39% came from continued expansion in our North American region. We believe the ability to grow further in our domestic market, where we already vaccinate more than 80% of broiler chickens with the Inovoject® system, is an impressive validation of our products, service and 20 years of experience. This growth translated into a 5% increase in gross profit and enabled us to sustain our gross margin at 59%.

In 2004, the noteworthy regional standout was Latin America, led by Brazil, where our business continues to increase. At year's end, we estimated that we were vaccinating nearly 85% of Brazil's breeders and 25% of their broiler chickens, which is more than double the broiler number we were injecting a year ago. In Asia, the growth anticipated did not occur due to the impact of avian influenza in that region. The fact that our Asian operation eked out even a slight increase in revenues is important to note, given the dramatic decline in poultry production in virtually every country in the region. Considering the influence that the challenges in Asia had on our operations, we are pleased with our overall revenue performance.

Progress with our products and projects, the second key aspect of our business strategy, also yielded encouraging results. Newplex,™ our *in ovo* Newcastle disease vaccine, is now approved in five countries, and we continue to conduct trials to ensure that we understand how it performs against local Newcastle disease challenges. We plan to use this trial data to position the product correctly with producers in those high-challenge countries where the solutions it provides to growers in improved bird performance and more convenient disease control correlates to product positioning.

Inovocox™ *in ovo* coccidiosis vaccine progress is tied to our new manufacturing facility that is in the process of producing USDA-required pre-licensing serials, or batches. These are the same as the actual vaccine that will be produced after the facility and product receive USDA approval. These pre-licensing serials will be tested in USDA-required field trials in 2005.

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
Form 10-K

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

For the fiscal year ended December 31, 2004
Commission file number 000-19495

Embrex, Inc.

(Exact name of registrant as specified in its charter)

North Carolina	56-1469825
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

1040 Swabia Court, Durham, North Carolina	27703
(Address of principal executive offices)	(Zip Code)

(919) 941-5185
(Registrant's telephone number, including area code)

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT: NONE

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:
Common Stock, $.01 Par Value Per Share (and Rights Attached Thereto)
(Title of class)

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

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

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Act). Yes _X_ No ___

As of June 30, 2004, the aggregate market value of the voting and non-voting common stock held by non-affiliates was $101,989,260 million, based on 7,554,760 outstanding shares voting and non-voting common stock held by non-affiliates and a closing price per common share of $13.50 on that date. Affiliates held 381,361 shares as of June 30, 2004.

As of February 25, 2005 there were 7,940,697 shares of the registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Document	Where Incorporated
Portions of the Proxy Statement relating to the Annual Meeting of Shareholders to be held on May 19, 2005, to be filed with the Securities and Exchange Commission	Part III

INDEX

PART I

Information set forth in this Annual Report on Form 10-K contains various "forward looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These statements represent the Company's judgment concerning the future and are subject to risks and uncertainties that could cause the Company's actual operating results and financial position to differ materially. Such forward looking statements can be identified by the use of forward looking terminology such as "may," "will," "expect," "plan," "intend," "target," "anticipate," "estimate," "believe," or "continue," or the negative thereof or other variations thereof or comparable terminology.

The Company cautions that any such forward-looking statements include statements with respect to future products, services, markets and financial results. These statements involve risks and uncertainties that could cause actual results to differ materially. Risks include without limitation the degree of growth in the poultry industry in the United States and globally, economic factors affecting the poultry industry in the United States and globally, competition arising within the United States since the expiration of the Company's USDA patent in June 2002, market acceptance and cost of expansion in new geographic markets and with new products, including the Company's ability to penetrate new markets and the degree of market acceptance of new products, the complete commercial development of potential future products on a cost effective basis and the ability to obtain regulatory approval of products. Such approval is dependent upon a number of factors, such as results of trials, the discretion of regulatory officials, and potential changes in regulations. Additional information on these risks and other factors that could affect the Company's consolidated financial results are described in "Risk Factors" under Item 7 below, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and in the Company's other filings with the Securities and Exchange Commission, including the Company's Forms 10-Q and 8-K.

ITEM 1. BUSINESS

GENERAL

Embrex, Inc. ("Embrex" or the "Company") is an international agricultural biotechnology company engaged in the development of innovative *in ovo* ("in the egg") solutions that meet the needs of the global poultry industry. The Company's unique integration of several scientific and engineering disciplines enables it to be the leading provider of *in ovo*, value-added solutions with its automated injection and detection devices as well as certain select vaccines. Embrex is focused on developing patented biological and mechanical products that improve bird health, help reduce production costs and provide other economic benefits to the poultry industry. The Company was incorporated in 1985 in North Carolina and is headquartered in the Research Triangle Park, North Carolina area.

Embrex has developed and commercialized the Inovoject® system, a proprietary, automated in-the-egg injection system which can process 20,000 to 60,000 eggs per hour and eliminates the need for manual, post-hatch injection of certain vaccines. The Inovoject® system is designed to inject vaccines and other compounds into targeted compartments within the egg. Some of these *in ovo* compounds are marketed by Embrex while others are marketed by third parties. Embrex primarily markets the Inovoject® system through lease arrangements with commercial poultry producers, charging a fee for each egg processed. The Company is also marketing the Egg Remover® system and Vaccine Saver® option to provide additional automation benefits to the poultry hatchery. The Egg Remover® system works alone or in conjunction with the Inovoject® system to remove infertile and early-dead eggs from incubator trays prior to transfer or inoculation through the Inovoject® system. The Vaccine Saver® option for the Inovoject® system identifies infertile and early-dead eggs and selectively prevents vaccination of these eggs.

In addition to the Inovoject® system and related devices, Embrex has developed an antigen-antibody complex technology ("AAC"), formerly known as VNF®, a concept that has been useful in the development of certain avian vaccines. Based on AAC, the Company has developed and is marketing Bursaplex® for protection against avian infectious bursal disease ("IBD") and Newplex™ for protection against Newcastle disease. Embrex is also developing various other proprietary mechanical and biological products to improve bird health, reduce bird production costs and provide other economic benefits to the poultry industry. These products are in various stages of development, and some are being developed or manufactured in collaboration with major animal health companies, federal agencies, major poultry producers and leading universities in the field of avian science. All biological products are designed for *in ovo* application.

EXISTING PRODUCTS

Inovoject® Egg Injection System and Other Devices

Embrex has developed and commercialized a proprietary, automated in-the-egg injection system, which can process 20,000 to 60,000 eggs per hour and eliminates the need for manual, post-hatch injection of certain vaccines. This proprietary system, called the Inovoject® system, is designed to inject vaccines and other compounds in precisely calibrated volumes into targeted compartments within the egg. Embrex primarily markets the Inovoject® system through lease arrangements with commercial poultry producers, charging a fee for each egg processed. Vaccines and other compounds injected using the Inovoject® system may be produced or distributed to the commercial poultry producers by Embrex, in which case Embrex receives additional compensation for such compounds. Currently substantially all of the vaccines and other compounds injected using the Inovoject® system are supplied to producers directly by third parties.

In 2004, the Company installed the Inovoject® system in a number of hatcheries and continued operating Inovoject® systems in substantially all of the hatcheries converted prior to 2004. The Company estimates that its Inovoject® system inoculates in excess of 80% of all eggs produced for the United States and Canadian broiler poultry markets and it expects limited growth in the number of egg injections and only minor Inovoject® system revenue growth in this market. Therefore, the Company must expand its Inovoject® system, Egg Remover® system and Vaccine Saver® option installations and vaccine product sales in worldwide markets to realize sustainable overall revenue growth. The Company estimates that approximately 75% or more of the world broiler production occurs outside the United States. Accordingly, the Company is continuing its strategy to further market its Inovoject® system and other products outside the United States.

During 2004, the Company placed a number of Inovoject® systems for trial and on contract at locations outside the United States and Canada. Currently, the Company has Inovoject® systems either operating on contract or on trial in 36 countries. Overall, the placement of Inovoject® systems outside the United States and Canada is dependent on market acceptance of various *in ovo* vaccines and obtaining regulatory approval of these vaccines in numerous countries.

Embrex has developed the Egg Remover® system that works alone or in conjunction with the Inovoject® system to remove infertile and early-dead eggs from incubator trays. The Egg Remover® system has continued to have commercial success with installation and revenue growth received from all of the Company's marketing regions in 2004. The Company anticipates continued growth in Egg Remover® system revenues during 2005. Embrex has also developed and introduced the Vaccine Saver® option for the Inovoject® system, which identifies infertile and early-dead eggs and selectively prevents vaccination of these eggs. It is designed for use in select markets where vaccine prices are high. The Vaccine Saver® option was first introduced in Europe in 1999, and later introduced in North America during 2001 and Asia during 2002.

Certain poultry diseases are more prevalent in some geographic regions than in others, and in those regions, the prevalence of particular diseases may fluctuate from year to year. For example, Marek's disease, for which the Inovoject® system primarily is used in the United States, is not as widespread in Europe as in North America. Infectious bursal disease (also known as Gumboro disease) is prevalent in Northern Europe, the Middle East, Asia, parts of Latin America and, to a lesser extent, the United States. The Company expects that the primary usage of its Inovoject® systems will vary by geographic region according to the prevailing diseases as well as regulatory approval and market acceptance of vaccines for *in ovo* delivery. There are a number of poultry vaccines and other compounds marketed by various animal health companies in the United States and other markets, which can be used with the Inovoject® system or post-hatch. The relative demand and cost for these vaccines and customer willingness to use *in ovo* delivery or substitute *in ovo* vaccines for post-hatch vaccines will influence Inovoject® system, Egg Remover® system and Vaccine Saver® option usage.

Revenues from the Company's Inovoject® system, Egg Remover® system and Vaccine Saver® option were $46.2 million, $43.5 million and $40.2 million during 2004, 2003 and 2002, respectively.

AAC Technology (Antigen-Antibody Complex Technology)

Embrex has developed, patented and commercialized an antigen-antibody complex ("AAC") technology – a concept that allows safe *in ovo* administration of moderately attenuated viruses. By using the AAC technology to form virus-antibody complex vaccines, safe and effective immunization is generally possible in a single step, thus reducing or eliminating the need for multiple vaccinations. The presence of the antibody delays onset of virus replication without compromising the virus' ability to stimulate the immune system. Prior to 2004, Embrex referred

to the AAC technology as virus neutralizing factor, or VNF®. The Company believes AAC more accurately describes the technology and will use that term going forward.

The AAC technology is the subject of six issued U.S. patents and several foreign patents and foreign patent applications. The U.S. patents are owned by the University of Arkansas and exclusively licensed to Embrex for avian use on a royalty basis for the life of the patents. See "Patents and Proprietary Rights" below for additional information on the Company's AAC patents. The Company's vaccine for infectious bursal disease, Bursaplex®, and the Company's Newcastle disease vaccine, Newplex™, described below, were developed based on the AAC technology.

Infectious Bursal Disease (IBD) Vaccine

AAC technology has been used in the Company's Bursaplex® vaccine, which combats IBD, an infectious disease that weakens a bird's immune system. Birds infected by IBD virus typically exhibit poor growth or can succumb to other diseases because of a compromised immune system. This disease is currently widespread in Northern Europe, the Middle East, Asia, Latin America and, to a lesser extent, the United States. Various existing IBD vaccines can be administered *in ovo*, post-hatch via day of age injection or by drinking water. The Company estimates the worldwide market for IBD vaccines is approximately $55 million annually.

To date, approval to sell Bursaplex® has been received in 30 countries and is pending in three countries. Currently, Bursaplex® vaccine is being marketed in most of the countries where regulatory approval has been obtained. Regulatory approval and market acceptance of various *in ovo* vaccines can facilitate the placement of Inovoject® systems in certain markets. Pending regulatory approvals are being sought in Latin American, Middle Eastern and Asian markets for *in ovo* and post-hatch use of Bursaplex® vaccine.

Newcastle Disease (ND) Vaccine

The registration application for Newplex™, Embrex's *in ovo* vaccine that controls ND, was also based on AAC technology and received U.S. Department of Agriculture ("USDA") approval in May 2003. ND is a contagious and sometimes fatal viral respiratory disease affecting all species of birds. Birds infected with ND typically exhibit respiratory problems, lower egg production and increased flock mortality. Currently, ND vaccines containing live or dead viruses are used as an important part of the programs to control ND. These vaccines are typically administered by several methods including spray cabinets in the hatchery, drinking water, eye drop, and hand-held sprayers in the field. To date, approval to sell Newplex™ has been received in five countries and is pending in 12 other countries. Embrex plans to pursue additional regulatory approvals for Newplex™ in key markets worldwide, particularly in Asia, Latin America, the Middle East, and South Africa, where ND is more prevalent. Although this product has received commercial regulatory approval in countries outside the U.S., there is no assurance that registrations in other markets will be granted or that Newplex™ will be sold in commercial quantities. The Company estimates that the worldwide market for products that control ND is approximately $40 million per year.

PRODUCTS UNDER DEVELOPMENT

Embrex is developing, independently and in collaboration with others, additional products and devices which address poultry health and performance needs *in ovo*. These additional products are in various stages of development. There can be no assurance that Embrex will successfully develop or market any of these products. Also, there is no assurance regulatory approval will be obtained. Marketing products developed jointly with others may require royalty or other payments by Embrex to its co-developers.

Coccidiosis Vaccine

The Company is developing a novel *in ovo* vaccine, Inovocox™, for control of coccidiosis. Coccidiosis is caused by a protozoan parasite, which attacks the gut of the chicken, causing significant problems with intake and digestion of feed and, therefore, the physical and economic performance of the bird. Currently, virtually all broiler chickens, and most poultry in general, receive treatments using compounds called anticoccidials which are incorporated into poultry feed. Over the years, coccidia have developed levels of resistance to many of these compounds, which have not only reduced their effectiveness, but have forced the poultry industry to continually evaluate treatment programs. Additionally, in certain countries and regions, environmental and food safety groups are lobbying to have anticoccidials removed from the market. While Embrex believes that these factors will lead to a change in the market such that coccidiosis vaccines will be favored over anticoccidials, there is no assurance that such a change will occur. Currently, a limited number of live vaccines have been developed and are administered orally soon after

hatch. However, due to difficulties in providing a precise oral dose to each bird, growth depression and non-uniformity can occur in broiler flocks. Using its Inovoject® system technology and its knowledge of avian embryology, the Company is developing a novel, efficacious and cost-effective vaccine for coccidiosis control in broiler chickens. This program is aimed at overcoming many of the problems associated with current practices. The Company estimates that the worldwide market for products that control coccidiosis is approximately $300-350 million per year.

In March 2004, Embrex completed construction of a $12.8 million coccidiosis vaccine manufacturing facility located in Scotland County, North Carolina for the purpose of manufacturing Inovocox™. USDA approval will be necessary for both the Inovocox™ vaccine and the coccidiosis vaccine manufacturing facility. Delays in obtaining either the vaccine or manufacturing facility approval may adversely affect the marketing of and the ability to receive revenues from Inovocox™. Marketing this product outside the U.S. will also require Embrex to pursue separate approvals from regulatory agencies in other countries. See "Production, Marketing and Distribution—Production—Inovocox™", below for further discussion of Inovocox™ production.

Gender Sorting Device

During 2004, Embrex continued its efforts to automate avian gender sorting, which included obtaining three patents relating to the automated gender sorting of eggs. These patents are for transferring selected eggs to flats and back filling of the flats. Certain segments of the poultry industry, such as layers (female birds raised to produce table eggs), broiler parents (female birds which produce fertile eggs for the meat industry) as well as turkeys, are manually sorted by gender when the chick or poult is newly hatched. In addition, the Company believes that an economical and efficient *in ovo* determination of a bird's gender before it hatches could lead to an increase in the practice of raising broiler birds separately by gender. In a number of independent studies, gender-separate rearing has been shown to increase the efficiency of feed utilization, improve processing plant operations and ultimately provide consumers with more uniform and economic poultry.

In April 2001, Embrex entered into a Credit Agreement with Advanced Automation, Inc. ("AA") of Greenville, S.C. under which Embrex agreed to loan AA up to $3.4 million in connection with development and construction of a gender sorting automation multi-egg system ("Gender Sort system"). The Company also entered into a Development and Supply agreement with AA in September 2001 and a Services Agreement in April 2003. In April 2003, Embrex and AA agreed to rollover the $2.5 million outstanding principal and accrued interest under the Credit Agreement that had matured April 1, 2003 into a seven-year 6% fixed-rate collateralized term loan (the "Term Loan"). Subsequently, in December 2003, the Company acquired the first Gender Sort system developed exclusively for Embrex by AA for $2.3 million, AA repaid its term loan due to Embrex in the same amount, and the related Services Agreement between Embrex and AA to build the first Gender Sort system was terminated. A related Development and Supply Agreement between the two companies remains in effect. The Company accounted for the purchase of the Gender Sort system as a write down and recorded it as a research and development expense of $2.3 million.

Embrex continues to evaluate this project and no assurance can be made that Embrex's efforts will lead to a commercial Gender Sort product as a result of its ongoing research and development work.

OTHER DEVELOPMENT PROJECTS

Embrex routinely enters into collaborative agreements with major animal health companies, pharmaceutical companies and federal agencies, as well as leading universities in the field of avian science to evaluate the utility of certain of their compounds, technologies and devices when delivered or applied *in ovo*. Depending upon the outcome of these evaluations, Embrex may or may not proceed with these collaborations. There is no assurance that these efforts will yield products or further collaborations.

PATENTS AND PROPRIETARY RIGHTS

Embrex controls (either through direct ownership or exclusive license) 45 issued U.S. patents, 14 pending U.S. patent applications, 191 issued foreign patents and 127 pending foreign patent applications. In addition, Embrex has executed confidentiality agreements with its collaborators, subcontractors and employees.

The Inovoject® system utilizes a process of injecting viral, bacterial or fungal vaccines into avian eggs that was patented in the United States by the USDA in 1984 (the "Sharma Patent"). Embrex held the exclusive license to this patent through its expiration in June 2002. Embrex has supplemented this process with seven additional issued U.S. patents (and numerous foreign patents and patent applications) covering specific design features of the Inovoject®

system as well as Embrex's Egg Remover® system and Vaccine Saver® option. The last of these patents will expire during 2018.

Embrex has exclusive rights to method-of-use patents for the *in ovo* administration of AAC vaccines and other compounds to elicit various beneficial responses in poultry. The AAC technology is the subject of six issued U.S. patents and numerous foreign patents and foreign patent applications. These patents and applications are owned by the University of Arkansas and exclusively licensed to Embrex for avian use on a royalty basis for the life of the patents. The last of these U.S. patents for AAC viral vaccines will expire during 2012, and for AAC bacterial vaccines will expire in 2017. Of these U.S. patents, one issued in 1991 and two were issued in 1995 for methods of treating IBD virus infections using AAC technology, including *in ovo* administration; one patent claiming the use of AAC vaccines in non-human primates issued in 1999, a further U.S. patent claiming use of AAC vaccines in any animal was issued in 2001; and one patent claiming the use of AAC bacterial vaccines was issued in 2002. Another U.S. patent application directed to administration of AAC protozoan vaccines was recently allowed. These patents and additional patent applications encompass the use of AAC vaccine compounds regardless of the source of the AAC. These AAC patents and patent applications additionally include composition-of-matter claims to AAC vaccines against IBD virus disease, composition-of-matter claims to AAC vaccines for combating viral diseases in any animal, and composition-of-matter claims to AAC bacterial and AAC protozoan vaccines.

The Company acquired an exclusive worldwide license from Pfizer, Inc. to three patents owned by Pfizer that cover the process of vaccination *in ovo* against coccidiosis. One patent was issued in the European Union in March 2001 and two were issued in the United States in December 2002. Embrex made initial payments to Pfizer in 2004 to acquire the license and is obligated to make future royalty payments to Pfizer based on actual product sales. Since then, Embrex has filed patent applications related to additional process improvements in vaccine production. Continued development of the product has demonstrated that Inovocox™ can be simultaneously delivered to the embryo with Marek's disease vaccine or Bursaplex™ bursal disease vaccine. Additionally, the vaccine is delivered uniformly due to the use of the Inovoject® system.

Embrex continues its efforts to patent methods of delivering compounds *in ovo*, including early intervention methods and devices. During the years 1999 through 2004, 28 U.S. patents were issued or allowed, further expanding Embrex's proprietary position with respect to *in ovo* technology. The Company filed six new U.S. patent applications in 2001, 12 new U.S. patent applications in 2002, nine new U.S. patent applications in 2003 and three new U.S. applications and nine U.S. provisional patent applications in 2004. During 2004, Embrex also filed numerous foreign patent applications. Each application covered various aspects of *in ovo* technology. Embrex's competitors or potential competitors may have filed for, or received, U.S. and foreign patents and may obtain additional patents and proprietary rights relating to *in ovo* technology, vaccines, uses or processes which may compete with Embrex's existing products and products under development. Accordingly, there can be no assurance that Embrex's patent applications will result in patents being issued or that, if issued, the claims of the patents will afford protection against competitors with similar technology, nor can Embrex be sure that others will not obtain patents that Embrex would need to license or circumvent in order to practice Embrex's inventions.

In addition to patent rights, Embrex has registered the trademarks Embrex®, Inovoject®, VNF®, Bursaplex®, Vaccine Saver®, Egg Remover® and the service mark, The In Ovo Company®, in the United States and certain foreign countries. Embrex has also applied for U.S. and some foreign registrations of these and other trademarks and service marks including Newplex™, Inovocox™ and Inovometrix™.

See "Competition" below and Item 3, "Legal Proceedings", below for further discussion of the Company's efforts to use its patents and proprietary rights to protect its market position.

COMPETITION

The Company estimates that its Inovoject® system inoculates in excess of 80% of all eggs produced for the U.S. and Canadian broiler poultry markets. In addition, the Company has Inovoject® systems either operating on a contract or trial basis in 34 additional countries. The competition for the Inovoject® system primarily is the manual, post-hatch administration of biological products, which was the primary method of administration prior to market acceptance of Inovoject® system. Post-hatch administration remains the primary method of delivery of biological products in many foreign markets. In addition, Embrex is aware of four companies that are marketing *in ovo* injection systems to poultry companies. Although there has not been widespread commercial acceptance of any of these competing systems, the Company is aware of direct competition for customers and limited commercial placements by two of these companies. Embrex believes that it will continue to compete effectively against other companies based on performance of products, pricing, quality, product features, and customer service. In order for the Company to expand placements of the Inovoject® system worldwide, the Inovoject® system and *in ovo*

products must continue to be accepted within the foreign markets and perform as intended under long-term commercial conditions.

The Inovoject® system utilizes a process that was patented in the United States by the USDA in 1984. Embrex held the exclusive license to this Sharma Patent until June 2002, when the Sharma Patent expired. Embrex owns seven additional issued U.S. patents and numerous foreign patents covering specific design features of the Inovoject® system as well as Embrex's Egg Remover® system and Vaccine Saver® option. Embrex relies on these patents to protect its intellectual properties and to afford a competitive advantage. In the event that Embrex believes that a competitive system infringes any Embrex patent, the Company plans to take all appropriate steps to protect its patent rights. These matters are discussed in more detail under "Patents and Proprietary Rights" above and Item 3, "Legal Proceedings", below.

The majority of Embrex's revenues are derived from lease fees received from commercial poultry producers for use of its Inovoject® system, rather than from sales of Embrex's vaccines. In marketing its vaccines, the Company competes with much larger animal health companies that typically market a broad range of vaccines and other animal products. Embrex's strategy is to develop and market *in ovo* delivered vaccines which compete effectively against other vaccines based on factors such as efficacy and cost-effectiveness. Competition for the Company's *in ovo* vaccines comes primarily from vaccines that are administered post-hatch. Embrex's Bursaplex® vaccine for IBD primarily competes with vaccines that are administered post-hatch either manually through injections or in drinking water. Newplex™, Embrex's vaccine for Newcastle disease, competes with vaccines that are administered through drinking water, eye drop or spraying. Embrex's Inovocox™ vaccine for coccidiosis, for which USDA approval is pending, would compete with anticoccidials that are incorporated into poultry feed and to a lesser extent with vaccines that are administered after hatch. The Company completed construction of a vaccine manufacturing facility for Inovocox™ in March 2004. While Embrex believes that the marketplace is developing such that sales of coccidiosis vaccines could grow, there is no assurance that this will occur or that Embrex will obtain necessary regulatory approvals for Inovocox™ and the manufacturing facility. Overall, in order for the Company to expand sales of its *in ovo* vaccines, these vaccines must obtain necessary regulatory approvals and be commercially accepted worldwide, and the Inovoject® system must also continue to be accepted in the marketplace.

PRODUCTION

General

Embrex currently outsources production of nearly all its mechanical devices and vaccines, and expects to continue to do so for the foreseeable future. The Company believes that alternative sources of manufacturing and supply generally exist for products currently manufactured for Embrex by contract manufacturers. In addition, the Company expects to begin to manufacture Inovocox™ in its Embrex Poultry Health LLC coccidiosis vaccine manufacturing facility in Scotland County, North Carolina, once the USDA approves the Inovocox™ vaccine and grants facility licensure to manufacture Inovocox™.

Inovoject® System, Egg Remover® System and Vaccine Saver® Option

Embrex's in-house engineering staff designs the Inovoject® system, Egg Remover® system and Vaccine Saver® option, which incorporate certain proprietary mechanical, pneumatic and electronic sub-systems and concepts. The Company uses one contract manufacturer, Precision Automation Company, Inc., to fabricate its Inovoject® and Egg Remover® systems. While other machine fabricators exist and have constructed limited numbers of these devices, a change in fabricators could cause a delay in manufacturing and a possible delay in the timing of future Inovoject® and Egg Remover® system installations and revenues from those installations. The Vaccine Saver® option is assembled in the manufacturing area at the Company's corporate headquarters and the components are purchased from multiple vendors.

AAC Vaccines (Antigen-Antibody Complex Vaccines)

Since 1993, Charles River Laboratories, Inc., through its SPAFAS Avian Products Services Division ("SPAFAS"), has supplied Embrex with the bursal disease antibody ("BDA") component for Bursaplex® vaccine. In January 2004, Embrex signed a new agreement with SPAFAS under which SPAFAS will continue to supply the Company's requirements for BDA for approximately three years. In connection with this agreement, Embrex seeks to maintain appropriate inventory levels and places orders with SPAFAS to allow Embrex to satisfy anticipated customer demand for the Bursaplex® vaccine. The regulatory approval granted by the USDA for Bursaplex® vaccine in 1997 specifically covers vaccines produced with SPAFAS-manufactured BDA. Additional agreements covering the

Company's needs for Newcastle disease antibody ("NDA") for the Company's Newplex™ vaccine for the next four years are in negotiation with SPAFAS.

The Company has a non-exclusive manufacturing agreement with Merial Select, Inc. ("Select") (a Merck and Sanofi-Aventis company), in the United States, for Bursaplex® vaccine, an IBD virus-antibody complex vaccine, for Embrex to market in North America, Latin America, Asia, the Middle East and South Africa. Abic Ltd. has been granted similar rights to manufacture and market an IBD AAC vaccine, known as GuMBryo™, in Israel. The Company has also granted Lohmann Animal Health International ("LAHI") non-exclusive rights to manufacture, in the United States, a Newcastle vaccine, known as Newplex™, based on Embrex's AAC technology, that Embrex intends to market in Latin America, Middle East and Asia. The manufacture of vaccines by Select, Abic, and LAHI along with the manufacture of specific vaccine antibodies by SPAFAS, generally must be performed in licensed facilities or under approved regulatory methods. Although there are other manufacturers who are capable of manufacturing the IBD AAC products and the BDA and NDA, a change of supplier for the Company could adversely affect Embrex's future operating results due to the time it would take a new supplier to obtain regulatory approval of its production process or manufacturing facilities. The Company seeks to minimize this exposure through multi-year supply agreements and the maintenance of adequate inventories.

Inovocox™ *In Ovo* Coccidiosis Vaccine

In March 2004, the Company completed construction of a coccidiosis vaccine manufacturing facility located in Scotland County, North Carolina, at a cost of $12.8 million. The facility is designed to manufacture the Company's Inovocox™ *in ovo* coccidiosis vaccine upon approval from the USDA. The site includes a main manufacturing facility, poultry brooder houses and a facility for the initial steps of the production process. Certain aspects of the novel manufacturing process are unique and proprietary to Embrex.

See "Products Under Development—Coccidiosis Vaccine", above for further discussion of Inovocox™.

MARKETING AND DISTRIBUTION

Because of the geographical and industrial concentration of the poultry industry in the United States and other global markets, Embrex markets its products and provides ongoing service directly to commercial poultry producers. Embrex's marketing is focused principally on the broiler chicken segment of the poultry industry, but the Company also has adapted its products for use by, and initiated trials and entered into commercial contracts with, broiler breeder companies and a limited number of layer and turkey producers. In addition, the Inovoject® and Egg Remover® systems have been marketed to human flu vaccine producers, who use the systems to inject influenza seed strains into eggs that are used in the flu vaccine production process and to candle eggs before injection.

To protect the Company's intellectual property, address customer needs and encourage proper use of the Inovoject® system technology within an appropriate production environment, Embrex generally leases and licenses, rather than sells, Inovoject® and Egg Remover® systems and the Vaccine Saver® option to hatcheries. The lease agreements cover the use of the mechanical equipment and ongoing field service, maintenance and technical support provided by Embrex. The agreements include a license with royalty fees payable for use of Embrex's proprietary injection process. Also, in a very limited number of markets, under specific circumstances, Embrex may sell the Inovoject® and Egg Remover® systems to a distributor or a human flu vaccine manufacturer. Vaccines and other compounds, which are delivered *in ovo*, are sold separately by Embrex, and also by third parties.

The Company has agreements with parties to distribute Bursaplex® in 20 countries in which regulatory approval for Bursaplex® has been granted. Subject to these distribution agreements, the Company will also distribute Bursaplex® directly, outside the U.S. To date, approval to sell Bursaplex® has been granted in 30 countries and regulatory approval is pending in three countries.

Embrex has added staff for selected Asian and Latin American markets and installed Inovoject® systems on a commercial or trial basis in certain Asian markets. In 1998, Embrex established Embrex BioTech Trade (Shanghai) Co., Ltd. in China, to focus on marketing and distribution of Embrex products in China. Also in 1998, Embrex established Embrex Inc. Sucursal Argentina, a branch office in Argentina, responsible for commercial development and customer service and support. Initially, this office only served Argentina but now extends to other regional *markets* such as Bolivia, Chile, Paraguay and Uruguay. In 1999, Embrex established a subsidiary in Brazil, Inovoject do Brasil Ltda. In 2001, Embrex established subsidiaries in France and Spain to market and service Inovoject® systems in those countries. In 2004, the Company established an office in Mexico and began marketing, servicing and supporting Inovoject® systems and other devices. This office is also responsible for marketing Bursaplex® and initiating the registration process for Newplex™ in Mexico.

The Company's revenues attributable to international operations in 2004, 2003 and 2002 were 34%, 32% and 31% of the Company's consolidated revenues, respectively. The Company's identifiable assets attributable to international operations in 2004, 2003 and 2002 were 22%, 18% and 25% of the Company's consolidated assets, respectively. The Company's gross profit attributable to international operations in 2004, 2003 and 2002 was 15%, 14% and 21% of the Company's consolidated gross profit, respectively. See "Segments" under Note 1 to "Notes to Consolidated Financial Statements" for further discussion of the Company's revenues from international operations. See "Our Future Growth Depends on Expansion of International Revenues and We Will Be Subject to Increased Risks in the International Marketplace" under "Risk Factors" in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" for additional information on the risks associated with international operations.

RESEARCH AND DEVELOPMENT EXPENDITURES

Research and development ("R&D") expense was $10.2 million in 2002, $12.5 million in 2003 and $10.5 million in 2004. The increase in R&D expense from 2002 to 2003 and the decrease from 2003 to 2004 largely reflects the write down of the Gender Sort system purchased from Advanced Automation, which increased R&D expenses by $2.3 million in 2003. R&D is principally Company sponsored and funded primarily from internal sources and supplemented by grant and other sources of funds as appropriate. The Company's research and development expenses include expenditures from the following groups: R&D, which is responsible for the work on the Company's product portfolio, particularly the Newplex™ and Inovocox™ vaccines; Global Product Development & Supply, which is responsible for development and testing of commercial machine devices and supply of vaccine products, including development and commercial testing related to the Gender Sort project and overseeing scale-up of the Embrex Poultry Health manufacturing facility for the production of Inovocox™; and finally Engineering and Manufacturing, which makes design modifications and improvements to the Company's devices, as well as final assembly and testing prior to installation of a Company device at a customer's hatchery. See "Products Under Development" above for further discussion of the Company's research and development efforts.

See "Operating Expenses" under Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" for additional information on research and development expenditures.

GOVERNMENTAL APPROVALS AND REGULATION

Regulation by governmental authorities in the United States and other countries is a significant factor in the production and marketing of Embrex's products and in its on-going research and development activities. Although the use of the Inovoject® system or its other devices are not subject to regulatory approval in the United States, animal health products being developed by Embrex and other companies must receive approval for marketing from either the USDA or the Food and Drug Administration (the "FDA") and from similar regulatory agencies in foreign countries where the Company has begun or contemplates doing business. These countries also may require approval of the Inovoject® system or its other devices. Regulatory agencies require that products be tested and demonstrate appropriate levels of safety and efficacy. Generally, with respect to animal health products in the United States, the USDA has regulatory authority over products which are biological in origin or which stimulate or affect an animal's immune system and the FDA has authority over all other animal health products. The time and cost for USDA approvals are generally less than those for FDA approvals. FDA approvals generally require more extensive animal and toxicology testing than USDA approvals and may take five or more years to obtain, whereas USDA approvals generally take one to three years to obtain.

Management believes that compliance with environmental regulations currently has no material adverse effect on the Company's capital expenditures, earnings or competitive position.

EMPLOYEES

At December 31, 2004, Embrex employed 309 persons, 301 of whom were full-time employees, an increase of 32 persons or 12% from the 269 full-time employees at December 31, 2003. Most of the 2004 new hires were related to establishing Inovocox™ marketing and production functions and adding field service personnel required to service the Company's expanding device installations.

SIGNIFICANT CUSTOMERS

Tyson Foods, Inc. ("Tyson") accounted for approximately 18% of Embrex's consolidated 2004 revenues. Based on millions of pounds of ready-to-cook poultry meat produced in 2004, Tyson accounted for approximately 22% of the

broilers grown in the United States. During 1997, Tyson extended its contract with Embrex through 2004. Tyson is continuing its lease of devices while Embrex and Tyson are in negotiations for a new contract. The only other customer representing greater than 10% of total consolidated revenues is Pilgrim's Pride Inc. ("Pilgrim's"), representing 12% of consolidated 2004 revenues. Pilgrim's accounted for approximately 16% of the broilers grown in the United States, based on millions of pounds of ready-to-cook poultry meat produced in 2004. Embrex's three largest customers, including Tyson and Pilgrim's, accounted for approximately 36% of consolidated 2004 revenues, down from 37% in 2003. Revenues from Tyson and Pilgrim's are primarily associated with the United States operations of Embrex's business.

AVAILABLE INFORMATION

Embrex maintains an Internet website, http://www.embrex.com, which contains additional information concerning the Company. Although the Company endeavors to keep its Internet website current and accurate there can be no guarantees that the information on the Internet website is up to date or correct. Embrex makes available free of charge through its Internet website its annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and beneficial ownership reports filed by officers, directors and principal security holders under Section 16(a) of the Securities Exchange Act of 1934, as soon as reasonably practicable after Embrex electronically files such material with, or furnishes it to, the Securities and Exchange Commission ("SEC"). In addition, the public may read or copy any materials we file with the SEC at the SEC's Public Reference Room at 450 Fifth Street, NW, Washington DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet website that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that site is www.sec.gov. Information on the Company's Internet website is not part of or incorporated into this report on Form 10-K.

ITEM 2. PROPERTIES

Embrex leases its corporate headquarters, which occupies approximately 60,000 square feet, and is located adjacent to Research Triangle Park, North Carolina. About one-third of the space is devoted to research and development. The lease has an initial six-year term expiring in 2005 with annual rent increases of approximately 3% and an additional six-year optional renewal term with annual rent increases of approximately 4%. In October 2004, the Company exercised its option to renew the first two years of the six-year optional renewal term with annual rent increases of approximately 4%. Embrex paid an annual rent of approximately $0.5 million during 2004. In addition to research and development activities conducted at its corporate headquarters, Embrex leases a 12,800 square-foot research facility near its headquarters. The lease has a 10-year term expiring in 2007, with a five-year renewal option. The annual rent paid in 2004 was approximately $0.2 million, with annual increases of approximately 3% through the first 10 years and approximately 4% during the five-year renewal term.

Embrex purchased approximately 60 acres in Scotland County, North Carolina in December 2002 for the purpose of constructing and equipping the Embrex Poultry Health vaccine manufacturing and testing facility. In January 2003, construction was initiated for this 40,000 square foot facility. Construction of the facility was completed in March 2004 at a cost of approximately $12.8 million.

In addition to the Company's facilities in North Carolina, Embrex has leased office and warehouse space at some other U.S. and international locations.

ITEM 3. LEGAL PROCEEDINGS

In August 2004, Embrex filed suit in the U.S. District Court for the Middle District of North Carolina against Avitech, L.L.C. of Hebron, Maryland asserting patent infringement. Embrex alleges that Avitech's injection system, designed to compete with the Company's patented Inovoject® system, infringes one of the Company's patents related to the Company's proprietary apparatus and methods for accurately and precisely injecting eggs to the same depth and location when the eggs are of varying sizes and may be presented to the injection apparatus in somewhat different orientations. The Company seeks injunctive relief and monetary damages and has asked for a jury trial. The defendant has denied that the North Carolina court has jurisdiction and has moved to dismiss or, in the alternative, for transfer to the United States District Court in Maryland. The Company asserts that the North Carolina court has jurisdiction and requested jurisdictional discovery to confirm its belief. The North Carolina court granted Embrex's request. If the defendant's motion is resolved in the Company's favor, the lawsuit will proceed in the North Carolina court. Because of this lawsuit, the Company's results of operations have been impacted and will continue to be affected by the costs of pursuing this litigation. Moreover, there can be no assurance the Company

will prevail in its claims against Avitech, L.L.C. Even if the court finds in the Company's favor, the Company has no assurances that any damage award will exceed the Company's costs of pursuing this litigation or that the Company would be able to collect any damages from the defendant.

In December 2003, Embrex filed suit in the U.S. District Court for the Eastern District of North Carolina against Breuil S.A. of Landivisiau, France, and New Tech Solutions, Inc. of Gainesville, Georgia, asserting patent infringement. Embrex alleges that each of the defendants' development of an *in ovo* selective injection device, designed to compete with Embrex's patented Inovoject® system injection method, Egg Remover® system and Vaccine Saver® option infringes two Embrex patents related to Embrex's proprietary methods and apparatus for distinguishing live eggs from infertile or "dead" eggs and for selectively injecting specific eggs identified as suitable for inoculation as well as the apparatus performing this function. Embrex seeks injunctive relief and monetary damages and has asked for a jury trial. The defendants have denied infringement and alleged that Embrex's two patents are invalid. Because of this lawsuit, the Company's results of operations have been impacted and will continue to be affected by the costs of pursuing this litigation. Moreover, there can be no assurance the Company will prevail in its claims against Breuil S.A. or New Tech Solutions, Inc. Even if the court finds in Embrex's favor, the Company has no assurances that any damage award will exceed the Company's costs of pursuing this litigation or that the Company will be able to collect any damages from either defendant.

The Company filed a lawsuit in April 2002 against Fort Dodge Australia, Pty. Ltd. and Wyeth, alleging breach of contractual obligations to develop, register and market Bursamune®, an IBD vaccine based upon the Company's AAC technology, in the territories of Europe, the Middle East and Africa, unfair and deceptive trade practices and related claims. In July 2002, Wyeth asserted a counterclaim against Embrex alleging breach of contract and related claims. On June 30, 2003, Embrex announced that it had reached settlement in this litigation with Wyeth. Under the terms of the settlement, Embrex and Fort Dodge dismissed all claims pending between them in return for payment to Embrex by Fort Dodge of $5.0 million. This settlement resulted in net other income of $3.7 million after legal expenses related to the settlement.

In 1996, Embrex filed a patent infringement suit in the U.S. District Court for the Eastern District of North Carolina against Service Engineering Corporation, a Maryland corporation, and Edward G. Bounds, Jr., a Maryland resident and officer of Service Engineering Corporation. The suit alleged that each of the defendants' development of an *in ovo* injection device, designed to compete with Embrex's patented Inovoject® system injection method, infringes at least one claim of U.S. Patent No. 4,458,630 exclusively licensed to Embrex for the *in ovo* injection of vaccines into an avian embryo (the "Sharma Patent"). Further, Embrex claimed that the defendants had violated the terms of a Consent Judgment and Settlement Agreement entered into with Embrex in November 1995 in which prior litigation was concluded with Service Engineering Corporation and Edward G. Bounds, Jr. agreeing not to engage in future activities violating the Sharma Patent. Embrex sought injunctive relief to prevent infringement of the Sharma Patent as well as monetary damages. In November 1996, Service Engineering Corporation and Edward G. Bounds, Jr., responded to Embrex's patent infringement suit by asserting various affirmative defenses and denying the substantive allegations in Embrex's complaint. This suit concluded in July 1998 with a jury verdict in favor of Embrex. The verdict fully upheld the validity of all claims of the Sharma Patent, finding that the defendants had infringed all asserted claims of the patent. The jury also found that Service Engineering Corporation and Edward G. Bounds, Jr., had breached the 1995 Consent Judgment and Settlement Agreement and that such breach was not in good faith. The jury awarded Embrex damages of $500,000 plus litigation expenses and court costs. The U.S. District Court for the Eastern District of North Carolina entered a Judgment in favor of Embrex in September 1998, which included a monetary award of $2,612,885 and an injunction prohibiting Service Engineering Corporation and Edward G. Bounds, Jr., from practicing methods claimed in, or otherwise infringing, the Sharma Patent. That injunction expired with the expiration of the Sharma Patent in June 2002. Following an appeal by Service Engineering Corporation and Edward G. Bounds, Jr. to the U.S. Court of Appeals for the Federal Circuit seeking a reversal of the Judgment, in July 2000, the United States Court of Appeals for the Federal Circuit affirmed the district court's decision to award to Embrex litigation expenses plus interest valued at approximately $1.5 million. In addition, the appeals court upheld the finding that Service Engineering Corporation and Edward G. Bounds, Jr. had willfully infringed all asserted claims of the Sharma Patent. However, the appeals court vacated the award of direct infringement damages, finding that the district court erroneously awarded direct damages without proper evidence to support the award. Therefore, the appeals court remanded that award ($500,000, which was trebled) to the district court for further proceedings for determination of a reasonable royalty for the infringement of the patented method by Service Engineering Corporation and Edward G. Bounds, Jr. These proceedings were opened in August 2000, but have been stayed since 2001.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of security holders during the fourth quarter of the fiscal year ended December 31, 2004.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Common Stock Market Information. The Company's Common Stock trades on the Nasdaq National Market under the symbol EMBX. The quarterly trading ranges of the sales prices of the Company's Common Stock (based on each day's closing prices during the specified quarter) for the last two fiscal years were as shown in the table below:

	Common Stock Price Per Share	
Quarter Ended	High	Low
March 31, 2003	$ 11.80	$ 6.41
June 30, 2003	$ 10.50	$ 7.63
September 30, 2003	$ 10.64	$ 9.37
December 31, 2003	$ 14.50	$ 9.85
March 31, 2004	$14.99	$10.06
June 30, 2004	$13.54	$11.10
September 30, 2004	$14.50	$12.60
December 31, 2004	$13.70	$13.00

Holders and Dividends. At February 25, 2005, there were 377 holders of record of the Common Stock. This number does not include beneficial owners of the Company's Common Stock whose stock is held in nominee or "street" name accounts through brokers. The Company has paid no dividends on any stock since inception and has no plans to pay dividends on its Common Stock in the foreseeable future. Additionally, pursuant to the Company's line of credit with its bank, the Company may not declare or pay any dividends until payment in full of any indebtedness and performance of all obligations under the related loan documents without the prior written consent of the bank.

Sales of Unregistered Securities. There were no sales of unregistered securities during the fourth quarter of fiscal 2004.

Issuer Purchases of Equity Securities. During the fourth quarter of 2004, the Company purchased 1,100 shares of its Common Stock as set forth in the following table pursuant to its 2004 Repurchase Program.

ISSUER PURCHASES OF EQUITY SECURITIES

Period	(a) Total Number of Shares Purchased	(b) Average Price Paid per Share	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (1)	(d) Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs(1)
10/1/2004–10/31/2004	1,100	13.00	44,350	455,650
11/1/2004 – 11/30/2004	-0-	-0-	44,350	455,650
12/1/2004 – 12/31/2004	-0-	-0-	44,350	455,650
Total	1,100	13.00	44,350	455,650

(1) On May 4, 2004, the Company announced that the Board of Directors had authorized a share repurchase program (the "2004 Repurchase Program") to purchase up to 500,000 of outstanding shares of Common Stock through December 2005 in open market or privately negotiated transactions on or after July 1, 2004.

See "Liquidity and Capital Resources" under Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations for further discussion of the Company's share repurchase programs.

ITEM 6. SELECTED FINANCIAL DATA

SUMMARY OF OPERATIONS BY QUARTERS (UNAUDITED)

The selected financial data below should be read in conjunction with the Company's consolidated financial statements and related notes appearing elsewhere in this report.

(In thousands, except per share amounts)

	2004				2003			
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Revenues	$11,956	$11,727	$12,765	$12,269	$10,898	$12,113	$11,507	$11,507
Gross Profit	$7,120	$6,953	$7,633	$6,864	$6,745	$6,780	$6,971	$6,615
Net income (loss)	$1,109	$808	$770	$626	$1,275	$3,885	$2,648	($197)

	2004				2003			
	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Net income per share of common stock								
Basic	$0.14	$0.10	$0.10	$0.08	$0.16	$0.48	$0.32	$(.02)
Diluted	$0.13	$0.10	$0.09	$0.08	$0.15	$0.46	$0.32	$(.02)
Number of shares used in per share calculation								
Basic	8,034	7,960	7,919	7,911	8,154	8,143	8,159	8,117
Diluted	8,346	8,268	8,290	8,220	8,383	8,379	8,398	8,482

5-YEAR SUMMARY OF SELECTED FINANCIAL DATA

(In thousands, except per share amounts)	2004	2003	2002	2001	2000
CONSOLIDATED STATEMENTS OF OPERATIONS DATA					
Revenues	$48,717	$46,025	$45,325	$44,660	$38,796
Research and development expenses	10,474	12,540	10,162	8,120	6,725
Other operating expenses	13,922	9,951	9,107	9,681	8,341
Net income	3,313	7,611	7,171	7,967	6,631
Net income per share of Common Stock					
Basic	$0.42	$0.94	$0.88	$1.00	$0.84
Diluted	$0.40	$0.91	$0.82	$0.92	$0.77
Number of Shares Used in Per Share Calculation					
Basic	7,954	8,119	8,116	8,007	7,901
Diluted	8,343	8,369	8,692	8,644	8,639
CONSOLIDATED BALANCE SHEET DATA					
Working capital	$12,467	$15,746	$14,005	$9,670	$7,695
Total assets	62,580	59,717	42,013	34,058	26,770
Long-term liabilities	8,518	6,404	46	43	37
Retained earnings (accumulated deficit)	2,365	(948)	(8,559)	(15,730)	(23,697)
Shareholders' equity	47,022	45,692	37,164	29,314	22,661

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with the Company's consolidated financial statements and related notes appearing elsewhere in this report.

INTRODUCTION

Embrex is an international agricultural biotechnology company engaged in the development of innovative *in ovo* solutions that meet the needs of the global poultry industry. The Company derives most of its global revenues from lease fees for the number of eggs processed by the Inovoject® system. Other revenue sources for the Company come from lease fees related to the Egg Remover® system and Vaccine Saver® option. In addition to these sources, the Company may sell each of these devices to distributors under special circumstances in selected countries and to human flu vaccine manufacturers. Revenues from these sources are categorized as device revenues in the Company's financial statements. Another source of revenues for the Company is product sales, which currently consist of sales of *in ovo* vaccines, Bursaplex® and Newplex™. The Company also derives some revenues from contract research and development ("R&D"), grant sources and other minor products. The Company's cost of revenue is primarily attributable to the costs of supporting the Company's devices at customer locations around the world. These costs include the labor, travel and parts necessary to ensure proper operation and maintenance of Embrex's devices located at hatcheries of the Company's customers, as well as associated depreciation, sales and property tax expenses.

During 2004 the Company experienced consolidated revenue growth of 6% primarily due to an increase in device revenues. Approximately 61% of the device revenue increase occurred outside of the United States primarily driven by new Inovoject® system customers in Latin America. The revenue increase and maintaining the Company's gross margin at 59% resulted in a 5% increase in gross profit. A 54% increase in general and administrative expenses partially offset by a 16% decrease in research and development expenses resulted in a 10% decrease in operating profit due primarily to additional Sarbanes-Oxley compliance related expenses, Inovocox™ production facility expenses and other increases described below. Total other income was $3.4 million higher in 2003 than 2004 primarily due to the $5.0 million Fort Dodge settlement, which netted $3.7 million after legal fees. These changes resulted in a 46% decrease in income before taxes. Income taxes were 52% higher in 2004 than 2003 and the effective tax rate increased from 9% to 26% due to changes described below. Overall net income and diluted earnings per share decreased 56% in 2004 from 2003, or $4.3 million and $0.51, respectively.

RESULTS OF OPERATIONS

Net Income

(In thousands, except per share amounts)	2004 vs. 2003				2003 vs. 2002			
	2004	2003	Change ($)	Change (%)	2003	2002	Change ($)	Change (%)
Consolidated Revenue	$48,717	$46,025	$2,692	6%	$46,025	$45,325	$ 700	2%
Operating Income	4,174	4,620	(446)	(10%)	4,620	8,498	(3,878)	(46%)
Net Income	$3,313	$7,611	($4,298)	(56%)	$7,611	$7,171	$440	6%
Earnings per share – basic	$0.42	$0.94	($0.52)	(55%)	$0.94	$0.88	$0.06	7%
Earnings per share – diluted	$0.40	$0.91	($0.51)	(56%)	$0.91	$0.82	$0.09	11%

Consolidated net income for 2004 decreased to $3.3 million, 56% lower than 2003 net income of $7.6 million, which was 6% higher than 2002 net income of $7.2 million. Diluted earnings per share were $0.82 in 2002, $0.91 in 2003 and $0.40 in 2004. The decrease in 2004 net income compared to 2003 was primarily due to the $3.7 million settlement of the Company's litigation with Fort Dodge in 2003 (net of legal fees) and $0.9 million spent on accounting fees for Sarbanes-Oxley compliance in 2004, which is a $0.7 million increase over 2003.

Outstanding Shares

(In thousands)

	2004	2003	2002
Weighted Average Shares Outstanding	7,954	8,119	8,116
Diluted Average Shares Outstanding	8,343	8,369	8,692

The weighted average shares outstanding increased by 3,000 shares from 2002 to 2003, or less than 0.1%, and decreased by 165,000 shares from 2003 to 2004, or 2%. The decrease in outstanding shares from 2003 to 2004 is primarily due to the repurchase of shares in 2004 pursuant to the Company's share repurchase programs.

The diluted average shares outstanding decreased by 323,000 shares from 2002 to 2003, or approximately 4%, which was due to common stock repurchases by the Company during 2003 as well as the decrease in the average closing share price of the Company's common stock from $16.66 per share in 2002 to $9.82 per share in 2003. The decrease in stock price lowered the number of outstanding stock options with exercise prices that were less than the market price of Embrex's stock (i.e., "in-the-money" stock options). Because only in-the-money stock options are counted in computing diluted average shares outstanding, the lower average closing price for the Company's common stock in 2003 as compared to 2002 resulted in less stock options being taken into account in 2003. Diluted average shares outstanding decreased 26,000 shares, or less than 1% from 2003 to 2004. This decrease is due to the repurchase of shares in 2004 pursuant to the Company's Share Repurchase programs, which was partially offset by the increase in the average closing share price of the Company's common stock from $9.82 in 2003 to $12.72 in 2004, which resulted in more in-the-money stock options being taken into account in computing diluted average shares outstanding.

Revenues

(In thousands)

	2004 vs. 2003				2003 vs. 2002			
	2004	2003	Change ($)	Change (%)	2003	2002	Change ($)	Change (%)
Device revenue	$46,157	$43,458	$2,699	6%	$43,458	$40,160	$3,298	8%
Product revenue	2,037	1,970	67	3%	1,970	3,079	(1,109)	(36%)
Other revenues	523	597	(74)	(12%)	597	2,086	(1,489)	(71%)
Consolidated revenues	$48,717	$46,025	$2,692	6%	$46,025	$45,325	$700	2%

Consolidated revenues in 2004 totaled $48.7 million, representing an increase of 6% over 2003 revenues of $46.0 million, which was 2% over 2002 revenues of $45.3 million. Device revenues totaled $46.2 million in 2004 compared to $43.5 million in 2003 and $40.2 million in 2002, representing increases of 6% from 2003 to 2004, and 8% from 2002 to 2003. The 2004 revenue increase derives mainly from increased device fees, which is primarily due to an increase in the Inovoject® system customer base, as well as new Egg Remover® installations. Other revenues decreased 12% from $0.6 million in 2003 to $0.5 million in 2004 and 71% from $2.1 million in 2002 to $0.6 in 2003. Both the 2003 and 2004 other revenues were derived from miscellaneous revenues for minor products, refunds and miscellaneous grants. The 2002 other revenues were primarily derived from funding provided by Cobb-Vantress in support of the Gender Sort project, federal Advanced Technology Program ("ATP") funds supporting the Company's collaborative development project with Origen Therapeutics, Inc. and Small Business Innovation Research funding for device development work. The decrease from 2002 to 2003 is primarily due to grant funding from Cobb-Vantress in support of the Gender Sort project that occurred in 2002 that did not recur in 2003, as well as the withdrawal of the ATP grant. During 2004, the U.S. dollar weakened against select currencies compared to the same period during 2003. If average exchange rates during 2004 had remained the same as the average exchange rates for these currencies during 2003, the Company's revenues would have been approximately $0.7 million lower and the overall increase would have been $2.0 million rather than the actual increase of $2.7 million.

The 2004 revenues include device lease fees for use of Inovoject® and Egg Remover® systems and Vaccine Saver® option by poultry producers in the United States and foreign countries, and the sale of devices to distributors and human flu vaccine manufacturers. The sporadic nature of device sales to distributors and human flu vaccine companies may cause variability in revenue and gross profit on an annual and quarterly basis. Embrex estimates that as of December 31, 2004, it was vaccinating in excess of 80% of the estimated nine billion broiler birds grown in the United States and Canada in 2004. Given its market penetration, the Company expects only limited Inovoject® systems revenue and earnings growth in this market, most of which is anticipated to come from new Egg

Remover® installations. In addition, the introduction of competitor machines could affect growth and/or the maintenance of the Company's revenues.

Sales of Bursaplex®, the Company's proprietary vaccine for the treatment of avian infectious bursal disease, was the source of approximately $2.0 million of product revenues in both 2004 and 2003, and $3.1 million of product revenues in 2002. Bursaplex® sales growth from 2003 to 2004 was restrained mainly by continued challenges in Asia resulting from avian influenza outbreaks and poor economic conditions. If the effects of avian influenza subside and production and consumption levels, as well as exports from the Asian region increase, the Company anticipates that increased injection activity and Bursaplex® sales could occur. Bursaplex® sales decreased 36% from 2002 to 2003 primarily due to lower sales caused by the Company's Japanese distributor's excess inventory, a weak market in Latin America and a weak market in Asia caused primarily by lower poultry production in Korea resulting from an oversupply of poultry and poor economic conditions at the end of 2003.

Limited initial sales of Newplex™, the Company's proprietary vaccine for the treatment of Newcastle disease, were generated in 2004. The Company anticipates sales growth of this product in 2005 as registrations to sell Newplex™ are approved in markets outside the U.S. Like Bursaplex®, Newplex™ registrations and sales are affected by economic conditions in non-U.S. markets, particularly in Asia with its challenges related to avian influenza. Although several registrations to sell Newplex™ were approved in 2004 and more approvals are anticipated in 2005, there can be no assurance that Newplex™ will be commercially accepted in these markets.

Management anticipates minor revenue and earnings growth in 2005 from existing Inovoject® system operations in the United States and Canada, higher revenue and earnings growth from new Inovoject® system leases in other countries, and sales of Bursaplex® and Newplex™ products to poultry producers worldwide. However, the rate at which the marketplace will accept the Inovoject® system technology outside the United States and Canada, the degree of acceptance of our competitor's machines within the United States and elsewhere, the timing of regulatory approvals of third-party vaccines for *in ovo* use outside the United States and Canada, costs associated with market expansion, possible variability in United States hatchery bird production as a result of grain price fluctuations, and variability in the demand for, and pricing of, U.S. poultry and poultry products both inside and outside the United States, will impact the pace of revenue growth, if any, and sustained profitability from the installation and operational throughputs of Inovoject® systems. In addition, avian disease outbreaks in markets where Embrex has device placements and sales also may affect future revenues. Demand for both Bursaplex® and Newplex™ is affected by local poultry producers' perceived degree of viral challenge. This may impact future revenues as well.

Cost of Revenues

(In thousands)	2004 vs. 2003				2003 vs. 2002			
	2004	2003	Change $	Change %	2003	2002	Change $	Change %
Consolidated Revenues	$48,717	$46,025	$2,692	6%	$46,025	$45,325	$700	2%
Cost of Device Revenues & Product Sales	20,147	18,914	1,233	7%	18,914	17,558	1,356	8%
Gross Profit	$28,570	$27,111	$1,459	5%	$27,111	$27,767	($656)	(2%)
Gross Margin	59%	59%			59%	61%		

Cost of revenues was 41% of total revenues in 2004 as compared to 41% and 39% of total revenues in 2003 and 2002, respectively. Consequently, gross margin was 59% for both 2004 and 2003, and 61% for 2002. Gross margin is affected by material costs related to servicing the Company's devices and changes in the Company's product mix, described in "Revenues" above. The decrease in gross margin between 2002 and 2004 was primarily due to higher material costs related to servicing the Company's devices, resulting in an increase in the cost of parts used to maintain the Company's devices. Stainless steel prices caused an increase in depreciation expenses due to increased capital cost for new devices. If material costs and stainless steel prices increase in the future, these increases could cause gross margins to decrease in the future if the Company is unable to pass these increases through to customers. Also, downward pressure on device lease fees, upward changes in other input costs and modifications in product mix could cause gross margins to decrease in the future.

Operating Expenses

(In thousands)	2004 vs. 2003				2003 vs. 2002			
	2004	2003	Change ($)	Change (%)	2003	2002	Change ($)	Change (%)
General & Administrative	$10,983	$7,119	$3,864	54%	$7,119	$6,571	$548	8%
Sales & Marketing	2,939	2,832	107	4%	2,832	2,536	296	12%
Research & Development	10,474	12,540	(2,066)	(16%)	12,540	10,162	2,378	23%
Total Operating Expenses	$24,396	$22,491	$1,905	8%	$22,491	$19,269	$3,222	17%

Operating expenses totaled $24.4 million in 2004 compared to $22.5 million in 2003, and $19.3 million in 2002.

General and administrative ("G&A") expenses were $11.0 million in 2004, up 54% from $7.1 million in 2003, which was up 8% from $6.6 million in 2002. The increase in G&A expenses from 2003 to 2004 was principally due to continued growth of expenses for the Company's Inovocox™ production facility, $0.9 million of accounting and legal expenses related to accounting and internal controls to comply with the Sarbanes-Oxley Act, increased insurance premiums due to increased property and product liability exposures, patent-related legal fees and staff-related increases in support of the business. The increase in G&A expenses from 2002 to 2003 was primarily due to increased expenses of $0.1 million related to legal expenses incurred for accounting and internal controls to comply with the Sarbanes-Oxley Act, additional facilities support and expenses for the Company's Inovocox™ production facility under construction, increased insurance premiums due to increased property and product liability exposures as well as a hardening of the 2003 insurance market, and staff-related increases in support of the business.

Sales and marketing expenses totaled $2.9 million in 2004 compared to $2.8 million in 2003 and $2.5 million in 2002. The increase from 2003 to 2004 is principally due to additional personnel in Marketing to market and support the Company's devices and to prepare and support Inovocox™ after registration is achieved. This increase was partially offset by lower sales tax expense in 2004. The increase in expenses from 2002 to 2003 is primarily due to sales tax assessments and staff-related increases to support the business

R&D expenses were $10.5 million in 2004 compared to $12.5 million in 2003 and $10.2 million in 2002. The decrease in R&D expense from 2003 to 2004 is primarily due to the write-off of the Gender Sort system purchased from Advanced Automation Inc., which increased 2003 R&D expenses by $2.3 million. The increase in R&D expense from 2002 to 2003 is also principally due to the write-off of the Gender Sort system purchased from Advanced Automation. Additionally, expenses related to the Company's collaboration with Origen Therapeutics, Inc., which was terminated in 2003, added to the increase during 2003. The Company continues to manage its research and development effort to leverage its know-how, patent position, market presence and expenditures. See "Products Under Development—Gender Sorting Device" under Item 1, "Business", above, for further discussion of the write-off of the Gender Sort system purchased from Advanced Automation.

The Company's overall research and development expenses reflect expenditures incurred in three distinct departments:

The first of these departments, R&D, is responsible for expenditures associated with the work on the Company's product portfolio and in particular the Newplex™ vaccine, Inovocox™, the *in ovo* coccidiosis vaccine, and, prior to its termination, the collaboration with Origen Therapeutics. Operating Expenses for R&D in 2004 were $5.0 million, compared to 2003 and 2002 expenses of $5.5 million and $6.0 million, respectively. The decrease in operating expenses from 2003 to 2004 is primarily due to reclassification of patent-related legal fees previously recorded as R&D expense that now are reflected as G&A expense, as well as the 2003 allocation of indirect expenses related to the Early Delivery Project from G&A to R&D that were not allocated in 2004 due to suspension of the ATP grant in late 2003. Reorganization of R&D staff to Global Product Development & Supply ("GPDS") and lower contract R&D expenses contribute to the decrease in operating expenses as well. The decrease in operating expenses from 2002 to 2003 is primarily due to lower contract R&D expenses, which partially resulted from a change in the Inovocox™ team's focus from pure research to the design and building of the Embrex Poultry Health facility.

The second of these departments, GPDS, is responsible for development and testing of commercial machine devices and supply of vaccine products. This group is currently responsible for development and commercial testing related to the Gender Sort project and overseeing scale up of the Embrex Poultry Health manufacturing facility for the production of Inovocox™. GPDS operating expenses for 2004, 2003 and 2002 were $3.0 million, $5.4 million and $2.1 million, respectively. The decrease from 2003 to 2004 is primarily due to the purchase of the Gender Sort

system from Advanced Automation, Inc. and the subsequent $2.3 million write down of the system as an R&D expense in 2003. These transactions are also the cause for the increase in operating expenses from 2002 to 2003. Additionally, increased staff-related expenses resulting from the realignment of the Gender Sort team from R&D and Engineering to GPDS contributed in the expense increase from 2002 to 2003.

The third of these departments is Engineering and Manufacturing, which makes design modifications and improvements to the Inovoject® and Egg Remover® systems and the Vaccine Saver® option, as well as final assembly and testing prior to installation of a Company device at a customer's hatchery. Operating expenses for this department were $2.5 million, $1.6 million and $2.1 million in 2004, 2003 and 2002, respectively. The increase from 2003 to 2004 is due to staff-related and manufacturing expenses related to the start-up of Embrex Poultry Health in 2004. The decrease in operating expenses from 2002 to 2003 is attributable to realignment of contract R&D expenses and engineering personnel related to the Gender Sort project to GPDS in 2003.

Other Income And Expense

Interest income totaled $0.1 million, $0.2 million and $0.2 million in years 2004, 2003 and 2002, respectively. The decreasing interest income from 2002 to 2004 is principally due to decreases in interest income received from a loan to Advanced Automation, Inc. that was paid off in 2003 and lower available cash balances. See "Products Under Development—Gender Sorting Device" under Item 1, "Business", above, for further discussion of the Company's loan to Advanced Automation.

Other Income totaled $0.3 in 2004, $3.6 million in 2003 and an expense of less than $0.1 million in 2002. The other income in 2004 and 2002 is primarily related to foreign currency translation gains and losses. The income in 2003 is attributable to the settlement of the $5.0 million Fort Dodge litigation in June 2003, which added $3.7 million of income to the second quarter of 2003 after deducting legal costs. See Item 3, "Legal Proceedings", for further discussion of the Fort Dodge litigation.

Interest expense totaled less than $0.1 million in 2004 and 2003, and was $0.1 million in 2002. The decrease in interest expense from 2002 to 2003 was mainly due to interest paid on sales and use tax in 2002 that did not recur in 2003. Interest costs of $0.3 million and $0.1 million related to the term loan for construction of the Embrex Poultry Health coccidiosis vaccine manufacturing facility are not reflected in the 2004 and 2003 interest expense totals as this amount is being capitalized as part of the construction cost of the facility. Interest expense, depreciation and amortization of the facility will commence once the Embrex Poultry Health facility obtains USDA approval to manufacture Inovocox™. It is anticipated that interest related to the term loan will begin to be expensed during 2006 and is estimated at $0.3 million to $0.6 million per year.

Management expects to continue to rely principally on the use of internally generated funds to finance the cost of additional devices in 2005, as was the case in 2004.

Income Tax Expense

	2004 vs. 2003				2003 vs. 2002			
	2004	2003	Change $	Change %	2003	2002	Change $	Change %
Income before tax expense (benefit)	$4,491	$8,384	($3,893)	(46%)	$8,384	$8,620	($236)	(3%)
Income tax expense (benefit)	1,178	773	405	52%	773	1,449	(676)	(47%)
Net Income	$3,313	$7,611	($4,298)	(56%)	$7,611	$7,171	$440	6%
Effective tax rate	26%	9%			9%	17%		

Income taxes totaled $1.2 million for 2004, a $0.4 million increase from $0.8 million in 2003, which was $0.6 million less than 2002 income tax expense of $1.4 million. The effective tax rate for 2004 was 26% in comparison to 9% in 2003 and 17% in 2002. In 2004, income tax expense and the effective tax rate increased over 2003 due to a $0.2 million increase in the valuation allowance versus a $1.7 million decrease in 2003, a lower R&D tax credit calculation in 2004 compared to 2003, an increase in 2004 business activities in foreign markets compared to 2003 and the use of NOL's in Embrex Europe for the 2003 Fort Dodge settlement. These were partially offset by miscellaneous decreases including adjustments for amended income tax returns and the reevaluation of tax and inventory accruals. In 2003, the evaluation of the Company's deferred tax asset caused the decrease in income tax

expense from 2002 to 2003. The evaluation indicated that the current and non-current deferred tax asset should be valued at $2.6 million in 2003. The effect on net income of the $2.3 million increase from 2002 resulted in a lower full year tax rate and lower income tax expense in 2003. Income from the Fort Dodge settlement was offset by net operating loss carry forwards ("NOL") in Embrex Europe, Ltd. as a jurisdiction analysis indicated that the settlement should be recorded by the Company's European subsidiary. Therefore no tax provision was recorded for the $3.7 million settlement net of legal expenses in 2003.

CRITICAL ACCOUNTING POLICIES

The Company's significant accounting policies are described in Note 1 to the consolidated financial statements in this Form 10-K Report, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these consolidated financial statements requires the Company to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. On an on-going basis, the Company evaluates its estimates including but not limited to those related to:

- Allowance for uncollectible accounts
- Warranty accruals
- Inventory obsolescence
- Deferred tax assets
- Employee fringe benefit plan accrual

The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis of making judgments about carrying values of assets and liabilities that are not readily discernible from other sources. Actual results may differ from these estimates under different assumptions or conditions.

The Company believes the following critical accounting policies are material to the preparation of its consolidated financial statements.

Revenue Recognition

Revenues for devices subject to lease agreements are recognized based on eggs processed during the period in accordance with lease terms. Device and product sales are recognized upon delivery, as that is when title passes to the customer. Contract research revenue is recognized as services are performed or as milestones are met over the term of the contract. Grant revenue is recognized as expenses related to the specific grants are incurred. Revenue received, but not yet earned, is classified as deferred revenue. The revenue section of the consolidated statement of operations divides revenues into three sections: device revenues which include device lease fees and device sales; product sales which include sales of the Company's vaccines, Bursaplex® and Newplex™; and other revenues which includes income derived from contract research, grants from federal agencies and other miscellaneous sources.

Allowance for Uncollectible Accounts

To date, the Company has not experienced any material trade accounts receivable collection issues. However, based on a review of cumulative balances, industry experience and the current economic environment, the Company currently reserves from 2% to 4% of trade accounts receivable, depending on the credit terms in various markets, as an allowance for uncollectible accounts. In addition, adjustments due to the financial stability of individual customers will affect the overall percentage reserved. Once the Company determines an account is uncollectible it writes off the receivable balance against the reserve. Accounts are written-off based on individual circumstances and only after all efforts of collection have been exhausted. The consolidated balance reserved for uncollectible accounts as of December 31, 2004 was $0.4 million, which represents 5% of the trade accounts receivable balance at December 31, 2004.

Warranty Accruals

To date, the Company has not experienced any material device or product warranty issues in excess of amounts reserved. Based on the sale and lease of devices and sale of products, the Company has established a reserve for future claims. The reserve is based on the estimated damages that a customer would experience if an Inovoject®

system or batch of Bursaplex® or Newplex™ should fail to perform to product specifications. The consolidated balance reserved for warranties as of December 31, 2004 was $0.1 million.

Inventory Obsolescence

To date, the Company has not experienced any material inventory obsolescence. However, based on a percentage of the current product and device parts inventory levels, the Company has established a reserve against future device parts obsolescence due to technological improvements and limited shelf life of product inventories. The percentage used to calculate the reserve is based on a historical percentage rate adjusted for anticipated technological advances on devices and shelf life of existing vaccine product inventories. The consolidated balance reserved for product and parts obsolescence as of December 31, 2004 was $0.3 million.

Deferred Tax Assets

The Company records deferred tax assets based upon amounts that are likely to be realized. Based on the Company's recent profitability and belief that 2005 will result in an overall profit, the Company has recorded net current and long-term deferred tax assets of $1.7 million. The Company's net deferred tax assets include a valuation allowance for two items that the Company may not be able to realize in future periods. The two items are research and development tax credits and deferred tax assets in a foreign subsidiary. This determination is based, in part, on historical operating performance as well as the likelihood of future income. The valuation allowance will be recognized when the Company believes that the likelihood of recognition is more likely than not. In the event the Company was to determine that it would be able to realize its deferred tax assets in the future in excess of its net recorded amount, an adjustment to the deferred tax assets would increase income in the period such determination was made. However, in the event the Company was to determine that it would not be able to realize its net recorded deferred tax asset in the future, an adjustment to the deferred tax asset would decrease income in the period such determination was made.

Employee Fringe Benefit Plan Accrual

The Company has established a reserve related to Embrex's employee fringe benefit plan. The most significant component of the accrual is the amount reserved for the employee self-insured health plan. The amount of the reserve is based on management's estimate of future employee health claims. The reserve covers expected short-term claims and is based on historical data adjusted for major events and anticipated changes in headcount or participation. The net balance reserved for the employee self-insured health plan as of December 31, 2004 was $0.2 million.

EFFECT OF INFLATION

The Company expects cost of product sales and device revenues, operating expenses and capital equipment costs to change in line with periodic inflationary changes in price levels. While the Company generally believes that it will be able to offset the effect of price level changes by adjusting selling/lease prices and effecting operating efficiencies, any material unfavorable changes in price levels could have a material adverse affect on its results of operations.

LIQUIDITY AND CAPITAL RESOURCES

At December 31, 2004, the Company's cash and cash equivalents balances totaled $4.5 million compared to $9.6 million and $8.0 million at December 31, 2003 and 2002, respectively. The decrease from 2003 to 2004 is primarily attributable to a $4.3 million decrease in cash provided by long-term debt, as well as the $4.3 million reduction in net income resulting from the $5.0 million settlement with Fort Dodge in 2003 and an increase in Sarbanes Oxley Act related expenses. A $2.2 million increase in cash used to repurchase shares of common stock contributed to the decrease in cash balances as well. This was partially offset by a $2.7 million decrease in cash used for investing in capital expenditures. The increase in cash and cash equivalents from 2002 to 2003 reflects the cash received from debt financing the building of the Embrex Poultry Health Inovocox™ manufacturing facility and a favorable currency translation adjustment, offset by a $2.1 million decrease in cash provided by operations and an $8.2 million increase in cash used for investing in capital expenditures, including building of the Embrex Poultry Health facility.

During 2004, operating activities generated $9.6 million in cash, primarily due to net income, non-cash depreciation, a change in the deferred tax asset and the increase in accounts receivable. For investing activities, device purchases and other capital expenditures used $12.6 million and the Embrex Poultry Health facility required $1.3 million. Financing activities used $1.4 million primarily due to common stock repurchases of $3.5 million and payoff of $0.6

million of short-term debt under the credit facility with Company's bank, Branch Banking and Trust Company ("BB&T") as described below. These were partially offset by the issuance of common stock upon the exercise of outstanding options and employee stock purchase plan purchases for $0.7 million and the issuance of $2.1 million of long-term debt from BB&T, under the construction/term loan described below.

The Company obtained a $9.0 million construction/term loan from BB&T, in August 2003 that was used for building and equipping the Embrex Poultry Health coccidiosis vaccine manufacturing facility located in Scotland County, North Carolina. At December 31, 2004, $9.0 million of the construction/term loan had been borrowed.

The Company has a $6.0 million secured revolving line of credit with BB&T, which may be used for working capital purposes. The term of this line of credit previously has been extended to May 2005 and the Company anticipates BB&T will renew this credit facility for a renewal term beyond May 2005. The line of credit carries an interest rate of the current LIBOR rate plus 1.65%. At December 31, 2004, the Company had no outstanding borrowings under this credit facility.

In August 2002, the Company announced that the Board of Directors authorized a share repurchase program (the "2002 Repurchase Program") to purchase up to 6% of outstanding shares of Common Stock, or up to approximately 500,000 shares over 17 months, in open market or privately negotiated transactions. In November 2003, the Board of Directors extended the term of the 2002 Repurchase Program to June 30, 2004. During the first half of 2004, the Company purchased 241,200 shares of its Common Stock for $2.9 million at an average price of $12.20 per share. The Company repurchased an aggregate of 455,100 shares of its Common Stock for $5.1 million at an average price of $11.15 per share during the entire term of the 2002 Repurchase Program.

In May 2004, the Company announced that the Board of Directors authorized a share repurchase program (the "2004 Repurchase Program") to purchase up to 500,000 of outstanding shares of Common Stock through December 2005, in open market or privately negotiated transactions on or after July 1, 2004. During the second half of 2004, the Company purchased 44,350 shares of its Common Stock for $0.6 million at an average price of $12.84 per share. See Note 4, "Shareholders' Equity" of "Notes to Consolidated Financial Statements" for further discussion of the Company's repurchase programs.

Based on its current operations, management believes that the Company's available cash and cash equivalents, together with cash flow from operations and its bank line of credit, will be sufficient to meet its cash requirements as these currently exist. However, Embrex may continue to explore additional alternative funding opportunities with respect to collaborative ventures and product expansion and would evaluate its cash requirements as appropriate.

CONTRACTUAL OBLIGATIONS

Embrex's known contractual obligations as of December 31, 2004 are summarized below:

Contractual Obligations	Payments due by period (thousands of dollars)				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Long-term debt obligations	$11,175	$802	$2,889	$2,889	$4,595
Capital lease obligations	9	7	2	-	-
Operating lease obligations	3 ,791	935	2,376	480	-
Purchase obligations	3,518	3,086	321	111	-
Other long-term liabilities reflected on the Company's balance sheet under GAAP	-	-	-	-	-
Total	$18,493	$4,830	$5,588	$3,480	$4,595

The long-term debt obligation listed in the chart represents the total amount due plus interest under Embrex's construction/term loan with BB&T. Embrex borrowed $9.0 million as of December 31, 2004, and will be obligated to repay the debt as shown in the chart. See Note 3, "Debt" of "Notes to Consolidated Financial Statements" for further discussion of the Company's long-term debt obligation. Long-term debt and certain lease obligations contain acceleration provisions requiring immediate repayment in the event of default as defined in each agreement. Short-term obligations recorded on the consolidated balance sheet equaled $0.5 million as of December 31, 2004. Of the outstanding purchase obligations included in the table above a total of $0.7 million were purchased during 2004.

OFF-BALANCE SHEET ARRANGEMENTS

The Company does not have any off-balance sheet arrangements that may have a current or future material effect on the Company's financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capitalization resources.

RISK FACTORS

If any of the following risks occur, our business, financial condition, or results of operations could be materially adversely affected.

OUR FUTURE GROWTH DEPENDS ON EXPANSION OF INTERNATIONAL REVENUES AND WE WILL BE SUBJECT TO INCREASED RISKS IN THE INTERNATIONAL MARKETPLACE

We estimate that our Inovoject® system inoculates more than 80% of all eggs produced for the United States and Canada broiler poultry markets. Given this market penetration, we expect only limited growth in the number of system installations and only minor system revenue growth in this market. Additionally, due to our market penetration and the significance of the United States and Canada poultry markets to our revenue, any adverse conditions in these markets could have a material and adverse affect on our revenues. For this reason, we must expand our device installations and product sales in markets outside the United States and Canada in order to realize revenue growth. In 2004, international sales accounted for 34% of our consolidated revenues. In 2003 and 2002, international sales accounted for 32% and 31% of our consolidated revenues, respectively. Revenue growth outside the United States and Canada depends on gaining market acceptance of our devices and *in ovo* administration of vaccine products in markets outside the United States and Canada to treat prevailing poultry diseases in those markets. Lack of market acceptance of our devices and *in ovo* products in these markets would materially adversely affect our revenue growth.

International sales are also subject to a variety of risks, including risks arising from the following:

- exchange rate risks, tariffs, trade barriers and taxes;
- adverse changes in local investment or exchange control regulations, potential restrictions on the flow of international capital, and the possibility of confiscatory taxation, price controls or the taking or modification of our property rights by a country in the exercise of its sovereignty;
- economic and political conditions beyond our control, including country-specific conditions such as political instability, government corruption and civil unrest;
- the risk that current product registrations subject to periodic re-registration in certain foreign countries may not be granted a renewal license due to regulatory changes or other reasons; and
- trade restrictions and economic embargoes imposed by the United States and other countries. For example, we have an arrangement for the distribution of Burasplex® in Syria, but currently are not distributing any product in Syria and have no intention of doing so in the foreseeable future whether or not the trade restrictions existed.

OUR FUTURE GROWTH ALSO DEPENDS ON THE DEVELOPMENT AND MARKET ACCEPTANCE OF NEW PRODUCTS

In addition to international expansion, we need to develop and market new products to continue to generate increased revenues and growth of our business. We currently are developing, both independently and in collaboration with others, various products which address poultry health and performance needs. These products are being designed to be delivered *in ovo* through the Inovoject® system or in conjunction with the Inovoject® system, and are in various stages of development. The Company may increase, decrease or eliminate funding for any product under development at any time depending on the Company's assessment of its priorities, its available funding, the probability that the product can be successfully commercialized, potential return on investment and other factors. There is no guarantee that any new products will be successfully developed and marketed. In addition, we have not initiated the regulatory approval process for some of these potential products, and we cannot assure you that regulatory approval will be obtained. Our inability to develop new products or any delay in our development of them may materially adversely affect our revenue growth. Because of a number of factors, a new product may not

reach the market without lengthy delays, if at all. Some of the factors that may affect our development and marketing of new products include the following:

- our research and evaluations of compounds and new technologies may not yield product opportunities;
- potential products may involve extensive and time-consuming clinical trials to demonstrate safety and effectiveness, and the results of such trials are uncertain;
- potential products may require collaborative partners and we may be unable to identify partners or enter into arrangements on terms acceptable to us;
- we may not be able to contract for the manufacture of new products at a cost or in quantities necessary to make them commercially viable;
- domestic and international regulatory approval of these products may not be obtained or may be obtained only with lengthy delays;
- we may not be able to secure additional financing that may be needed to bring a potential product to market;
- we may experience unexpected safety, regulatory or efficacy concerns with respect to marketed products, whether or not scientifically justified, leading to adverse public reaction, product recalls, withdrawals or declining sales;
- marketing products developed jointly with other parties may require royalty payments or other payments by us to our co-developers, which may materially adversely affect our profitability;
- we may be unable to accurately predict market requirements and evolving standards; and
- we may not be able to attract and retain sufficient numbers of qualified development personnel.

We have developed and commercialized two devices that work with the Inovoject® system: the Egg Remover® and Vaccine Saver®. The Egg Remover® can also be used without an Inovoject® system in specific situations where customers do not need injection services. These two products have had initial success, however, there is no guarantee that acceptance of these products will continue to grow.

Embrex has initiated the United States Department of Agriculture, or USDA, regulatory approval process with respect to our *in ovo* coccidiosis vaccine, Inovocox™. Although this product has begun the regulatory review process, there is no assurance that USDA approval will be obtained. Marketing this product in foreign countries will require us to pursue separate approvals from foreign regulatory agencies. We completed construction of a $12.8 million vaccine manufacturing facility in the first quarter of 2004 to commercially produce the Inovocox™ vaccine. In addition to USDA approval for Inovocox™, our coccidiosis vaccine manufacturing facility must receive a separate USDA approval to manufacture the Inovocox™ vaccine. We cannot assure you that the facility will receive USDA approval to manufacture Inovocox™. Delays in obtaining either product or manufacturing facility approvals may materially adversely affect our marketing of, and our ability to receive revenues from, Inovocox™. Additionally, even if we receive USDA product and facility approvals, we cannot assure you that Inovocox™ will be sold in commercial quantities or that product sales will be sufficient to offset our investment in development of the product and construction of the coccidiosis vaccine manufacturing facility.

We are also developing a device to separate poultry by gender while still in the egg. We cannot assure you that our development work will lead to a successful commercial device.

We have developed and commercialized antigen-antibody complex, or AAC, technology which the Company uses in its Bursaplex® vaccine. Bursaplex® has been sold in commercial quantities during the past six years, however, there is no assurance that the product will continue to be sold in commercial quantities.

In May 2003, the USDA provided regulatory approval of Newplex™, our *in ovo* Newcastle Disease vaccine, within the United States. Newplex™ vaccine is also based on AAC technology. We are now seeking regulatory approval for Newplex™ in key markets worldwide. Although we have received approval to sell Newplex™ in five countries, there is no assurance that other registrations will be granted or that Newplex™ will be sold in commercial quantities.

There can be no assurance that we will successfully complete the development and commercialization of any new products or that such products, if developed and commercialized, will meet revenue and profit expectations.

ECONOMIC FACTORS AFFECTING OUR CUSTOMERS MAY ADVERSELY AFFECT OUR FINANCIAL RESULTS

Our revenues principally come from leases and sales to the poultry industry. If there is a general economic decline in that industry, our operations and financial condition could be materially and adversely affected. Also, domestic and global economic factors beyond our control may adversely impact our customers and, as a result, our revenues and earnings. Examples of these factors include the following:

- fluctuations in the prices of energy and poultry feed;
- disease outbreaks that adversely affect poultry production;
- market demand for poultry products, including the supply and pricing of alternative proteins;
- costs to comply with applicable laws and regulations, including those relating to environmental protection, food safety, market regulation and genetically modified organisms or ingredients;
- product recalls and related adverse publicity and consumer reaction;
- access to foreign markets together with foreign economic conditions, including currency fluctuations and trade restrictions; and
- the extent to which our cost of products and operating expenses increase faster than contractual price adjustments with our customers.

For example, if rising poultry feed prices increase the production costs of commercial poultry producers or a foreign government bans the importation of U.S. chicken, these producers may reduce production. This decreased production could adversely impact our revenues, since a principal component of our revenues are fees charged to customers for the number of eggs injected or processed by Embrex devices.

WE FACE RISKS OF COMPETITION AND CHANGING TECHNOLOGY

The Inovoject® system uses a process that was patented in the United States by the USDA in 1984. We held the exclusive license to the Sharma Patent until June 2002, when the Sharma Patent expired. With the expiration of the Sharma Patent, competitive *in ovo* delivery systems are being developed and marketed. Embrex is aware of four companies that are marketing *in ovo* injection systems to poultry companies. Although there has not been widespread commercial acceptance of any of these competing systems, the Company is aware of direct competition for customers and limited commercial placements by two of these companies. Competition could result in lower prices for our products, reduced demand for our products, and a corresponding reduction in our ability to recover development, engineering, manufacturing and service costs. In addition, if a competitor became successful selling its devices, Embrex may have to evaluate the viability of its current leasing model. Also, a significant portion of our revenues comes from a relatively small number of customers. If we lose one or more large customers due to competition, our revenues could be significantly lower. Any of these developments could have a material adverse effect on our business, results of operations and financial condition.

The poultry vaccine business is especially competitive and dominated by a few large companies with an established global presence. In order for us to expand our sales of *in ovo* vaccines, these products must be commercially accepted worldwide and compete effectively against the vaccines of these other companies. Our inability to compete successfully in the poultry vaccine sector could materially adversely affect our revenue growth.

Our competitors and potential competitors include independent companies that specialize in biotechnology, as well as major agricultural or animal health companies, pharmaceutical companies, chemical companies, universities, and public and private research organizations. Many of these competitors are well established and have substantially greater marketing, financial, technological and other resources than we have. Competitors may succeed in developing technologies and products that are more effective than any that have been or are being developed by us or that could render our technology and products obsolete or non-competitive.

WE FACE RISKS RELATED TO COMPLIANCE WITH LAWS IMPACTING CORPORATE GOVERNANCE AND FINANCIAL REPORTING STANDARDS

The Sarbanes-Oxley Act of 2002, as well as related new rules and regulations implemented by the Securities and Exchange Commission, Nasdaq and the Public Company Accounting Oversight Board, have required changes in the corporate governance practices and financial reporting standards for public companies. These new laws, rules and

regulations, including compliance with Section 404 of the Sarbanes-Oxley Act of 2002, have materially increased our legal and financial compliance costs and made some activities more time-consuming and more burdensome. The costs of compliance with these laws, rules and regulations have adversely affected our financial results. Moreover, we run the risk of non-compliance which could adversely affect our financial condition or results of operations or the trading price of our stock. For example, recently when conducting our assessment of internal control over financial reporting pursuant to Section 404, we identified a material weakness in our internal controls in the area of accounting for income taxes. Although we are taking steps to address this material weakness, there is no assurance that we will be successful in remedying the material weakness or preventing future material weaknesses.

POULTRY HEALTH AND DISEASE FACTORS AFFECTING OUR CUSTOMERS MAY ADVERSELY AFFECT OUR FINANCIAL RESULTS

Any widespread poultry health problem or disease outbreak could have a negative impact on global poultry production. Our revenues and earnings derived from both the U.S. and international poultry industry could be materially and adversely affected. In addition, the emergence of new disease variants, serotypes and strains in the domestic and/or global markets may reduce the efficacy of our vaccine products and result in reduced revenues and earnings. On the other hand, poultry disease could also positively affect our financial results if an infectious bursal disease or Newcastle disease outbreak occurs in a country where Bursaplex® or Newplex™ is registered and available.

WE DO NOT MANUFACTURE MOST OF OUR DEVICES OR ANY OF OUR VACCINE PRODUCTS, AND ARE DEPENDENT ON ONE CONTRACT MANUFACTURER FOR INOVOJECT® AND EGG REMOVER® DEVICES AND ANOTHER CONTRACT MANUFACTURER FOR AAC PRODUCTION. WE ARE ALSO DEPENDENT ON SINGLE CONTRACT MANUFACTURERS FOR PRODUCTION OF BOTH BURSAPLEX® AND NEWPLEX™.

We currently do not have facilities for the production of most of our devices and vaccine products. Therefore, we rely principally upon relationships with contract manufacturers. There can be no assurance that we can maintain manufacture and supply agreements on terms and at costs acceptable to us. We have various relationships with manufacturers and suppliers, including those described below. The loss of any of these relationships could materially adversely affect our operating results. There are a number of risks associated with our dependence on contract manufacturers, including:

- reduced control over delivery schedules;
- potential inability to monitor and maintain inventory levels;
- reduced control over quality assurance;
- reduced control over manufacturing yields and costs;
- potential lack of adequate capacity during periods of unanticipated demand;
- limited warranties on products supplied to us;
- increases in prices;
- reduced control over regulatory efforts;
- potential misappropriation of our intellectual property;
- catastrophic loss of production capacity due to property damage, either man made or by nature;
- the loss of these contract manufacturers due to financial circumstances in their respective businesses or their exit from the business lines that manufacture our devices and products; and
- minimum purchase requirements, which could result in excessive inventories if the demand for products falls short of such minimum purchase requirements.

If our contract manufacturers failed to provide us with an adequate supply of finished devices or vaccine products, our business would be harmed. We do not have long-term contracts or arrangements with several of our vendors that guarantee product availability or the continuation of particular payment terms. In addition, we are currently dependent on a single contract manufacturer for several of our key products as described below. Although we

believe our relationship with each of the manufacturers is sound, we cannot assure you that we will continue to maintain relationships with them or that they will continue to exist.

Inovoject® and Egg Remover® Systems

We rely on Precision Automation Company, Inc. (Precision) to fabricate all of our Inovoject® and Egg Remover® systems. While other machine fabricators exist and have constructed limited numbers of Inovoject® systems, we do not currently have alternative sources for production of either the Inovoject® or Egg Remover® systems. If Precision is unable to carry out its manufacturing obligations to our satisfaction, we may be unable to obtain alternative manufacturing, or to obtain such manufacturing on commercially reasonable terms or on a timely basis. Any delays in the manufacturing process may adversely impact our ability to meet commercial demands for Inovoject® and Egg Remover® system installations and delay receipt of revenues from those installations.

Vaccines and AAC Technology

We obtain all of our requirements for the active ingredient in AAC technology from Charles River Laboratories, Inc. through its SPAFAS Avian Products Services Division, or SPAFAS. Under our agreement with SPAFAS, we are required to purchase minimum amounts of AAC-based antigen on an annual basis. The manufacture of AAC must be performed in licensed facilities and is subject to USDA regulation. The regulatory approvals granted by the USDA for Bursaplex® in January 1997 and for Newplex™ in May 2003 specifically cover vaccines produced with SPAFAS-manufactured AAC. Although there are other manufacturers that may be capable of manufacturing AAC, we do not currently have alternative sources for production of AAC.

We obtain all of our requirements for Bursaplex® from Merial Select, Inc., or Select, a Merck and Sanofi-Aventis company, and all of our requirements for Newplex™ from Lohmann Animal Health International, or LAHI. The manufacture of all vaccine products must be performed in licensed facilities, under approved regulatory methods. As the USDA licensed manufacturers of record, Select holds the USDA permit for Bursaplex® and LAHI holds the USDA permit for Newplex™. Although there are other manufacturers that may be capable of manufacturing avian viral vaccines, we do not currently have alternative sources for production of either product.

If SPAFAS, Select or LAHI is unable to carry out its respective manufacturing obligations (described immediately above) to our satisfaction, we may be unable to obtain alternative manufacturing, or to obtain such manufacturing on commercially reasonable terms or on a timely basis. A change of supplier for the Company could materially adversely affect our future operating results due to the time it would take a new supplier to obtain regulatory approval by the USDA of its production process or manufacturing facilities. Current regulatory approvals in foreign countries are or will be based on product manufactured with AAC as manufactured by SPAFAS or Bursaplex® as manufactured by Select or Newplex™ as manufactured by LAHI. A change of manufacturer would result in the need to reapply for regulatory approval in those countries and may lead to suspended sales of that product until new approvals could be secured. Any delays in securing new approvals would have a material adverse effect on our revenues and growth prospects. We cannot guarantee that we would be able to secure new approvals in every country or that such approvals would be granted in a timely fashion.

WE ARE DEPENDENT ON DISTRIBUTORS IN CERTAIN MARKETS

We market and distribute our devices principally by leasing and licensing the systems directly to hatcheries. In some markets, such as Japan, we instead rely upon distributors for our devices. We also rely on third parties to market certain of our vaccine products, such as products containing AAC technology, and we may enter into other arrangements in the future. There can be no assurance that we can maintain these relationships on terms acceptable to us. The loss of any of these relationships could materially adversely affect our operating results. There are a number of risks associated with our dependence on distributors and other third parties including:

- reduced control over regulatory efforts which may delay local regulatory approvals and thus market introduction;
- reduced control over marketing and sales efforts and in turn the extent of resulting market penetration or acceptance;
- reduced control over distribution and related customer satisfaction; and
- potential delays in distribution associated with securing new distributors, including the possible need to seek re-registration in markets where a distributor may hold product registration, if current relationships are not maintained.

THE LOSS OF KEY CUSTOMERS COULD ADVERSELY AFFECT OUR FINANCIAL RESULTS

Historically, a significant portion of our revenues has come from a relatively small number of customers. Tyson Foods, Inc. accounted for approximately 18% and 20% of our consolidated 2004 and 2003 revenues, respectively. During 1997, Tyson extended its contract with Embrex through 2004. Tyson is continuing its lease of devices while Embrex and Tyson are in negotiations for a new contract. Our top three customers, including Tyson, accounted for approximately 36% and 37% of our consolidated 2004 and 2003 revenues, respectively. We expect a similar level of customer concentration to continue in future years. The poultry market is highly concentrated, with the largest poultry producers dominating the market. For example, in 2004, Tyson supplied approximately 22% of all broilers grown in the United States. The concentration of our revenues with these large customers means factors affecting those customers also will impact our revenues and earnings. If we lose a large customer and fail to add new customers to replace lost revenues, our operating results will be materially and adversely affected. Also, if these customers reduce the number of eggs they incubate at hatcheries, we will receive lower device revenues since our fees are based on the number of eggs injected.

IF WE LOSE THE PROTECTION OF OUR PATENTS AND PROPRIETARY RIGHTS, OUR FINANCIAL RESULTS COULD SUFFER

Some of our products and processes used to produce our products involve proprietary rights, including patents. We own some of the technologies employed in these processes, and some are owned by others and licensed to us. The Inovoject® system utilizes a process that was patented by the USDA in the United States. We held an exclusive license to the Sharma Patent, which expired in June 2002. We have supplemented the Sharma Patent with additional U.S. and foreign patents and have submitted additional patent applications covering specific design features of the Inovoject® system, as well as Embrex's Egg Remover® system and Vaccine Saver® option. Our competitors or potential competitors may have filed for, or have received, United States and foreign patents and may obtain additional patents and proprietary rights relating to *in ovo* technology, vaccines, uses and/or processes which may compete with our existing products and our products under development. Accordingly, we cannot assure you that our patent applications will result in patents being issued or that, if issued, the claims under our patents will afford protection against competitors with similar technology. We cannot be sure that others will not obtain patents of different technology that we would need to license or circumvent in order to practice our inventions. Even though we strive to take appropriate action to protect our intellectual property, there is a risk that competitive systems currently being developed and marketed could gain acceptance in the United States or elsewhere.

We believe that patent protection of materials or processes we develop and any products that may result from the research and development efforts of our licensors and us are important to the commercial success of our products. The loss of the protection of these patents and proprietary rights could materially adversely affect our business and our competitive position in the market. The patent position of companies such as ours generally is highly uncertain and involves complex legal and factual questions. Some of the reasons for this uncertainty include the following:

- To date, no consistent regulatory policy has emerged regarding the breadth of claims allowed in biotechnology patents. Consequently, there can be no assurance that patent applications relating to our products or technology will result in patents being issued or that, if issued, the patents will afford protection against competitors with similar technology;

- Some patent licenses held by us may be terminated upon the occurrence of specified events or become non-exclusive after a specified period;

- Companies that obtain patents claiming products or processes that are necessary for or useful to the development of our products could bring legal actions against us claiming infringement (though we currently are not the subject of any patent infringement claim);

- Issuance of a valid patent does not prevent other companies from using alternative, non-infringing technology so we cannot be sure that any of our patents (or patents issued to others and licensed to us) will provide significant commercial protection;

- We may not have the financial resources necessary to obtain patent protection in some countries or to enforce any patent rights we may hold;

- The laws of some foreign countries may not protect proprietary rights to the same extent as the laws of the United States, and many companies have encountered significant problems in protecting their proprietary

rights in these foreign countries;

- We may be required to obtain licenses from others to develop, manufacture or market our products. We may not be able to obtain these licenses on commercially reasonable terms, and we cannot be sure that the patents underlying the licenses will be valid and enforceable; and

- We also rely upon unpatented, proprietary technology, which we may not be able to protect fully if others independently develop substantially equivalent proprietary information or techniques, improperly gain access to our proprietary technology, or disclose this technology to others.

We attempt to protect our proprietary materials and processes by relying on trade secret laws and non-disclosure and confidentiality agreements with our employees and other persons with access to our proprietary materials or processes or who have licensing or research arrangements with us. We plan to continue to use these protections in the future but we cannot be sure that these agreements will not be breached or that we would have adequate remedies for any breach. Even with these protections, others may independently develop or obtain access to these materials or processes, which may materially adversely affect our competitive position.

If we are sued for infringing the patent or other proprietary rights of a third party, we could incur substantial costs and diversion of management and technical personnel, whether or not the litigation is ultimately determined in our favor.

We have been involved in the patent litigations summarized below:

Embrex v. Service Engineering Corporation and Edward G. Bounds, Jr.

In September 1996, we filed a patent infringement suit against Service Engineering Corporation and Edward G. Bounds, Jr. in the U.S. District Court for the Eastern District of North Carolina. This suit concluded in July 1998 with the jury finding the patent valid and willfully infringed by the defendants and a judgment being entered in September 1998, which included a monetary award of $2,612,885.

In July 2000, the U.S. Court of Appeals for the Federal Circuit affirmed the award to Embrex of approximately $1.5 million in litigation expenses and costs and upheld the finding of willful infringement. However, the appeals court vacated the award of direct infringement damages and remanded that issue to the district court for further proceedings. These proceedings were opened in August 2000, but were stayed early in 2001.

Embrex v. Breuil S.A. and New Tech Solutions, Inc.

In December 2003, we filed suit in the U.S. District Court for the Eastern District of North Carolina against Breuil S.A. of Landivisiau, France, and New Tech Solutions, Inc. of Gainesville, GA, asserting patent infringement. We allege that each of the defendants' development of an *in ovo* selective injection device, designed to compete with our patented Inovoject® system injection method, Vaccine Saver® option and Egg Remover® system, infringes two of our patents related to our proprietary apparatus and methods for distinguishing live eggs from infertile or "dead" eggs and for selectively injecting specific eggs identified as suitable for inoculation as well as the apparatus performing this function. We seek injunctive relief and monetary damages and have asked for a jury trial. The defendants have denied infringement and alleged that our two patents are invalid. Because of this lawsuit, our results of operations have been impacted and will continue to be impacted by the costs of pursuing this litigation. Moreover, there can be no assurance we will prevail in our claims against Breuil S.A. or New Tech Solutions, Inc. Even if the court finds in our favor, we have no assurances that any damage award will exceed our costs of pursuing this litigation or that we would be able to collect any damages from either defendant.

Embrex v. Avitech, LLC

In August 2004, we filed suit in the U.S. District Court for the Middle District of North Carolina against Avitech, LLC of Hebron, Maryland asserting patent infringement. We allege that Avitech's injection system, designed to compete with Embrex's patented Inovoject® system, infringes one of the our patents related to our proprietary apparatus and methods for accurately and precisely injecting eggs to the same depth and location when the eggs are of varying sizes and may be presented to the injection apparatus in somewhat different orientations. We seek injunctive relief and monetary damages and have asked for a jury trial. The defendant has denied that the North Carolina court has jurisdiction and has moved to dismiss or, in the alternative, for transfer to the United States District Court in Maryland. We assert that the North Carolina court has jurisdiction and have requested jurisdictional discovery to confirm our belief. If the defendant's motion is resolved in our favor, the lawsuit will proceed in the North Carolina court. Because of this lawsuit, our results of operations have been impacted and will continue to be affected by the costs of pursuing this litigation. Moreover, there can be no assurance we will prevail

in our claims against Avitech, LLC. Even if the court finds in our favor, we have no assurances that any damage award will exceed our costs of pursuing this litigation or that we would be able to collect any damages from the defendant.

THE LOSS OF KEY COLLABORATORS, SUPPLIERS AND OTHER KEY PARTIES COULD ADVERSELY AFFECT OUR FINANCIAL RESULTS

We currently conduct our operations with various third-party collaborators, suppliers, licensors or licensees. We plan to continue developing these relationships and believe our present and future collaborators, suppliers, licensors and licensees will perform their obligations under their agreements with us, based on an economic motivation to succeed. However, financial or other difficulties facing these parties may affect the amount and timing of funds and other resources devoted by the parties under these agreements. In addition, disagreements may arise with these third parties which could delay or lead to the termination of the development or commercialization of new products, or result in litigation or arbitration, which would be time consuming and expensive. Thus, there is no assurance that we will develop any new products or generate any revenues from these collaborative agreements.

WE ARE SUBJECT TO AN INHERENT RISK OF PRODUCT LIABILITY

The development, manufacture, distribution and marketing of our products involve an inherent risk of product liability claims and associated adverse publicity. These claims may be made even with respect to those products that are manufactured in licensed and approved facilities or that otherwise possess regulatory approval for commercial sale. These claims could expose us to significant liabilities that could prevent or interfere with the development and marketing of our products. Product liability claims could require us to spend significant time and money in litigation or pay significant damages. Although we currently maintain liability insurance that we believe is adequate to cover the Company's potential exposure in this area, there can be no assurance that the coverage limits of our policies will be adequate. Such insurance is expensive, difficult to obtain and may not continue to be available on acceptable terms or at all.

GOVERNMENT REGULATION AND THE NEED FOR REGULATORY APPROVAL MAY ADVERSELY AFFECT OUR BUSINESS

Regulatory approval required in various areas of our business may materially adversely affect our operations. The primary emphasis of these requirements is to assure the safety and effectiveness of our products. While the use of the Inovoject® system is not subject to regulatory approval in the United States, it may require regulatory approval by foreign agencies. Also, research and development activities and the investigation, manufacture and sale of poultry health products are subject to regulatory approval in the United States by either the USDA or the United States Food & Drug Administration, or FDA, and state agencies, as well as by foreign agencies. Obtaining regulatory approval is a lengthy, costly and uncertain process. Approval by the USDA generally takes 1 to 3 years, while approval by the FDA may take 5 or more years. Various problems may arise during the regulatory approval process and may have an adverse impact on our operations. Changes in the policies of U.S. and foreign regulatory bodies could increase the time required to obtain regulatory approval for each new product. Delays in obtaining approval may materially adversely affect the marketing of, and the ability to receive revenues and royalties from, products developed by us. There is no assurance that any future products developed by us or by our collaborative partners will receive regulatory approval without lengthy delays, if at all. Even when approved, regulators may impose limitations on the uses for which the product may be marketed and may continue to review a product after approving it for marketing. Regulators may impose restrictions and sanctions, including banning the continued sale of the product, if they discover problems with the product or its manufacturer.

Pursuant to some of our licensing or joint development agreements, the licensees or joint developers bear the costs associated with the regulatory approval process for some products. We plan to continue to enter into these types of agreements in the future. If we cannot generate sufficient funds from operations or enter into licensing or joint development agreements to develop products, we may not have the financial resources to complete the regulatory approval process with respect to all or any of the products currently under development. We may need to obtain approval from appropriate regulators before we can sell our products in a particular jurisdiction.

Other regulations apply or may apply to research and manufacturing activities, including federal, state and local laws, regulations and recommendations relating to the following:

- safe working conditions;
- laboratory and manufacturing practices; and
- use and disposal of hazardous substances used in conjunction with research activities.

It is difficult to predict the extent to which these or other government regulations may adversely impact the production and marketing of our products.

OUR INABILITY TO ATTRACT AND RETAIN KEY PERSONNEL COULD ADVERSELY AFFECT OUR BUSINESS

We must continue to attract and retain experienced and highly educated scientific and management personnel and advisors to be able to develop marketable products and maintain a competitive research and technological position. Competition for qualified employees among biotechnology companies is intense. There can be no assurance that we will be able to continue to attract and retain qualified staff. The departure of any key executive or our inability to recruit and retain key scientific or management personnel could have an adverse affect on our business, results of operations or financial condition. Our ability to replace key individuals may be difficult and may take an extended period of time because of the limited number of individuals in the biotechnology industry with the breadth of skills and experience required to develop and commercialize products successfully. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate such individuals. We have obtained insurance in the amount of $1,000,000 on the life of Randall L. Marcuson, our President and Chief Executive Officer, of which we are the sole beneficiary. This amount may not be sufficient to compensate us for the loss of his services.

IF WE CANNOT CONTINUE TO PROVIDE TIMELY SUPPORT AND MAINTENANCE TO OUR CUSTOMERS, OUR BUSINESS MAY SUFFER

We are required to supply, support, and maintain large numbers of Inovoject® systems at our customers' hatcheries on a timely basis at a reasonable cost to us. There can be no assurance that we will be able to continue to provide these services on a timely or cost-effective basis. If we are unable to do so, our customers may reduce their use of our products, which could materially adversely affect our operating results.

WE HAVE ANTI-TAKEOVER DEFENSES THAT COULD DISCOURAGE OR DELAY A TAKEOVER

Provisions of our certificate of incorporation and bylaws could have the effect of discouraging or delaying an acquisition of our company. For example, the Board of Directors has the authority to issue up to 15,000,000 shares of Preferred Stock in one or more series and to determine the designations, preferences and relative rights and qualifications, limitations or restrictions of the shares constituting any series of Preferred Stock, without any further vote or action by the shareholders. The issuance of Preferred Stock by the Board of Directors could affect the rights of the holders of Common Stock. For example, an issuance could result in a class of securities outstanding that would have preferences with respect to voting rights and dividends and in liquidation over the Common Stock, and could (upon conversion or otherwise) enjoy all of the rights applicable to Common Stock. The authority of the Board of Directors to issue Preferred Stock potentially could be used to discourage attempts by others to obtain control of us through merger, tender offer, proxy contest or otherwise by making these attempts more difficult to achieve or more costly. The Board of Directors may issue the Preferred Stock without shareholder approval and such Preferred Stock could have voting and conversion rights that could materially adversely affect the voting power of the holders of Common Stock. No agreements or understandings currently exist for the issuance of Preferred Stock, and the Board of Directors has no present intention to issue any Preferred Stock. The Board adopted a shareholder rights plan that could have the effect of discouraging a takeover of us. The rights plan, if triggered, would make it more difficult to acquire us by, among other things, allowing existing shareholders to acquire additional shares at a substantial discount, thus substantially inhibiting the ability of an interested party to obtain control of the Company.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk is the risk of potential loss arising from adverse changes in market rates and prices. The Company's primary market risk exposure is in changes in foreign currency exchange rates. Approximately 34%, 32% and 31% of Embrex's revenues for the years ended 2004, 2003 and 2002, respectively, were derived from our operations outside the United States. Our consolidated financial statements are denominated in U.S. dollars and, accordingly, changes in the exchange rates between foreign currencies and the U.S. dollar will affect the translation of our subsidiaries' financial results into U.S. dollars for purposes of reporting our consolidated financial results. From 2003 to 2004, the British pound and euro each strengthened 8% against the U.S. dollar and to a lesser extent select *Latin* American currencies also strengthened against the U.S. dollar. If average exchange rates during 2004 had remained the same as the average exchange rates for these currencies during the same period of 2003, then the Company's 2004 revenues would have been approximately $48.0 million instead of $48.7 million representing a year-to-year growth rate of 4% as compared to the actual exchange-adjusted growth rate of 6%.

Accumulated currency translation adjustments recorded as a separate component (reduction) of shareholders' equity were $0.2 million at December 31, 2004 as compared with ($0.3) million at December 31, 2003. This $0.5 million change was mainly attributable to the weakening U.S. dollar with respect to most of the currencies in which the Company has an exchange rate risk. Since Embrex Europe is Embrex's largest subsidiary, the exchange rate change between the U.S. dollar and British pound and the British pound and the euro were the primary contributors to the $0.5 million change in currency translation adjustments. To date, the Company has not utilized any derivative financial instruments or other hedging instruments to affect this exposure.

In addition to currency translation risk, the Company is subject to transaction risk. Transaction risk is the risk of potential loss arising from adverse changes in exchange rates from the date invoices are issued until the receipts are collected. Most of Embrex's transaction risk resides in the Company's largest subsidiary, Embrex Europe, where accrued revenues are recorded in the functional currency, British pounds. However, most of Embrex Europe's revenues are invoiced in U.S. dollars or euros. When revenues are collected, there is a risk that changes in the respective exchange rates could cause the amount collected (when converted to British pounds) to be less than originally accrued.

As of December 31, 2004, the Company's exposure to market risk for a change in interest rates is related solely to debt outstanding under the term loan used for construction and equipping of the Embrex Poultry Health coccidiosis vaccine manufacturing facility. At December 31, 2004, variable rate debt outstanding that is exposed to fluctuations in the market rate of interest under this term loan totaled $9.0 million. The definitive extent of the Company's interest rate risk under this term loan is not quantifiable or predictable because of the variability of future interest rates and business financing requirements. Based on the current balance outstanding, an increase in the LIBOR rate of 100 basis points would increase the Company's annualized interest expense by approximately $0.1 million.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders of Embrex, Inc.

We have audited the accompanying consolidated balance sheets of Embrex, Inc. as of December 31, 2004 and 2003, and the related consolidated statements of operations, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2004. Our audits also included the financial statement schedule listed in the Index at Item 15(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Embrex, Inc. at December 31, 2004 and 2003, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2004, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the effectiveness of Embrex, Inc.'s internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Comission and our report dated March 11, 2005 expressed an unqualified opinion on management's assessment and an adverse opinion on the effectiveness of internal control over financial reporting.

/s/ Ernst & Young LLP

Raleigh, North Carolina

March 11, 2005

CONSOLIDATED BALANCE SHEETS
(In thousands)

	December 31, 2004	2003
ASSETS		
Current Assets		
Cash and cash equivalents	$4,469	$9,629
Restricted cash (Note 1)	115	373
Accounts receivable – trade (net of allowance of $415 and $418 in 2004 and 2003, respectively)	7,816	7,776
Inventories:		
Materials and supplies	2,107	1,928
Product	1,448	1,406
Current deferred tax asset (Note 8)	706	468
Other current assets	2,846	1,787
Total Current Assets	19,507	23,367
Land	147	147
Devices under construction	3,055	3,062
Devices	47,379	39,756
Less accumulated depreciation	(31,864)	(29,920)
	15,515	9,836
Plant and Equipment (Note 1)	28,953	26,205
Less accumulated depreciation and amortization	(9,704)	(7,803)
	19,249	18,402
Other Assets:		
Intangible assets (net of accumulated amortization of $538 in 2004 and $410 in 2003)	4,025	2,746
Long-term deferred tax asset (Note 8)	949	2,155
Other long-term assets	133	2
Total Other Assets	5,107	4,903
TOTAL ASSETS	$62,580	$59,717
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current Liabilities		
Accounts payable	$887	$1,105
Accrued expenses	5,351	4,507
Deferred revenue	145	586
Product warranty accrual	136	288
Current portion of long-term debt	514	1,128
Current portion of capital lease obligations	7	7
Total Current Liabilities	7,040	7,621
Capital Lease Obligations, less current portion	2	9
Long-term debt, less current portion (Note 3)	8,516	6,395
Shareholders' Equity (Notes 4, 5 and 6)		
Common Stock, $.01 par value per share: authorized-30,000,000 shares; issued and outstanding – 7,921,605 net of 1,674,666 treasury shares and 8,152,974 net of 1,389,116 treasury shares at December 31, 2004 and 2003, respectively	95	94
Additional paid-in capital	64,938	63,572
Accumulated other comprehensive income (loss)	196	(322)
Deferred compensation	(725)	(369)
Retained earnings (accumulated deficit)	2,365	(948)
Treasury stock	(19,847)	(16,335)
Total Shareholders' Equity	47,022	45,692
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	$62,580	$59,717

See accompanying notes.

CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands, except per share amounts)	Year ended December 31,		
	2004	2003	2002
REVENUES			
Device revenues	$46,157	$43,458	$40,160
Product sales	2,037	1,970	3,079
Other revenues	523	597	2,086
Total Revenues	48,717	46,025	45,325
Cost of Device Revenues and Product Sales	20,147	18,914	17,558
Gross Profit	28,570	27,111	27,767
OPERATING EXPENSES			
General and administrative	10,983	7,119	6,571
Sales and marketing	2,939	2,832	2,536
Research and development	10,474	12,540	10,162
Total Operating Expenses	24,396	22,491	19,269
Operating Income	4,174	4,620	8,498
Other Income (Expense)			
Interest income	87	163	225
Interest expense	(29)	(20)	(62)
Other income (expense)	259	3,621	(41)
Total Other Income	317	3,764	122
Income Before Income Tax Expense	4,491	8,384	8,620
Income Tax Expense (Note 8)	1,178	773	1,449
Net Income	$3,313	$7,611	$7,171
Net Income *per* share of Common Stock (Note 10)			
Basic	$0.42	$0.94	$0.88
Diluted	$0.40	$0.91	$0.82
Number of Shares Used in Per Share Calculation (Note 10)			
Basic	7,954	8,119	8,116
Diluted	8,343	8,369	8,692

See accompanying notes.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)	Year ended December 31,		
	2004	2003	2002
Operating Activities			
Net income	$3,313	$7,611	$7,1
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	5,879	5,320	4,8
Gain/(loss) on sale of devices, plant and equipment	115	(6)	
Change in restricted cash	258	(118)	
Change in deferred tax asset	968	(1,855)	
Restricted stock expense (Note 5)	254	97	
Changes in operating assets and liabilities:			
Accounts receivable, inventories and other current assets	(1,214)	(2,851)	(32
Accounts payable, accrued expenses, deferred revenue and warranty accrual	33	1,585	121
NET CASH PROVIDED BY OPERATING ACTIVITIES	9,606	9,783	11,8
Investing Activities			
Land acquisition	-0-	(18)	(12
Purchases of devices, plant and equipment	(12,361)	(18,019)	(5,92
Investments in patents and other non-current assets	(1,562)	1,434	(2,35
NET CASH USED IN INVESTING ACTIVITIES	(13,923)	(16,603)	(8,40
Financing Activities			
Issuance of common stock	651	1,310	1,96
Issuance of/(payments on) short-term debt	(614)	1,128	-(
Issuance of long-term debt and capital lease obligations	2,114	6,364	
Repurchase of common stock	(3,512)	(1,343)	(790
NET CASH (USED IN) PROVIDED BY FINANCING ACTIVITIES	(1,361)	7,459	1,17
CHANGE IN CASH AND CASH EQUIVALENTS	(5,678)	639	4,62
CURRENCY TRANSLATION ADJUSTMENTS	518	951	(49
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	9,629	8,039	3,90
CASH AND CASH EQUIVALENTS AT END OF PERIOD	$4,469	$9,629	$8,03

SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:

Total interest paid net of capitalized interest was $288, $78 and $62 for the years ended December 31, 2004, 2003 and 2002, respectively.

Total income taxes paid were $1,052, $1,512 and $2,337 for the years ended December 31, 2004, 2003 and 2002, respectively.

See accompanying notes.

ISOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

housands)

	Common Stock	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Deferred Compensation	Retained Earnings (Accumulated Deficit)	Treasury Stock	Total
LANCE AT DECEMBER 31, 2001	$90	$59,932	($776)	$0	($15,730)	($14,202)	$29,314
ck repurchased						(790)	(790)
ck issued:							
Upon exercise of options and issuance of us stock	3	1,662					1,665
Under employee stock purchase plan		301					301
er comprehensive income, net of tax ote 1):							
Currency translation adjustments			(497)				(497)
Net income					7,171		7,171
mprehensive income							6,674
LANCE AT DECEMBER 31, 2002	$93	$61,895	($1,273)	$0	($8,559)	($14,992)	$37,164
ck repurchased						(1,343)	(1,343)
ck issued:							
Upon exercise of options and issuance of us stock	1	308					309
Under employee stock purchase plan		238					238
Issuance of restricted stock		466		(466)			-0-
Amortization of deferred compensation				97			97
Employee compensation		631					631
Payment for services		34					34
her comprehensive income, net of tax ote 1):							
Currency translation adjustments			951				951
Net income					7,611		7,611
mprehensive income							8,562
LANCE AT DECEMBER 31, 2003	$94	$63,572	($322)	($369)	($948)	($16,335)	$45,692
ck repurchased						(3,512)	(3,512)
ck issued:							
Upon exercise of options	1	310					311
Under employee stock purchase plan		350					350
Issuance of restricted stock		600		(600)			-0-
Amortization of deferred compensation				244			244
Tax benefits of options & ESPP		106					106
her comprehensive income, net of tax ote 1):							
Currency translation adjustments			518				518
Net income					3,313		3,313
mprehensive income							3,831
LANCE AT DECEMBER 31, 2004	$95	$64,938	$196	($725)	$2,365	($19,847)	$47,022

accompanying notes.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. SIGNIFICANT ACCOUNTING POLICIES

NATURE OF BUSINESS

Embrex, Inc. is an international agricultural biotechnology company specializing in the poultry industry. Embrex is focused on developing patented vaccine and mechanical products that improve bird health, help reduce production costs and provide other economic benefits to the poultry industry. Embrex has developed and commercialized the Inovoject® system, a proprietary, automated in-the-egg injection system which can inoculate 20,000 to 60,000 eggs per hour and eliminates the need for manual, post-hatch injection of certain vaccines. Embrex primarily markets the Inovoject® system through lease arrangements with commercial poultry producers, charging a fee for each egg injected. The Company is also marketing the Egg Remover® system and Vaccine Saver® option to provide additional automation benefits to the poultry hatchery. The Egg Remover® system works alone or in conjunction with the Inovoject® system to remove infertile and early-dead eggs from incubator trays prior to transfer or inoculation through the Inovoject® system. The Vaccine Saver® option for the Inovoject® system identifies infertile and early-dead eggs and selectively prevents vaccination of these eggs. In addition to the Inovoject® and Egg Remover® systems, and Vaccine Saver® option, Embrex has developed an antigen-antibody complex technology ("AAC"), formerly known as VNF®, useful in the development of certain avian vaccines. Based on AAC, the Company has developed and is marketing Bursaplex® for protection against avian infectious bursal disease ("IBD") and Newplex™ for protection against Newcastle disease.

PRINCIPLES OF CONSOLIDATION

The consolidated financial statements include the accounts of Embrex, Inc. and its wholly owned subsidiaries, Embrex Europe Limited, Embrex France s.a.s., Embrex Iberica, Embrex BioTech Trade (Shanghai) Co., Ltd., Inovoject do Brasil Ltda., Embrex de Mexico, S. de R.L. de C.V. and Vaccination Services, S. de R.L. de C.V. (the "Company"). All significant intercompany transactions and accounts have been eliminated. Currently, international operations account for approximately 34% of the Company's revenues.

CASH AND CASH EQUIVALENTS

The Company considers all highly liquid investments with a maturity of three months or less when purchased to be cash and cash equivalents.

RESTRICTED CASH

The Company maintains deposits of restricted cash for VAT import duties and a company credit card.

FAIR VALUE OF FINANCIAL INSTRUMENTS

The carrying value of cash and cash equivalents, accounts receivable and current liabilities approximate fair values at December 31, 2004.

INVENTORIES

Items recorded as inventory are generally purchased from others and recorded at the lower of cost or market using the average cost method or standard cost method. Materials and supplies inventories include spare parts for the Company's devices as well as laboratory and general supplies. Product inventories are comprised of biological compounds, principally vaccines based on the Company's AAC technology, Bursaplex® and Newplex™. Based on a percentage of the current product and device parts inventory levels, the Company has established a reserve against future device parts obsolescence due to technological improvements and limited shelf life of product inventories. The percentage used to calculate the reserve is based on a historical percentage rate adjusted for anticipated technological advances on devices and shelf life of existing vaccine product inventories.

DEVICES

Devices are comprised of egg injection and related equipment, including the Inovoject system®, Egg Remover® system and Vaccine Saver® option, available for lease to customers. The equipment is recorded at the lower of cost or estimated net realizable value. Depreciation is computed principally by using straight-line methods over the estimated useful lives of the equipment and commences after construction is complete and the equipment is placed in service. Repair and maintenance costs are expensed as incurred to cost of revenue and material betterments are capitalized.

PLANT AND EQUIPMENT

Plant and equipment are recorded at cost. Depreciation is computed principally by using straight-line methods over the estimated useful lives of the assets placed in service, generally three to seven years. The Company's total depreciation expense for 2004, 2003 and 2002 including devices and plant and equipment was $5.7 million, $5.2 million and $4.7 million, respectively. Plant and Equipment, at cost, consist of (in thousands):

	At December 31,	
	2004	2003
Plant and equipment		
Manufacturing buildings and equipment	$745	$211
Construction in progress	12,063	11,303
Leasehold improvements	5,529	5,404
Furniture, office and lab equipment, other	8,542	7,855
Vehicles	2,074	1,431
Total Plant and equipment	$28,953	$26,204
Less: accumulated depreciation	(9,704)	(7,802)
Net Plant and equipment	$19,249	$18,402

INTANGIBLE ASSETS

Costs incurred to acquire exclusive licenses of U.S. patents, to apply for and obtain U.S. patents on internally developed technology and in some cases to bring patent infringement lawsuits are capitalized and amortized using the straight-line method. Exclusive license agreements are amortized over the period of the license. Patents are amortized over the shorter of the useful or legal life of the patent. Trademarks and Goodwill are not amortized, but analyzed for impairment annually. During 2004 approximately $0.8 million of expenses related to patent infringement lawsuits were capitalized. If the lawsuits covered by these expenses are not resolved in the Company's favor, either via settlement or judgment by the applicable court, the capitalized cost will be expensed in future periods. In addition, costs incurred to obtain patents on internally developed technology could be expensed in future periods if the Company decides to abandon a patent application or a patent is denied. The Company's total amortization expense of intangible assets for 2004 was $0.2 million and $0.1 million for both 2002 and 2003. The Company estimates amortization of intangible assets will be approximately $0.1 million per year over the next five years based on current asset values and remaining lives. Net intangible assets consist of (in thousands):

	At December 31,	
	2004	2003
Intangible assets		
Patents and exclusive patent licenses	$3,189	$1,957
Goodwill	655	608
Trademarks	140	112
Other intangibles	41	69
Net intangible assets	$4,025	$2,746

FOREIGN CURRENCY TRANSLATION

All assets and liabilities in the balance sheets of the Company's foreign subsidiaries, Embrex Europe Limited, Embrex France s.a.s., Embrex Iberica, Embrex BioTech Trade (Shanghai) Co., Ltd., Inovoject do Brasil Ltda., Embrex de Mexico, S. de R.L. de C.V. and Vaccination Services, S. de R.L. de C.V. are translated at year-end exchange rates except shareholders' equity and any related balance sheet accounts, which are translated at historical rates. Revenues, costs and expenses are recorded at average rates of exchange during the year. Translation gains and losses are accumulated as a component of shareholders' equity. Foreign currency transaction gains and losses are included in determining net income in the other income (expense) line item on the consolidated statements of operations.

REVENUE RECOGNITION

Revenues for devices subject to lease agreements are recognized based on eggs processed during the period in accordance with lease terms. Device and product sales are recognized upon delivery, as that is when title passes to the customer. Contract research revenue is recognized as services are performed or as milestones are met over the term of the contract. Grant revenue is recognized as expenses related to the specific grants are incurred. Revenue received, but not yet earned, is classified as deferred revenue. The revenue section of the consolidated statement of operations divides revenues into three sections: device revenues which include device lease fees and device sales; product sales which include sales of the Company's vaccines, Bursaplex® and Newplex™; and other revenues which includes income derived from contract research, grants from federal agencies and other miscellaneous sources.

COST OF REVENUE

Cost of revenue includes costs associated with servicing the Company's Inovoject® systems and other devices around the world. These costs include replacement parts, labor, travel, depreciation, property taxes and related shipping costs. Cost of revenue also includes the costs associated with selling Bursaplex®, Newplex™, and devices.

RESEARCH AND DEVELOPMENT COSTS

Research and development costs, including costs incurred to complete contract research, are charged to operations when incurred and are included in operating expenses.

ADVERTISING EXPENSES

Advertising expenses include costs associated with creating and printing marketing materials along with the cost of trade shows and other marketing materials needed for these events. The Company has incurred $0.2 million for these activities for each of the years ended December 31, 2004, 2003 and 2002, respectively.

INCOME TAXES

The Company accounts for income taxes under the provisions of Statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes" (SFAS 109). SFAS 109 requires recognition of deferred tax assets and liabilities for the expected future tax consequences of temporary basis differences that have arisen between financial statement and income tax reporting.

NET INCOME PER SHARE

Basic net income per share was determined by dividing net income available for common shareholders by the weighted average number of common shares outstanding during each year. Diluted net income per share reflects the potential dilution that could occur assuming conversion or exercise of all convertible securities and all issued and unexercised stock options with exercise prices that were less than the market price of Embrex's stock (i.e., "in-the-money" stock options). A reconciliation of the net income available for common shareholders and number of shares used in computing basic and diluted net income per share is set forth in Note 10.

USE OF ESTIMATES

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

PRINCIPAL CUSTOMERS

Tyson Foods, Inc. ("Tyson") accounted for approximately 18%, 20% and 19% of consolidated 2004, 2003 and 2002 revenues, respectively. Pilgrim's Pride Inc. accounted for approximately 12%, 12% and 4% of consolidated 2004, 2003 and 2002 revenues, respectively. In 2004 and 2003, Tyson and Pilgrim's Pride were the only customers that represented greater than 10% of total revenues. In 2002, Tyson was the only customer that represented greater than 10% of total revenues.

CONCENTRATION OF CREDIT RISK

The Company's principal financial instrument, subject to potential concentration of credit risk, is accounts receivables, which are unsecured. As of December 31, 2004, Pilgrim's Pride accounted for 15% of consolidated accounts receivable, and Tyson Foods, Inc. accounted for approximately 11% of consolidated accounts receivable. Substantially all of the Company's accounts receivables are due from companies in the poultry industry.

SOURCES OF SUPPLY

General

Embrex currently outsources the production of all of its mechanical and vaccine products, with the exception of the Vaccine Saver® option, and expects to continue to do so for the foreseeable future. The Company believes that alternative sources of manufacture and supply generally exist. The Company signed a purchase commitment in January 2004 that will require the Company to purchase minimum amounts of bursal disease antibody ("BDA") over the three year term of the contract. The Company expects to produce its Inovocox™ vaccine in-house at the Embrex Poultry Health manufacturing facility in 2005 for USDA registration field trials.

Inovoject® System, Egg Remover® System and Vaccine Saver® Option

Embrex's in-house engineering staff designs the Inovoject® system, Vaccine Saver® option and Egg Remover® system, which incorporate proprietary mechanical, pneumatic and electronic sub-systems and concepts. The Company uses one contract manufacturer, Precision Automation Company, Inc., to fabricate its Inovoject® systems and Egg Remover® systems. While other machine fabricators exist and have constructed limited numbers of these devices, a change in fabricators could cause a delay in manufacturing and a possible delay in the timing of future Inovoject® and Egg Remover® system installations and revenues from those installations. The Vaccine Saver® option is assembled in the manufacturing area at the Company's corporate headquarters and the components are sourced from multiple vendors.

AAC (Antigen-Antibody Complex) Vaccines

Since 1993, Charles River Laboratories, Inc., through its SPAFAS Avian Products Services Division ("SPAFAS"), has supplied Embrex with the bursal disease antibody ("BDA") component for Bursaplex® vaccine. In January 2004, Embrex signed a new agreement with SPAFAS under which SPAFAS will continue to supply the Company's requirements for BDA for approximately three years. In connection with this agreement, Embrex seeks to maintain appropriate inventory levels and places orders with SPAFAS to allow Embrex to satisfy anticipated customer demand for the Bursaplex® vaccine. The regulatory approval granted by the USDA for Bursaplex® vaccine in 1997 specifically covers vaccines produced with SPAFAS-manufactured BDA. Additional agreements covering the Company's needs for Newcastle disease antibody ("NDA") for the Company's Newplex™ vaccine for the next four years are in negotiation with SPAFAS.

The Company has a non-exclusive manufacturing agreement with Merial Select, Inc. ("Select") (a Merck and Sanofi-Aventis company), in the United States, for Bursaplex® vaccine, an IBD virus-antibody complex vaccine, for Embrex to market in North America, Latin America, Asia, the Middle East and South Africa. Abic Ltd. has been granted similar rights to manufacture and market an IBD AAC vaccine, known as GuMBryo™, in Israel. The Company has also granted Lohmann Animal Health International ("LAHI") non-exclusive rights to manufacture, in the United States, a Newcastle vaccine, known as Newplex™, based on Embrex's AAC technology, that Embrex intends to market in Latin America, Middle East and Asia. The manufacture of vaccines by Select, Abic, and LAHI along with the manufacture of specific vaccine antibodies by SPAFAS, generally must be performed in licensed facilities or under approved regulatory methods. Although there are other manufacturers who are capable of manufacturing the IBD AAC products and the BDA and NDA, a change of supplier for the Company could adversely affect Embrex's future operating results due to the time it would take a new supplier to obtain regulatory approval of its production process or manufacturing facilities. The Company seeks to minimize this exposure through multi-year supply agreements and the maintenance of adequate inventories.

COMPREHENSIVE INCOME

FASB Statement No. 130, "Reporting Comprehensive Income" ("SFAS 130") establishes standards for reporting and display of comprehensive income and its components in the financial statements. In accordance with the Financial Accounting Standards Board ("FASB") Statement No. 130, Reporting Comprehensive Income, the Company has determined total comprehensive income, net of tax, to be $3.8 million, $8.6 million and $6.7 million for the years ended December 31, 2004, 2003 and 2002, respectively. Embrex's total comprehensive income represents net income plus the after-tax effect of foreign currency translation adjustments for the years presented:

(in thousands)

	2004	2003	2002
Net Income	$3,313	$7,611	$7,171
Currency translation adjustment	518	951	(497)
Comprehensive income	$3,831	$8,562	$6,674

SEGMENTS

The Company operates in a single segment. The table below presents the Company's operations by geographic area (in thousands):

	2004	2003	2002
U.S. Revenue:			
Device Revenues	31,812	30,760	29,114
Product Revenues	11	25	114
Other Revenues	421	507	1,989
Total United States Revenues	$32,244	$31,292	$31,217
International Revenue:			
Device Revenues	14,345	12,698	11,046
Product Revenues	2,026	1,945	2,965
Other Revenues	102	90	97
Total International Revenues	$16,473	$14,733	$14,108
Total Consolidated Revenues	$48,717	$46,025	$45,325
Assets:			
United States	$48,613	$48,770	$31,570
International	13,967	10,947	10,443
Total Assets	$62,580	$59,717	$42,013

Depreciation and Amortization Expense:			
United States	$3,620	$3,226	$2,949
International	2,259	2,094	1,929
Total Depreciation and Amortization Expense	$5,879	$5,320	$4,878

STOCK BASED COMPENSATION

The Company's stock plans (the "Plans") are designed to provide incentives to eligible employees, officers, and directors in the form of stock, incentive stock options, and non-qualified stock options. The Company accounts for the Plans under the recognition and measurement principles of Accounting Principles Board Option No. 25, "Accounting for Stock Issued to Employees" ("APB 25") and related Interpretations. No stock-based employee compensation cost is reflected in net income under current plans, as all options granted under the Plans had an exercise price equal to the market value of the underlying common stock on the date of grant. However, net income does reflect the cost of restricted stock awards granted in 2003 and unrestricted stock awards in 2002 and 2001. The following table illustrates the effect on net income and earnings per share if the Company had applied the fair value recognition provisions of FASB Statement No. 123, "Accounting for Stock-Based Compensation" ("SFAS 123") (in thousands, except per share amounts):

	Year Ended December 31		
	2004	2003	2002
Net income, as reported	$3,313	$7,611	$7,171
Add: Non-cash stock-based compensation included in net income, net of related tax effects	188	88	189
Deduct: Total stock-based compensation expense determined under fair value based method for all awards, net of related tax effects	(1,316)	(1,503)	(1,931)
Pro forma net income	$2,185	$6,196	$5,429
Earnings per share:			
Basic—as reported	$0.42	$0.94	$0.88
Basic—pro forma	$0.27	$0.76	$0.67
Diluted—as reported	$0.40	$0.91	$0.82
Diluted—pro forma	$0.26	$0.74	$0.62

The Company computes fair value for purposes of SFAS 123 using the Black-Scholes option pricing model. The weighted-average assumptions used in this model to estimate fair value and resulting values are as follows:

	Stock Option Plans			ESPP		
	2004	2003	2002	2004	2003	2002
Expected dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Risk-free interest rate	3.1%	2.5%	3.9%	1.6%	1.3%	1.9%
Expected volatility	57.0%	57.0%	50.0%	57.0%	57.0%	50.0%
Expected life (in years)	5.2	5.2	4.0	1.0	0.9	0.5
Weighted-average fair value per share	$6.19	$4.91	$7.60	$4.62	$4.95	$5.55

The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options, which have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions including the expected stock price volatility. Because changes in the subjective

input assumptions can materially affect the fair value estimate, in management's opinion, the existing models do not necessarily provide a reliable single measure of the fair value of the awards granted under the Plans.

IMPACT OF RECENTLY ISSUED ACCOUNTING STANDARDS

In December 2004, the FASB issued SFAS No. 123 (revised 2004), "Share-Based Payment" ("SFAS 123(R)"). SFAS 123(R), a revision of SFAS 123, "Accounting for Stock-Based Compensation", supersedes APB Opinion No. 25, "Accounting for Stock Issued to Employees", and amends SFAS No. 95, "Statement of Cash Flows." SFAS 123(R) requires all share-based payments to employees, including grants of employee stock options, to be recognized in the financial statements based on their fair values. SFAS 123(R) is effective for the beginning of the first interim or annual period beginning after June 15, 2005. Therefore the Company plans to adopt SFAS 123(R) on July 1, 2005. The Company is currently evaluating the two fair value pricing methods permitted by SFAS 123(R) and has not selected a final fair value pricing model nor determined the impact such model will have on the Company's financial statements.

2. LEASES

At December 31, 2004, the Company had approximately $9 thousand of assets financed by capital lease agreements. At December 31, 2003, the Company had approximately $16 thousand of assets financed by capital lease agreements.

The Company leases its facilities under a number of operating leases extending through November 2007. The Company has the option to cancel one of its operating lease agreements with the payment of a $0.2 million penalty. Total rent expense was $1.0 million, $0.9 million and $0.9 million for the years ended December 31, 2004, 2003 and 2002, respectively. The lease on the Company's corporate headquarters has an initial six-year term expiring in 2005 with annual rent increases of approximately 3% and an additional six-year optional renewal term with annual rent increases of approximately 4%. In addition, the lease at Embrex's research facility is a 10-year term expiring in November 2007, with a five-year renewal option and annual increases of approximately 3% through the first 10 years and approximately 4% during the five-year renewal term.

At December 31, 2004 the Company's minimum future commitments under operating leases were as follows (in thousands):

	Operating Leases
2005	$ 935
2006	919
2007	833
2008	624
Thereafter	480
Total	$3,791

3. DEBT

The Company obtained a $9.0 million construction/term loan from its bank, Branch Banking and Trust Company ("BB&T"), in August 2003, to be used for construction and equipping of the Embrex Poultry Health coccidiosis vaccine manufacturing facility located in Scotland County, North Carolina. The interest rate of the loan is based on the one-month LIBOR rate plus 1.65% with the option of entering into a swap agreement for a 10-year fixed interest rate of 6.4% effective 18 months after the closing date of the loan. The loan has a term of 138 months or 11.5 years with payments of interest only for the first 18 months. Principal repayment on the loan begins at the end of the interest only period over the remaining term of the loan in equal monthly installments of principal plus interest. At December 31, 2004, $9.0 million of the construction/term loan had been borrowed and the December 1, 2004 one-month LIBOR rate was 2.3%.

The Company has a $6.0 million secured revolving line of credit with BB&T, which may be used for working capital purposes. The term of this line of credit has been extended and will now expire in May 2005. The Company intends to renew this line of credit for another twelve months upon expiration. At December 31, 2004 the Company had no outstanding borrowings under this short-term line of credit.

4. SHAREHOLDERS' EQUITY

At December 31, 2004, the Company had reserved a total of 2,657,112 shares of its Common Stock for future issuance as follows:

For exercise of Common Stock options and for possible awards of Common Stock to employees and others	2,364,944
For possible future issuance to employees and others under employee stock purchase plans	292,168
Total reserved	2,657,112

At December 31, 2004, the Company had no issued and outstanding warrants to purchase Common Stock.

In August 2002, the Company announced that the Board of Directors authorized a share repurchase program (the "2002 Repurchase Program") to purchase up to 6% of outstanding shares of Common Stock, or up to approximately 500,000 shares over 17 months, in open market or privately negotiated transactions. In November 2003, the Board of Directors extended the term of the 2002 Repurchase Program to June 30, 2004. During 2002, the Company purchased 66,500 shares of its Common Stock for $0.8 million at an average price of $11.88 per share. During 2003, the Company purchased 147,400 shares of its Common Stock for $1.3 million at an average price of $9.11 per share. During the first half of 2004, the Company purchased 241,200 shares of its Common Stock for $2.9 million at an average price of $12.20 per share under the 2002 Repurchase Program. During the entire term of the 2002 Repurchase Program, the Company repurchased an aggregate of 455,100 shares of Common Stock for $5.1 million at an average price of $11.15 per share.

In May 2004, the Company announced that the Board of Directors authorized a share repurchase program (the "2004 Repurchase Program") to purchase up to 500,000 of outstanding shares of Common Stock through December 2005, in open market or privately negotiated transactions on or after July 1, 2004. During the second half of 2004, the Company purchased 44,350 shares of its Common Stock for $0.6 million at an average price of $12.84 per share under the 2004 Repurchase Program.

The Company has purchased a total of 1,674,666 shares for $19.8 million at an average price of $11.83 per share under all repurchase programs to date.

5. STOCK COMPENSATION PLANS

The Company's Plans are designed to provide incentives to eligible employees, officers, and directors in the form of stock, incentive stock options, and non-qualified stock options. As of December 31, 2004, a total of 2,364,944 shares of Common Stock have been reserved for issuance under the Plans. Of this amount, 592,012 shares are available for future stock-based awards.

During the years ended December 31, 2004, 2003 and 2002, the Company made aggregate stock awards of 48,400, 51,500 and 12,629 shares of Common Stock, respectively. The stock awards issued during the year ended December 31, 2004 were subject to a four-year vesting schedule. Previous stock awards were fully vested on the date of grant as they were granted in lieu of a cash bonus. The compensation expense recognized in connection with stock awards was $0.3 million, $0.1 million and $0.2 million for the years ended December 31, 2004, 2003 and 2002, respectively. As of December 31, 2004, the amount of unamortized compensation expense related to stock awards was $0.7 million.

Stock options generally vest and become exercisable over a four-year period and expire ten years from the date of grant. In general, the exercise price of stock options is the closing price of the Company's Common Stock on the

date of grant.

Stock option activity with respect to all of the Plans follows:

	Options Outstanding	Weighted-Average Exercise Price
Balance at December 31, 2001	1,477,754	$ 9.40
Granted	365,471	17.94
Exercised	(182,583)	7.81
Canceled	(65,883)	14.77
Balance at December 31, 2002	1,594,759	$ 11.31
Granted	209,735	9.69
Exercised	(52,845)	5.85
Canceled	(57,348)	14.33
Balance at December 31, 2003	1,694,301	$ 11.21
Granted	193,075	13.09
Exercised	(70,146)	7.10
Canceled	(44,298)	14.25
Balance at December 31, 2004	1,772,932	$ 11.50

The Company's exercisable stock options as of December 31, 2002, 2003 and 2004 were 863,222, 1,091,678 and 1,269,778, respectively.

Selected information regarding stock options as of December 31, 2004 follows:

	Options Outstanding			Options Currently Exercisable	
Exercise Price	Number Outstanding	Weighted-Average Remaining Contractual Life (yrs.)	Weighted-Average Exercise Price	Number Exercisable	Weighted-Average Exercise Price
$ 4.84 – $ 6.25	382,593	2.9	$ 5.51	382,593	$ 5.51
$ 6.38 – $ 9.66	342,055	5.5	$ 8.40	209,564	$ 7.61
$ 9.66 – $13.09	420,830	6.9	$11.67	257,965	$10.80
$13.09 – $17.25	323,011	6.2	$15.57	251,225	$15.60
$17.99 – $17.99	304,443	7.1	$17.99	168,431	$17.99
	1,772,932	5.7	$11.50	1,269,778	$10.58

6. EMPLOYEE STOCK PURCHASE PLAN

The Company maintains an Employee Stock Purchase Plan for its U.S.-based employees (the "U.S. Purchase Plan") and a similar plan for some of its employees outside the U.S. (the "Non-U.S. Purchase Plan", and together with the U.S. Purchase Plan, the "Purchase Plans") to provide an additional opportunity for the Company's employees to share in the ownership of the Company. Under terms of both plans, all regular full-time employees of the Company (or the Company's subsidiaries) may make voluntary payroll contributions thereby enabling them to purchase Common Stock. Contributions are limited to 20% of an employee's compensation. As of December 31, 2004, the maximum number of shares that may be issued under both Purchase Plans together shall not exceed 500,000. Of this amount, 292,168 shares are available for future purchases. The purchase price of the stock is the lesser of 85% of the Fair Market Value on the first business day of the plan year, which runs from July 1st in one year to June 30th in the succeeding year, or 85% of the Fair Market Value on the date of exercise, which can occur at any time during

the plan year, as determined by each participating employee.

Under the Purchase Plans, during 2004, 2003 and 2002, 37,429, 31,007 and 22,739 shares of Common Stock, respectively, were purchased.

7. 401(k) RETIREMENT SAVINGS PLAN

The Company has a 401(k) plan which is available to all U.S. based employees upon employment who are at least 18 years of age. Employer contributions are voluntary at the discretion of the Company. The Company does not match any employee contributions with stock.

Company contributions amounted to $412,129, $355,406 and $321,791 for the years ended December 31, 2004, 2003 and 2002, respectively.

8. INCOME TAXES

The Company's income before income taxes separated by those operations subject to foreign and United States tax jurisdictions for years ended December 31, 2004, 2003 and 2002 are listed as follows (in thousands):

	2004	2003	2002
Total income before taxes for operations subject to foreign tax jurisdictions:	($287)	$2,903	($1,093)
Total income before taxes for operations subject to United States tax jurisdiction:	4,778	5,481	9,713
Income before taxes	$4,491	$8,384	$8,620

The components of income tax expense for the years ended December 31 are as follows (in thousands):

Current:	2004	2003	2002
Federal	($450)	$2,297	$702
State	121	251	335
Foreign	539	548	712
Total Current	210	3,096	1,749
Deferred	968	(2,323)	(300)
Total	$1,178	$773	$1,449

The Company's consolidated effective tax rate differed from the statutory rate as set forth below for the years ended December 31 (in thousands):

	2004	2003	2002
Federal taxes at statutory rate	$1,527	$2,850	$2,930
State and local income taxes, net of Federal benefit	173	222	489
Non-deductible expenses and credits	(40)	(220)	(226)
ETI benefit	(587)	-0-	-0-
Other	(628)	(143)	-0-
Foreign losses for which no benefit has been recognized/foreign earnings offset by foreign net operating losses	103	(809)	372
Change in valuation allowance	231	(1,675)	(2,828)
Foreign taxes	399	548	712
	$1,178	$773	$1,449

Deferred income taxes reflect the net effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. The tax effects of temporary differences and carryforwards that give rise to deferred tax assets and liabilities consist of the following (in thousands):

	At December 31,	
	2004	2003
Deferred tax assets (liabilities):		
Book under tax depreciation and amortization	($1,801)	($1,239)
Patent costs	(681)	-0-
Research and experimental tax credit carryforwards	3,524	3,354
Accrued liabilities and reserves	706	467
Alternative Minimum Tax credit carryforward	426	329
Total deferred tax assets	$2,174	$2,911
Valuation allowance for deferred tax assets	(519)	(288)
Net deferred tax assets	$1,655	$2,623

During 2004, 2003 and 2002 the valuation allowance (increased)/decreased by ($0.2 million), $1.7 million and $2.8 million, respectively.

U.S. income taxes were not provided for on a cumulative total of approximately $0.6 million of undistributed earnings for certain non-U.S. subsidiaries. The company intends to reinvest these earnings indefinitely in operations outside the United States.

In addition, the Company has research and experimental tax credit carryforwards totaling approximately $3.5 million, which are available to offset future federal income taxes. These credits expire during the years 2005 through 2024.

9. COMMITMENTS AND CONTINGENCIES

The Company has certain known contractual obligations due to mortgage financing of the coccidiosis manufacturing facility, capital leases, operating leases related to office and storage space rentals and purchase obligations related to the manufacturing of devices, serum and vaccines and the purchase of other miscellaneous supplies. The terms of these obligations vary from less than a year to 10 years. The total amount of these contractual obligations is $18.5 million and the amounts payable over the next 5 years are $4.8 million during 2005, $5.6 million during 2006 and 2007 and $3.5 million during 2008 and 2009. Of the purchase obligations outstanding at December 31, 2004, $0.7 million were purchased during 2004.

The Company is engaged in certain legal and administrative proceedings incidental to its normal business activities. While it is not possible to determine the ultimate outcome of those actions, in the opinion of management after discussion with legal counsel, it is unlikely that the outcome of such litigation and other proceedings will have a material adverse effect on the results of the Company's operations or its financial position

The Company operates in multiple tax jurisdictions and significant judgment is required in determining its worldwide provision for income taxes. In the ordinary course of a global business, there are many transactions for which the ultimate tax outcome is uncertain. Although the Company believes its approach to determining its various tax provisions is reasonable, no assurance can be given that the final outcome will not be materially different than that which is reflected in the Company's historical income tax provision and accruals upon review by taxing authorities. Management believes that adequate amounts of tax and related interest and penalties, if any, have been reserved for any adjustments that may result from years open to examination from taxing authorities. As of December 31, 2004, $1.5 million has been reserved.

10. NET INCOME PER SHARE

The following table sets forth the computation of basic and diluted net income per share (in thousands, except per share amounts):

	2004	2003	2002
Numerator:			
Net income available to Common Stockholders	$3,313	$7,611	$7,171
Denominator:			
Denominator for basic net income per share—weighted-average	7,954	8,119	8,116
Effect of Dilutive Securities:			
Employee Stock Options	365	245	576
Restricted Stock Grants	24	5	-0-
Dilutive Potential Shares	389	250	576
Denominator for diluted net income per share — adjusted weighted-average shares and assumed option exercises	8,343	8,369	8,692
Basic net income per share	$0.42	$0.94	$0.88
Diluted net income per share	$0.40	$0.91	$0.82

For the diluted net income per share denominator, 803, 919 and 725 shares underlying outstanding stock options were excluded from the calculation for 2004, 2003 and 2002, respectively, because the exercise price of such options exceeded the average closing share price of the Company's common stock during the applicable year.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

The Company maintains disclosure controls and procedures that are designed to provide reasonable assurances that information required to be disclosed by the Company in the reports that it files or submits under the Securities Exchange Act of 1934, as amended (the "Exchange Act") is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to management, including the Company's Chief Executive Officer and Vice President, Finance and Administration (the Company's Chief Financial Officer), as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurances of achieving the desired control objectives, as the Company's are designed to do, and management necessarily was required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

An evaluation was carried out under the supervision and with the participation of the Company's management, including its Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act). Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer believe, as of the end of

the period covered by this report, the Company's disclosure controls and procedures are effective in that they provide reasonable assurances that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms. The Chief Executive Officer and the Chief Financial Officer reached this conclusion with respect to the Company's disclosure controls and procedures notwithstanding the fact that they also concluded, as described below, that the Company's internal control over financial reporting was not effective as of December 31, 2004, based upon their findings of a material weakness with respect to accounting for income taxes. While the Chief Executive Officer and Chief Financial Officer believe there is overlap between disclosure controls and procedures and internal control over financial reporting, they have concluded that a material weakness in internal controls limited to accounting for income taxes, as further explained below, does not cause the Company's disclosure controls and procedures to be ineffective. The Company believes that the inter-relation of disclosure controls and procedures and internal control over financial reporting is not yet well defined by law, regulation or interpretation. The Company believes that disclosure controls and procedures and internal control over financial reporting are intended to be two distinct standards, otherwise the requirements for separate determinations as to their effectiveness would be redundant. Nonetheless, if disclosure controls and procedures and internal control over financial reporting are intended to be in effect substantially the same standard under these circumstances, then in such case, the Company's disclosure controls and procedures also would be ineffective for the same reasons discussed below that the Chief Executive Officer and the Chief Financial Officer have concluded that the Company's internal control over financial reporting was not effective.

Changes to Internal Control Over Financial Reporting

During the fourth quarter of fiscal year 2004, as well as the entire fiscal year 2004, the Company continued to assess the effectiveness of its internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) as a part of its on-going accounting and financial reporting review process. The Company engaged Grant Thornton LLP to assist it with this assessment. During the course of assessing the effectiveness of the Company's internal control over financial reporting, management identified a number of items for review and began to analyze the need for any changes. As a result, the Company has made a number of changes in its internal control over financial reporting as summarized below. The Company made no changes in its internal control over financial reporting during the fiscal quarter ending December 31, 2004 that have materially affected, or are reasonably likely to materially affect, its internal control over financial reporting, other than as described below.

The Company has implemented changes to its internal control over financial reporting designed to improve its overall internal control structure and several areas of its material internal controls. The changes included preparation of substantial, detailed written documentation of policies and procedures which previously existed but had not been compiled in comprehensive written form, implementation of additional monitoring controls through increased, documented management review of certain account reconciliations, calculations, estimates, and transactions, and implementation of general information technology controls and processes. In the area of entity level internal controls, the Company implemented measures designed to improve the dissemination and effectiveness of its policy regarding complaints about accounting and auditing matters. The Company also has increased review and documentation by senior management of critical accounting policies and implemented additional monitoring controls over certain Embrex Europe accounts. As a result of its assessment of internal controls, the Company has hired three additional employees. The Company may determine that it needs to hire additional personnel as its evaluations continue. The Company also has made changes that affect specific areas of material internal controls as described below.

In the area of sales order processing, the Company implemented changes to internal controls designed to ensure the retention and tracking of customer contracts for the Inovoject system and other devices. With regard to cash disbursements, the Company made improvements to segregation of duties such as in the areas of controls over check writing and permitted changes to identified vendors. In the area of payroll expense, the Company further restricted access to its payroll system processes and made improvements to segregation of duties regarding increased controls over changes to salary and wages and access to payroll records, including by transferring certain responsibilities from the human resources department to the accounting department. In the treasury function, the Company made changes to segregation of duties regarding disbursements and receipts generally and specifically regarding cash transactions related to equity compensation programs, including by transferring certain responsibilities from the human resources department to the accounting department.

In the area of information technology (IT), the Company made changes to segregation of duties by further limiting the number of persons that can both initiate a system development change and effect a system change related to the development change. As segregation of responsibilities limitations continue to exist in this area, the Company has designed and implemented approval policies and procedures related to system development and system changes intended to mitigate these limitations. In addition, in February 2005, the Company segregated the responsibilities of information technology and supply chain by hiring an IT director to assume the segregated responsibility over information technology. The Company currently is evaluating possible additional steps to take, including the hiring of additional personnel and outside consultants to enhance segregation of duties.

With regard to accounting for income taxes, for the fifteen-year period between 1988 and 2003, the Company retained the services of Ernst & Young LLP to assist management by providing tax advice on certain matters. As a result of changes in standards, Ernst & Young ceased providing these services effective year-end 2003. Accordingly, the Company began a search for a tax analyst (later re-scoped and upgraded to a tax manager). A tax manager was hired and was able to assist in the preparation and review of the Company's accounting for income taxes and other tax functions for the third and fourth quarters of 2004. Also, the Company engaged PricewaterhouseCoopers LLP during the fourth quarter of 2004 to consult with management on the application of certain limited tax regulations. Notwithstanding these steps, the Company recorded adjustments to certain tax accounts which were brought to the Company's attention by its independent auditors in connection with the audit of the Company's 2004 annual financial statements. The Company is in the process of evaluating steps it could take to improve procedures for preparation and review of the Company's accounting for income taxes, including evaluating whether to hire additional in-house tax expertise or engage external tax expertise.

The Company plans to continue an on-going review and evaluation of its internal control over financial reporting and may make changes as it deems desirable based on its reviews and evaluations.

Management's Report on Internal Control over Financial Reporting

The management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control system is designed to provide reasonable assurance to the Company's management and board of directors regarding the preparation and fair presentation of published financial statements.

The Company's internal control over financial reporting includes those policies and procedures that:

(i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;

(ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and

(iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2004. In making its assessment of internal control over financial reporting management used the criteria issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework. Management believes that a combination of control deficiencies relating to inadequate staffing and a lack of sufficient tax accounting expertise constituted a material weakness in internal controls over the preparation and review of the Company's accounting for income taxes as of December 31, 2004.

This material weakness affected the following tax accounts: income tax expense, the related income tax accruals, current and non-current deferred tax assets and liabilities, and the related valuation allowances for net deferred tax assets. As a result of the material weakness described above, management has concluded that, as of December 31, 2004, the Company's internal control over financial reporting was not effective based on those criteria.

An internal control significant deficiency (within the meaning of Public Company Accounting Oversight Board Auditing Standard No. 2) exists when a control deficiency, or a combination of control deficiencies, adversely affects the Company's ability to initiate, authorize, record, process or report external financial data reliably in accordance with general accepted accounting principles such that there is more than a remote likelihood that a misstatement of the Company's annual or interim financial statements that is more than inconsequential will not be prevented or detected. An internal control material weakness is a control deficiency (within the meaning of Public Company Accounting Oversight Board Auditing Standard No. 2), or combination of control deficiencies, that results in there being more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected.

The Company's independent registered public accounting firm has issued an attestation report on management's assessment of the Company's internal control over financial reporting below.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders of Embrex, Inc.

We have audited management's assessment, included in the accompanying Management's Report on Internal Control over Financial Reporting, that Embrex, Inc. did not maintain effective internal control over financial reporting as of December 31, 2004, because of the effect of a material weakness in internal controls over the preparation and review of the Company's accounting for income taxes, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Embrex, Inc.'s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express an opinion on management's assessment and an opinion on the effectiveness of the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, evaluating management's assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

A material weakness is a control deficiency, or combination of control deficiencies, that results in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected. The following material weakness has been identified and included in management's assessment. In making its assessment as of December 31, 2004, management identified as a material weakness a combination of control deficiencies relating to inadequate staffing and a lack of sufficient tax accounting expertise over the preparation and review of the Company's accounting for income taxes. This material weakness affected the following tax accounts: income tax expense, the related income tax accruals, current and non-current deferred tax assets and liabilities, and the related valuation allowances for net deferred tax assets as adjustments were recorded to the Company's 2004 annual financial statements as a result of our audit. This material weakness was considered in determining the nature, timing, and extent of audit tests applied in our audit of the 2004 financial statements, and this report does not affect our report dated March 11, 2005 on those financial statements.

In our opinion, management's assessment that Embrex, Inc. did not maintain effective internal control over financial reporting as of December 31, 2004, is fairly stated, in all material respects, based on the COSO control criteria. Also, in our opinion, because of the effect of the material weakness described above on the achievement of the objectives of the control criteria, Embrex, Inc. has not maintained effective internal control over financial reporting as of December 31, 2004, based on the COSO control criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets as of December 31, 2004 and 2003, and the related consolidated statements of operations, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2004 of Embrex, Inc. and our report dated March 11, 2005 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Raleigh, North Carolina

March 11, 2005

ITEM 9B. OTHER INFORMATION

Not applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

Information on the Company's executive officers and directors is incorporated by reference from the Company's Proxy Statement with respect to the Annual Meeting of Shareholders to be held on May 19, 2005 to be filed with the Securities and Exchange Commission.

Embrex has adopted a code of ethics applicable to its directors, officers (including its principal executive officer, principal financial officer, and principal accounting officer or controller, or persons performing similar functions) and employees. The Company makes its code of ethics available on the Company's Internet website, http://www.embrex.com. The Company intends to post on its Internet website any amendments to, or waivers from, its code of ethics that apply to its principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, promptly following any such amendment or waiver.

ITEM 11. EXECUTIVE COMPENSATION

This information is incorporated by reference from the Company's Proxy Statement with respect to the Annual *Meeting of* Shareholders to be held on May 19, 2005, to be filed with the Securities and Exchange Commission.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

EQUITY COMPENSATION PLAN INFORMATION

The following table sets forth information as of December 31, 2004 with respect to compensation plans under which equity securities of the Company are authorized for issuance.

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 securities remaining available for future issuance under equity compensation plans (excluding securities reflected in the first column (1))
Equity compensation plans approved by security holders	1,772,932	$ 11.50	884,180
Equity compensation plans not approved by security holders	-0-	Not Applicable	-0-
Total	1,772,932	$11.50	884,180

(1) The Company's stock plans (the "Stock Plans") are designed to provide incentives to eligible employees, officers, and directors through grants in the form of stock, incentive stock options, and non-qualified stock options. The Company maintains an Employee Stock Purchase Plan for its U.S.-based employees (the "U.S. Purchase Plan") and a similar plan for some of its employees outside the U.S. (the "Non-U.S. Purchase Plan", and together with the U.S. Purchase Plan, the "Purchase Plans") to provide an additional opportunity for the Company's employees to share in the ownership of the Company. As of December 31, 2004, 592,012 shares of Common Stock remain available for future issuance under the Stock Plans and 292,168 shares of Common Stock remain available for grant under the Purchase Plans.

The remainder of the information required to be included under this Item 12 is incorporated by reference from the Company's Proxy Statement with respect to the Annual Meeting of Shareholders to be held on May 19, 2005, to be filed with the Securities and Exchange Commission.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Not applicable.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

This information is incorporated by reference from the Company's Proxy Statement with respect to the Annual Meeting of Shareholders to be held on May 19, 2005, to be filed with the Securities and Exchange Commission.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a)(1). The consolidated financial statements listed below are included in Item 8 of this report.

Report of Independent Registered Public Accounting Firm

Consolidated Financial Statements

Consolidated Balance Sheets at December 31, 2004 and 2003

Consolidated Statements of Operations for each of the years ended December 31, 2004, 2003 and 2002

Consolidated Statements of Cash Flows for each of the years ended December 31, 2004, 2003 and 2002

Consolidated Statements of Shareholders' Equity for each of the years ended December 31, 2004, 2003 and 2002

Notes to Consolidated Financial Statements

(a)(2) Financial Statement Schedule

Schedule II – Valuation and Qualifying Accounts (appears following Signatures in this report)

(a)(3) The exhibits listed below are filed as part of this report. Executive compensation plans and arrangements are listed in Exhibits 10.12 through 10.46.

Exhibit Number	Description
3.1(1)	Restated Articles of Incorporation
3.2(2)	Articles of Amendment to Restated Articles of Incorporation, effective March 21, 1996
3.3(3)	Articles of Amendment to Restated Articles of Incorporation, effective May 28, 1996
3.4(4)	Amended and Restated Bylaws, effective September 21, 2000
4.1	Reference is made to Exhibits 3.1, 3.2, 3.3 and 3.4
4.2(5)	Specimen of Common Stock Certificate
4.3(6)	Rights Agreement dated as of March 21, 1996 between Embrex and Branch Banking and Trust Company, as Rights Agent
4.4(7)	Amendment to Rights Agreement dated as of January 6, 2003 between Embrex and Branch Banking and Trust Company, as Rights Agent
10.1(8)	License Agreement dated December 11, 1991, between Embrex and the National Technical Information Service, a Primary operating unit of the United States Department of Commerce
10.2(8)	Collaborative Research Agreement dated January 17, 1989 between Embrex and the University of Arkansas
10.3(8)	License Agreement dated October 1, 1998 between Embrex and the National Technical Information Service, a Primary operating unit of the United States Department of Commerce
10.4(8)	Lease Agreement dated December 9, 1986 between Embrex, as tenant, and Imperial Center Partnership and Petula Associates, Ltd., as landlord, as amended by First Amendment dated June 11, 1987, Second Amendment dated December 1, 1988, and Third Amendment dated May 2, 1989
10.5(9)	Lease for Royal Center II dated October 13, 1997 between the Company and Petula Associates, Ltd.
10.6(10)	Sublease Agreement dated October 1, 1999, between Embrex, as subtenant, and Wandel & Goltermann Technologies, Inc., as sublandlord
10.7(10)	First Amendment to Sublease Agreement dated February 29, 2000, among Wandel & Goltermann Technologies, Inc., Embrex and W & G Associates

10.8	Subtenant Non-Disturbance and Substitute Lease Agreement dated January 16, 2004 between Embrex and W & G Associates, L.P.
10.9	First Amendment to Substitute Lease Agreement dated October 1, 2004 between Embrex and W & G Associates, L.P.
10.10(8)	Unrestricted Grant Agreement dated November 1, 1986, between Embrex and North Carolina State University, as Amended by Amendment dated May 3, 1989, Amendment dated September 15, 1989, and Amendment dated April 22, 1991
10.11(8)	Basic Research Agreement dated October 24, 1989, between Embrex and University of Arkansas, as amended on October 23, 1990, February 1, 1991 and July 22, 1991
10.12(8)	1988 Incentive Stock Option Plan and form of Incentive Stock Option Agreement
10.13(8)	1991 Nonstatutory Stock Option Plan and form of Nonstatutory Stock Option Agreement
10.14(11)	Incentive Stock Option and Nonstatutory Stock Option Plan and forms of Stock Option Agreements – June 1993
10.15(3)	Amendment dated May 16, 1996 to Incentive Stock Option and Nonstatutory Stock Option Plan – June 1993
10.16(12)	Amended and Restated Incentive Stock Option and Nonstatutory Stock Option Plan – May 1998
10.17(13)	Amended and Restated Incentive Stock Option and Nonstatutory Stock Option Plan – January 1999 and form of Stock Option Agreement
10.18(14)	Amended and Restated Incentive Stock Option and Nonstatutory Stock Option Plan – July 2000
10.19(15)	Amendment dated May 16, 2002 to Amended and Restated Incentive Stock Option and Nonstatutory Stock Option Plan – July 2000
10.20(15)	Amendment dated July 18, 2002 to Amended and Restated Incentive Stock Option and Nonstatutory Stock Option Plan – July 2000
10.21(22)	Form of Restricted Stock Agreement under Amended and Restated Incentive Stock Option and Nonstatutory Stock Option Plan of the Company
10.22(22)	Form of Stock Option Agreement under Amended and Restated Incentive Stock Option and Nonstatutory Stock Option Plan of the Company
10.23(5)	Amended and Restated Employee Stock Purchase Plan – November 1996
10.24(14)	Amended and Restated Employee Stock Purchase Plan – July 2000
10.25(15)	Amendment dated July 18, 2002 to Amended and Restated Employee Stock Purchase Plan – July 2000
10.26(23)	Amendment dated May 15, 2003 to Amended and Restated Employee Stock Purchase Plan
10.27(14)	Amended and Restated Employee Stock Purchase Plan for Non-U.S. Employees – July 2000
10.28(23)	Amendment dated February 6, 2003 to Amended and Restated Non-U.S. Employee Stock Purchase Plan
10.29(23)	Amendment dated May 15, 2003 to Amended and Restated Non-U.S. Employee Stock Purchase Plan
10.30(8)	Employment Agreement dated November 15, 1989, between Embrex and Randall L. Marcuson
10.31(5)	Amendment to Employment Agreement dated May 21, 1996 between Embrex and Randall L. Marcuson
10.32(5)	Change In Control Severance Agreement dated May 21, 1996 between Embrex and Randall L. Marcuson
10.33(16)	Amendment to Change in Control Severance Agreement dated October 1, 1998 between Embrex and Randall L. Marcuson
10.34(8)	Employment Agreement dated October 16, 1989, between Embrex and Catherine A. Ricks
10.35(5)	Change In Control Severance Agreement dated May 21, 1996 between Embrex and Catherine A. Ricks
10.36(16)	Amendment to Change in Control Severance Agreement dated October 1, 1998 between Embrex and Catherine A. Ricks

10.37(2)	Terms and Conditions of Employment between Embrex Europe Limited and David M. Baines dated May 12, 1994
10.38(5)	Change In Control Severance Agreement dated June 9, 1996 between Embrex and David M. Baines
10.39(16)	Amendment to Change in Control Severance Agreement dated October 1, 1998 between Embrex and David M. Baines
10.40(5)	Letter Agreement and General Provisions to Employment Agreement dated August 20, 1996 between Embrex and Don T. Seaquist and Amendment to Employment Agreement dated September 9, 1996 between Embrex and Don T. Seaquist
10.41(5)	Change In Control Severance Agreement dated September 9, 1996 between Embrex and Don T. Seaquist
10.42(16)	Amendment to Change in Control Severance Agreement dated October 1, 1998 between Embrex and Don T. Seaquist
10.43(16)	Letter Agreement and General Provisions to Employment Agreement dated February 3, 1999 between Embrex and Brian C. Hrudka
10.44(16)	Change In Control Severance Agreement dated March 24, 1999 between Embrex and Brian C. Hrudka
10.45(25)	Letter Agreement and General Provisions to Employment Agreement dated June 2, 1997 between Embrex and Joseph P. O'Dowd
10.46(25)	Amendment to Employment Agreement dated May 1, 2001 between Embrex and Joseph P. O'Dowd
10.47(13)	Indemnification Agreement among Embrex, Randall L. Marcuson, Charles E. Austin, C. Daniel Blackshear, Lester M. Crawford, Peter J. Holzer, Kenneth N. May, and Arthur M. Pappas dated as of April 1, 1999
10.48(17)	Amendment to Indemnification Agreement among Embrex, John E. Klein and Walter V. Smiley dated as of May 17, 2001
10.49(17)	Amendment to Indemnification Agreement between Embrex and Dr. Ganesh M. Kishore, Ph.D., dated as of February 14, 2002
10.50(22)	Amendment to Indemnification Agreement among Embrex, Inc. and David L. Castaldi dated as of January 13, 2003
10.51(21)	Change In Control Severance Agreement dated April 12, 2002 between Embrex and Joseph P. O'Dowd
10.52(24)	Amendment to Change in Control Agreement dated September 4, 2003 between Embrex and Joseph P. O'Dowd
10.53(9)	Inovoject® Egg Injection System Lease, Limited License, Supply and Service Agreement dated September 1, 1994 between Embrex and Tyson Foods, Inc.
10.54(9)	Amendment dated March 26, 1997 to the Inovoject® Egg Injection System Lease, Limited License, Supply and Service Agreement dated September 1, 1994 between Embrex and Tyson Foods, Inc.
10.55(2)	Agreement dated as of January 22, 1996 between Embrex and Select
10.56(2)	Letter Agreement dated as of January 22, 1996 between Select and Embrex
10.57(2)	License dated as of January 22, 1996 granted by Select to Embrex
10.58(18)	Loan Agreement between Embrex and Branch Banking and Trust Company dated as of April 7, 1999
10.59(19)	License and Royalty Agreement between Embrex and Pfizer, Inc. and it Affiliates dated as of June 22, 2001
10.60(20)	Credit Agreement between Embrex and Advanced Automation, Inc. dated as of April 1, 2001
10.61(22)	Term Loan and Security Agreement between Embrex and Advanced Automation, Inc. dated as of April 30, 2003
10.62(22)	Services Agreement between Embrex and Advanced Automation, Inc. dated as of April 30, 2003
10.63(25)	Engineering, Procurement, and Construction Agreement dated November 26, 2002 between Embrex and Lockwood Greene E&C, L.L.C.
10.64(24)	Loan Agreement dated July 31, 2003 between Embrex and Branch Banking and Trust
10.65(24)	Promissory Note dated July 31, 2003 of Embrex issued in favor of Branch Banking and Trust

10.66(26)	BDA Production and Supply Agreement dated January 29, 2004 between Embrex and Charles River Laboratories, Inc. (asterisks located within the exhibit denote information that has been deleted pursuant to a request for confidential treatment filed with the Securities and Exchange Commission)
21	Subsidiaries
23	Consent of Ernst & Young LLP, independent register public accounting firm, to the incorporation of their report dated March 11, 2005 with respect to the consolidated financial statements and schedule of Embrex, Inc. and subsidiaries included in this Form 10-K and of their attestation report dated March 11, 2005, regarding management's assessment of the Company's internal control over financial reporting in the Registration Statements on Form S-3 (Registration Nos. 333-18231 and 333-31811), as filed with the Securities and Exchange Commission on December 19, 1996 and July 22, 1997, respectively, and into the Registration on Form S-8 (Registration Nos. 33-51582, 33-63318, 333-04109, 333-56279, 333-42676, 333-91304 and 333-105924), as filed with the Securities and Exchange Commission on September 1, 1992, May 25, 1993, May 20, 1996, June 8, 1998, July 31, 2000, June 27, 2002, and June 6, 2003, respectively.
24	Powers of Attorney (included in the signature page for this report)
31.1	Certification of Principal Executive Officer of Periodic Report Pursuant to Rule 13a-14(a) or Rule 15d-14(a)
31.2	Certification of Principal Financial Officer of Periodic Report Pursuant to Rule 13a-14(a) or Rule 15d-14(a)
32.1	Certification of Principal Executive Officer of Periodic Report Pursuant to Rule 13a-14(b) or Rule 15d-14(b) and 18 U.S.C. Section 1350
32.2	Certification of Principal Financial Officer of Periodic Report Pursuant to Rule 13a-14(b) or Rule 15d-14(b) and 18 U.S.C. Section 1350

(1) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for fiscal year ending December 31, 1991 and incorporated herein by reference

(2) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for the fiscal year ending December 31, 1995 and incorporated herein by reference

(3) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended June 30, 1996 and incorporated herein by reference

(4) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended September 30, 2000 and incorporated herein by reference

(5) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for the fiscal year ending December 31, 1996 and incorporated herein by reference

(6) Exhibit to the Company's Registration Statement on Form 8-A as filed with the Securities and Exchange Commission on March 22, 1996 and incorporated herein by reference

(7) Exhibit to the Company's Form 8-K as filed with the Securities and Exchange Commission on January 9, 2003 and incorporated herein by reference

(8) Exhibit to the Company's Registration Statement on Form S-1 as filed with the Securities and Exchange Commission (Registration No. 33-42482) effective November 7, 1991 and incorporated herein by reference

(9) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for the fiscal year ending December 31, 1997 and incorporated herein by reference

(10) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for the fiscal year ending December 31, 1999 and incorporated herein by reference

(11) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for the fiscal year ending December 31, 1992 and incorporated herein by reference

(12) Exhibit to the Company's Registration Statement on Form S-8 as filed with the Securities and Exchange Commission (Registration No. 333-56279) effective June 8, 1998 and incorporated herein by reference

(13) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended March 31, 1999 and incorporated herein by reference

(14) Exhibit to the Company's Form S-8 as filed with the Securities and Exchange Commission on July 31, 2000 and incorporated herein by reference

(15) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended June 30, 2002 and incorporated herein by reference

(16) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for the fiscal year ending December 31, 1998 and incorporated herein by reference

(17) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for the fiscal year ending December 31, 2001 and incorporated herein by reference

(18) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended June 30, 1999 and incorporated herein by reference

(19) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended June 30, 2001 and incorporated herein by reference

(20) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended September 30, 2001 and incorporated herein by reference

(21) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended March 31, 2003 and incorporated herein by reference

(22) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended June 30, 2003 and incorporated herein by reference

(23) Exhibit to the Company's Form S-8 as filed with the Securities and Exchange Commission on June 6, 2003 and incorporated herein by reference

(24) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended September 30, 2003 and incorporated herein by reference

(25) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for the twelve months ended December 31, 2002 and incorporated herein by reference

(26) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended March 31, 2004 and incorporated herein by reference

SIGNATURES AND POWER OF ATTORNEY

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

EMBREX, INC.

By: /s/ Randall L. Marcuson
Randall L. Marcuson
President and Chief Executive Officer

Date: March 15, 2005

We, the undersigned directors and officers of Embrex, Inc. (the "Company"), do hereby constitute and appoint Randall L. Marcuson and Don T. Seaquist or either of them, our true and lawful attorneys-in-fact and agents, with full power of substitution, to execute and deliver an Annual Report on Form 10-K pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Act"), with respect to the year ended December 31, 2004, to be filed with the Securities and Exchange Commission, and to do any and all acts and things and to execute any and all instruments for us and in our names in the capacities indicated below, which said attorneys-in-fact and agents, or either of them, may deem necessary or advisable to enable the Company to comply with the Act and any rules, regulations, and requirements of the Securities and Exchange Commission in connection with such Report, including without limitation the power and authority to execute and deliver for us or any of us in our names and in the capacities indicated below any and all amendments to such Report; and we do hereby ratify and confirm all that the said attorneys-in-fact and agents, or either of them, shall do or cause to be done by virtue of this power of attorney.

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

Signature	Title	Date
/s/ Randall L. Marcuson Randall L. Marcuson	President, Chief Executive Officer and Director	March 15, 2005
/s/ Don T. Seaquist Don T. Seaquist	Vice President, Finance and Administration (Principal Financial and Accounting Officer)	March 15, 2005
/s/ C. Daniel Blackshear C. Daniel Blackshear	Director	March 15, 2005
/s/ David L. Castaldi David L. Castaldi	Director	March 15, 2005
/s/ Peter J. Holzer Peter J. Holzer	Director	March 15, 2005
/s/ Ganesh M. Kishore, Ph.D. Ganesh M. Kishore, Ph.D.	Director	March 15, 2005
/s/ John E. Klein John E. Klein	Director	March 15, 2005

FINANCIAL STATEMENT SCHEDULE

SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS
EMBREX, INC. AND CONSOLIDATED SUBSIDIARIES

(In thousands)		ADDITIONS			
DESCRIPTION	BALANCE AT BEGINNING OF PERIOD	(1) CHARGED TO COSTS AND EXPENSES	(2) CHARGED TO OTHER ACCOUNTS	DEDUCTIONS	BALANCE AT END OF PERIOD
YEAR ENDED DECEMBER 31, 2004					
Allowance for doubtful accounts	$418	$45	0	(48)	415
Inventory valuation allowance	298	103	0	(105)	296
Warranty reserve	288	(122)	0	(30)	136
Amortization of intangible assets	410	185	12	(69)	538
Valuation allowance for deferred tax asset	288	231	0	0	519
Employee fringe benefit plan	320	1,825	0	(1,992)	153
YEAR ENDED DECEMBER 31, 2003					
Allowance for doubtful accounts	$247	$182	0	$(11)(a)	$418
Inventory valuation allowance	224	146	0	(72)	298
Warranty reserve	270	18	0	0	288
Amortization of intangible assets	275	135	0	0	410
Valuation allowance for deferred tax asset	1,963	0	0	(1,675)	288
Employee fringe benefit plan	220	1,914	0	(1,814)	320
YEAR ENDED DECEMBER 31, 2002					
Allowance for doubtful accounts	$171	$133(a)	0	$(57)(a)	$247
Inventory valuation allowance	222	73(a)	0	(71)(a)	224
Warranty reserve	218	52	0	0	270
Amortization of intangible assets	144	131(a)	0	0	275
Valuation allowance for deferred tax asset	4,791	0	0	(2,828)	1,963
Employee fringe benefit plan	280	1,501	0	(1,561)	220

(a) Specific account write offs, net of recoveries.

EXHIBIT INDEX

Exhibit Number	Description
3.1(1)	Restated Articles of Incorporation
3.2(2)	Articles of Amendment to Restated Articles of Incorporation, effective March 21, 1996
3.3(3)	Articles of Amendment to Restated Articles of Incorporation, effective May 28, 1996
3.4(4)	Amended and Restated Bylaws, effective September 21, 2000
4.1	Reference is made to Exhibits 3.1, 3.2, 3.3 and 3.4
4.2(5)	Specimen of Common Stock Certificate
4.3(6)	Rights Agreement dated as of March 21, 1996 between Embrex and Branch Banking and Trust Company, as Rights Agent
4.4(7)	Amendment to Rights Agreement dated as of January 6, 2003 between Embrex and Branch Banking and Trust Company, as Rights Agent
10.1(8)	License Agreement dated December 11, 1991, between Embrex and the National Technical Information Service, a Primary operating unit of the United States Department of Commerce
10.2(8)	Collaborative Research Agreement dated January 17, 1989 between Embrex and the University of Arkansas
10.3(8)	License Agreement dated October 1, 1998 between Embrex and the National Technical Information Service, a Primary operating unit of the United States Department of Commerce
10.4(8)	Lease Agreement dated December 9, 1986 between Embrex, as tenant, and Imperial Center Partnership and Petula Associates, Ltd., as landlord, as amended by First Amendment dated June 11, 1987, Second Amendment dated December 1, 1988, and Third Amendment dated May 2, 1989
10.5(9)	Lease for Royal Center II dated October 13, 1997 between the Company and Petula Associates, Ltd.
10.6(10)	Sublease Agreement dated October 1, 1999, between Embrex, as subtenant, and Wandel & Goltermann Technologies, Inc., as sublandlord
10.7(10)	First Amendment to Sublease Agreement dated February 29, 2000, among Wandel & Goltermann Technologies, Inc., Embrex and W & G Associates
10.8	Subtenant Non-Disturbance and Substitute Lease Agreement dated January 16, 2004 between Embrex and W & G Associates, L.P.
10.9	First Amendment to Substitute Lease Agreement dated October 1, 2004 between Embrex and W & G Associates, L.P.
10.10(8)	Unrestricted Grant Agreement dated November 1, 1986, between Embrex and North Carolina State University, as Amended by Amendment dated May 3, 1989, Amendment dated September 15, 1989, and Amendment dated April 22, 1991
10.11(8)	Basic Research Agreement dated October 24, 1989, between Embrex and University of Arkansas, as amended on October 23, 1990, February 1, 1991 and July 22, 1991
10.12(8)	1988 Incentive Stock Option Plan and form of Incentive Stock Option Agreement
10.13(8)	1991 Nonstatutory Stock Option Plan and form of Nonstatutory Stock Option Agreement
10.14(11)	Incentive Stock Option and Nonstatutory Stock Option Plan and forms of Stock Option Agreements – June 1993
10.15(3)	Amendment dated May 16, 1996 to Incentive Stock Option and Nonstatutory Stock Option Plan – June 1993
10.16(12)	Amended and Restated Incentive Stock Option and Nonstatutory Stock Option Plan – May 1998
10.17(13)	Amended and Restated Incentive Stock Option and Nonstatutory Stock Option Plan — January 1999 and form of Stock Option Agreement
10.18(14)	Amended and Restated Incentive Stock Option and Nonstatutory Stock Option Plan – July 2000

10.19(15)	Amendment dated May 16, 2002 to Amended and Restated Incentive Stock Option and Nonstatutory Stock Option Plan – July 2000
10.20(15)	Amendment dated July 18, 2002 to Amended and Restated Incentive Stock Option and Nonstatutory Stock Option Plan – July 2000
10.21(22)	Form of Restricted Stock Agreement under Amended and Restated Incentive Stock Option and Nonstatutory Stock Option Plan of the Company
10.22(22)	Form of Stock Option Agreement under Amended and Restated Incentive Stock Option and Nonstatutory Stock Option Plan of the Company
10.23(5)	Amended and Restated Employee Stock Purchase Plan – November 1996
10.24(14)	Amended and Restated Employee Stock Purchase Plan – July 2000
10.25(15)	Amendment dated July 18, 2002 to Amended and Restated Employee Stock Purchase Plan – July 2000
10.26(23)	Amendment dated May 15, 2003 to Amended and Restated Employee Stock Purchase Plan
10.27(14)	Amended and Restated Employee Stock Purchase Plan for Non-U.S. Employees – July 2000
10.28(23)	Amendment dated February 6, 2003 to Amended and Restated Non-U.S. Employee Stock Purchase Plan
10.29(23)	Amendment dated May 15, 2003 to Amended and Restated Non-U.S. Employee Stock Purchase Plan
10.30(8)	Employment Agreement dated November 15, 1989, between Embrex and Randall L. Marcuson
10.31(5)	Amendment to Employment Agreement dated May 21, 1996 between Embrex and Randall L. Marcuson
10.32(5)	Change In Control Severance Agreement dated May 21, 1996 between Embrex and Randall L. Marcuson
10.33(16)	Amendment to Change in Control Severance Agreement dated October 1, 1998 between Embrex and Randall L. Marcuson
10.34(8)	Employment Agreement dated October 16, 1989, between Embrex and Catherine A. Ricks
10.35(5)	Change In Control Severance Agreement dated May 21, 1996 between Embrex and Catherine A. Ricks
10.36(16)	Amendment to Change in Control Severance Agreement dated October 1, 1998 between Embrex and Catherine A. Ricks
10.37(2)	Terms and Conditions of Employment between Embrex Europe Limited and David M. Baines dated May 12, 1994
10.38(5)	Change In Control Severance Agreement dated June 9, 1996 between Embrex and David M. Baines
10.39(16)	Amendment to Change in Control Severance Agreement dated October 1, 1998 between Embrex and David M. Baines
10.40(5)	Letter Agreement and General Provisions to Employment Agreement dated August 20, 1996 between Embrex and Don T. Seaquist and Amendment to Employment Agreement dated September 9, 1996 between Embrex and Don T. Seaquist
10.41(5)	Change In Control Severance Agreement dated September 9, 1996 between Embrex and Don T. Seaquist
10.42(16)	Amendment to Change in Control Severance Agreement dated October 1, 1998 between Embrex and Don T. Seaquist
10.43(16)	Letter Agreement and General Provisions to Employment Agreement dated February 3, 1999 between Embrex and Brian C. Hrudka
10.44(16)	Change In Control Severance Agreement dated March 24, 1999 between Embrex and Brian C. Hrudka
10.45(25)	Letter Agreement and General Provisions to Employment Agreement dated June 2, 1997 between Embrex and Joseph P. O'Dowd
10.46(25)	Amendment to Employment Agreement dated May 1, 2001 between Embrex and Joseph P. O'Dowd
10.47(13)	Indemnification Agreement among Embrex, Randall L. Marcuson, Charles E. Austin, C. Daniel Blackshear, Lester M. Crawford, Peter J. Holzer, Kenneth N. May, and Arthur M. Pappas dated as of April 1, 1999

10.48(17)	Amendment to Indemnification Agreement among Embrex, John E. Klein and Walter V. Smiley dated as of May 17, 2001
10.49(17)	Amendment to Indemnification Agreement between Embrex and Dr. Ganesh M. Kishore, Ph.D., dated as of February 14, 2002
10.50(22)	Amendment to Indemnification Agreement among Embrex, Inc. and David L. Castaldi dated as of January 13, 2003
10.51(21)	Change In Control Severance Agreement dated April 12, 2002 between Embrex and Joseph P. O'Dowd
10.52(24)	Amendment to Change in Control Agreement dated September 4, 2003 between Embrex and Joseph P. O'Dowd
10.53(9)	Inovoject® Egg Injection System Lease, Limited License, Supply and Service Agreement dated September 1, 1994 between Embrex and Tyson Foods, Inc.
10.54(9)	Amendment dated March 26, 1997 to the Inovoject® Egg Injection System Lease, Limited License, Supply and Service Agreement dated September 1, 1994 between Embrex and Tyson Foods, Inc.
10.55(2)	Agreement dated as of January 22, 1996 between Embrex and Select
10.56(2)	Letter Agreement dated as of January 22, 1996 between Select and Embrex
10.57(2)	License dated as of January 22, 1996 granted by Select to Embrex
10.58(18)	Loan Agreement between Embrex and Branch Banking and Trust Company dated as of April 7, 1999
10.59(19)	License and Royalty Agreement between Embrex and Pfizer, Inc. and it Affiliates dated as of June 22, 2001
10.60(20)	Credit Agreement between Embrex and Advanced Automation, Inc. dated as of April 1, 2001
10.61(22)	Term Loan and Security Agreement between Embrex and Advanced Automation, Inc. dated as of April 30, 2003
10.62(22)	Services Agreement between Embrex and Advanced Automation, Inc. dated as of April 30, 2003
10.63(25)	Engineering, Procurement, and Construction Agreement dated November 26, 2002 between Embrex and Lockwood Greene E&C, L.L.C.
10.64(24)	Loan Agreement dated July 31, 2003 between Embrex and Branch Banking and Trust
10.65(24)	Promissory Note dated July 31, 2003 of Embrex issued in favor of Branch Banking and Trust
10.66(26)	BDA Production and Supply Agreement dated January 29, 2004 between Embrex and Charles River Laboratories, Inc. (asterisks located within the exhibit denote information that has been deleted pursuant to a request for confidential treatment filed with the Securities and Exchange Commission)
21	Subsidiaries
23	Consent of Ernst & Young LLP, independent registered public accounting firm, to the incorporation of their report dated March 11, 2005 with respect to the consolidated financial statements and schedule of Embrex, Inc. and subsidiaries included in this Form 10-K and of their attestation report dated March 11, 2005, regarding management's assessment of the Company's internal control over financial reporting in the Registration Statements on Form S-3 (Registration Nos. 333-18231 and 333-31811), as filed with the Securities and Exchange Commission on December 19, 1996 and July 22, 1997, respectively, and into the Registration on Form S-8 (Registration Nos. 33-51582, 33-63318, 333-04109, 333-56279, 333-42676, 333-91304 and 333-105924), as filed with the Securities and Exchange Commission on September 1, 1992, May 25, 1993, May 20, 1996, June 8, 1998, July 31, 2000, June 27, 2002, and June 6, 2003, respectively.
24	Powers of Attorney (included in the signature page for this report)
31.1	Certification of Principal Executive Officer of Periodic Report Pursuant to Rule 13a-14(a) or Rule 15d-14(a)
31.2	Certification of Principal Financial Officer of Periodic Report Pursuant to Rule 13a-14(a) or Rule 15d-14(a)
32.1	Certification of Principal Executive Officer of Periodic Report Pursuant to Rule 13a-14(b) or Rule 15d-14(b) and 18 U.S.C. Section 1350
32.2	Certification of Principal Financial Officer of Periodic Report Pursuant to Rule 13a-14(b) or Rule 15d-14(b) and 18 U.S.C. Section 1350

(1) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for fiscal year ending December 31, 1991 and incorporated herein by reference

(2) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for the fiscal year ending December 31, 1995 and incorporated herein by reference

(3) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended June 30, 1996 and incorporated herein by reference

(4) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended September 30, 2000 and incorporated herein by reference

(5) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for the fiscal year ending December 31, 1996 and incorporated herein by reference

(6) Exhibit to the Company's Registration Statement on Form 8-A as filed with the Securities and Exchange Commission on March 22, 1996 and incorporated herein by reference

(7) Exhibit to the Company's Form 8-K as filed with the Securities and Exchange Commission on January 9, 2003 and incorporated herein by reference

(8) Exhibit to the Company's Registration Statement on Form S-1 as filed with the Securities and Exchange Commission (Registration No. 33-42482) effective November 7, 1991 and incorporated herein by reference

(9) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for the fiscal year ending December 31, 1997 and incorporated herein by reference

(10) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for the fiscal year ending December 31, 1999 and incorporated herein by reference

(11) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for the fiscal year ending December 31, 1992 and incorporated herein by reference

(12) Exhibit to the Company's Registration Statement on Form S-8 as filed with the Securities and Exchange Commission (Registration No. 333-56279) effective June 8, 1998 and incorporated herein by reference

(13) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended March 31, 1999 and incorporated herein by reference

(14) Exhibit to the Company's Form S-8 as filed with the Securities and Exchange Commission on July 31, 2000 and incorporated herein by reference

(15) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended June 30, 2002 and incorporated herein by reference

(16) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for the fiscal year ending December 31, 1998 and incorporated herein by reference

(17) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for the fiscal year ending December 31, 2001 and incorporated herein by reference

(18) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended June 30, 1999 and incorporated herein by reference

(19) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended June 30, 2001 and incorporated herein by reference

(20) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended September 30, 2001 and incorporated herein by reference

(21) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended March 31, 2003 and incorporated herein by reference

(22) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended June 30, 2003 and incorporated herein by reference

(23) Exhibit to the Company's Form S-8 as filed with the Securities and Exchange Commission on June 6, 2003 and incorporated herein by reference

(24) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended September 30, 2003 and incorporated herein by reference

(25) Exhibit to the Company's Form 10-K as filed with the Securities and Exchange Commission for the twelve months ended December 31, 2002 and incorporated herein by reference

(26) Exhibit to the Company's Form 10-Q as filed with the Securities and Exchange Commission for the three months ended March 31, 2004 and incorporated herein by reference

EXHIBIT 21

EMBREX, INC.
SUBSIDIARIES

Name	Jurisdiction of Organization
Embrex Europe Limited	United Kingdom
Embrex Sales, Inc.	North Carolina
Embrex BioTech Trade (Shanghai) Co., Ltd.	People's Republic of China
Inovoject® do Brasil Ltda.	Brazil
Embrex France s.a.s.	France
Embrex Iberica	Spain
Embrex Poultry Health, LLC	North Carolina
Embrex de Mexico, S. de R.L. de C.V.	Mexico
Vaccination Services, S. de R.L. de C.V.	Mexico

EXHIBIT 23

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statements on Form S-3 (Nos. 333-18231 and 333-31811) and the Registration Statements on Form S-8 (Nos. 33-51582, 33-63318, 333-04109, 333-42676, 333-56279, 333-91304, and 333-105924) of Embrex, Inc. and in the related Prospectuses of our reports dated March 11, 2005 with respect to the consolidated financial statements and schedule of Embrex, Inc., management's assessment of the effectiveness of internal control over financial reporting, and the effectiveness of internal control over financial reporting of Embrex, Inc. included in this Annual Report (Form 10-K) for the year ended December 31, 2004.

/s/ Ernst & Young, LLP

Raleigh, North Carolina
March 11, 2005

EXHIBIT 31.1

CERTIFICATION

I, Randall L. Marcuson, certify that:

1. I have reviewed this annual report on Form 10-K of Embrex, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 15, 2005

/s/ Randall L. Marcuson
Randall L. Marcuson
President and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION

I, Don T. Seaquist, certify that:

1. I have reviewed this annual report on Form 10-K of Embrex, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 15, 2005

/s/ Don T. Seaquist
Don T. Seaquist
Vice President, Finance and Administration

EXHIBIT 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Embrex, Inc. (the "Company") on Form 10-K for the twelve months ended December 31, 2004 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Randall L. Marcuson, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to my knowledge, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

March 15, 2005

/s/ Randall L. Marcuson
Randall L. Marcuson
President and Chief Executive Officer

EXHIBIT 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Embrex, Inc. (the "Company") on Form 10-K for the twelve months ended December 31, 2004 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Don T. Seaquist, Vice President, Finance and Administration of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to my knowledge, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

March 15, 2005

/s/ Don T. Seaquist
Don T. Seaquist
Vice President, Finance and Administration

In 2004, we moved our sampling prototype for our gender sort system into a larger-scale research facility so that we can run larger quantities of eggs than we were able to do at Embrex. We plan to continue these larger-scale trials as we further refine the sampling apparatus and process. We continue to evaluate this project although our timelines were pushed out into 2007 for this complex, yet potentially breakthrough, system.

Now I'd like to turn my thoughts to Sarbanes-Oxley which, unfortunately, has turned into the third largest project at Embrex, behind Inovocox™ and gender sort. First, with regard to accounting for income taxes, for the 15-year period from 1988 through 2003, Embrex retained the services of Ernst & Young. However, because of newly legislated, augmented auditor independence requirements at year-end 2003, Ernst & Young ceased providing these services. At that time, we initiated a search for a tax analyst/manager in a highly competitive environment and filled that position in October 2004. Notwithstanding, the Company recorded adjustments to certain tax accounts which were brought to our attention by our independent auditors. Overall, we concluded that inadequate staffing and a lack of sufficient tax accounting expertise constituted a material weakness in internal controls over the preparation and review of Embrex's accounting for income taxes as of year-end 2004. In 2005, our efforts to correct this may include hiring additional in-house tax expertise or engaging independent external tax expertise, or both. Thankfully, that was the only material weakness identified.

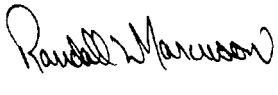
There were broader problems and costs associated with Sarbanes-Oxley compliance which have had a significant downside on Embrex and, I believe, other companies. In 2004, our spending related to Sarbanes-Oxley compliance, over which we had very little discretion, was approximately $1.5 million, or 33% of 2004 pre-tax income, or $0.18 per share on a pre-tax basis. If asked to estimate the true value of that expenditure in the context of improved documentation, processes and procedures that add value to Embrex's operation, we would say it was on the order of 20 to 30 percent of the full expenditure we have made. The opportunity cost associated with this is difficult to calculate, which leads me to believe that Sarbanes-Oxley has put us and the officers of smaller-cap public companies, generally, in conflict with their duty to act in the best interests of shareholders. In short, in a normal environment most of this expenditure is one that Embrex, in good conscience, would not have made.

Sarbanes-Oxley flies in the face of companies that have worked hard to be thrifty, have a high degree of creativity, a strong entrepreneurial sense, and a culture of taking initiative and being resourceful. Perhaps it is to be expected, given the environment in which the law was passed, as it assumes a company has problems and deficiencies and places no value on its employees,' management's, or Board of Directors' values of integrity, judgment, ethics, opportunity vs. risk, duty of care, reputation, mission or vision. One must prove innocence and create processes and structures to try to compensate for what might go wrong. We believe this legislation hurt our performance, put us in conflict with our responsibilities to shareholders to use our assets as we believe prudent, and created very little value for our customers, employees and shareholders. Consequently, until there is a better correlation between the cost and value, we believe companies like Embrex will continue to struggle with this regulatory burden. We believe shareholders are not served by a law that imposes a cost of compliance of this magnitude without differentiating between the sizes of companies.

Looking toward 2005, avian influenza throughout Asia remains a key unknown. Pre-outbreak levels of production have not recovered, although some increases in production are occurring in markets such as Thailand and Korea. We anticipate that production in Brazil will continue to grow and support our business there. Other areas in the world also show good signs, especially Mexico and certain countries in the Middle East. Our U.S. operation also has potential to grow since we signed new contracts, extended others, and as yet have experienced minimal impact from competition. In short, we are comfortable that our revenue will grow because we believe we are strongly positioned to deal with these challenges.

I offer my sincere thanks to the employees at Embrex who have toiled long and hard to focus on developing new products and expanding our business even as we undertook efforts to comply with the requirements of Sarbanes-Oxley. To our shareholders and customers–we thank you for your continued support and look forward to updating you on our progress in 2005, our 20th year.

Sincerely,



Randall L. Marcuson
President and Chief Executive Officer
Embrex, Inc.
March 21, 2005

Corporate Information

DIRECTORS

C. Daniel Blackshear
President and Chief Executive Officer
Carolina Turkeys

David L. Castaldi
Former Chairman and Chief Executive Officer
Cadent Medical Corporation

Peter J. Holzer
Chairman of the Board
Retired Executive Vice President
The Chase Manhattan Bank, NA

Ganesh Kishore, Ph.D.
Vice President of Science and Technology and Chief Biotechnology Officer
DuPont Company

John E. Klein
Executive Vice Chancellor for Administration
Washington University, St. Louis

Randall L. Marcuson
President and Chief Executive Officer
Embrex, Inc.

COMMITTEES

Compensation Committee
David L. Castaldi
Ganesh Kishore, Ph.D.
John E. Klein*

Audit Committee
C. Daniel Blackshear
Peter J. Holzer*
John E. Klein

Nominations Committee
C. Daniel Blackshear
David L. Castaldi
Peter Holzer*
Ganesh Kishore, Ph.D.

* Chairman

OFFICERS

David M. Baines, Ph.D.
Vice President, Global Sales

Brian C. Hrudka
Vice President, Latin America
Vice President, Marketing

Randall L. Marcuson
President and Chief Executive Officer

Joseph P. O'Dowd
Vice President, Global Product Development and Supply

Catherine A. Ricks, Ph.D.
Vice President, Research and Development

Don T. Seaquist
Vice President, Finance and Administration and Corporate Secretary

TRADEMARKS

Embrex®
The In Ovo Company®
Inovoject®
Bursaplex®
Egg Remover®
Vaccine Saver®
Newplex™
Inovocox™

CORPORATE OFFICES

Embrex, Inc.
P.O. Box 13989
Research Triangle Park, NC 27709-3989
Telephone (919) 941-5185
Fax (919) 941-5186
www.embrex.com
NASDAQ Ticker Symbol: EMBX

REGISTRAR AND TRANSFER AGENT

American Stock Transfer & Trust Company
Operations Center
6201 15th Avenue
Brooklyn, NY 11219
Toll-Free (888) 563-9653
Direct Line (718) 921-8143
Fax (718) 921-8116

INDEPENDENT AUDITORS

Ernst & Young LLP
Highwoods Tower One, Suite 700
3200 Beechleaf Court
Raleigh, NC 27604-1063

CORPORATE COUNSEL

Smith, Anderson, Blount, Dorsett, Mitchell & Jernigan LLP
2500 Wachovia Capitol Center
Raleigh, NC 27601

INVESTOR RELATIONS INQUIRIES

Ellen T. Moore
Vice President, Investor Relations and Corporate Communications
Embrex, Inc.
P.O. Box 13989
Research Triangle Park, NC 27709-3989
Telephone (919) 314-2561
Fax (919) 941-5186

ANNUAL MEETING OF SHAREHOLDERS

The annual meeting of shareholders will be held at 9 a.m., on May 19, 2005, at Embrex, Inc., 1040 Swabia Court, Durham, NC 27703. Directions are available at www.embrex.com.

This Annual Report of Embrex, Inc. consists of the following documents:

1. The accompanying material including financial highlights and the 2004 Letter to Our Shareholders

2. The accompanying Form 10-K for the Fiscal Year Ended December 31, 2004

Note: This Annual Report contains forward-looking statements. See Part I of the Form 10-K accompanying this Annual Report for further information.