

FORM 10-KSB

Annual Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the fiscal year ended December 31, 1999

Transition Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the transition period from ___to___

Commission File Number 0-27282

ATLANTIC TECHNOLOGY VENTURES, INC.
(Exact name of issuer as specified in its charter)

Delaware 36-3898269
(State or other jurisdiction of (IRS Employer
incorporation or organization) Identification No.)

150 Broadway Avenue, Suite 1009, New York, New York 10038 (Address
of principal executive offices, including zip code)

(212) 267-2503
(Issuer's telephone number)

Securities registered pursuant to Section 12(g) of the Exchange Act: None

Units, each consisting of one share of Common Stock and one Redeemable Warrant

Common Stock, \$.001 par value
Redeemable Warrants

Indicate by check mark whether the issuer (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 issuer 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-B is not contained herein, and will not be contained, to the best of issuer's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-KSB or any amendment to this Form 10-KSB. []

The issuer's revenues for the fiscal year ended December 31, 1999 were \$1,159,579

As of March 22, 2000 there were 5,054,539 outstanding shares of common stock, par value \$.001 per share.

The aggregate market value of the voting common stock of the issuer held by non-affiliates of the issuer on March 22, 2000 based on the closing price of the common stock as quoted by the Nasdaq SmallCap Market on such date was \$32,381,292.

Transitional Small Business Disclosure Format: Yes |_| No X

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PART I

ITEM 1. DESCRIPTION OF BUSINESS

GENERAL

We are engaged in the business of developing and commercializing early-stage technologies. Specifically, we aim to do the following:

- o identify early biomedical, pharmaceutical, electronic infrastructure, software, communications or other technologies that we believe could be commercially viable;
- o acquire proprietary rights to these technologies, either by license or by acquiring an ownership interest;
- o fund research and development of these technologies; and
- o bring these technologies to market, either directly or by selling or licensing these technologies to other companies willing to make the necessary investment to conduct the next level of research or seek required regulatory approvals.

We have in the past focused on biomedical and pharmaceutical technologies. We are currently developing three such technologies that we believe may be useful in treating a variety of diseases, including cancer, infectious disease, ophthalmic disorders, pain and inflammation.

We have, however, recently expanded our focus, and now seek to develop and commercialize a diverse portfolio of patented technologies. (Consistent with this, we recently changed our name from "Atlantic Pharmaceuticals, Inc." to our current name, "Atlantic Technology Ventures, Inc." Our letter of intent to acquire a 35% ownership interest in a company that is currently developing the next generation of high speed fiber optic communication technologies represents our first investment in an electronic infrastructure technology.

CORPORATE STRUCTURE

We were incorporated in Delaware on May 18, 1993. Each of our technologies is held either by Atlantic or by our subsidiaries Optex Ophthalmologics, Inc., or "Optex," and Gemini Technologies, Inc., or "Gemini."

We seek to minimize administrative costs, thereby maximizing the capital available for research and development. We do so by providing a centralized management team that oversees the transition of products and technologies from the early development stage to commercialization. In addition, we budget and monitor funds and other resources among Atlantic and our subsidiaries, thereby providing flexibility to allocate resources among technologies based on the progress of individual technologies. Optex and Gemini each have a separate Scientific Advisory Board composed of eminent scientists who provide us with advice and expertise on our research and development activities.

ATLANTIC AND ITS SUBSIDIARIES

Optex and the Catarex Technology

Background

One of the most common vision disorders is cataracts, or the clouding of the normally clear lens inside the eye. This results in increased glare, decreased vision, or both. Cataracts progressively degrade visual acuity, and restoring vision eventually requires that the affected lens be surgically extracted. Cataracts may exist at birth, may result from aging or may be caused by injury or disease. Cataract surgery is currently the most frequently performed therapeutic surgical procedure in the U.S. among persons over 65 years of age. Medicare pays \$3.4 billion a year for 1 million of the 1.3 million cataract procedures performed annually in the U.S. Each year approximately 3.6

million cataract surgeries are performed worldwide. According to the American Academy of Ophthalmology, the chances are 50% that a person between the ages of 52 and 64 will develop a cataract, and by age 75 almost everyone will develop a cataract. We anticipate that given the aging of the world population, the number of cataract removal procedures performed each year will increase in the near future.

Currently, there are two principal technologies that are widely used for cataract removal: extracapsular cataract extraction, or "ECCE," and phacoemulsification, or "phaco." Until relatively recently, most cataract procedures were done by means of ECCE, which is generally a simple and reliable procedure that can be used with cataracts of any density. The ECCE procedure requires direct surgical extraction of the entire lens nucleus in one step through an approximately 11 millimeter, or "mm," incision in the eye and an approximately 6mm opening in the lens capsule inside the eye. The residual cortical material (the softer material that surrounds the lens nucleus) is then removed using a mechanical irrigation/aspiration device. Once the lens is completely removed, an intraocular synthetic polymer lens is inserted into the eye and placed in the remaining portion of the lens capsule.

Although it is an effective procedure, ECCE has a number of disadvantages, including the time required for surgery, post-operative recovery and visual rehabilitation.

In a phaco procedure, the surgeon uses an ultrasound-emitting handpiece to sculpt or carve the lens nucleus. An incision of approximately 3mm to 5mm is made in the eye and an opening of approximately 5mm is made in the lens capsule. As these incisions are smaller than those required in ECCE procedures, patients generally recover faster, and also experience better post-operative results, due to a reduction in astigmatism induced by wound healing. Phaco, however, also has disadvantages. For one, performing a phaco procedure successfully requires considerable skill and much training. Also, the ultrasound energy used in, and stray fragments of the lens nucleus resulting from, a phaco procedure can damage the cells that line the inner layer of the cornea, which in turn can cause them to degenerate.

The Catarex Device and its Applications

Our majority-owned subsidiary, Optex, is developing the Catarex technology to overcome the limitations and deficiencies of traditional ECCE and phaco cataract extraction techniques. The Catarex device removes the lens nucleus and cortex in a single step through a small incision in the eye while leaving the lens capsule functionally intact. The Catarex device is inserted into the eye through an incision of less than 3mm and advanced into the lens capsule through a less than 1.5mm incision. Once positioned within the lens capsule, the device is activated and the lens nucleus and cortex are removed in a matter of minutes through the action of fluid vortex forces drawing the lens material to the device, where it is mechanically emulsified and aspirated. A synthetic lens would then be placed in the capsule; given the limitations of currently available intraocular lenses, the incision in the lens capsule would need to be slightly enlarged.

We believe that the Catarex device has several advantages over existing technologies that should facilitate its being accepted by the ophthalmic community:

- o If successfully developed, Catarex would allow the entire cataract, including the lens nucleus and cortex, to be removed through incisions in the eye and lens capsule that would be smaller than the incisions required in either ECCE or phaco procedures. We anticipate that this would reduce operating time and the trauma associated with operating, which in turn would speed recovery.
- o Speedier patient recovery would reduce the costs involved in cataract surgery, an important consideration in this era of managed care and cost containment.
- o We expect that cataract extraction using the Catarex device will leave the anterior lens capsule of the lens functionally intact, which would shield from damage the cells that line the inner surface of the cornea.
- o We expect that surgeons will find the Catarex device easier to master than phaco extraction, as the operating principles of the device eliminate the need for the skill-intensive sculpting required in the phaco procedure.
- o Studies have indicated that the Catarex device can be used on cataracts of all degrees of hardness.

- o Leaving the lens capsule functionally intact would permit the insertion of liquid polymer lenses, once they are developed. Liquid polymer lenses are lenses made of injectable substances that can be used to refill the original lens capsule. The use of injectable lenses in conjunction with lens extraction using the Catarex device could result in the Catarex device being used not only in cataract surgery, but also to treat all refractive errors, including myopia (nearsightedness), hyperopia (farsightedness) and presbyopia (the loss of near vision that occurs with age).

Research and Development Activities

The feasibility of cataract extraction using the Catarex device has been demonstrated in ex vivo bovine, porcine and human cataract preparations using a laboratory prototype of the device. In ex vivo studies using porcine eyes the eye was left intact and the lens nucleus and cortical material were removed through a less than 1.5mm capsulorexis (opening) in the anterior lens capsule. This prototype device was also demonstrated to be effective in removing the ocular lens in an in vivo study conducted in a model of a pig eye. The in vivo study demonstrated that the Catarex device was able to remove the lens rapidly and completely, and a pathology study found that there were no observed adverse effects on the structure of the eye. Optex has completed work on a functional clinical prototype of the Catarex device. This prototype has been tested in vivo in a porcine model and in a human cataract model developed by the scientific founders of Optex. In this model, the human cataract lens and lens capsule are removed intact and embedded in gelatin. The studies demonstrated the ability of the Catarex device to remove cataract lenses of a wide range of hardness while leaving the lens capsule functionally intact.

In May 1998, Optex entered into a development and licensing agreement pursuant to which it granted to Bausch & Lomb Surgical Incorporated, an affiliate of Bausch & Lomb which is a multinational ophthalmics company, a worldwide license to its rights to the Catarex device. Under this agreement, Bausch & Lomb is responsible for clinical testing, obtaining regulatory approval worldwide, and manufacturing and commercializing the Catarex device. In addition, Bausch & Lomb undertook to make up-front and milestone payments to Optex, as well as royalty payments on sales of the Catarex device, and is required to reimburse Optex for all of its costs, up to \$2.5 million, related to the initial phase of development of the Catarex device. As of December 31, 1999, Optex had received an up-front payment of \$2.5 million and more than \$2 million as reimbursement of costs related to this initial phase.

In September 1999, Optex and Bausch & Lomb Surgical amended this agreement. This amendment expanded Optex's role in development of the Catarex surgical device. In addition to the basic design work provided for in the original agreement, Optex is required to deliver to Bausch & Lomb within a stated period of time a number of Catarex devices for use in clinical trials, and is required to assist Bausch & Lomb in developing manufacturing processes for scale-up of manufacture of the Catarex device. Bausch & Lomb will reimburse Optex for all costs, including labor, professional services and materials, incurred by Optex in delivering these Catarex devices and performing manufacturing services, and will pay Optex a profit component based upon certain of those costs. Optex has budgeted at \$8 million its costs for the work to be performed by it under this amendment to the development and licensing agreement. This would result in Optex receiving a total of \$9.6 million from Bausch & Lomb pursuant to the amendment, \$1.6 million of which would be profit.

In November 1999, Optex was issued U.S. Patent No. 5,957,921, "Devices and Methods Usable for Forming Small Openings in the Lens Capsules of Mammalian Eyes." The new patent covers a device and system for creating small (less than 3mm, and preferably about 1mm in cross dimensions) openings in the anterior lens capsule of a mammalian eye to facilitate the removal of the lens nucleus and cortex. This device would work in tandem with the Catarex device, and would facilitate the use of liquid injectable replacement lenses, since it makes possible consistent reproducible small openings in the anterior lens capsule.

Bausch & Lomb is preparing to file a 510(k) with the U.S. Food and Drug Administration, or the "FDA," for the Catarex device. In a 510(k) filing, a company requests that the FDA treat a given technology as substantially equivalent to an already approved technology, the aim being to greatly speed up the approval process. We anticipate that in the second quarter of 2000 Bausch & Lomb will meet with the FDA to discuss this filing.

Competition

There are several large companies that have made significant investments in traditional cataract extraction technology, including phaco and ECCE equipment. Also, we are aware of several other companies that are developing cataract removal devices based on other technologies. We do not currently anticipate that these devices will offer any advantages over those foreseen for the Catarex device.

Proprietary Rights

Optex owns two U.S. patents and corresponding foreign applications covering the Catarex device and the method of using it for cataract removal, as well as a U.S. patent application and corresponding foreign applications covering a capsulorexis device to be used in conjunction with the Catarex device.

CT-3 Technology

Background

Agents for the treatment of pain and inflammation are among the most widely prescribed pharmaceutical products. Currently available analgesic (anti-pain) and anti-inflammatory drugs include narcotics, non-narcotic analgesics, corticosteroids and nonsteroidal anti-inflammatory drugs, or "NSAIDs." Although highly effective as analgesics, the usefulness of narcotics is limited by significant adverse effects, including their potential to cause addiction. In contrast, non-narcotic analgesics are safer but, due to their low potency, have limited usefulness in cases of severe chronic pain. Use of corticosteroids, which are highly effective as anti-inflammatory agents, is limited by their potentially significant side effects. Traditional NSAIDs, such as aspirin, ibuprofen and indomethacin, are generally safer than corticosteroids for long-term use, but they too can cause significant side effects when used chronically. While the newer NSAIDs categorized as COX-2 inhibitors, for example Celebrex (developed by G.D. Searle & Co.) and Vioxx (developed by Merck & Co.), are potentially less prone to cause ulcers than are traditional NSAIDs, they do not appear to be more effective for the relief of pain or inflammation.

Although a major focus of pharmaceutical research for many years has been the development of safe, powerful anti-inflammatory and analgesic drugs with minimal adverse side effects, no such universally safe and efficacious drug has been developed. A variety of compounds are in preclinical and early clinical development, but it is not evident that an acceptable combination of efficacy and safety has yet been achieved.

The CT-3 Technology and its Applications

We have proprietary rights to a group of compounds, one of which is currently designated "CT-3." Based upon the anti-inflammatory and analgesic properties exhibited in preclinical studies, we believe that this group of compounds may be potentially useful in the treatment of inflammation and pain. We also believe, based on preclinical studies, that this group of compounds has a reduced potential for side effects.

Of these compounds, we are currently developing CT-3, a synthetic derivative of a metabolite of tetrahydrocannabinol, or "THC." Animal studies have shown that CT-3 lacks the ulcer-causing side effects of NSAIDs. Animal studies using dosages significantly higher than the anticipated therapeutic dose of CT-3 have indicated a lack of central nervous system side effects (psychoactivity), and we believe that CT-3 provides anti-inflammatory and analgesic effects without the psychoactive effects of THC. Several in vitro studies have indicated that CT-3 acts by inhibiting a number of cytokines (mediators of inflammation) and we believe this mechanism of action is potentially useful for treating inflammation. We also believe that it is not yet known whether this compound is more clinically effective than traditional NSAIDs, corticosteroids, COX-2 inhibitors and the variety of potential competitor compounds in late preclinical and early clinical development. Several in vivo studies have tested the analgesic activity of CT-3 and the data available, to date, indicate that CT-3 could be as potent an analgesic as morphine. Furthermore, we believe the pain relief provided by CT-3 would not be accompanied by the adverse effects associated with morphine, such as constipation and the risk of becoming addicted. In addition, tests in an in vivo model of rheumatoid arthritis have shown CT-3 to have significant anti-inflammatory effects, including the potential to reduce the amount of joint destruction caused by rheumatism. The preliminary data on CT-3 makes

it an attractive candidate for development as an anti-inflammatory agent and an analgesic agent that potentially lacks the major side effects of traditional NSAIDs, corticosteroids and narcotics. Initially, we plan to develop an oral formulation of CT-3 as a treatment for acute pain and possibly acute inflammation. Later in the development process, we will study the long-term use of CT-3 for pain and inflammation.

Research and Development Activities

Atlantic is developing CT-3 as the lead compound in the series of patented compounds. CT-3 has been tested in many pre-clinical in vitro and in vivo studies to profile its potential activity and to evaluate its usefulness in treating medical conditions. This evaluation process is continuing with a focus on analgesic and anti-inflammatory processes. The results of these studies have been promising thus far. CT-3 was tested in an animal model of addiction in 1999 and did not demonstrate addictive properties.

We completed in 1999 a toxicology program required for entry into clinical trials. The results of the toxicity studies indicate that CT-3 poses a very low risk of unwanted effects in humans. We therefore plan to hold the first clinical trial in Europe during the second quarter of 2000. We believe it is important that we conduct Phase I studies to determine CT-3's potential for detrimental central nervous system effects. The first trial will specifically address CT-3's potential to produce central nervous system effects resembling those of THC.

In addition to pursuing clinical trials in Europe, Atlantic will file an Investigational New Drug application, or "IND," with the FDA for CT-3 by early in the second quarter of 2000. The design of the complete clinical program will require additional toxicology testing and formulation development prior to beginning large-scale clinical trials.

Competition

The market for the treatment of pain and inflammation is large and highly competitive. Several multinational pharmaceutical companies currently have many popular products in this market and many companies have active research programs to identify and develop more potent and safer anti-inflammatory and analgesic agents. One notable area of research is in the development of "COX-2 inhibitors" that are claimed to be safer to the stomach than available NSAIDs. (COX-2 inhibition is not considered a significant contributor to the mechanism of action of CT-3; in vitro studies have shown very weak COX-2 inhibition.) Two COX-2 inhibitor compounds have recently received FDA approval and several others are in various stages of clinical development. We believe that the potential advantages of CT-3 make it worth developing, and that if we succeed, CT-3 could become a significant new agent in the treatment of pain and inflammation.

We are in the process of identifying one or more strategic partners to assist in clinical development, regulatory approval filing, manufacturing and/or marketing of CT-3. We anticipate signing a contract by early in the second quarter of 2000 to begin Phase I clinical trials.

Proprietary Rights

We have an exclusive worldwide license to three U.S. patents, a provisional U.S. patent application and corresponding foreign applications covering a group of compounds, including CT-3. The licensor is Dr. Sumner Burstein, a professor at the University of Massachusetts. This license extends until the expiration of the underlying patent rights. The primary U.S. patent expires in 2012. We have the right under this license to sublicense our rights under the license. The license requires that we pay royalties to Dr. Burstein based on sales of products and processes incorporating technology licensed under the license, as well as a percentage of any income derived from any sublicense of the licensed technology. Furthermore, pursuant to the terms of the license, we must satisfy certain other terms and conditions in order to retain the license rights. If we fail to comply with certain terms of the license, our license rights under the license could be terminated.

Gemini and the 2-5A Antisense Technology

Gemini is developing a novel antisense technology that combines the 2'-5' oligoadenylate (2-5A) complex with standard antisense compounds to form a chimeric molecule (the "2-5A Chimeric Antisense Technology"). Two of the key components of the 2-5A system are 2-5A, a short oligoadenylate, and 2-5A dependent ribonuclease L (RNaseL), an enzyme found in most human cells. RNaseL becomes selectively activated after interacting with a 2-5A antisense chimera in the target cell. RNaseL then rapidly and selectively degrades the target RNA in the target cell.

The catalytic properties of the 2-5A Chimeric Antisense Technology increase the rate at which a targeted RNA molecule is degraded. We believe that the specificity and the catalytic properties of the 2-5A Chimeric Antisense Technology represent an improvement over existing antisense therapeutics under development by other companies. In addition, we believe that our 2-5A Chimeric Antisense Technology may be useful when combined with selected antisense therapeutics under development by third parties.

Background

Proteins carry out physiological functions of humans and microorganisms. For example, in infectious diseases, proteins of invading organisms mediate the infectious process, and in many malignancies, it is the presence of a defective/abnormal protein that causes a cell's abnormal growth. The instructions to produce all of the proteins in the human body are stored in the cell nuclei in the form of deoxyribonucleic acid ("DNA"). DNA contains the information that is the blueprint for protein molecules. In order to produce a protein, a cell must first copy the relevant information in the DNA into a messenger ribonucleic acid ("mRNA") molecule (a process known as transcription). Such information is conveyed by the precise sequence of the nucleotide chain comprising the mRNA molecule. Once the information is transcribed into a mRNA molecule, it is transported out of the cell's nucleus into the cytoplasm, where a process known as translation uses the information encoded by the mRNA to synthesize a protein. Like cells in the human body, viruses use DNA and RNA as their genetic material. Therefore, viruses could theoretically be stopped by targeting their genetic material with the use of specific antisense therapeutic agents.

One of the key properties of short nucleotide chains ("oligonucleotides") is the ability of complementary sequences ("sense" and "antisense") to bind to each other. This process is highly specific, with the specificity largely being determined by the sequence of the oligonucleotides involved.

The use of antisense molecules as therapeutics is a relatively new and experimental concept. Generally, antisense therapeutics alter the production of disease-causing proteins. They do so by binding specifically to targeted strands of mRNA or viral genomic RNA (the "sense"). In many pathological conditions, it is the information encoded by the mRNA (or genomic RNA) that is utilized to synthesize proteins involved in the causation and even the perpetuation of a disease. By utilizing the sequence of the target RNA, an antisense molecule (an "antisense oligonucleotide") capable of binding to the target RNA can be designed. The effect of this binding is to block the ability of the RNA to produce disease-causing proteins. The antisense that is bound to the RNA may directly impair the translation of the RNA into protein, or it may promote RNA degradation by attracting cellular enzymes known as ribonucleases (RNases) that cleave RNA. To date, only one such therapeutic has been approved by the FDA but several dozen antisense compounds are being utilized in human clinical trials by other companies and we expect that one or more of those companies will apply to the FDA for marketing approval within the next several years.

Research and Development Activities

We are currently considering strategies to maximize the potential of the 2-5A Chimeric Antisense Technology. We have conducted research at our own laboratory facilities and have sponsored research at the National Institutes of Health (the "NIH") focusing on two main objectives: (1) to advance basic research with the 2-5A Chimeric Antisense Technology in order to improve the knowledge base of the technology, efficiency of synthesis and to potentially increase its broad-potential ("platform") clinical utility and (2) to develop a potential lead product candidate for the treatment of Respiratory Syncytial Virus ("RSV") infection. Research to date has been conducted primarily in in vitro systems and has included studies of infectious diseases (RSV, herpes, human

immunodeficiency virus), certain cancers (chronic myelogenous leukemia, glioblastoma), conditions modulated by 5-alpha reductase and dihydrotestosterone receptors (acne and androgenic alopecia) and aspects of the interferon pathway that are mediated by PKR (a protein kinase enzyme).

Based on these data, we decided to initially focus more of our efforts on studies of RSV and telomerase, an enzyme believed to be critical for the growth and survival of some cancers. Data collected to date indicate that the molecule to be tested has greater in vitro potency than Ribavirin, one of two FDA-approved treatments for RSV infections (the other treatment is a monoclonal antibody recommended for use in high-risk infants only) and were published in The Proceedings of the National Academy of Sciences, a peer-reviewed research journal. The current molecule has also been shown to be stable against degradative enzymes and is capable of being absorbed into lung tissue when administered in a droplet formulation. The next step in development would be to conduct an in vivo proof-of-principle study, preferably in primates. We are currently exploring optimal manufacturing processes to produce sufficient quantities needed in an in vivo study. We anticipate, but we can give no assurance, that such a study would establish proof-of-efficacy in primates. Further in vivo studies will likely be necessary to firmly establish optimal dosing regimens. The lead compound against telomerase demonstrated convincing proof-of-concept in a limited in vivo (nude mice) model where human glioblastoma (the most common form of primary brain cancer) cells were transplanted into the animals. The data were subsequently published in Oncogene, a peer-reviewed journal dedicated to cancer research.

We believe that the current focus of our antisense program on primate-oriented RSV will allow us to more effectively pursue corporate partnerships to further the development of the 2-5A antisense technology. If we can complete such a partnership, the research and development of the technology may be expanded into some of the aforementioned and additional areas of potential clinical use.

Competition

Several biotechnology companies focus primarily on antisense technology and a number of multinational pharmaceutical companies have active research programs and/or collaborations in the area of antisense technology. We believe that these companies are potential partners rather than competitors, as data generated to date show that the 2-5A Chimeric Antisense Technology could, within collaborative arrangements, be used to boost the effectiveness of products from other companies. The 2-5A antisense technology acts to destroy targeted proteins by recruiting the natural enzyme RNase L. Other companies are developing products that recruit a related, but less adaptable enzyme, RNase H. We believe that the use of the RNase L enzyme will lead to greater effectiveness in a wide range of applications and will be easier to adapt to current and future scientific developments.

Antisense technology is still an experimental treatment and, to date, only one antisense product has been approved by the FDA or other regulatory agencies for clinical use.

Proprietary Rights

We have an exclusive worldwide sublicense from the Cleveland Clinic Foundation (the "Cleveland License") to a U.S. patent and related patent applications as well as corresponding foreign applications relating to 2-5A Chimeric Antisense Technology and its use for selective degradation of targeted RNA. The rights exclusively licensed to Gemini include rights obtained by the Cleveland Clinic through an interinstitutional agreement with the NIH, the co-owner of the patent rights. The Cleveland License extends until the expiration of the underlying patent rights. The Cleveland License provides for payment of royalties by Gemini to the Cleveland Clinic based on sales of products and processes incorporating technology licensed under the Cleveland License. A percentage of any income derived from any sublicense of the licensed technology will be paid to the Cleveland Clinic. Pursuant to the terms of the Cleveland License, Gemini must satisfy other terms and conditions in order to retain its license rights thereunder. A failure by the Cleveland Clinic to discharge its obligations to the NIH under the interinstitutional agreement, including an obligation by the Cleveland Clinic and Gemini to take effective steps to achieve practical application of the licensed technology, could cause the termination of the Cleveland License and, in turn, our access to the technology.

Channel Therapeutics, Inc.

Channel Therapeutics, Inc., a wholly-owned subsidiary of Atlantic, was the licensee under several patents and related patent applications covering the use of polyanionic cyclodextrins and their derivatives for the treatment and prevention of restenosis and late vein graft failure, two pathological conditions involving smooth muscle cell proliferation and migration. After an extensive review, we decided that while this technology had advanced under our direction, moving the technology to a clinical stage would have cost more money than we were willing to commit. Consequently, we have, pursuant to an agreement dated August 25, 1999, among Atlantic, Channel and the Trustees of the University of Pennsylvania, terminated the license agreement granting us rights to this technology. Pursuant to this termination agreement, Atlantic and Channel, on the one hand, and the University of Pennsylvania, on the other hand, released each other from any further obligations under the license agreement, and we paid the University of Pennsylvania a portion of the patent costs for which it was seeking reimbursement under the license agreement. Our terminating this license agreement has allowed us to focus our resources on technologies that offer significantly greater potential for near-term development and corporate partnerships.

Our Diversification Strategy

After considerable deliberation, our board of directors determined early in 2000 that it would be in the best interest of Atlantic and its stockholders to adopt a broader approach in selecting technologies to develop, and to consider investing in electronic infrastructure, software and communication technologies.

Consistent with this approach, effective March 21, 2000, Atlantic's name was changed from "Atlantic Pharmaceuticals, Inc." to its current name.

This broader approach is reflected in our entry into a letter of intent dated March 17, 2000, to acquire preferred stock representing a 35% ownership interest in a privately-held company that is currently developing next-generation high-speed fiber optic communications technologies.

This company is developing what Atlantic believes would be the world's fastest fiber optic transceiver. This groundbreaking technology is theoretically capable of time division multiplexing, or "TDM," digital data transmission speeds exceeding a Terabit, or a million million bits, per second on a single fiber optic channel, and is expected to be fully compatible with state-of-the-art dense wave division multiplexing methods, or "DWDM." By contrast, the newest state-of-the-art transceivers being introduced this year are capable of TDM digital data transmission speeds of 40 Gigabits, or one thousand million bits, per second on a single fiber optic channel, which is close to their theoretical electronic switching limit and 25 times slower than the proposed Terabit-per-second transceiver. This technology is protected by two issued U.S. patents, and several pending U.S.

and international patent applications.

The purchase price for our ownership interest is \$5 million in cash, 200,000 shares of our common stock and a warrant to purchase 200,000 shares of our common stock. Taking into account the cash purchase price and the value of the common stock at the signing of the letter of intent, we value this deal at \$6,795,000. The closing of this transaction, which is scheduled to occur in May 2000, is subject to our being satisfied with the results of our due diligence investigation, and is also subject to waiver by certain stockholders of the company of their right to have their shares represent a fixed ownership interest, regardless of future issuances of capital stock.

Of the \$5 million cash portion of the purchase price, we have paid \$250,000 into escrow, to be released once we have received the stockholder waivers referred to above. A further \$750,000 is payable at closing, with the remainder payable in four quarterly installments of \$1 million. If after closing we elect not to pay the balance of the cash purchase price, our ownership interest in the company would be reduced proportionately. The warrant would have a term of three years, and would be exercisable at \$8.975 per share of common stock, but only if the market price per share of our common stock is \$30 or more.

We do not currently have the full amount of the cash purchase price. We could raise the necessary amount through exercise of warrants, debt or equity financing, or any combination thereof. It is, however, possible that we will not be able to raise the entire amount, which would result in a reduction in our ownership interest.

EMPLOYEES

Atlantic currently has one employee, Dr. A. Joseph Rudick, our President. Optex has 12 full-time employees and two part time consultants; as it moves to fulfill its obligations under its agreement with Bausch & Lomb, it expects to increase the number of full-time employees to 24. Gemini

currently has three full time employees.

FORWARD-LOOKING STATEMENTS

The statements contained in this Annual Report on Form 10-KBS that are not historical are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, including statements regarding the expectations, beliefs, intentions or strategies regarding the future. We intend that all forward-looking statements be subject to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements reflect our views as of the date they are made with respect to future events and financial performance, but are subject to many risks and uncertainties, which could cause actual results to differ materially from any future results expressed or implied by such forward-looking statements. Examples of such risks and uncertainties include the risks detailed below. We do not undertake to update any forward-looking statements.

RISK FACTORS

Investing in our common stock is very risky, and you should be able to bear losing your entire investment. You should carefully consider the risks presented by the following factors.

Our Financial Condition and Need for Substantial Additional Funding

Our future profitability is uncertain.

We were incorporated in 1993, and we have incurred significant operating losses in each of our fiscal years since then. As of December 31, 1999, our accumulated deficit was \$18,790,099. We have not completed developing any of our products or generated any product sales. All of our technologies are in the research and development stage, which requires substantial expenditures. Our operating revenue of \$3,759,511 from inception through December 31, 1999 consists of up-front and milestone payments and development revenue, including a profit component, by Bausch & Lomb in connection with development of the Catarex device, and a government grant. Except for additional milestone payments, which we do not anticipate receiving until 2001 at the earliest, and further development revenue from Bausch & Lomb, we do not expect to generate any additional revenues in the near future. It is possible that we may not receive any additional payments from Bausch & Lomb. We expect to incur significant operating losses over the next several years, primarily due to continued and expanded research and development programs, including preclinical studies and clinical trials for our products and technologies under development, as well as costs incurred in identifying and, possibly, acquiring, additional technologies.

We will need additional funding, and it may not be available.

As of December 31, 1999, we had cash, cash equivalents and short-term investment balances of approximately \$3,473,321. We will require substantial additional resources to continue to develop and test our potential products, to obtain regulatory approvals, to manufacture and commercialize any products that we may develop, and to license new technologies.

We will need to obtain additional funding through public or private equity or debt financings, through collaborative arrangements or from other sources (including exercise of the warrants we have issued giving the holder the right to purchase shares of our capital stock for a stated exercise price). Additional financing sources may not be available on acceptable terms, if at all. If adequate funds are not available, we may need to reduce significantly our spending and delay, scale back or eliminate one or more of our research, discovery or development programs.

Our Operations

We depend on others to conduct clinical development, obtain regulatory approvals, and manufacture and commercialize our technologies.

We do not have the resources to directly conduct full clinical development, obtain regulatory approvals, manufacture or commercialize any of our proposed products and we have no current plans to acquire such resources. Our subsidiary, Optex, is party to a license and development agreement with Bausch & Lomb, and we anticipate that we may enter into additional collaborative agreements for the research and development, clinical testing, seeking of regulatory approval, manufacturing or commercialization of our proposed products. In addition, collaborative agreements we do enter into could limit our control over the resources devoted to these activities as well as our flexibility in considering alternatives for the commercialization of the products involved.

We may not succeed in developing commercially viable products.

To be profitable, we must, alone or with others, successfully commercialize our technologies. They are, however, in early stages of development, will require significant further research, development and testing, and are subject to the risks of failure inherent in the development of products based on innovative or novel technologies. Each of the following is possible with respect to any one of our products:

- o that we will not be able to maintain our current research and development schedules;
- o that, in the case of one of our pharmaceutical technologies or the Catarex device, we will not be able to enter into human clinical trials because of scientific, governmental or financial reasons, or encounter problems in clinical trials that will cause us to delay or suspend development of one of;
- o that it will be found to be ineffective or unsafe;
- o that it will fail to meet applicable regulatory standards; or
- o that it will fail to obtain required regulatory approvals.

Similarly, it is possible that, for the following reasons, we may be unable to commercialize any given technology, even if it is shown to be effective:

- o it is uneconomical;
- o in the case of one of our pharmaceutical technologies or the Catarex device, its is not eligible for third-party reimbursement from government or private insurers;
- o others hold proprietary rights that preclude us from commercializing it;
- o others have brought to market equivalent or superior products;
- o others have superior resources to market similar products or technologies; or
- o it has undesirable or unintended side effects that prevent or limit their commercial use.

Our ability to compete will suffer if we are unable to protect our patent rights and trade secrets or if we infringe the proprietary rights of third parties.

Our success will depend to a large extent on our ability to obtain U.S. and foreign patent protection for drug candidates and processes, preserve trade secrets and operate without infringing the proprietary rights of third parties.

To obtain a patent on an invention, one must be the first to invent it or the first to file a patent application for it. We cannot be sure that the inventors of subject matter covered by patents and patent applications that we own or license were the first to invent, or the first to file patent applications for, those inventions. Furthermore, patents we own or license may be challenged, infringed upon, invalidated, found to be unenforceable, or circumvented by others, and our rights under any issued patents may not provide sufficient protection against competing drugs or otherwise cover commercially valuable drugs or processes.

We seek to protect trade secrets and other unpatented proprietary information, in part by means of confidentiality agreements with our collaborators, employees, and consultants. If any of these agreements is breached, we may be without adequate remedies. Also, our trade secrets may become known or be independently developed by competitors.

Government regulations may prevent us from commercializing one or more of our technologies, or may delay commercialization or make it more expensive.

The federal government, principally the FDA, and comparable agencies in state and local jurisdictions and in foreign countries extensively and rigorously regulates all new drugs and medical devices, including our products and technologies under development. These authorities, particularly the FDA, impose substantial requirements upon preclinical and clinical testing, manufacturing and commercialization of pharmaceutical and medical device products.

There are many costly and time-consuming procedures required for approval of a new drug, including lengthy and detailed preclinical and clinical testing and validation of manufacturing and quality control processes. Several years may be needed to satisfy these requirements, and this time period may vary substantially depending on the type, complexity and novelty of the product candidate. Government regulation can delay or prevent marketing of potential products for a considerable period of time and impose costly procedures upon our activities. Moreover, the FDA or other regulatory agency may not grant approval for any products developed or not grant approval on a timely basis, and success in preclinical or early stage clinical trials does not assure success in later stage clinical trials.

Data obtained from preclinical and clinical activities are susceptible to varying interpretations. This could delay, limit or prevent regulatory approval. Even if regulatory approval of a product is granted, limitations may be imposed on the indicated uses of a product. Further, later discovery of previously unknown problems with a product may result in added restrictions on the product, including withdrawal of the product from the market. Any delay or failure in obtaining regulatory approvals would materially and adversely affect our business, financial condition and results of operations.

A drug and medical device manufacturer (either us or one of our third-party manufacturers) must conform to Good Manufacturing Practices, or "GMP," regulations, which the FDA enforces strictly through their facilities inspection programs. Contract manufacturing facilities must pass a pre-approval inspection of their manufacturing facilities before the FDA will approve a New Drug Application, or "NDA." Certain material manufacturing changes that occur after approval are also subject to FDA review and clearance or approval. FDA or other regulatory agencies may not approve the process or the facilities by which any of our products may be manufactured. Our dependence on others to manufacture our products may adversely affect our ability to develop and deliver products on a timely and competitive basis. If we are required to manufacture our own products we will be required to build or purchase a manufacturing facility, will be subject to the regulatory requirements described above, to similar risks regarding delays or difficulties encountered in manufacturing any such products and will require substantial additional capital. We may be unable to manufacture any such products successfully or in a cost-effective manner.

The FDA's policies may change and additional government regulations and policies may be instituted, both of which could prevent or delay regulatory approval of our potential products. Moreover, increased attention to the containment of health care costs in the U.S. could result in new government regulations that could materially and adversely affect our business. We are unable to predict the likelihood of adverse governmental regulations that could arise from future legislative or administrative action, either in the U.S. or abroad.

We will also be subject to a variety of foreign regulations governing clinical trials, registration and sales of our products. Regardless of whether FDA approval is obtained, approval of a product by comparable regulatory authorities of foreign countries must be obtained prior to marketing the product in those countries. The approval process varies from country to country and the time needed to secure approval may be longer or shorter than that required for FDA approval. Delays in the approval process or failure to obtain such foreign approvals would materially and adversely affect our business, financial condition and results of operations.

We depend upon our key license agreements.

With the exception of the Catarex technology, we have licensed our proprietary technology from others. If we do not meet our financial, development or other obligations under our license agreements in a timely manner, we could lose the rights to some or all of our proprietary technologies, which could materially and adversely affect our business and financial condition and results of operations. In addition, our rights to 2-5A are contingent on the Cleveland Clinic upholding its obligations to the National Institutes of Health with respect to 2-5A. We could lose our rights to 2-5A if the Cleveland Clinic fails to properly discharge its obligations to the National Institutes of Health.

We carry only a limited amount of product liability insurance.

If we develop and commercialize any products, through third-party arrangements or otherwise, we may be exposed to product liability claims. We intend to carry product liability insurance when we initiate the Phase I study of CT-3. Some of our license agreements require us to obtain product liability insurance when we begin clinical testing or commercialization of our proposed products and to indemnify our licensors against product liability claims brought against them as a result of the products developed by us. We may not be able to obtain such insurance at all, in sufficient amounts to protect us against such liability or at a reasonable cost. None of our licensors has made, nor is expected to make, any representations to us as to the safety or efficacy of the inventions covered by the license agreements or as to any products which may be made or used under rights granted therein. In addition, Optex is required to indemnify Bausch & Lomb for certain matters under the terms of their development and license agreement. Product liability claims brought against us or a party that we are obligated to indemnify could materially and adversely affect our business, financial condition and results of operations.

Any breach by us of environmental regulations could result in our incurring significant costs.

Federal, state and local laws, rules, regulations and policies govern our use, generation, manufacture, storage, air emission, effluent discharge, handling and disposal of certain materials and wastes. Although we believe that we have complied with these laws and regulations in all material respects and have not been required to take any action to correct any noncompliance, we may be required to incur significant costs to comply with environmental and health and safety regulations in the future. In addition, our research and development activities involve the controlled use of hazardous materials and we cannot eliminate the risk of accidental contamination or injury from these materials, although we believe that our safety procedures for handling and disposing of such materials comply with the standards prescribed by state and federal regulations. In the event of an accident, we could be held liable for any resulting damages and we do not have insurance to cover this contingency.

We may ultimately not consummate our proposed acquisition, or may end up acquiring a reduced ownership interest.

We have signed a letter of intent to acquire preferred stock representing a 35% ownership interest of a privately-held company that is developing certain fiber optic technology. See "Business--Atlantic and Its Subsidiaries--Our Diversification Strategy." This acquisition is, however, subject to our being satisfied with the results of our due diligence investigation, and is also subject to waiver by certain stockholders of the company of their right to have their shares represent a fixed ownership interest, regardless of future issuances of capital stock. Also, we do not currently have the full amount of the cash purchase price. We intend to raise the necessary capital through debt or equity financing, or a combination of both. It is, however, possible that we will not be able to raise the required amount. If the acquisition closes, and we are unable to raise the full amount of the cash purchase price, our ownership interest would be proportionately reduced.

Our Securities

Holders of our Series A preferred stock have rights superior to those of the holders of our common stock.

Holders of shares of our outstanding Series A preferred stock can convert each share into 3.27 shares of our common stock without paying any cash to us. The conversion price of the Series A preferred stock is \$3.06 per

share. Both the conversion rate and the conversion price may be adjusted in favor of the holders of the Series A preferred stock upon certain triggering events. Accordingly, the number of shares of common stock that holders of the Series A preferred stock receive upon conversion may increase, which could adversely affect the prevailing market price of our other securities.

In addition, each February 7th and August 7th we are obligated to pay dividends, in arrears, to the holders of the Series A preferred stock, and the dividends consist of 0.065 additional shares of Series A preferred stock for each outstanding share of Series A preferred stock. Our obligation to issue additional shares of Series A preferred stock without payment of any cash to us could adversely affect the prevailing market price of our other securities.

If we are liquidated, sold to or merged with another entity (and we are not the surviving entity after the merger), we will be obligated to pay the holders of the Series A preferred stock a liquidation preference of \$13.00 per share before any payment is made to the holders of the common stock. After payment of the liquidation preference, we might not have any assets remaining to pay the holders of the common stock. The liquidation preference could adversely affect the market price of our other securities.

We need to obtain the approval of a supermajority (66.67%) of the outstanding shares of the Series A preferred stock, voting separately as a class, to approve certain actions that we may wish to take. Accordingly, if we are unable to obtain the required approval on a timely basis from the holders of the Series A preferred stock, our ability to conduct business may be impaired.

The holders of the Series A preferred stock have rights in addition to those summarily described above. A complete description of the rights of the Series A preferred stock is contained in the Certificate of Designations for the Series A preferred stock filed with the Secretary of State of the State of Delaware and attached hereto as an exhibit.

Our capitalization structure may adversely affect the price of our common stock and impede our ability to obtain additional funding.

As of December 31, 1999, our outstanding convertible securities (other than those relating to the Series A preferred stock), both vested and unvested, were convertible into 4,017,950 shares of common stock at prices ranging from \$1.00 to \$10.00 per share. As of December 31, 1999, there were outstanding 610,088 shares of Series A preferred stock and warrants to purchase 117,195 shares of Series A preferred stock, which may be converted into shares of common stock at a conversion rate of 3.27 shares of common stock for each share of Series A preferred stock. Exercise of these convertible securities or conversion of the Series A preferred stock into shares of common stock may adversely affect the market price of the common stock as well as the market price of our publicly-traded warrants.

The Certificate of Designations of the Series A preferred stock provides that we may not issue securities that have superior rights to the Series A preferred stock without the consent of the holders of the Series A preferred stock. Accordingly, so long as these convertible securities remain unexercised and shares of the Series A preferred stock remain unconverted, the terms under which we could obtain additional funding, if at all, may be adversely affected.

Our redeeming the redeemable warrants could cause holders to exercise their warrants at an inopportune time, or result in holders forfeiting their right to exercise their warrants.

Under certain conditions, we may redeem our redeemable warrants. If we state our intention to do so, that could encourage holders to exercise their redeemable warrants and pay the exercise price at a time when it may be disadvantageous for them to do so, to sell their redeemable warrants at the current market price when they might otherwise wish to hold their redeemable warrants, or to accept the redemption price, which may be substantially less than the market value of the redeemable warrants at the time of redemption. Holders of redeemable warrants will automatically forfeit their rights to purchase the shares of common stock issuable upon exercise of the redeemable warrants unless the redeemable warrants are exercised before they are redeemed.

The value of our redeemable warrants may suffer if a prospectus covering the underlying shares of common stock is not kept effective and current or if the underlying shares are not registered in those states in which the securities are to be offered.

A holder of any of our redeemable warrants has the right to exercise them for the purchase of shares of common stock only if we have filed with the Commission a current prospectus covering the resale of the shares of common stock issuable upon exercise of the redeemable warrants and only if the resale of the shares of common stock has been registered or qualified, or is deemed to be exempt from registration or qualification under the securities laws of the state of residence of the holder of the redeemable warrant. We have filed and have undertaken to keep effective and current a prospectus permitting the purchase and sale of the common stock underlying the redeemable warrants, but we cannot assure you that we will be able to keep the prospectus effective and current. Although we intend to seek to qualify for sale the resale of the shares of common stock underlying the redeemable warrants in those states in which the securities are to be offered, no assurance can be given that this qualification will occur. The redeemable warrants may be deprived of any value if a prospectus covering the shares of common stock issuable upon the exercise thereof is not kept effective and current or if the underlying shares are not, or cannot be, registered in the applicable states.

Delisting from Nasdaq and the resulting market illiquidity could adversely affect our ability to raise funds.

Although our common stock, redeemable warrants and the units offered in our initial public offering are quoted on the Nasdaq SmallCap Market, continued inclusion of those securities on Nasdaq will require the following:

- o that we maintain at least \$2,000,000 in net tangible assets;
- o that the minimum bid price for the common stock be at least \$1.00 per share;
- o that the public float consist of at least 500,000 shares of common stock, valued in the aggregate at more than \$1,000,000;
- o that the common stock have at least two active market makers;
- o that the common stock be held by at least 300 holders; and
- o that we adhere to certain corporate governance requirements.

If we are unable to satisfy these maintenance requirements, our securities may be delisted from Nasdaq. The risk of our being delisted will increase in the event we close our proposed acquisition of a 35% ownership interest in a privately-held company that is currently developing next-generation high-speed fiber optic communications technologies. See "Business--Atlantic and Its Subsidiaries--Our Diversification Strategy."

If we were to be delisted, trading, if any, in the securities would thereafter be conducted in the over-the-counter market in the "pink sheets" or the National Association of Securities Dealers' "Electronic Bulletin Board." Consequently, the liquidity of our securities could be materially impaired, not only in the number of securities that could be bought and sold at a given price, but also through delays in the timing of transactions and reduction in security analysts' and the media's coverage of us, which could result in lower prices for our securities than might otherwise be attained and could also result in a larger spread between the bid and asked prices for our securities. In addition, if our securities were delisted it could materially and adversely affect our ability to raise funding.

In addition, if our securities are delisted from trading on Nasdaq and the trading price of our common stock is less than \$5.00 per share, our common stock would be a "penny stock." Broker-dealers who sell penny stocks must provide purchasers of these stocks with a standardized risk-disclosure document prepared by the Commission. It provides information about penny stocks and the nature and level of risks involved in investing in the penny-stock market. A broker must also give a purchaser, orally or in writing, bid and offer quotations and information regarding broker and salesperson compensation, make a written determination that the penny stock is a suitable investment for the purchaser, and obtain the purchaser's written agreement to the purchase. In the event our securities are delisted, the penny stock rules may make it difficult for you to sell your shares of our stock. Because

of the rules, there is less trading in penny stocks. Also, many brokers choose not to participate in penny stock transactions.

Our securities are relatively illiquid compared to securities traded on the principal trading markets.

Our securities are traded on the Nasdaq SmallCap Market and lack the liquidity of securities traded on the principal trading markets. Accordingly, an investor may be unable to promptly liquidate an investment in our securities. Similarly, the sale of a larger block of our securities could depress the price of our securities to a greater degree than a company that typically has a higher volume of trading in its securities.

Our stock price has been and may continue to be volatile.

The securities markets have, from time to time, experienced significant price and volume fluctuations that may be unrelated to the operating performance of particular companies or industries. Thus, the market price of our securities, like the stock prices of many publicly traded biotechnology and smaller companies, has been and may continue to be especially volatile. Announcements regarding technological innovations, regulatory matters, new commercial products by us or our competitors, developments or disputes concerning patent or proprietary rights, publicity regarding actual or potential medical results relating to products under development by us or our competitors, regulatory developments in both the U.S. and foreign countries, public concern as to the safety of pharmaceutical products and economic and other external factors, as well as continued operating losses by us and period-to-period fluctuations in our financial results may have a significant impact on the market price of our securities.

Item 2. Description of Property

During 1999, Atlantic's executive offices were relocated from Raleigh, North Carolina to New York City. On February 1, 2000, we moved into new offices at 150 Broadway Avenue, Suite 1009, New York, New York 10038. The lease for this space is for a term of two years with a monthly lease payment of \$967.

Optex leases space at 27452 Calle Arroyo, San Juan Capistrano, California 92675. The lease, which commenced August 1999, is for a term of three years with a monthly lease payment of \$5,598. Optex has also leased space at the same location commencing November 2000 for a term of one year, with a monthly lease payment of \$7,623.

Gemini leases space at 11000 Cedar Avenue, Cleveland, Ohio 44106. The lease, which commenced October 1, 1997, is for a term of three years with a monthly lease payment of \$1,871.

We believe that our existing facilities are adequate to meet its current requirements and that our existing insurance coverage adequately covers its interest in its leased spaces. We do not own any real property.

ITEM 3. LEGAL PROCEEDINGS

There are no current or pending legal proceedings to which Atlantic or any of its subsidiaries is a party or to which any of their properties is subject other than the following.

Litigation Brought by Christopher R. Richied

On May 13, 1999, Christopher R. Richied filed suit against a group of defendants, including Atlantic, in the U.S. District Court for the Southern District of New York. This lawsuit is described in our Quarterly Report on Form 10-QSB for the quarterly period ended June 30, 1999 and September 30, 1999.

The parties are currently engaged in factual and expert-related discovery. Atlantic and all other defendants in this action are being jointly represented by the Wilmington, Delaware office of the law firm Skadden, Arps, Slate,

Meagher & Flom LLP. We believe that the asserted claims are without merit and intend to defend vigorously the action instituted by the plaintiff. We further believe that the outcome of this suit will not be material to us.

Settlement of Litigation Brought by Stephen R. Miller and Margaret A. Schalk

Pursuant to a settlement agreement dated January 22, 2000, we settled the litigation brought against us by Stephen R. Miller and Margaret A. Schalk. This lawsuit is more fully described in Atlantic's Quarterly Reports on Form 10-QSB for the quarterly periods ended June 30, 1999 and September 30, 1999. In exchange for a full release, we made a lump-sum settlement payment of \$77,083.30 and \$56,250 to Dr. Miller and Ms. Schalk, respectively, plus an aggregate of \$26,000 in payment of their legal fees. These amounts equal less than the severance payments provided for in Dr. Muller's and Ms. Schalk's offer letters, which in the aggregate would have amounted to \$138,750, in the case of Dr. Miller, and \$101,250, in the case of Ms. Schalk. In the lawsuit we maintained that we would, in connection with our closing of the Raleigh, North Carolina office, have made the severance payments required under the offer letters if Dr. Miller and Ms. Schalk had not, in our view, terminated their employment voluntary.

Item 4. Submission of Matters to a Vote of Security Holders

None.

PART II

Item 5. Market for Common Equity and Related Stockholder Matters

Our common stock listed on the Nasdaq SmallCap Market. The following table sets forth the high and low closing price for our common stock as quoted, in U.S. dollars, by Nasdaq during each quarter within the last two fiscal years:

| Quarter Ended | High | Low |
|--------------------|---------|---------|
| March 31, 1998 | \$6.75 | \$4.875 |
| June 30, 1998 | \$7.81 | \$3.813 |
| September 30, 1998 | \$4.813 | \$1.438 |
| December 31, 1998 | \$1.969 | \$1.25 |
| March 31, 1999 | \$2.625 | \$1.375 |
| June 30, 1999 | \$1.75 | \$1.125 |
| September 30, 1999 | \$2.25 | \$1.188 |
| December 31, 1999 | \$1.875 | \$1.313 |

The number of holders of record of our common stock as of March 22, 2000 was 117. The number of beneficial stockholders of our common stock as of January 21, 2000 was 1,236.

We have not paid or declared any dividends on our common stock and we do not anticipate paying dividends on our common stock in the foreseeable future. The Certificate of Designations for our Series A preferred stock provides that we may not pay dividends on our common stock unless a special dividend is paid on our Series A preferred stock.

Item 6. Management's Discussion and Analysis OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

OVERVIEW

We were incorporated in Delaware on May 18, 1993 and commenced operations on July 13, 1993. We are engaged in the development of biomedical and pharmaceutical products and technologies. We have rights to three technologies which we believe may be useful in the treatment of a variety of diseases, including cancer, infectious disease, ophthalmic disorders, pain and inflammation. Our existing products and technologies under development are each held either by us or our subsidiaries. We have been unprofitable since inception and expect to incur substantial additional operating losses over the next several years. The following discussion and analysis should be read in conjunction with the financial statements and notes thereto appearing elsewhere in this Form 10-KSB.

RESULTS OF OPERATIONS

1999 Versus 1998

From the commencement of operations through December 31, 1999, we have generated \$3,759,511 of revenue.

During 1999, Optex's agreement with Bausch & Lomb was amended to include a profit component. Fees earned from the date of the amendment, are presented in our financial statements as development revenue. Prior to the date of the amendment in September 1999, reimbursements from Bausch & Lomb were treated as a reduction of

expenses and totaled \$2,276,579 since the inception of the Bausch & Lomb agreement. Reimbursements made under the Bausch & Lomb agreement in 1999 reduced our research and development expenses by \$1,044,708 and general and administrative expenses by \$184,360. Net general and administrative expenses for the year ended December 31, 1999 were \$1,823,915 as compared to \$2,668,508 for the corresponding period in 1998, and consisted primarily of expenses associated with corporate operations, legal, finance and accounting, human resources and other general operating costs. The primary reason for this decrease in 1999 was attributable to a general reduction in corporate overhead associated with reduced corporate staffing, patent prosecution fees, advertising and travel expenses.

Research and development expenditures consist primarily of costs associated with research and development personnel; the costs to operate our research and development laboratories; payments made under our license agreements, sponsored research agreements, research agreements with institutes and consultants' agreements to its licensors, its scientific collaborators, research institutes and its consultants; and costs related to patent filings and maintenance. Research and development expenses, inclusive of license fees, were \$1,957,299 for the year ended December 31, 1999 as compared to \$3,036,355 for the corresponding period in 1998. These amounts are net of reimbursements from Bausch & Lomb of \$1,044,708 in 1999 and \$899,936 in 1998. The decrease in research and development expenses in 1999 was attributable to reduced research and development activities for all of our technologies except for the Catarex technology being developed by Optex, with respect to which increased development work was offset by higher reimbursement from Bausch & Lomb. The reduction in activity also included the termination of the license agreement between Channel and the Trustees of the University of Pennsylvania. We anticipate initiating a clinical Phase I study by early in the second quarter of 2000 for the further development of our CT-3 compound. Additionally, development activity at Optex will continue as planned during the year 2000.

Interest income in 1999 was \$292,630 compared to \$451,335 in 1998. The decrease was attributable to less investment amounts.

1998 Versus 1997

In accordance with the Bausch & Lomb Agreement, Bausch & Lomb reimbursed Optex in the amount of \$1,047,511 for Optex's costs related to the development of the Catarex technology and incurred since the date of the Agreement. This reimbursement reduced our research and development expenses by \$899,936 and general and administrative expenses by \$147,575.

General and administrative expenses for the year ended December 31, 1998 were \$2,816,083 (net general and administrative expense was \$2,668,508 after deduction of the Bausch & Lomb reimbursement in the amount of \$147,575) as compared to \$2,838,331 for the corresponding period in 1997, and consisted primarily of expenses associated with corporate operations, legal, finance and accounting, human resources and other general operating costs. In connection with the resignation of the former Chief Executive Officer and President, Jon D. Lindjord, we recognized an expense for fiscal 1998 of \$140,833 for severance pay in the form of six months of salary continuation during fiscal 1999.

Research and development expenditures consist primarily of the costs of research and development personnel; the costs to operate our research and development laboratories; payments made under our license agreements, sponsored research agreements, research agreements with institutes and consultants' agreements to our licensors, our scientific collaborators, research institutes and our consultants; and costs related to patent filings and maintenance. Research and development expenses, inclusive of license fees, were \$3,936,291 (net research and development expense was \$3,036,355 after deduction of the Bausch & Lomb reimbursement in the amount of \$899,936) for the year ended December 31, 1998, as compared to \$2,560,584 for the corresponding period in 1997.

Our cumulative net loss since inception through December 31, 1999, was \$18,790,099.

LIQUIDITY, CAPITAL RESOURCES AND PLAN OF OPERATIONS

Our available working capital and capital requirements will depend upon numerous factors, including progress of our research and development programs; progress and cost of ongoing and planned preclinical and clinical testing; timing and cost of obtaining regulatory approvals; the cost of filing, prosecuting, defending and enforcing patent claims and other intellectual property rights; competing technological and market developments; changes in our existing collaborative and licensing relationships; levels of resources that we devote to the development of manufacturing and commercializing capabilities; technological advances; status of competitors; our ability to establish collaborative arrangements with other organizations; our need to purchase additional capital equipment.

We anticipate that our current resources, together with proceeds from the Bausch & Lomb agreement, will be sufficient to finance our currently anticipated needs for operating and capital expenditures for at least the next twelve months. In addition, we will attempt to generate additional capital through a combination of collaborative agreements, strategic alliances and equity and debt financing. However, we can give no assurance that we will be able to obtain additional capital through these sources or upon terms acceptable to us.

In September 1999, the Bausch & Lomb agreement was amended to provide for an expanded role for Optex in development of the Catarex surgical device. Under the agreement as amended, Optex, in addition to the basic design work provided for in the original agreement, is required to deliver to Bausch & Lomb within a stated period Catarex devices for use in clinical trials, and is required to assist Bausch & Lomb in connection with development of manufacturing processes for scale-up of manufacture of the Catarex device. This increased role in the development of the Catarex device will expedite introduction of this innovative product in the marketplace.

Additionally, Bausch & Lomb will reimburse Optex for all costs, including labor, professional services and materials, incurred by Optex in delivering those Catarex devices and performing manufacturing services, and will pay Optex a profit component based upon certain of those costs. Optex has budgeted at \$8 million its costs for the work to be performed by it under the amendment; this would result in it receiving a total of \$9.6 million from Bausch & Lomb pursuant to the amendment, \$1.6 million of which would be profit.

During 1999, we recorded development revenue from the amended agreement in the amount of \$1,082,510.

Until required for operations, our policy is to keep our cash reserves in bank deposits, certificates of deposit, commercial paper, corporate notes, U.S. government instruments and other investment-grade quality instruments.

At December 31, 1999, we had \$3,402,809 in cash and cash equivalents and working capital of \$3,285,299. We are also obligated, and contingently obligated, under consulting and lease agreements to pay certain amounts in the future. See Note 12 of Notes to Consolidated Financial Statements.

We are party to a letter of intent dated March 17, 2000, to acquire preferred stock representing a 35% ownership interest in a privately-held company that is currently developing next-generation high-speed fiber optic communications technologies. The purchase price for our ownership interest is \$5 million in cash, 200,000 shares of our common stock and a warrant to purchase 200,000 shares of our common stock. The closing of this transaction, which is scheduled to occur in May 2000, is subject to our being satisfied with the results of our due diligence investigation, and is also subject to waiver by certain stockholders of the company of their right to have their shares represent a fixed ownership interest, regardless of future issuances of capital stock.

Of the \$5 million cash portion of the purchase price, we have paid \$250,000 into escrow, to be released once we have received the stockholder waivers referred to above. A further \$750,000 is payable at closing, with the remainder payable in four quarterly installments of \$1 million. If after closing we elect to not to pay the balance of the cash purchase price, our ownership interest in the company would be reduced proportionately. The warrant would have a term of three years, and would be exercisable at \$8.975 per share of common stock, but only if the market price of our common stock is \$30 or more.

We do not currently have the full amount of the cash purchase price. If the market price of our common stock permits it, we intend to redeem our redeemable warrants, which would encourage the holders to exercise the warrants, thereby providing us with capital that we could apply towards the cash purchase price. Alternatively, we could raise the necessary amount through debt or equity financing, or a combination of both. It is, however, possible that we will not be able to raise the required amount.

RECENTLY ISSUED ACCOUNTING STANDARDS

In December 1999, the staff of the Commission issued Staff Accounting Bulletin or "SAB" No. 101, Revenue Recognition in Financial Statements. SAB No. 101 summarizes certain of the staff's views in applying generally accepted accounting principles to revenue recognition in financial statements, including the recognition of non-refundable fees received upon entering into arrangements. We are in the process of evaluating this SAB and the effect it will have on our consolidated financial statements and current revenue recognition policy.

Item 7. Financial Statements

For a list of the financial statements filed as part of this report, see the Index to Financial Statements at page F-1.

Item 8. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Part III

Item 9. Directors, Executive Officers, Promoters and Control Persons;
Compliance With Section 16(a) of the Exchange Act

INFORMATION CONCERNING DIRECTORS AND EXECUTIVE OFFICERS

A. Joseph Rudick, M.D., 43, has been a Director of Atlantic since May 1999. He has also been the President of Atlantic and a founder of Atlantic and two of its majority-owned subsidiaries, Optex and Channel, since May 1999. Dr. Rudick served as a business consultant to Atlantic from January 1997 until November 1998. From June, 1994 until November 1998, Dr. Rudick was a Vice President of Paramount Capital, Inc. ("Paramount"), an investment bank specializing in the biotechnology and biopharmaceutical industries. Since 1988, he has been a Partner of Associate Ophthalmologists P.C., a private ophthalmology practice located in New York, and from 1993 to 1998 he served as a director of Healthdesk Corporation, a publicly-traded medical information company of which he was a co-founder. Dr. Rudick earned a B.A. in Chemistry from Williams College in 1979 and an M.D. from the University of Pennsylvania in 1983.

Steve H. Kanzer, C.P.A., Esq., 36, has been a Director of Atlantic since its inception in 1993. Mr. Kanzer currently is a member of the Audit Committee and the Compensation Committee. Since December 1997, Mr. Kanzer has been President, Chief Executive Officer and a member of the board of directors of Corporate Technology Development, Inc., a private pharmaceutical research and development company based in New York. From 1992 until December 1998, Mr. Kanzer was a founder and Senior Managing Director of Paramount, and Senior Managing Director--Head of Venture Capital of Paramount Capital Investments, LLC ("Paramount Investments"), a biotechnology and biopharmaceutical venture capital and merchant banking firm that is associated with Paramount. From 1993 until June 1998, Mr. Kanzer was a founder and a member of the Board of Directors of Boston Life Sciences, Inc., a publicly-traded pharmaceutical research and development company. Mr. Kanzer is a founder and Chairman of the Board of Discovery Laboratories, Inc., and a member of the Board of Directors of Endorex Corp., two publicly-traded pharmaceutical research and development companies. Prior to joining Paramount, Mr. Kanzer was an attorney with Skadden, Arps, Slate, Meagher & Flom LLP in New York, New York from September 1988 to October 1991. He received his J.D. from New York University School of Law in 1988 and a B.B.A. in Accounting from Baruch College in 1985. In his capacity as employee and Director of other companies in the venture capital field, Mr. Kanzer is not required to present to Atlantic opportunities that arise outside the scope of his duties as a Director of Atlantic.

Frederic P. Zotos, Esq., 34, has been a Director of Atlantic since May 1999. Mr. Zotos is Director of Due Diligence and Internal Legal Counsel of Licent Capital, LLC, an intellectual property royalty finance company located in Jericho, New York. From September 1998 until June 1999, Mr. Zotos practiced as an independent patent attorney and technology licensing consultant in Cohasset, Massachusetts. From December 1996 until August 1998, Mr. Zotos was Assistant to the President and Patent Counsel of Competitive Technologies, Inc., a publicly-traded technology licensing agency located in Fairfield, Connecticut. From July 1994 until November 1996, Mr. Zotos was an Intellectual Property Associate of Pepe & Hazard, a general practice law firm located in Hartford, Connecticut. He is Co-Chair of the Fairfield-Westchester and Chair of the New York City Chapters of the Licensing Executive Society, and a member of its Financial Markets Committee. Mr. Zotos is a registered patent attorney with the United States Patent and Trademark Office, and is also registered to practice law in Massachusetts and Connecticut. He earned a B.S. in Mechanical Engineering from Northeastern University in 1987, a joint J.D. and M.B.A. degree from Northeastern University in 1993, and successfully completed an M.S. in Electrical Engineering Prerequisite Program from Northeastern University in 1994.

Peter O. Kliem, 61, has been a Director of Atlantic since March 21, 2000 and is a member of the Compensation Committee. Mr. Kliem is a co-founder, President and CEO of Enanta Pharmaceuticals, a Boston based biotechnology start-up. Prior to this start-up, he worked with Polaroid Corporation for 36 years, most recently in the positions of Senior Vice President, Business Development, Senior VP, Electronic Imaging and Senior VP and Director of Research & Development. During his tenure with Polaroid, he initiated and executed major strategic alliances with corporations in the U.S., Europe, and the Far East. Mr. Kliem also introduced a broad range of innovative products such as printers, lasers, CCD and CID imaging, fiber optics, flat panel display, magnetic/optical

storage and medical diagnostic products in complex technological environments. He serves as trustee and vice president of the Boston Biomedical Research Institute and served as Chairman of PB Diagnostics. He is a member of the Board of Directors of the privately held company, Corporate Technology Development, Inc. In addition, he serves as Industry Advisor to TVM-Techno Venture Management. Mr. Kliem earned his M.S. in chemistry from Northeastern University.

There are no family relationships among the executive officers or directors of Atlantic.

COMPLIANCE WITH SECTION 16(A) OF THE SECURITIES EXCHANGE ACT OF 1934

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires Atlantic's officers, directors and persons who are the beneficial owners of more than 10% of the Common Stock to file initial reports of ownership and reports of changes in ownership of the Common Stock with the Securities and Exchange Commission (the "Commission"). Officers, directors and beneficial owners of more than 10% of the Common Stock are required by Commission regulations to furnish Atlantic with copies of all Section 16(a) forms they file.

Based solely on its review of the copies of such forms furnished to Atlantic and certain written representations that no other reports were required, Atlantic believes that, during the period from January 1, 1999 to December 31, 1999, all officers, directors and beneficial owners of more than 10% of Atlantic's Common Stock complied with all Section 16(a) requirements.

Item 10. Executive Compensation

DIRECTOR COMPENSATION

Non-employee board members are eligible to participate in an automatic stock option grant program pursuant to the 1995 Stock Option Plan. Non-employee directors are granted an option for 10,000 shares of common stock upon their initial election or appointment to the board and an option for 2,000 shares of common stock on the date of each annual meeting of Atlantic stockholders for those non-employee directors continuing to serve after that meeting. Pursuant to the automatic stock option grant program, Atlantic granted each of Dr. Rudick and Messrs. Zotos and Kanzer an option on September 23, 1999 for 2,000 shares of common stock at an exercise price of \$1.75 per share, the fair market value of our common stock on the date of grant. Additionally, each of Dr. Rudick and Messrs. Zotos and Kanzer were granted options for 25,000 shares of common stock on October 21, 1999 at an exercise price of \$1.50. In partial consideration for his service as President of Atlantic, on October 21, 1999, Dr. Rudick was granted an option for 50,000 shares of common stock at an exercise price of \$1.313. On October 21, 1999, Dr. Rudick was also granted an option for an additional 50,000 shares of common stock at an exercise price of \$1.313, only exercisable in the event of the sale of Optex.

The board agreed that effective October 21, 1999, each non-employee member of the board is to receive \$6,000 per year for his services as a director, payable semi-annually in arrears, plus \$1,500 for each board meeting attended in person, \$750 for each board meeting attended via telephone conference call and \$500 for each meeting of a committee of the board attended.

Board members are reimbursed for reasonable expenses incurred in connection with attending meetings of the board and of committees of the board.

COMPENSATION OF EXECUTIVE OFFICERS

The following table sets forth, for the last three fiscal years, the compensation earned for services rendered in all capacities by Atlantic's chief executive officer and the other highest-paid executive officers serving as such at the end of 1999 whose compensation for that fiscal year was in excess of \$100,000. The individuals named in the table will be hereinafter referred to as the "Named Officers." No other executive officer of Atlantic received compensation in excess of \$100,000 during fiscal year 1999. No executive officer who would otherwise have been included in this table on the basis of 1999 salary and bonus resigned or terminated employment during the year.

SUMMARY COMPENSATION TABLE

| Name and Principal Position | Year | Annual Compensation | | | Long-Term Compensation Awards |
|---|------|---------------------|-------------|-------------------------------|---------------------------------------|
| | | Salary(\$)(1) | (Bonus(\$)) | Other Annual Compensation(\$) | Securities Underlying Options/SARS(#) |
| A. Joseph Rudick, M.D.(2) President and Chairman of the Board | 1999 | 0 | 23,502 | 50,516 | 137,000 |
| | 1998 | 0 | 0 | 0 | 10,000 |
| | 1997 | 0 | 0 | 0 | 0 |
| Shimshon Mizrachi (3) Chief Financial Officer, Treasurer and Assistant Secretary | 1999 | 135,000 | 25,000 | 10,000 | 20,000 |
| | 1998 | 146,667 | 15,000 | 9,500 | 20,000 |
| | 1997 | 122,000 | 0 | 5,900 | 20,000 |
| Stephen R. Miller, M.D.(4) Senior Vice President and Chief Scientific and Medical Officer | 1999 | 106,506 | 0 | 10,000 | 0 |
| | 1998 | 163,833 | 20,000 | 9,500 | 20,000 |
| | 1997 | 164,200 | 0 | 9,500 | 30,000 |

- (1) Does not include amounts deferred under Atlantic's SAR-SEP retirement plan pursuant to payroll deductions and matching contributions of Atlantic.
- (2) Dr. Rudick became President of Atlantic on May 28, 1999. He initially acted as a non-employee consultant but became a an employee effective January 1, 2000.
- (3) Mr. Mizrachi's employment was terminated by Atlantic effective January 7, 2000.
- (4) Dr. Miller's employment was terminated by Atlantic effective July 1, 1999.

OPTIONS AND STOCK APPRECIATION RIGHTS

The following table contains information concerning the grant of stock options under the 1995 Stock Option Plan to the Named Officers during the 1999 fiscal year. Except as described in footnote (1) below, no stock appreciation rights were granted during the 1999 fiscal year.

OPTION/SAR GRANTS IN LAST FISCAL YEAR

Individual Grants

| Name | Number of Securities Underlying Options/SARs Granted(1) | % of Underlying Options/SARs Granted to Employees in Fiscal Year(2) | Exercise Price (\$/Share)(3) | Expiration Date |
|-----------------------|---|---|------------------------------|-----------------|
| A. Joseph Rudick M.D. | 50,000 | 32% | 1.313 | 08/09/09 |
| | 50,000 | 32% | 1.313 | 08/09/09 |
| | 10,000 | 6% | 1.375 | 05/28/09 |
| | 25,000 | 16% | 1.5 | 10/21/09 |
| | 2,000 | 1% | 1.75 | 09/23/09 |
| Shimshon Mizrachi | 20,000 | 13% | \$1.313 | 04/07/00 |

- (1) Each option has a maximum term of ten years, subject to earlier termination in the event of the optionee's cessation of service with Atlantic. Dr. Rudick's options became exercisable as follows: (1) the first option for 50,000 shares, 25% upon granting and 25% each of the first three anniversaries of the date of granting; (2) the second option for 50,000 shares will vest only in the event of the sale of Optex, (3) the option for 10,000 shares, 33 1/3% each of the first three anniversaries of the date of granting, (4) the option for 25,000 shares is immediately exercisable, and (5) the option for 2,000 shares, on the first anniversary of the date of granting. Of the option granted to Mr. Mizrachi, 25% became exercisable upon granting. Because Mr. Mizrachi's employment was terminated by Atlantic on January 7, 2000, the remaining options in that grant expired before becoming exercisable. Each option will become immediately exercisable in full upon an acquisition of Atlantic by merger or asset sale, unless the option is assumed by the successor entity. Each option includes a limited stock appreciation right pursuant to which the optionee may surrender the option, to the extent exercisable for vested shares, upon the successful completion of a hostile tender for securities possessing more than 50% of the combined voting power of Atlantic's outstanding voting securities. In return for the surrendered option, the optionee will receive a cash distribution per surrendered option share equal to the excess of (i) the highest price paid per share of common stock in that hostile tender offer over (ii) the exercise price payable per share under the cancelled option.
- (2) Calculated based on total option grants to employees of 157,000 shares of common stock during the 1999 fiscal year.
- (3) The exercise price may be paid in cash or in shares of common stock (valued at fair market value on the exercise date) or through a cashless exercise procedure involving a same-day sale of the purchased shares. Atlantic may also finance the option exercise by loaning the optionee sufficient funds to pay the exercise price for the purchased shares and the federal and state income tax liability incurred by the optionee in connection with such exercise. The optionee may be permitted, subject to the approval of the Plan Administrator, to apply a portion of the shares purchased under the option (or to deliver existing shares of common stock) in satisfaction of such tax liability.

OPTION EXERCISE AND HOLDINGS

The following table provides information with respect to the Named Officers concerning the exercisability of options during fiscal year 1999 and unexercisable options held as of the end of fiscal year 1999. No stock appreciation rights were exercised during fiscal year 1999, and, except for the limited rights described in footnote (1) to the preceding table, no stock appreciation rights were outstanding at the end of that fiscal year.

AGGREGATED OPTION EXERCISES IN LAST FISCAL YEAR ("FY")
AND FY-END OPTION VALUES

| Name | Shares Acquired on Exercise | Value Realized (1) | No. of Securities Underlying Unexercised Options/SARs at FY-End (#) | | Value of Unexercised In-the-Money Options/SARs at FY-End (Market price of shares at FY-End less exercise price) (\$)(1) | |
|----------------------------|--------------------------------------|--------------------------|---|---------------|--|---------------|
| | | | Exercisable | Unexercisable | Exercisable | Unexercisable |
| Stephen R. Miller, M.D. | 1 | 0(2) | 0 | 0 | 0 | 0 |
| A. Joseph Rudick, M.D. | 0 | - | 41,945 | 105,045 | 1,588 | 13,013 |
| Shimshon Mizrachi | 0 | - | 61,389 | 48,611 | 625 | 0 |

- (1) Equal to the fair market value of the purchased shares at the time of the option exercise over the exercise price paid for those shares.
- (2) Based on the fair market value of Atlantic's common stock on July 29, 1999 of \$1.28 per share, the closing sales price per share on that date on the Nasdaq SmallCap Market.

LONG TERM INCENTIVE PLAN AWARDS

No long term incentive plan awards were made to a Named Officer during the last fiscal year.

EMPLOYMENT CONTRACTS AND TERMINATION OF EMPLOYMENT AND CHANGE OF CONTROL AGREEMENTS

Effective November 15, 1995, Mr. Mizrachi became Controller of Atlantic and of each of Atlantic's subsidiaries pursuant to a letter Agreement dated November 6, 1995. Mr. Mizrachi and his dependents were also eligible to receive paid medical and long-term disability insurance and such other health benefits as Atlantic made available to its other senior officers and directors. Effective January 7, 2000, Atlantic terminated the employment of Mr. Mizrachi and is obligated, pursuant to the letter agreement, to pay his salary for six months thereafter, subject to Mr. Mizrachi's duty to mitigate damages by seeking alternative employment.

The Compensation Committee has the discretion under the 1995 Stock Option Plan to accelerate options granted to any Named Officers in connection with a change in control of Atlantic or upon the subsequent termination of the Named Officer's employment following the change of control.

Item 11. Security Ownership of Certain Beneficial Owners and Management

The following table sets forth certain information known to us with respect to the beneficial ownership of common stock as of March 22, 2000, by (i) all persons who are beneficial owners of 5% or more of our common stock, (ii) each director and nominee, (iii) the Named Officers in the Summary Compensation Table above and (iv) all directors and executive officers as a group. We do not know of any person who beneficially owns more than 5% of the Series A preferred stock and none of Atlantic's directors or the Named Officers owns any shares of Series A preferred stock. Consequently, the following table does not contain information with respect to the Series A preferred stock.

The number of shares beneficially owned is determined under rules by the Commission, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under those rules, beneficial ownership includes any shares as to which the individual has sole or shared voting power or investment power and also any shares that the individual has the right to acquire within 60 days of March 22, 2000, through the exercise or conversion of any stock option, convertible security, warrant or other right. Including those shares in the tables does not, however, constitute an admission that the named stockholder is a direct or indirect beneficial owner of those shares. Unless otherwise indicated, each person or entity named in the table has sole voting power and investment power (or shares that power with that person's spouse) with respect to all shares of capital stock listed as

owned by that person or entity. The common stock represented here includes the common stock that the beneficial holders would directly possess if they converted all shares of Series A preferred stock held by them.

| NAME AND ADDRESS ----- | NUMBER OF SHARES ----- | % OF TOTAL SHARES OUTSTANDING (1) ----- |
|--|------------------------------|---|
| CERTAIN BENEFICIAL HOLDERS: | | |
| Lindsay A. Rosenwald, M.D.(2) 787 Seventh Avenue New York, NY 10019 | 499,238 | 12.5% |
| VentureTek, L.P.(3) 40 Exchange Place 20th Floor New York, NY 10005 | 438,492 | 8.7% |
| Joseph Stevens & Company, Inc.(4) 33 Maiden Lane, 8th floor New York, NY 10038 | 480,000 | 8.7% |
| MANAGEMENT: | | |
| Stephen R. Miller, M.D.(5) | 1 | * |
| A. Joseph Rudick, M.D.(6) | 56,250 | 1.1% |
| Frederic P. Zotos, Esq.(7) | 87,500 | 1.1% |
| Steve H. Kanzer, C.P.A., Esq.(8) | 37,121 | * |
| Peter O. Kliem(9) | 35,000 | * |
| All current executive officers and directors as a group (4 persons) | 215,871 | 4.1% |

* Less than 1.0%

- (1) Percentage of beneficial ownership is calculated assuming 5,054,539 shares of common stock were outstanding on March 22, 2000.
- (2) Includes 344,507 shares of common stock and 154,351 shares of common stock issuable upon conversion of 47,202 shares of Series A preferred stock issuable pursuant to a warrant exercisable within 60 days of March 22, 2000. Also includes 190 shares of common stock held by June Street Corporation and 190 shares of common stock held by Huntington Street Corporation. Dr. Rosenwald is the sole proprietor of both June Street Corporation and Huntington Street Corporation.
- (3) The general partner of VentureTek, L.P. is Mr. C. David Selengut. Mr. Selengut may be considered a beneficial owner of shares owned by VentureTek, L.P. by virtue of his authority as general partner to vote and dispose of those shares. VentureTek, L.P. is a limited partnership, the limited partners of which

include Dr. Rosenwald's wife and children, and sisters of Dr. Rosenwald's wife and children. Dr. Rosenwald disclaims beneficial ownership of those shares.

- (4) Represents two warrants each exercisable within 60 days of March 22, 2000. One warrant is a warrant to purchase 165,000 units, each unit consisting of one share of Common Stock and one redeemable common stock purchase warrant, each redeemable warrant entitling the holder to purchase an additional share of common stock. The second warrant is a warrant to purchase 150,000 shares of common stock at a purchase price of \$2.50 per share it was immediately exercisable on the date of granting, except that it may only be exercised if the last sale price of a share of common stock on NASDAQ (or the principal stock exchange on which the common stock is then listed or admitted to trading) on the immediately preceding business day is equal or greater than \$1.00 plus the exercise price then in effect.

Does not include two additional warrants, each entitles the holder to purchase 150,000 shares of common stock, which are not exercisable until January 4, 2001 and January 4, 2002 respectively.

Does not include any units, shares of common stock or redeemable warrants that may be held in the Joseph Stevens market-making account. Mr. Joseph Sorbara and Mr. Steven Markowitz, each of whom is a controlling shareholder, director and officer of Joseph Stevens, own beneficially the shares of common stock owned beneficially by Joseph Stevens.

- (6) Represents options exercisable within 60 days of March 22, 2000. 25,000 shares are exercisable pursuant to stock options granted October 21, 1999 which are immediately exercisable; an additional 25,000 shares are exercisable pursuant to stock options granted under the plan on March 21, 2000 for 100,000 of which 25% or 25,000 shares are exercisable on issuance, then an additional 25% annually thereafter; an additional 6,250 shares are exercisable pursuant to stock options granted March 21, 2000 for 25,000 of which 25% or 6,250 shares are exercisable on issuance, then an additional 25% annually thereafter.

Does not include an option to purchase 50,000 shares of common stock, which is only exercisable in the event of the sale of Optex.

- (7) Represents options exercisable within 60 days of March 22, 2000. 25,000 shares are exercisable pursuant to stock options granted October 21, 1999 which are immediately exercisable; an additional 25,000 shares are exercisable pursuant to stock options granted under the plan on March 21, 2000 for 100,000 of which 25% or 25,000 shares are exercisable on issuance, then an additional 25% annually thereafter; an additional 37,500 shares are exercisable pursuant to stock options granted March 21, 2000 for 150,000 of which 25% or 37,500 shares are exercisable on issuance, then an additional 25% annually thereafter.
- (8) Includes 31,000 shares of common stock underlying options exercisable within 60 days of March 22, 2000.
- (9) Includes 35,000 shares of common stock underlying options exercisable within 60 days of March 22, 2000.

Item 12. Certain Relationships and Related Transactions

In recognition of his role in negotiating an amendment to Optex's contract with Bausch & Lomb (see "Business--Optex Ophthalmologics, Inc."), Atlantic agreed to pay to Dr. Rudick, Atlantic's President, an amount equal to \$141,012. This amount will be paid in 18 monthly installments (\$7834 per month), which commenced October 1999, out of the profit component of Bausch & Lomb's payments to Optex. Under this arrangement, Dr. Rudick received in 1999 a total of \$23,502. We felt it was appropriate to enter into this arrangement, given that the deal struck with Bausch & Lomb was considerably more advantageous to Atlantic than the deal tentatively agreed to by Atlantic prior to Dr. Rudick's joining the board and becoming President, and given also that in 1999 Dr. Rudick spent more time on Atlantic matters than Atlantic had any right to expect, given that Dr. Rudick's compensation was initially limited to consulting fees of \$6,000 a month.

In June 1999, Mr. Zotos performed consulting services for Channel for which he received \$2,500. In the months of July, August, November and December of 1999, Mr. Zotos performed consulting services for Atlantic for which he received \$2,600, and he may perform further such services from time to time in the future. On November 17, 1999, Channel Therapeutics, Inc., paid Mr. Zotos \$8,261 in recognition of his role in negotiating the termination of Channel's license agreement with the Trustees of the University of Pennsylvania. See "Business--Channel Therapeutics, Inc." On January 12, 2000, Atlantic paid Mr. Zotos \$2,600 for miscellaneous consulting services.

On January 4, 2000, we entered into a Financial Advisory and Consulting Agreement with Joseph Stevens & Company, Inc. In this agreement, we engaged Joseph Stevens to provide us with investment banking services from January 4, 2000 until January 4, 2001. As partial compensation for the services to be rendered by Joseph Stevens, we issued them three warrants to purchase an aggregate of 450,000 shares of our common stock. The exercise price and exercise period of each warrant is as follows:

| Warrant Number | No. of Shares | Exercise Price | Exercise Period |
|----------------|---------------|----------------|---|
| No.1 | 150,000 | \$2.50 | 1/4/00 through 1/4/05 |
| No.2 | 150,000 | \$3.50 | 1/4/01 through 1/4/06 (subject to vesting in equal monthly increments from 1/4/00-1/4/01) |
| No.3 | 150,000 | \$4.50 | 1/4/02 through 1/4/07 (subject to vesting in equal monthly increments from 1/4/00-1/4/01) |

In addition, each warrant may only be exercised when the market price of a share of common stock is at least \$1.00 greater than the exercise price of that warrant. In connection with issuance of the warrants, Atlantic and Joseph Stevens entered into a letter agreement granting Joseph Stevens registration rights in respect of the shares of common stock issuable upon exercise of the warrants.

Pursuant to Atlantic's restated certificate of incorporation and bylaws, Atlantic enters into indemnification agreements with each of its directors and executive officers.

All transactions between Atlantic and its officers, directors, principal stockholders and their affiliates are approved by a majority of the board of directors, including a majority of the independent and disinterested outside directors on the Board of Directors. Atlantic believes that all of the transactions set forth above were made on terms no less favorable to Atlantic than could have been obtained from unaffiliated third parties.

Item 13. Exhibits List, and Reports on Form 8-K

(a) Exhibits

The Following documents are referenced or included in this report.

| Exhibit No. | Description |
|-------------|--|
| 3.1(1) | Certificate of Incorporation of Atlantic, as amended to date. |
| 3.2(1) | Bylaws of Atlantic, as amended to date. |
| 3.3(5) | Certificate of Designations of Series A Convertible Preferred Stock. |
| 3.4(6) | Certificate of Increase of Series A Convertible Preferred Stock. |

- 4.2(1) Form of Unit certificate.
- 4.3(1) Specimen Common Stock certificate.
- 4.4(1) Form of Redeemable Warrant certificate.
- 4.5(1) Form of Redeemable Warrant Agreement by and between Atlantic and Continental Stock Transfer & Trust Company.
- 4.6(1) Form of Underwriter's Warrant certificate.
- 4.7(1) Form of Underwriter's Warrant Agreement by and between Atlantic and Joseph Stevens & Company, L.P.
- 4.8(1) Form of Subscription Agreement by and between Atlantic and the Selling Stockholders.
- 4.9(1) Form of Bridge Note.
- 4.10(1) Form of Bridge Warrant.
- 4.11(2) Investors' Rights Agreement by and among Atlantic, Dreyfus Growth and Value Funds, Inc. and Premier Strategic Growth Fund.
- 4.12(2) Common Stock Purchase Agreement by and among Atlantic, Dreyfus Growth and Value Funds, Inc. and Premier Strategic Growth Fund.
- 10.2(1) Employment Agreement dated July 7, 1995, between Atlantic and Jon D. Lindjord.
- 10.3(1) Employment Agreement dated September 21, 1995, between Atlantic and Dr. Stephen R. Miller.
- 10.4(1) Employment Agreement dated September 21, 1995, between Atlantic and Margaret A. Schalk.
- 10.5(1) Letter Agreement dated August 31, 1995, between Atlantic and Dr. H. Lawrence Shaw.
- 10.6(1) Consulting Agreement dated January 1, 1994, between Atlantic and John K.A. Prendergast.
- 10.8(1) Investors' Rights Agreement dated July 1995, between Atlantic, Dr. Lindsay A. Rosenwald and VentureTek, L.P.
- 10.9(1) License and Assignment Agreement dated March 25, 1994, between Optex Ophthalmologics, Inc., certain inventors and NeoMedix Corporation, as amended.
- 10.10(1) License Agreement dated May 5, 1994, between Gemini Gene Therapies, Inc. and the Cleveland Clinic Foundation.
- 10.11(1)+ License Agreement dated June 16, 1994, between Channel Therapeutics, Inc., the University of Pennsylvania and certain inventors, as amended.
- 10.12(1)+ License Agreement dated March 28, 1994, between Channel Therapeutics, Inc. and Dr. Sumner Burstein.
- 10.13(1) Form of Financial Advisory and Consulting Agreement by and between Atlantic and Joseph Stevens & Company, L.P.
- 10.14(1) Employment Agreement dated November 3, 1995, between Atlantic and Shimshon Mizrachi.

- 10.15(3) Financial Advisory Agreement between Atlantic and Paramount dated September 4, 1996 (effective date of April 15, 1996).
- 10.16(3) Financial agreement between Atlantic, Paramount and UI USA dated June 23, 1996.
- 10.17(3) Consultancy agreement between Atlantic and Dr. Yuichi Iwaki dated July 31, 1996.
- 10.18(3) 1995 Stock Option Plan, as amended.
- 10.19(3) Warrant issued to an employee of Paramount Capital, LLC to purchase 25,000 shares of Common Stock of Atlantic.
- 10.20(3) Warrant issued to an employee of Paramount Capital, LLC to purchase 25,000 shares of Common Stock of Atlantic.
- 10.21(3) Warrant issued to an employee of Paramount Capital, LLC to purchase 12,500 shares of Common Stock of Atlantic.
- 10.22(4) Letter Agreement between Atlantic and Paramount Capital, Inc. dated February 26, 1997.
- 10.23(4) Agreement and Plan of Reorganization by and among Atlantic, Channel Therapeutics, Inc. and New Channel, Inc. dated February 20, 1997.
- 10.24(4) Warrant issued to John Prendergast to purchase 37,500 shares of Atlantic's Common Stock.
- 10.25(4) Warrant issued to Dian Griesel to purchase 24,000 shares of Atlantic's Common Stock.
- 10.26(7) Amendment No.1 to Development & License Agreement by and between Optex and Bausch & Lomb Surgical, Inc. dated September 16, 1999.
- 10.27 Financial Advisory and Consulting Agreement by and between Atlantic and Joseph Stevens & Company, Inc. dated January 4, 2000.
- 10.28 Warrant No.1 issued to Joseph Stevens & Company, Inc. to purchase 150,000 shares of Atlantic's Common Stock exercisable January 4, 2000.
- 10.29 Warrant No.2 issued to Joseph Stevens & Company, Inc. to purchase 150,000 shares of Atlantic's Common Stock exercisable January 4, 2001.
- 10.30 Warrant No.3 issued to Joseph Stevens & Company, Inc. to purchase 150,000 shares of Atlantic's Common Stock exercisable January 4, 2002.
- 21.1(1) Subsidiaries of Atlantic
- 23.1 Consent of KPMG LLP.
- 24.1 Power of Attorney (included in part II of this Report under the caption "Signatures")
- 27.1 Financial Data Schedule

- - - - -

+ Confidential treatment has been granted as to certain portions of these exhibits.

- (1) Incorporated by reference to exhibits of Atlantic's Registration Statement on Form SB-2, Registration #33-98478, as filed with the Securities and Exchange Commission (the "Commission") on October 24, 1995 and as amended by Amendment No. 1, Amendment No. 2, Amendment No.3, Amendment No. 4 and Amendment No. 5, as filed with the Commission on November 9, 1995, December 5, 1995, December 12, 1995, December 13, 1995 and December 14, 1995, respectively.
- (2) Incorporated by reference to exhibits of Atlantic's Current Report on Form 8-KSB, as filed with the Commission on August 30, 1996.
- (3) Incorporated by reference to exhibits of Atlantic's Form 10-QSB for the period ended September 30, 1996.
- (4) Incorporated by reference to exhibits of Atlantic's Form 10-QSB for the period ended March 31, 1996.
- (5) Incorporated by reference to exhibits of Atlantic's Current Report on Form 8-KSB, as filed with the Commission on June 9, 1997.
- (6) Incorporated by reference to exhibits of Atlantic's Registration Statement on Form S-3 (Registration No.333-34379), as filed with the Commission on August 26, 1997, and as amended by Amendment No. 1 as filed with the Commission on August 28, 1997.
- (7) Incorporated by reference to exhibits of Atlantic Form 10-QSB for the period ended September 30, 1999.
- (b) Reports on Form 8-K

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, Atlantic has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on March 29, 2000.

Atlantic Ventures Technology, Inc.

/s/ A. Joseph Rudick

 A. Joseph Rudick
 President and Director

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of Atlantic Ventures Technology, Inc., hereby severally constitute and appoint A. Joseph Rudick our true and lawful attorney, with full power to him, to sign for us in our names in the capacities indicated below, all amendments to this Annual Report on Form 10-KSB, and generally to do all things in our names and on our behalf in such capacities to enable Atlantic Ventures Technology, Inc. to comply with the provisions of the Securities Exchange Act of 1934, as amended, and all requirements of the Securities and Exchange Commission.

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

| Signatures ----- | Titles ----- | Date ---- |
|---|------------------------|----------------|
| /s/ A. Joseph Rudick ----- A. Joseph Rudick | President and Director | March 30, 2000 |
| /s/ Steve H. Kanzer ----- Steve H. Kanzer | Director | March 30, 2000 |
| /s/ Frederic P. Zotos ----- Frederic P. Zotos | Director | March 30, 2000 |
| /s/ Peter O. Kliem ----- Peter O. Kliem | Director | March 30, 2000 |

ATLANTIC TECHNOLOGY VENTURES, INC.
AND SUBSIDIARIES
(formerly Atlantic Pharmaceuticals, Inc.)
(A Development Stage Company)

Consolidated Financial Statements

December 31, 1999, 1998 and 1997

(With Independent Auditors' Report Thereon)

ATLANTIC TECHNOLOGY VENTURES, INC. AND SUBSIDIARIES
(formerly Atlantic Pharmaceuticals, Inc.)
(A Development Stage Company)

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Independent Auditors' Report

The Board of Directors and Stockholders

Atlantic Technology Ventures, Inc. (formerly Atlantic Pharmaceuticals, Inc.):

We have audited the accompanying consolidated balance sheets of Atlantic Technology Ventures, Inc. (formerly Atlantic Pharmaceuticals, Inc.) and subsidiaries (a development stage company) as of December 31, 1999 and 1998, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 1999 and for the period from July 13, 1993 (inception) to December 31, 1999. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Atlantic Technology Ventures, Inc. (formerly Atlantic Pharmaceuticals, Inc.) and subsidiaries (a development stage company) as of December 31, 1999 and 1998, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 1999, and for the period from July 13, 1993 (inception) to December 31, 1999, in conformity with generally accepted accounting principles.

/s/ KPMG LLP
KPMG LLP

Short Hills, New Jersey
March 15, 2000

ATLANTIC TECHNOLOGY VENTURES, INC. AND SUBSIDIARIES

(formerly Atlantic Pharmaceuticals, Inc.)

(A Development Stage Company)

Consolidated Statements of Operations

ATLANTIC TECHNOLOGY VENTURES, INC. AND SUBSIDIARIES

(formerly Atlantic Pharmaceuticals, Inc.)

(A Development Stage Company)

Consolidated Balance Sheets

| | December 31 | |
|---|--------------|--------------|
| Assets | 1999 | 1998 |
| | ----- | ----- |
| Current assets: | | |
| Cash and cash equivalents | \$ 3,473,321 | 5,835,669 |
| Accounts receivable | 337,323 | 381,015 |
| Prepaid expenses | 17,414 | 42,108 |
| | ----- | ----- |
| Total current assets | 3,828,058 | 6,258,792 |
| Property and equipment, net | 131,832 | 262,173 |
| | ----- | ----- |
| Total assets | \$ 3,959,890 | 6,520,965 |
| | ===== | ===== |
| | | |
| Liabilities and Stockholders' Equity | | |
| Current liabilities - accounts payable and accrued expenses | \$ 542,759 | 657,001 |
| | ----- | ----- |
| Stockholders' equity: | | |
| Preferred stock, \$.001 par value. Authorized 10,000,000 shares; 1,375,000 shares designated as Series A convertible preferred stock | -- | -- |
| Series A convertible preferred stock, \$.001 par value Authorized 1,375,000 shares; 610,088 and 632,468 shares issued and outstanding at December 31, 1999 and 1998, respectively (liquidation preference aggregating \$7,931,144 and \$8,222,084 in 1999 and 1998, respectively) | 610 | 632 |
| Convertible preferred stock warrants, 117,195 issued and outstanding at December 31, 1999 and 1998 | 540,074 | 540,074 |
| Common stock, \$.001 par value. Authorized 50,000,000 shares; 4,815,990 and 4,503,388 shares issued and outstanding at December 31, 1999 and 1998, respectively | 4,816 | 4,503 |
| Common stock subscribed. 182 shares at December 31, 1999 and 1998 | -- | -- |
| Additional paid-in capital | 21,662,272 | 21,662,881 |
| Deficit accumulated during development stage | (18,790,099) | (16,343,584) |
| | ----- | ----- |
| Total stockholders' equity | 3,417,131 | 5,863,964 |
| | ----- | ----- |
| Total liabilities and stockholders' equity | \$ 3,959,890 | 6,520,965 |
| | ===== | ===== |

See accompanying notes to consolidated financial statements.

| | Year ended December 31 | | | Cumulative period from July 13, 1993 (inception) to December 31, |
|--|------------------------|--------------------|--------------------|--|
| | 1999 | 1998 | 1997 | 1999 |
| Revenues: | | | | |
| Development revenue | \$ 1,082,510 | -- | -- | 1,082,510 |
| License revenue | -- | 2,500,000 | -- | 2,500,000 |
| Grant revenue | 77,069 | -- | 2,288 | 177,001 |
| Total revenue | 1,159,579 | 2,500,000 | 2,288 | 3,759,511 |
| Costs and expenses: | | | | |
| Cost of development revenue | 866,008 | -- | -- | 866,008 |
| Research and development | 1,091,291 | 3,036,355 | 2,560,584 | 8,374,565 |
| General and administrative | 1,941,425 | 2,668,508 | 2,838,331 | 13,668,428 |
| License fees | -- | -- | -- | 173,500 |
| Total operating expenses | 3,898,724 | 5,704,863 | 5,398,915 | 23,082,501 |
| Other (income) expense: | | | | |
| Interest and other income | (292,630) | (451,335) | (245,231) | (1,158,466) |
| Interest expense | -- | -- | -- | 625,575 |
| Total other (income) expense | (292,630) | (451,335) | (245,231) | (532,891) |
| Net loss | (2,446,515) | (2,753,528) | (5,151,396) | (18,790,099) |
| Imputed convertible preferred stock dividend | -- | 1,628,251 | 3,703,304 | 5,331,555 |
| Preferred stock dividend issued in preferred shares | 314,366 | -- | -- | 314,366 |
| Net loss applicable to common shares | \$ (2,760,881) | (4,381,779) | (8,854,700) | (24,436,020) |
| Net loss per common share - basic and diluted | \$ (0.59) | (1.13) | (2.97) | |
| Shares used in calculation of net loss per common share - basic and diluted | 4,692,912 | 3,883,412 | 2,979,664 | |

See accompanying notes to consolidated financial statements.

ATLANTIC TECHNOLOGY VENTURES, INC. AND SUBSIDIARIES

(formerly Atlantic Pharmaceuticals, Inc.)

(A Development Stage Company)

Consolidated Statements of Stockholders' Equity

| | Series A Convertible Preferred Stock | | Convertible Preferred Stock Warrants | | Common Stock | |
|---|--|--------|--|------------|--------------|----------|
| | Shares | Amount | Number | Amount | Shares | Amount |
| Common stock subscribed at \$.001 per shares July-November 1993 (note 6) | -- | \$ -- | -- | \$ -- | -- | \$ -- |
| Issued common stock at \$.001 per share, June 1994 (note 6) | -- | -- | -- | -- | 84 | -- |
| Issued and subscribed common stock at \$.05 per share, August 1994 (note 6) | -- | -- | -- | -- | 860 | 1 |
| Payments of common stock subscriptions (note 6) | -- | -- | -- | -- | 5,061 | 5 |
| Issuance of warrants, September 1995 (note 5) | -- | -- | -- | -- | -- | -- |
| Issued common stock and warrants at \$4 per unit, December 1995 (net of costs of issuance of \$1,454,300) (note 8) | -- | -- | -- | -- | 1,872,750 | 1,873 |
| Conversion of demand notes payable and the related accrued interest to common stock, December 1995 (note 4) | -- | -- | -- | -- | 785,234 | 785 |
| Repurchase of common stock | -- | -- | -- | -- | (269) | -- |
| Compensation related to grant of stock options (note 7) | -- | -- | -- | -- | -- | -- |
| Amortization of deferred compensation (note 7) | -- | -- | -- | -- | -- | -- |
| Net loss | -- | -- | -- | -- | -- | -- |
| Balance at December 31, 1995 | -- | -- | -- | -- | 2,663,720 | 2,664 |
| Issuance of warrants, April 1996 (note 8) | -- | -- | -- | -- | -- | -- |
| Issued common stock and warrants at \$6.73 per share, August 1996 (net of costs of issuance of \$76,438) (note 6) | -- | -- | -- | -- | 250,000 | 250 |
| Amortization of deferred compensation (note 7) | -- | -- | -- | -- | -- | -- |
| Net loss | -- | -- | -- | -- | -- | -- |
| Balance at December 31, 1996 | -- | -- | -- | -- | 2,913,720 | 2,914 |
| Issued convertible preferred stock at \$10 per unit, May and August 1997 (net of costs of issuance of \$1,758,816) (note 6) | 1,237,200 | 1,237 | -- | -- | -- | -- |
| Channel merger (note 6) | -- | -- | -- | -- | 103,200 | 103 |
| Conversion of preferred to common stock | (22,477) | (22) | -- | -- | 47,651 | 48 |
| Issuance of convertible preferred stock warrants (note 8) | -- | -- | 123,720 | 570,143 | -- | -- |
| Issuance of warrants (note 8) | -- | -- | -- | -- | -- | -- |
| Amortization of deferred compensation (note 7) | -- | -- | -- | -- | -- | -- |
| Imputed convertible preferred stock dividend | -- | -- | -- | -- | -- | -- |
| Imputed convertible preferred stock dividend | -- | -- | -- | -- | -- | -- |
| Net loss | -- | -- | -- | -- | -- | -- |
| Balance at December 31, 1997 | 1,214,723 | 1,215 | 123,720 | 570,143 | 3,064,571 | 3,065 |
| Conversion of preferred to common stock | (584,265) | (585) | -- | -- | 1,367,817 | 1,367 |
| Cashless exercise of preferred warrants (note 8) | 2,010 | 2 | (6,525) | (30,069) | -- | -- |
| Exercise of options | -- | -- | -- | -- | 70,000 | 70 |
| Exercise of warrants (note 8) | -- | -- | -- | -- | 1,000 | 1 |
| Expense related to grant of stock options (note 7) | -- | -- | -- | -- | -- | -- |
| Amortization of deferred compensation (note 7) | -- | -- | -- | -- | -- | -- |
| Imputed convertible preferred stock dividend | -- | -- | -- | -- | -- | -- |
| Imputed convertible preferred stock dividend | -- | -- | -- | -- | -- | -- |
| Net loss | -- | -- | -- | -- | -- | -- |
| Balance at December 31, 1998 | 632,468 | 632 | 117,195 | 540,074 | 4,503,388 | 4,503 |
| Conversion of preferred to common stock | (95,599) | (95) | -- | -- | 312,602 | 313 |
| Preferred stock dividend | 73,219 | 73 | -- | -- | -- | -- |
| Net loss | -- | -- | -- | -- | -- | -- |
| Balance at December 31, 1999 | 610,088 | \$ 610 | 117,195 | \$ 540,074 | 4,815,990 | \$ 4,816 |

| Common Stock Subscribed | | Additional paid-in capital | Deficit accumulated during development stage | Deferred compen- sation |
|----------------------------|--------|----------------------------------|--|-------------------------------|
| Number | Amount | | | |

Common stock subscribed at \$.001 per shares

| | | | | | |
|---|----------|-----|-------------|--------------|-----------|
| July-November 1993 (note 6) | 5,231 \$ | 5 | 6,272 | -- | -- |
| Issued common stock at \$.001 per share, June 1994 (note 6) | -- | -- | 101 | -- | -- |
| Issued and subscribed common stock at \$.05 per share, August 1994 (note 6) | 12 | -- | 52,374 | -- | -- |
| Payments of common stock subscriptions (note 6) | (5,061) | (5) | -- | -- | -- |
| Issuance of warrants, September 1995 (note 5) | -- | -- | 300,000 | -- | -- |
| Issued common stock and warrants at \$4 per unit, December 1995 (net of costs of issuance of \$1,454,300) (note 8) | -- | -- | 6,034,827 | -- | -- |
| Conversion of demand notes payable and the related accrued interest to common stock, December 1995 (note 4) | -- | -- | 2,441,519 | -- | -- |
| Repurchase of common stock | -- | -- | -- | -- | -- |
| Compensation related to grant of stock options (note 7) | -- | -- | 208,782 | -- | (144,000) |
| Amortization of deferred compensation (note 7) | -- | -- | -- | -- | 12,000 |
| Net loss | -- | -- | -- | (8,438,660) | -- |
| Balance at December 31, 1995 | 182 | -- | 9,043,875 | (8,438,660) | (132,000) |
| Issuance of warrants, April 1996 (note 8) | -- | -- | 139,000 | -- | -- |
| Issued common stock and warrants at \$6.73 per share, August 1996 (net of costs of issuance of \$76,438) (note 6) | -- | -- | 1,452,063 | -- | -- |
| Amortization of deferred compensation (note 7) | -- | -- | -- | -- | 28,800 |
| Net loss | -- | -- | -- | (3,557,692) | -- |
| Balance at December 31, 1996 | 182 | -- | 10,634,938 | (8,438,660) | (103,200) |
| Issued convertible preferred stock at \$10 per uni May and August 1997 (net of costs of issuance of \$1,758,816) (note 6) | -- | -- | 10,611,947 | -- | -- |
| Channel merger (note 6) | -- | -- | 657,797 | -- | -- |
| Conversion of preferred to common stock | -- | -- | (26) | -- | -- |
| Issuance of convertible preferred stock warrants (note 8) | -- | -- | (570,143) | -- | -- |
| Issuance of warrants (note 8) | -- | -- | 159,202 | -- | -- |
| Amortization of deferred compensation (note 7) | -- | -- | -- | -- | 28,800 |
| Imputed convertible preferred stock dividend | -- | -- | (3,703,304) | -- | -- |
| Imputed convertible preferred stock dividend | -- | -- | 3,703,304 | -- | -- |
| Net loss | -- | -- | -- | (5,151,396) | -- |
| Balance at December 31, 1997 | 182 | -- | 21,493,715 | (13,590,056) | (74,400) |
| Conversion of preferred to common stock | -- | -- | (782) | -- | -- |
| Cashless exercise of preferred warrants (note 8) | -- | -- | 30,067 | -- | -- |
| Exercise of options | -- | -- | 52,430 | -- | -- |
| Exercise of warrants (note 8) | -- | -- | 5,499 | -- | -- |
| Expense related to grant of stock options (note 7) | -- | -- | 81,952 | -- | -- |
| Amortization of deferred compensation (note 7) | -- | -- | -- | -- | 74,400 |
| Imputed convertible preferred stock dividend | -- | -- | (1,628,251) | -- | -- |
| Imputed convertible preferred stock dividend | -- | -- | 1,628,251 | -- | -- |
| Net loss | -- | -- | -- | (2,753,528) | -- |
| Balance at December 31, 1998 | 182 | -- | 21,662,881 | (16,343,584) | -- |
| Conversion of preferred to common stock | -- | -- | (218) | -- | -- |
| Preferred stock dividend | -- | -- | (391) | -- | -- |
| Net loss | -- | -- | -- | (2,446,515) | -- |
| Balance at December 31, 1999 | 182 \$ | -- | 21,662,272 | (18,790,099) | -- |

| | Common stock subscrip- tions receivable | Treasury stock | Total stock- holders' equity (deficit) |
|--|---|-------------------|--|
| Common stock subscribed at \$.001 per shares July-November 1993 (note 6) | (6,277) | -- | -- |
| Issued common stock at \$.001 per share, June 1994 (note 6) | -- | -- | 101 |
| Issued and subscribed common stock at \$.05 per share, August 1994 (note 6) | (750) | -- | 51,625 |
| Payments of common stock subscriptions (note 6) | 6,809 | -- | 6,809 |
| Issuance of warrants, September 1995 (note 5) | -- | -- | 300,000 |
| Issued common stock and warrants at \$4 per unit, December 1995 (net of costs of issuance of \$1,454,300) (note 8) | -- | -- | 6,036,700 |
| Conversion of demand notes payable and the related accrued interest to common stock, December 1995 (note 4) | -- | -- | 2,442,304 |
| Repurchase of common stock | -- | (324) | (324) |
| Compensation related to grant of stock options (note 7) | -- | -- | 64,782 |
| Amortization of deferred compensation (note 7) | -- | -- | 12,000 |
| Net loss | -- | -- | (8,438,660) |

| | | | |
|---|-------|-------|-------------|
| Balance at December 31, 1995 | (218) | (324) | 475,337 |
| Issuance of warrants, April 1996 (note 8) | -- | -- | 139,000 |
| Issued common stock and warrants at \$6.73 per share, August 1996 (net of costs of issuance of \$76,438) (note 6) | -- | -- | 1,452,313 |
| Amortization of deferred compensation (note 7) | -- | -- | 28,800 |
| Net loss | -- | -- | (3,557,692) |
| Balance at December 31, 1996 | (218) | (324) | 2,095,450 |
| Issued convertible preferred stock at \$10 per unit, May and August 1997 (net of costs of issuance of \$1,758,816) (note 6) | -- | -- | 10,613,184 |
| Channel merger (note 6) | -- | -- | 657,900 |
| Conversion of preferred to common stock | -- | -- | -- |
| Issuance of convertible preferred stock warrants (note 8) | -- | -- | -- |
| Issuance of warrants (note 8) | -- | -- | 159,202 |
| Amortization of deferred compensation (note 7) | -- | -- | 28,800 |
| Imputed convertible preferred stock dividend | -- | -- | (3,703,304) |
| Imputed convertible preferred stock dividend | -- | -- | 3,703,304 |
| Net loss | -- | -- | (5,151,396) |
| Balance at December 31, 1997 | (218) | (324) | 8,403,140 |
| Conversion of preferred to common stock | -- | -- | -- |
| Cashless exercise of preferred warrants (note 8) | -- | -- | -- |
| Exercise of options | -- | -- | 52,500 |
| Exercise of warrants (note 8) | -- | -- | 5,500 |
| Expense related to grant of stock options (note 7) | -- | -- | 81,952 |
| Amortization of deferred compensation (note 7) | -- | -- | 74,400 |
| Imputed convertible preferred stock dividend | -- | -- | (1,628,251) |
| Imputed convertible preferred stock dividend | -- | -- | 1,628,251 |
| Net loss | -- | -- | (2,753,528) |
| Balance at December 31, 1998 | (218) | (324) | 5,863,964 |
| Conversion of preferred to common stock | -- | -- | -- |
| Preferred stock dividend | -- | -- | (318) |
| Net loss | -- | -- | (2,446,515) |
| Balance at December 31, 1999 | (218) | (324) | 3,417,131 |

ATLANTIC TECHNOLOGY VENTURES, INC. AND SUBSIDIARIES
(formerly Atlantic Pharmaceuticals, Inc.)
(A Development Stage Company)

Consolidated Statements of Cash Flows

| | Year ended December 31 | | | Cumulative period from July 13, 1993 (inception) to December 31, |
|--|------------------------|-------------|-------------|--|
| | 1999 | 1998 | 1997 | 1999 |
| Cash flows from operating activities: | | | | |
| Net loss | \$ (2,446,515) | (2,753,528) | (5,151,396) | (18,790,099) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | | | |
| Expense relating to issuance of warrants | -- | -- | 159,202 | 298,202 |
| Expense relating to the issuance of options | -- | 81,952 | -- | 81,952 |
| Expense related to Channel merger | -- | -- | 657,900 | 657,900 |
| Compensation expense relating to stock options | -- | 74,400 | 28,800 | 208,782 |
| Discount on notes payable - bridge financing | -- | -- | -- | 300,000 |
| Depreciation | 113,771 | 166,553 | 74,953 | 430,410 |
| Loss on disposal of furniture and equipment | 73,387 | -- | -- | 73,387 |
| Changes in assets and liabilities: | | | | |
| (Increase) decrease in accounts receivable | 43,692 | (381,015) | -- | (337,323) |
| (Increase) decrease in prepaid expenses | 24,694 | (40,858) | 23,699 | (17,414) |
| Increase (decrease) in accrued expenses | (114,242) | 264,435 | 110,774 | 542,759 |
| Increase (decrease) in accrued interest | -- | -- | -- | 172,305 |
| Net cash used in operating activities | (2,305,213) | (2,588,061) | (4,096,068) | (16,379,139) |
| Cash flows from investing activities: | | | | |
| Purchase of furniture and equipment | (62,917) | (177,765) | (243,153) | (641,730) |
| Proceeds from sale of furniture and equipment | 6,100 | -- | -- | 6,100 |
| Net cash used in investing activities | (56,817) | (177,765) | (243,153) | (635,630) |
| Cash flows from financing activities: | | | | |
| Proceeds from exercise of warrants | -- | 5,500 | -- | 5,500 |
| Proceeds from exercise of stock options | -- | 52,500 | -- | 52,500 |
| Proceeds from issuance of demand notes payable | -- | -- | -- | 2,395,000 |
| Repayment of demand notes payable | -- | -- | -- | (125,000) |
| Proceeds from the issuance of notes payable - bridge financing | -- | -- | -- | 1,200,000 |
| Proceeds from issuance of warrants | -- | -- | -- | 300,000 |
| Repayment of notes payable - bridge financing | -- | -- | -- | (1,500,000) |
| Repurchase of common stock | -- | -- | -- | (324) |
| Preferred stock dividend paid | (318) | -- | -- | (318) |
| Proceeds from the issuance of common stock | -- | -- | -- | 7,547,548 |
| Proceeds from issuance of convertible preferred stock | -- | -- | 10,613,184 | 10,613,184 |
| Net cash provided by (used in) financing activities | (318) | 58,000 | 10,613,184 | 20,488,090 |
| Net increase (decrease) in cash and cash equivalents | (2,362,348) | (2,707,826) | 6,273,963 | 3,473,321 |
| Cash and cash equivalents at beginning of period | 5,835,669 | 8,543,495 | 2,269,532 | -- |
| Cash and cash equivalents at end of period | \$ 3,473,321 | 5,835,669 | 8,543,495 | 3,473,321 |
| Supplemental disclosure of noncash financing activities: | | | | |
| Issuance of common stock in exchange for common stock subscriptions | \$ -- | -- | -- | 7,027 |
| Conversion of demand notes payable and the related accrued interest to common stock | -- | -- | -- | 2,442,304 |
| Cashless exercise of preferred warrants | -- | 30,069 | -- | 30,069 |
| Conversion of preferred to common stock | 313 | 1,367 | 48 | 1,415 |
| Preferred stock dividend issued in shares | 314,366 | -- | -- | 314,366 |

See accompanying notes to consolidated financial statements.

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(formerly Atlantic Pharmaceuticals, Inc.)
(A Development Stage Company)

Notes to Consolidated Financial Statements

December 31, 1999, 1998 and 1997

(1) Organization, Liquidity and Basis of Presentation

Organization

Atlantic Technology Ventures, Inc. (formerly Atlantic Pharmaceuticals, Inc.) (the Company) was incorporated on May 18, 1993, began operations on July 13, 1993, and is the majority owner of two operating companies - Gemini Technologies, Inc. (Gemini), Optex Ophthalmologics, Inc. (Optex), and has one wholly-owned subsidiary - Channel Therapeutics, Inc. (Channel) (collectively, the Operating Companies).

Gemini (an 85%-owned subsidiary) was incorporated on May 18, 1993 to exploit a new proprietary technology which combines 2'-5' oligoadenylate (2-5A), with standard antisense compounds to alter the production of disease-causing proteins. Optex (an 82%-owned subsidiary) was incorporated on October 19, 1993 to develop its principal product, a novel cataract removal device. Channel was incorporated on May 18, 1993 to develop pharmaceutical products in the fields of cardiovascular disease, pain and inflammatory disorders. Prior to 1997, Channel was an 88%-owned subsidiary. The Company purchased the remaining 12% of Channel in 1997 for \$657,900 through the issuance of common stock. See note 6 for further discussion.

The Company and each of its operating companies are in the development stage, devoting substantially all efforts to obtaining financing and performing research and development activities.

The consolidated financial statements include the accounts of the Company and its subsidiaries. Significant intercompany accounts and transactions have been eliminated in consolidation.

Liquidity

The Company anticipates that their current resources, together with proceeds from an agreement between the Company and Bausch & Lomb Surgical (Bausch & Lomb) (see note 11), will be sufficient to finance their currently anticipated needs for operating and capital expenditures for at least the next 12 months. In addition, the Company will attempt to generate additional capital through a combination of collaborative agreements, strategic alliances and equity and debt financing. However, the Company can give no assurance that they will be able to obtain additional capital through these sources or upon terms acceptable to them.

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Basis of Presentation

The consolidated financial statements have been prepared in accordance with the provisions of Statement of Financial Accounting Standards (SFAS) No. 7, "Accounting and Reporting by Development Stage Enterprises," which requires development stage enterprises to employ the same accounting principles as operating companies.

(2) Summary of Significant Accounting Policies

Cash and Cash Equivalents

The Company considers all highly liquid investments with an original maturity of 90 days or less to be cash equivalents.

Property and Equipment

Property and equipment are recorded at cost. Depreciation is calculated principally using straight-line methods over their useful lives, generally five years, except for leasehold improvements which are depreciated over the lesser of five years or the term of the lease.

Minority Interest

The Company has recorded 100% of the losses of the Operating Companies in its consolidated statements of operations as the minority shareholders are not required to and have not funded their pro rata share of losses. Minority interest losses recorded by the Company since inception total \$621,665 as of December 31, 1999 and will only be recovered if and when the Operating Companies generate income to the extent of those losses recorded by the Company.

Research and Development

All research and development costs are expensed as incurred and include costs of consultants who conduct research and development on behalf of the Company and the Operating Companies. Costs related to the acquisition of technology rights and patents, for which development work is still in process, are expensed as incurred and considered a component of research and development costs.

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Revenue Recognition

Revenue from development fees are earned in accordance with the terms of the contract (see note 11) as the work is performed. Revenue from achievement of milestones is recognized when all parties concur that the requirements of the milestone have been met. Revenue under these contracts is not subject to repayment.

Income Taxes

Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between financial statement carrying amounts of existing assets and liabilities, and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

Comprehensive Income

Effective January 1, 1998, the Company adopted SFAS No. 130, "Reporting Comprehensive Income." SFAS No. 130 establishes new rules for the reporting and display of comprehensive income and its components. The adoption of SFAS No. 130 had no impact on the Company's results of operations for the years ended December 31, 1999, 1998 or 1997. The net loss is equal to the comprehensive loss for all periods presented.

Computation of Net Loss per Common Share

Basic net loss per common share is calculated by dividing net loss applicable to common shares by the weighted-average number of common shares outstanding for the period. Diluted net loss per common share is the same as basic net loss per common share, as common equivalent shares from stock options, stock warrants, stock subscriptions, and convertible preferred stock would have an antidilutive effect because the Company incurred a net loss during each period presented.

Use of Estimates

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

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Stock-Based Compensation

SFAS No. 123, "Accounting for Stock-Based Compensation," encourages, but does not require companies to record compensation cost for stock-based employee compensation plans at fair value. The Company has chosen to continue to account for stock-based compensation using the method prescribed in Accounting Principles Board (APB) Opinion No. 25, "Accounting for Stock Issued to Employees," and related Interpretations. Accordingly, compensation cost for stock options granted to employees and directors is measured as the excess, if any, of the quoted market price of the Company's common stock at the date of the grant over the exercise price.

(3) Property and Equipment

Property and equipment consists of the following at December 31, :

| | 1999 | 1998 |
|-------------------------------|------------|-----------|
| | ----- | ----- |
| Furniture and equipment | \$ 269,142 | 530,024 |
| Leasehold improvements | 83,861 | 48,788 |
| | ----- | ----- |
| | 353,003 | 578,812 |
| Less accumulated depreciation | (221,171) | (316,639) |
| | ----- | ----- |
| Net property and equipment | \$ 131,832 | 262,173 |
| | ===== | ===== |

(4) Demand Notes Payable to Related Parties

Demand notes payable at December 31, 1994 consisted of advances from one of the founders of the Company who served as a director and was, at that time, the controlling shareholder of the Company (Controlling Shareholder) totaling \$485,000, advances from a partnership including certain family members of the Controlling Shareholder (the Partnership) totaling \$400,000, and advances under a line of credit agreement with the Controlling Shareholder totaling \$500,000. All unpaid principal and accrued interest through June 30, 1995, including a note payable of \$1,010,000 issued in 1995, was converted into 785,234 shares of common stock of the Company upon the consummation of the initial public offering (IPO).

Demand notes payable at December 31, 1995 totaling \$125,000 consisted of a loan provided to the Company by the Partnership in July 1995. This loan had an interest rate of 10% annually. Terms of the loan required the Company to repay the principal amount of such loan, together with the interest accrued thereon, with a portion of the proceeds received by the Company in the IPO. This loan and the related accrued interest was fully repaid in January 1996.

(5) Notes Payable - Bridge Financing

On September 12, 1995, the Company closed the sale of thirty units with each unit consisting of an unsecured 10% promissory note of the Company in the principal amount of \$50,000 and 50,000 warrants, each exercisable to purchase one share of common stock of the Company at an initial exercise price of \$1.50 per share. The total proceeds received of \$1,500,000 were allocated to the notes payable and warrants based on the estimated fair value as determined by the Board of Directors of the Company of \$1,200,000 and \$300,000, respectively. The warrants were reflected as additional paid-in capital.

Proceeds from the IPO were used to pay these notes payable with \$75,000 remaining unpaid at December 31, 1995. This remaining obligation was paid in January 1996.

(6) Stockholders' Equity

Common Stock

In 1993, the Company received common stock subscriptions for 5,231 shares of common stock from various individuals, including the Controlling Shareholder and the Partnership, in exchange for common stock subscriptions receivable of \$6,277. In December 1994, the Company issued 2,606 shares of common stock upon receipt of payment of \$3,127 representing a portion of these common stock subscriptions receivable.

In June 1994, the Company received common stock subscriptions for 84 shares of common stock from various individuals including directors and employees. Payment of the related common stock subscriptions receivable in the amount of \$101 was received in December 1994 which resulted in the issuance of 84 shares of common stock.

In August 1994, the Company received common stock subscriptions for 872 shares of common stock from certain investors. Payment of the related common stock subscriptions receivable in the amount of \$33,000 and \$18,625 was received in August 1994 and December 1994, respectively, which resulted in the issuance of 860 shares of common stock.

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In March 1995, June 1995, and August 1995, the Company repurchased 62, 20, and 187 shares of common stock, respectively, for an aggregate total of \$324.

In March 1995, May 1995, and June 1995, the Company issued 2,170, 125, and 160 shares of common stock, respectively, upon receipt of payment of \$3,682 representing subscriptions receivable.

In December 1995, the Company issued 1,872,750 shares of common stock through a public offering, resulting in net proceeds, after deducting applicable expenses, of \$6,036,700. Concurrent with this offering 785,234 shares of common stock were issued upon the conversion of certain demand notes payable and accrued interest totaling \$2,442,304 (see note 4).

In August 1996, the Company sold in a private placement 250,000 shares of common stock to certain investors resulting in net proceeds of \$1,452,313. In connection with this private placement, the Company paid Paramount Capital, Incorporated (Paramount) a finders fee of \$76,438 and issued an employee of Paramount a warrant to purchase 12,500 shares of the Company's common stock at \$6.73 per share, which expires August 16, 2001. Paramount is owned by the Controlling Shareholder.

Pursuant to an Agreement and Plan of Reorganization by and among the Company, Channel, and New Channel, Inc., a Delaware corporation, dated February 20, 1997, all of the stockholders of Channel (except for the Company) agreed to receive an aggregate of 103,200 shares of common stock of the Company in exchange for their shares of common stock, par values \$0.001 per share, of Channel. On February 20, 1997, Channel became a wholly-owned subsidiary of the Company. Subsequent to this transaction, Channel issued a dividend to the Company consisting of all of Channel's rights to the CT-3 technology, which is in the field of pain and inflammation. On May 16, 1997, the Company issued 103,200 shares of common stock of the Company to stockholders of Channel. In connection with the issuance of these shares, the Company recognized an expense in the amount of \$657,900. This expense is included in research and development expense in the accompanying 1997 consolidated statement of operations.

Convertible Preferred Stock

In May and August, 1997, the Company sold in a private placement 1,237,200 shares of Series A convertible preferred stock (Series A Preferred) to certain investors resulting in net proceeds of \$10,613,184.

Prior to August 7, 1998 (the Reset Date), each share of Series A Preferred was convertible into 2.12 shares of common stock initially at a conversion price of \$4.72 per share of common stock. Pursuant to the Certificate of Designations for the Series A Preferred, the conversion price was adjusted on the

Reset Date such that now each share is convertible into 3.27 shares of common stock at a conversion price of \$3.06. This conversion price is subject to adjustment upon the occurrence of certain events, including the issuance of common stock at a per share price less than the conversion price, or the occurrence of a merger, reorganization, consolidation, reclassification, stock dividend or stock split which will result in an increase or decrease in the number of common stock shares outstanding.

Holder of Series A Preferred will be entitled to receive dividends, as when, and if declared by the Board of Directors. Commencing on the Reset Date, the holders of the Series A Preferred are entitled to payment-in-kind dividends, payable semi-annually in arrears, on their respective shares of Series A Preferred at the annual rate of 0.13 shares of Series A Preferred for each outstanding share of Series A Preferred. The Company did not make the February 7, 1999 dividend payment. On August 9, 1999, the Company issued a payment-in-kind dividend of 0.13325 of a share of Series A Preferred per share of Series A Preferred to holders of shares of Series A Preferred as of the record date of August 2, 1999, amounting to an aggregate of 73,219 shares. This dividend included the dividend payment of 0.065 of a share of Series A Preferred per share of Series A Preferred that had not been made on February 7, 1999, and the portion of the dividend payment due August 9, 1999, was increased from 0.065 of a share to 0.06825 of a share to reflect non-payment of the February 7, 1999 dividend. The estimated fair value of the dividend was included in the Company's calculation of the 1999 net loss per common share.

The holders of shares of Series A Preferred have the right at all meetings of stockholders of the Company to that number of votes equal to the number of shares of common stock issuable upon conversion of the Series A Preferred at the record or vote date for determination of the stockholders entitled to vote on such matters.

In connection with the issuance of the convertible preferred stock, the Company recognized \$1,628,251 and \$3,703,304 in 1998 and 1997, respectively, as an imputed preferred stock dividend in the calculation of net loss per common share to record the difference between the conversion price of the preferred stock and the market price of the common stock on the effective date of the private placement.

Upon liquidation, the holders of shares of Series A Preferred then outstanding will first be entitled to receive, pro rata, and in preference to the holders of common stock and any capital stock of the Company, an amount per share equal to \$13.00 plus any accrued but unpaid dividends, if any.

The Certificate of Designations of Series A Preferred provides that we may not issue securities that have superior rights to Series A Preferred without the consent of the holders of Series A Preferred. Accordingly, so long as these convertible securities remain unexercised and shares of Series A Preferred remain uncovered, the terms under which we could obtain additional funding, if at all, may be adversely affected.

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(7) Stock Options

In August 1995, in connection with a severance agreement entered into between the Company and a former CEO, the Company granted options (not pursuant to the 1995 Stock Option Plan) to purchase 23,557 shares of common stock at an exercise price of \$1.00 per share with immediate vesting. Total compensation expense recorded at the date of grant with regards to those options was \$64,782 with the offset recorded as additional paid-in capital.

Stock Option Plan

In July 1995, the Company established the 1995 Stock Option Plan (the Plan), which provided for the granting of up to 650,000 options to officers, directors, employees and consultants for the purchase of stock. In July 1996, the Plan was amended to increase the total number of shares authorized for issuance by 300,000 shares to a total of 950,000 shares and beginning with the 1997 calendar year, by an amount equal to one percent (1%) of the shares of common stock outstanding on December 31 of the immediately preceding calendar year. At December 31, 1999, 1,054,817 shares were authorized for issuance. The options have a maximum term of 10 years and vest over a period determined by the Company's Board of Directors (generally 4 years).

The Company applies APB Opinion No. 25 in accounting for its plan. Accordingly, compensation cost has been recognized for stock options granted to employees and directors only to the extent that the quoted market price of the Company's stock at the date of grant exceeded the exercise price of the option.

During 1995, the Company granted options to purchase 246,598 shares of the Company's common stock at exercise prices below the quoted market prices of its common stock. Deferred compensation expense in the amount of \$144,000 was recorded at the date of grant with the offset recorded as an increase to additional paid in capital. Compensation expense in the amount of \$74,400, \$28,800 and \$28,800 was recognized in 1998, 1997 and 1996, respectively.

In November 1997, the Company granted options to purchase 24,000 shares of the Company's common stock at \$9.50 per share to Investor Relations Group (Investor). These options expire November 10, 2002. The Company recognized expense of \$81,952, which is included in general and administrative expense in the consolidated statement of operations for the year ended December 31, 1998. The expense represents the estimated fair market value of the options, in accordance with SFAS No. 123.

During 1999, the Company granted its President options to purchase 50,000 shares of the Company's common stock which will be exercisable at such date that Optex is sold while he is still serving as President.

All stock options granted in 1999 were granted at the quoted market price.

Had compensation costs been determined in accordance with the fair value method prescribed by SFAS No. 123, the Company's net loss applicable to common shares and net loss per common share (basic and diluted) would have been increased to the pro forma amounts indicated below:

| | 1999 | 1998 | 1997 |
|--|--------------|-----------|-----------|
| | ----- | ----- | ----- |
| Net loss applicable to common shares: | | | |
| As reported | \$ 2,760,881 | 4,381,779 | 8,854,700 |
| Pro forma | 3,623,177 | 5,038,676 | 9,537,916 |
| Net loss per common share - basic and diluted: | | | |
| As reported | 0.59 | 1.13 | 2.97 |
| Pro forma | 0.77 | 1.30 | 3.20 |
| | ===== | ===== | ===== |

The fair value of each option granted is estimated on the date of the grant using the Black-Scholes option pricing model with the following assumptions used for the grants in 1999, 1998, and 1997; dividend yield of 0%; expected volatility of 94% for 1999, 95% for 1998 and 46% for 1997; risk-free interest rate of 6.5% for 1999, 5.0% for 1998 and 1997; and expected lives of eight years for each year.

A summary of the status of the Company's stock plan as of December 1999, 1998, and 1997 and changes during the years then ended is presented below:

| | 1999 shares | Weighted average exercise price | 1998 shares | Weighted average exercise price | 1997 shares | Weighted average exercise price |
|---|----------------|--|----------------|--|----------------|--|
| | ----- | ----- | ----- | ----- | ----- | ----- |
| At the beginning of the year | 837,798 \$ | 5.06 | 715,598 \$ | 5.16 | 560,598 \$ | 4.57 |
| Granted | 221,000 | 1.39 | 192,200 | 3.19 | 155,000 | 7.29 |
| Exercised | -- | -- | (70,000) | 0.75 | -- | -- |
| Cancelled | (662,598) | 4.93 | -- | -- | -- | -- |
| | ----- | ----- | ----- | ----- | ----- | ----- |
| At the end of the year | 396,200 \$ | 3.25 | 837,798 \$ | 5.06 | 715,598 \$ | 5.16 |
| | ===== | ===== | ===== | ===== | ===== | ===== |
| Options exercisable at year-end | 211,869 | | 574,660 | | 375,461 | |
| | ===== | | ===== | | ===== | |
| Weighted-average fair value of options granted during the year | \$ 1.20 | | \$ 2.84 | | \$ 3.74 | |
| | ===== | | ===== | | ===== | |

The following table summarizes the information about stock options outstanding at December 31, 1999:

| Exercise price | Number outstanding | Remaining contractual life | Number of options exercisable |
|----------------|---------------------------|----------------------------|-------------------------------|
| 1.313 | 20,000 | 0.25 years | 5,000 |
| 1.313 | 100,000 | 9.75 years | 12,500 |
| 1.375 | 20,000 | 9.60 years | -- |
| 1.500 | 75,000 | 9.80 years | 75,000 |
| 1.750 | 6,000 | 9.75 years | -- |
| 2.313 | 4,000 | 8.67 years | 4,000 |
| 3.250 | 20,000 | 0.25 years | 8,889 |
| 3.250 | 40,000 | 8.67 years | 17,780 |
| 5.810 | 50,000 | 0.25 years | 37,500 |
| 6.625 | 20,000 | 0.25 years | 10,000 |
| 6.813 | 1,200 | 3.25 years | 1,200 |
| 7.000 | 2,000 | 0.25 years | 2,000 |
| 7.000 | 2,000 | 7.50 years | 2,000 |
| 7.250 | 10,000 | 0.25 years | 10,000 |
| 7.500 | 2,000 | 6.50 years | 2,000 |
| 9.500 | 24,000 | 2.86 years | 24,000 |
| | ----- 396,200 ===== | | ----- 211,869 ===== |

(8) Stock Warrants

In connection with notes payable - bridge financing, the Company issued warrants to purchase 1,500,000 shares of common stock at an initial exercise price of \$1.50 per share; subject to an upward adjustment upon consummation of the IPO. Simultaneously with the consummation of the IPO, these warrants were converted into redeemable warrants at an exercise price of \$5.50 per share on a one-for-one basis (see note 5). These redeemable warrants expire on December 13, 2000.

As of December 14, 1996, the redeemable warrants are subject to redemption by the Company at a redemption price of \$0.05 per redeemable warrant on 30 days prior written notice, provided that the average closing bid price of the common stock as reported on Nasdaq equals or exceeds \$8.25 per share, subject to adjustment, for any 20 trading days within a period of 30 consecutive trading days ending on the fifth trading day prior to the date of notice of the redemption.

In December 1995, in connection with the IPO, the Company issued redeemable warrants to purchase 1,872,750 shares of common stock at an exercise price of \$5.50 per share. These redeemable warrants expire on December 13, 2000. Commencing December 14, 1996, these redeemable warrants are subject to redemption by the Company at its option, at a redemption price of \$0.05 per warrant provided that the average closing bid price of the common stock equals or exceeds \$8.25 per share for a specified period of time, and the Company has obtained the required approvals from the Underwriters of the Company's IPO. In January 1998, 1,000 warrants were exercised.

In connection with the IPO, the Company granted to Joseph Stevens & Co., L.P. (the Underwriter) warrants to purchase from the Company 165,000 units, each unit consisting of one share of common stock and one redeemable warrant at an initial exercise price of \$6.60 per unit. Such warrants are exercisable during the four-year period commencing December 13, 1996. The redeemable warrants issuable upon exercise of these warrants have an exercise price of \$6.05 per share. As long as the warrants remain unexercised, the terms under which the Company could obtain additional capital may be adversely affected.

The Company entered into an agreement with Paramount effective April 15, 1996 pursuant to which Paramount will, on a non-exclusive basis, render financial advisory services to the Company. Two warrants exercisable for shares of the Company's common stock were issued to Paramount in connection with this agreement. These included a warrant to purchase 25,000 shares of the Company's common stock at \$10 per share, which warrant expires on April 16, 2001 and a warrant to purchase 25,000 shares of the Company's common stock at \$8.05 per share, which warrant expires on June 16, 2001. In connection with the issuance of these warrants, the Company recognized an expense in the amount of \$139,000 for the fair value of the warrants, in accordance with SFAS No. 123. This expense is included in general and administrative expenses in the consolidated statements of operations for the year ended December 31, 1996.

In connection with the Channel merger discussed in note 6, the Company issued a warrant to a director of the Company to purchase 37,500 shares of the Company's common stock at \$5.33 per share, which warrant expires on July 14, 2006. The Company recognized expense of \$48,562, which is included in research and development expenses in the consolidated statements of operations for the year ended December 31, 1997.

The Company entered into an agreement with Investor pursuant to which Investor will render investor relations and corporate communication services to the Company. A warrant to purchase 24,000 shares of Company's common stock at \$7.00 per share, which warrant expires on November 22, 2001, was issued in 1996. The Company recognized expense of \$110,640, which is included in general and administrative expense in the consolidated statements of operations for the year ended December 31, 1997. The expense represents the fair value of the warrants, in accordance with SFAS No. 123.

Concurrent with the private placement offering of Series A Preferred in 1997, the Company issued 123,720 warrants to designees of Paramount, the placement agent. These warrants are initially exercisable at a price equal to \$11.00 per share and may be exercised at any time during the 10 year period commenced February 17, 1998. The rights, preferences and privileges of the shares of Series A Preferred issuable upon exercise of these warrants are identical to those offered to the participants in the private placement. The warrants contain anti-dilution provisions providing for adjustment of the number of securities underlying the Series A Preferred issuable upon exercise of the warrants and the exercise price of the warrants under certain circumstances. The warrants are not redeemable and will remain outstanding, to the extent not exercised, notwithstanding any mandatory redemption or conversion of the Series A Preferred underlying the warrants. In accordance with SFAS No. 123, the Company determined the fair value of the warrants using the Black Scholes Model and allocated this value of \$570,143, to convertible preferred stock warrants with a corresponding reduction in additional paid-in capital. In June 1998, 6,525 warrants were exercised via a cashless method for 2,010 shares of Series A Preferred.

On January 4, 2000, the Company entered into a Financial Advisory and Consulting Agreement with the Underwriters. In this agreement, the Company engaged the Underwriters to provide investment banking services from January 4, 2000 until January 4, 2001. As partial compensation for the services to be rendered by the Underwriters, the Company issued the Underwriters three warrants to purchase an aggregate of 450,000 shares of its common stock. The exercise price ranges between \$2.50 and \$4.50 and the exercise period of each warrant is at various times through 2007. In addition, each warrant may only be exercised when the market price of share of common stock is at least \$1.00 greater than exercise price of that warrant. In connection with the issuance of the warrants, the Company and the Underwriters entered into a letter agreement granting registration rights in respect of the shares of common stock issuable upon exercise of the warrants. The Company intends to record the fair value of the warrants as general and administrative expense over the vesting period through January 4, 2001.

(9) Related-Party Transactions

During 1999, the Company entered into consulting agreements with certain members of its Board of Directors. Prior to 1999, the Company had several consulting agreements with directors of the Company. These agreements, all of which have been terminated, required either monthly consulting fees or project-based fees. Consulting expense under these agreements was \$99,000, \$96,000 and \$60,000 for the years ended December 31, 1999, 1998 and 1997, respectively.

One of the three members of the Board of Directors of the Company was a full-time officer of Paramount. In the regular course of its business, Paramount identifies, evaluates and pursues investment opportunities in biomedical and pharmaceutical products, technologies and companies. The Company had several agreements with Paramount as well as with employees of Paramount pursuant to which Paramount and such employees of Paramount provide financial advisory services to the Company. Consulting expense under these agreements was \$18,000, \$36,000 and \$28,000 for the years ended December 31, 1999, 1998 and 1997, respectively.

(10) Income Taxes

There was no current or deferred tax expense for the years ended December 31, 1999, 1998 and 1997 because of the Company's operating losses.

The components of deferred tax assets and deferred tax liabilities as of December 31, 1999 and 1998 are as follows:

| | 1999 | 1998 |
|------------------------------------|-------------|-----------|
| | ----- | ----- |
| Deferred tax assets: | | |
| Tax loss carryforwards | \$7,003,948 | 6,542,380 |
| Research and development credit | 495,555 | 421,217 |
| Fixed assets | 9,651 | 18,924 |
| | ----- | ----- |
| Gross deferred tax assets | 7,509,154 | 6,982,521 |
| Less valuation allowance | 7,509,154 | 6,982,521 |
| | ----- | ----- |
| Net deferred tax assets | -- | -- |
| Deferred tax liabilities | -- | -- |
| | ----- | ----- |
| Net deferred tax asset (liability) | \$ -- | -- |
| | ===== | ===== |

The reasons for the difference between actual income tax expense (benefit) for the years ended December 31, 1999, 1998 and 1997 and the amount computed by applying the statutory federal income tax rate to losses before income tax (benefit) are as follows:

| | 1999 | | 1998 | | 1997 | |
|--|--------------|----------------------|--------------|----------------------|----------------|----------------------|
| | Amount | % of pretax earnings | Amount | % of pretax earnings | Amount | % of pretax earnings |
| Income tax expense at statutory rate | \$ (832,000) | (34.0%) | \$ (936,000) | (34.0%) | \$ (1,752,000) | (34.0%) |
| State income taxes, net of Federal tax benefit | (147,000) | (6.0%) | (165,000) | (6.0%) | (309,000) | (6.0%) |
| Change in valuation reserve | 527,000 | 21.5% | 1,255,000 | 45.6% | 2,239,000 | 43.4% |
| Credits generated in current year | (74,000) | (3.0%) | (183,000) | (6.6%) | (171,000) | (3.3%) |
| Adjustment to prior estimated income tax expense | 529,000 | 21.6% | -- | -- % | -- | -- % |
| Other, net | (3,000) | (0.1%) | 29,000 | 1.0% | (7,000) | (0.1%) |
| Income tax benefit | \$ -- | -- % | \$ -- | -- % | \$ -- | -- % |

A valuation allowance is provided when it is more likely than not that some portion or all of the deferred tax assets will not be realized. The net change in the total valuation allowance for the years ended December 31, 1999, 1998 and 1997 was an increase of \$527,000, \$1,255,000 and \$2,239,000, respectively. The tax benefit assumed using the federal statutory tax rate of 34% has been reduced to an actual benefit of zero due principally to the aforementioned valuation allowance.

At December 31, 1999, the Company had federal and state net operating loss tax carryforwards of approximately \$17,400,000. The net operating loss carryforwards expire in various amounts starting in 2008 and 2000 for federal and state tax purposes, respectively. The Tax Reform Act of 1986 contains provisions which limit the ability to utilize net operating loss carryforwards in the case of certain events including significant changes in ownership interests. If the Company's net operating loss carryforwards are limited, and the Company has taxable income which exceeds the permissible yearly net operating loss carryforward, the Company would incur a federal income tax liability even though net operating loss carryforwards would be available in future years.

(11) License Agreement

On May 14, 1998, Optex entered into a Development and License Agreement (the Agreement) with Bausch & Lomb to complete the development of Catarex, a cataract-removal technology owned by Optex. Under the terms of the Agreement, Optex and Bausch & Lomb intend jointly to complete the final design and development of the Catarex System. Bausch & Lomb was granted an exclusive worldwide license to the Catarex technology for human ophthalmic surgery and will assume responsibility for commercializing Catarex globally. The Agreement is cancellable by Bausch & Lomb at any time upon six months written notice.

The Agreement provides that Bausch & Lomb will pay Optex milestone payments of (a) \$2,500,000 upon the signing of the Agreement, (b) \$4,000,000 upon the successful completion of certain clinical trials, (c) \$2,000,000 upon receipt of regulatory approval to market the Catarex device in the United States (this payment is creditable in full against royalties), and (d) \$1,000,000 upon receipt of regulatory approval to market the Catarex device in Japan. Pursuant to the Agreement, Bausch & Lomb shall reimburse Optex for its research and development expenses not to exceed \$2,500,000. Bausch & Lomb shall pay Optex a royalty of 7% of net sales and an additional 3% royalty when certain conditions involving liquid polymer lenses are met.

During 1998, the Company received the first milestone payment of \$2,500,000, which is nonrefundable, and recorded this amount as license revenue. In addition, the Company recorded \$1,047,511 in 1998 as a reduction of expenses related to the research and development of the Catarex device. Of this amount, \$381,015 is recorded as an account receivable at December 31, 1998.

On September 16, 1999, the Company and Bausch & Lomb amended the Agreement to provide for an expanded role for Optex in development of the Caterex surgical device.

Under the amended Agreement, Optex, in addition to the basic design work provided for in the original agreement, is responsible for providing Bausch & Lomb within a stated period Caterex devices for use in clinical trials, and assisting Bausch & Lomb in connection with development of manufacturing processes for scale-up of manufacture of the Caterex device.

Additionally, Bausch & Lomb will reimburse Optex for all costs, including labor, professional services and materials, incurred by Optex in delivering those Caterex devices and performing manufacturing services, and will pay Optex a profit component of 25% on the first \$6.4 million of such costs and just cost reimbursement on the remaining \$1.6 million of estimated costs.

During 1999, Optex recorded revenue pursuant to the amended Agreement of \$1,082,510. Of this amount, \$304,752 is recorded as an account receivable at December 31, 1999. In addition, through September 16, 1999, the date of the amendment, the Company recorded \$1,229,068 as a reduction of expenses related to the research and development of the Catarex device.

In connection with the revised agreement, the Company agreed to pay a bonus to its President totaling \$141,000, payable monthly through September 2001. At December 31, 1999, \$117,500 is still due and is included in accounts payable and accrued expenses in the accompanying 1999 consolidated balance sheet.

(12) Commitments and Contingencies

Consulting and Research Agreements

The Company has entered into consulting agreements, under which stock options may be issued in the foreseeable future. The agreements are cancellable with no firm financial commitments.

Operating Leases

The Company rents certain office space under operating leases which expire in various years through 2002.

Aggregate annual lease payments for noncancelable operating leases are as follows:

| Year ending December 31 | |
|----------------------------|------------|
| ----- | |
| 2000 | \$ 112,000 |
| 2001 | 155,000 |
| 2002 | 40,000 |
| | ===== |
| | \$ 307,000 |
| | ===== |

Rent expense related to operating leases for the years ended December 31, 1999, 1998, and 1997 was \$118,264, \$97,756, and \$62,683, respectively.

Resignation of CEO

In July 1998, the CEO of the Company resigned. The Company recorded \$211,250 of expense for salary continuation through April 1999. Of this amount, \$140,833 is recorded in accrued expenses at December 31, 1998. Pursuant to the resignation, all unvested stock options held by the CEO vested immediately and expired in July 1999.

Termination of Agreement with the Trustees of the University of Pennsylvania

On October 12, 1999, the Company and Channel announced the termination of the license agreement dated as of June 16, 1994, between the Trustees of the University of Pennsylvania (Penn) and Channel pursuant to which Channel received the rights to use cyclodextrin technology. The Company and Channel, on the one hand, and Penn, on the other hand, released each other from any further obligations under the license agreement. The Company paid Penn a portion of the patent costs for which Penn was seeking reimbursement under the agreement.

FINANCIAL ADVISORY AND CONSULTING AGREEMENT

This Agreement is made and entered into as of this 4th day of January, 2000, by and between ATLANTIC PHARMACEUTICALS, INC., a Delaware corporation (the "Company"), and JOSEPH STEVENS & COMPANY, INC. (the "Consultant").

In consideration of and for the mutual promises and covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto hereby agree as follows:

1. Purpose. The Company hereby retains the Consultant during the term specified in Section 2 hereof to render consulting advice to the Company as an investment banker relating to financial and similar matters, upon the terms and conditions as set forth herein.

2. Term. Other than the provisions of Sections 8, 9, 10 and 12 hereof, which shall survive any termination of this Agreement, this Agreement shall be effective for a period (the "Term") beginning on the date hereof and ending on January 4, 2001, unless earlier terminated pursuant to Section 14 hereof.

3. Duties of Consultant. During the term of this Agreement, the Consultant will provide the Company with such regular and customary consulting advice as is reasonably requested by the Company, provided that the Consultant shall not be required to undertake duties not reasonably within the scope of the consulting advisory service contemplated by this Agreement. In performance of these duties, the Consultant shall provide the Company with the benefits of its best judgment and efforts. It is understood and acknowledged by the parties that the value of the Consultant's advice is not measurable in any quantitative manner, and that the Consultant shall be obligated to render advice, upon the request of the Company, in good faith, but shall not be obligated to spend any specific amount of time in doing so. The Consultant's duties may include, but will not necessarily be limited to:

A. Providing sponsorship and exposure in connection with the dissemination of corporate information regarding the Company to the investment community at large under a systematic planned approach.

B. Rendering advice and assistance in connection with the preparation of annual and interim reports and press releases.

C. Arranging, on behalf of the Company and its representatives, at appropriate times, meetings with securities analysts of major regional investment banking firms.

D. Assisting the Company's financial public relations, including discussions between the Company and the financial community.

E. Rendering advice with regard to internal operations, including:

- (1) advice regarding formation of corporate goals and their implementation;
- (2) advice regarding the financial structure of the Company and its divisions or subsidiaries or any programs and projects;
- (3) advice concerning the securing, when necessary and, if possible, of additional financing through banks and/or insurance companies; and
- (4) advice regarding corporate organization and personnel.

F. Rendering advice with respect to acquisitions by the Company and/or mergers of the Company with other companies, joint ventures by the Company with any third parties, license and royalty agreements and any other financing (other than the private or public sale of the Company's securities for cash) including, without limitation, the sale of the Company itself or any significant percentage, subsidiaries or affiliates thereof (each of the foregoing being referred to herein as a "Transaction") such advice to include, without limitation, identifying potential acquisition targets or merger candidates, and assisting the Company with analyzing, structuring, negotiating and effecting acquisition and merger opportunities.

G. Rendering advice regarding a future public or private offering of securities of the Company or of any subsidiary.

4. Relationships with Others. The Company acknowledges that the Consultant and its affiliates are in the business of providing financial services and consulting advice (of all types contemplated by this Agreement) to others. Nothing herein contained shall be construed to limit or restrict the Consultant or its affiliates from rendering such services or advice to others. It is clearly understood that the Consultant, for services rendered under this Agreement, makes no commitment whatsoever to make a market in the securities of the Company or to recommend or advise its clients to purchase the securities of the Company. Research reports or corporate finance reports that may be prepared by the Consultant will, when and if prepared, be done solely on the merits or judgment of analysts of the Consultant or senior corporate finance personnel of the Consultant. The Company and the Consultant shall follow reasonable

procedures, to be mutually agreed, to eliminate the sharing of information between employees of Consultant who are engaged in providing advisory services to the Company and those who are engaged in such market-making and reporting activities, if any.

5. Consultant's Liability. In the absence of gross negligence or willful misconduct on the part of the Consultant, or the Consultant's breach of this Agreement, the

Consultant shall not be liable to the Company, or to any officer, director, employee, shareholder or creditor of the Company, for any act or omission in the course of or in connection with the rendering or providing of advice or services hereunder.

6. Expenses. The Company, upon receipt of appropriate supporting documentation, shall reimburse the Consultant for any and all reasonable out-of-pocket expenses incurred by the Consultant in connection with services rendered by the Consultant to the Company pursuant to this Agreement, including, but not limited to, hotel, food and associated expenses, all charges for travel and long-distance telephone calls, reasonable attorneys' fees and all other expenses incurred by the Consultant in connection with services rendered by the Consultant to the Company pursuant to this Agreement. Notwithstanding the foregoing, the Company shall not be obligated to reimburse the Consultant for expenses in excess of \$1000 individually or \$10,000 in the aggregate, unless such expenses were incurred with the Company's prior written consent. Expenses payable under this Section 6 shall not include allocable overhead expenses of the Consultant, including, but not limited to, secretarial charges and rent.

7. Compensation. As partial compensation for the services to be rendered by the Consultant to the Company pursuant to Section 3 hereof, the Company shall issue on the date hereof to the Consultant, or to such person as the Consultant shall designate in writing subject to the approval of the Company, warrants in the form of Exhibit A hereto ("Warrants") to purchase an aggregate of 450,000 shares of common stock, par value \$.001 per share of the Company ("Common Stock"), with an exercise price and term of exercisability as follows:

| # Shares | Exercise Price | Exercise Period |
|----------|----------------|--|
| 150,000 | \$2.50 | 1/4/00 through 1/4/05 |
| 150,000 | \$3.50 | 1/4/01 through 1/4/06, (subject to vesting in equal monthly increments during the Term) |
| 150,000 | \$4.50 | 1/4/02 through 1/4/07, (subject to vesting in equal monthly increments during the Term) |

In addition, each Warrant shall only be exercisable when the market price of a share of Common Stock is at least \$1.00 greater than the relevant Exercise Price, as provided in the Warrant. In connection with the issuance of the Warrants, the Company shall execute a letter agreement in the form of Exhibit B hereto, which shall provide for

registration rights in respect of the shares of Common Stock issuable upon exercise of the Warrants.

8. Success Fee. In addition to the compensation described in Section 7 hereof, the Company agrees to pay to Consultant a success fee as described below upon the closing of any Transaction with one or more parties introduced to the Company by Consultant during the Term for which definitive documentation is signed during the Term or within twelve (12) months after the termination or non-renewal of the Term. The success fee described in this Section 8 will not become payable in connection with any Transaction unless the aggregate legal consideration (as defined below) payable to the Company in connection with such Transaction is equal to or greater than \$10 million.

| Legal Consideration | Fee |
|---------------------------------|---|
| 1. \$-0- | 5% of legal consideration |
| 2. \$3,000,000.01 - \$3,000,000 | Amount calculated pursuant to line 1 of this computation, plus 4% of excess over \$3,000,000 |
| 3. \$4,000,000.01 - \$5,000,000 | Amount calculated pursuant to lines 1 and 2 of this computation, plus 3% of excess over \$4,000,000 |
| 4. above \$5,000,000 | Amount calculated pursuant to lines 1, 2 and 3 of this computation, plus 2% of excess over \$5,000,000. |

Legal consideration is defined, for purposes of this Agreement, as the total of stock (valued at market on the day of closing, or if there is no public market, valued as set forth herein for other property), cash and assets and property or other benefits received by the Company or its shareholders in the Transaction (all valued at fair market value as agreed or, if not, by any independent appraiser), irrespective of period of payment or terms.

9. Sales or Distributions of Securities. If the Consultant assists the Company in the sale or distribution a private transaction, the Consultant shall receive fees in the amount and form to be arranged separately at the time of such transaction.

10. Form of Payment. All fees due to the Consultant pursuant to Section 8 hereof are due and payable to the Consultant, in cash or by certified check, at the closing or closings of the Transaction, whether during or after the Term, or as otherwise agreed between the parties hereto; provided, however, that in the case of license and royalty agreements specified in Section 8 hereof, the fees due the Consultant in receipt of such license and royalty agreements shall be paid as and when license and/or royalty payments are received by the Company.

11. Limitation Upon the Use of Advice and Services.

A. No person or entity, other than the Company or any of its subsidiaries, shall be entitled to make use of or rely upon the advice of the Consultant to be given hereunder, and the Company shall not transmit such advice to others, or encourage or facilitate the use of or reliance upon such advice by others, without the prior written consent of the Consultant.

B. The use of the Consultant's name in any annual report or other report of the Company, or any release or similar document prepared by or on behalf of the Company, must have the prior written approval of the Consultant unless the Company is required by law to include the Consultant's name in such annual report, other report or release, in which event the Consultant will be furnished with a copy of such annual report, other report or release using the Consultant's name in advance of publication by or on behalf of the Company.

C. Should any purchases of securities be requested to be effected through the Consultant by the Company, its officers, directors, employees or other affiliates, or by any person on behalf of any profit sharing, pension or similar plan of the Company, for the account of the Company or the individuals or entities involved, such orders shall be taken by a registered account executive of the Consultant, shall not be subject to the terms of this Agreement, and the normal brokerage commission as charged by the Consultant will apply in conformity with all rules and regulations of the New York Stock Exchange, the National Association of Securities Dealers, Inc. or other regulatory bodies. Where no regulatory body sets the fee, the normal established fee as used by the Consultant shall apply.

D. The Consultant shall not disclose confidential information which it learns about the Company as a result of its engagement hereunder, and which is not available from any other source not subject to a confidentiality obligation, except for such disclosure as may be required for Consultant to perform its duties hereunder.

12. Indemnification. Since the Consultant will be acting on behalf of the Company in connection with its engagement hereunder, the Company and Consultant have entered into a separate indemnification agreement substantially in the form attached hereto as Exhibit C and dated the date hereof, providing for the indemnification of Consultant by the Company. The Consultant has entered into this Agreement in reliance on the indemnities set forth in such indemnification agreement.

13. Severability. Every provision of this Agreement is intended to be severable. If any term or provision hereof is deemed unlawful or invalid for any reason whatsoever, such unlawfulness or invalidity shall not affect the validity of the remainder of this Agreement.

14. Termination. This Agreement may be terminated by either party at any time for any reason, provided that 30 days written notice of termination has been given to the other party.

15. Miscellaneous.

A. Any notice or other communication between the parties hereto shall be sent by certified or registered mail, postage prepaid, if to the Company, addressed to it at 150 Broadway, Suite 1100, New York, NY 10038, Attention: A. Joseph Rudick, with a copy to Kramer Levin Naftalis & Frankel, 919 Third Avenue, New York, NY 10022, Attention: Ezra G. Levin, Esq., or, if to the Consultant, addressed to it at 33 Maiden Lane, 8th Floor, New York, New York 10038, Attention: Joseph Sorbara, Chief Executive Officer, with a copy to Weil, Gotshal & Manges LLP, 767 Fifth Avenue, New York, New York 10153, Attention: Carl Lobell, Esq., or to such address as may hereafter be designated in writing by one party to the other. Such notice or other communication shall be deemed to be given on the date of receipt.

B. If, during the term hereof, the Consultant shall cease to do business, the provisions hereof relating to the duties of the Consultant and the compensation by the Company as it applies to the Consultant shall thereupon cease to be in effect, except for the Company's obligation of payment for services rendered prior thereto. This Agreement shall survive any merger of, acquisition of, or acquisition by the Consultant and, after any such merger or acquisition, shall be binding upon the Company and the corporation surviving such merger or acquisition.

C. This Agreement embodies the entire agreement and understanding between the Company and the Consultant and supersedes any and all negotiations, prior discussions and preliminary and prior agreements and understandings related to the central subject matter hereof.

D. This Agreement has been duly authorized, executed and delivered by and on behalf of the Company and the Consultant.

E. This Agreement shall be governed by and construed in all respects under the laws of the State of New York, without reference to its conflict of laws rules or principles. Any suit, action, proceeding or litigation arising out of or relating to this Agreement shall be brought and prosecuted in such federal or state court or courts located within the State of New York as provided by law. The parties hereby irrevocably and unconditionally consent to the jurisdiction of each such court or courts located within the State of New York and to service of process by registered or certified mail, return receipt requested, or by any other manner provided by applicable law, and hereby irrevocably and unconditionally waive any right to claim that any suit, action, proceeding or litigation so commenced has been commenced in an inconvenient forum.

F. This Agreement and the rights hereunder may not be assigned by either party (except by operation of law) and shall be binding upon and inure to the benefit of the parties and their respective successors, assigns and legal representatives.

[SIGNATURES BEGIN ON NEXT PAGE]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date hereof.

ATLANTIC PHARMACEUTICALS, INC.

By: /s/ A. Joseph Rudick

Name: A. Joseph Rudick
Title: President

JOSEPH STEVENS & COMPANY, INC.

By: /s/ Steven Markowitz

Name: Steven Markowitz
Title: Chairman

EXHIBIT A
FORM OF WARRANT

WARRANT

To Purchase Common Stock of
ATLANTIC PHARMACEUTICALS, INC.

Warrant No. _____

No. of Shares of Common Stock: _____

B-1

THIS WARRANT AND THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE TRANSFERRED IN VIOLATION OF SUCH ACT, THE RULES AND REGULATIONS THEREUNDER OR THE PROVISIONS OF THIS WARRANT.

No. of Shares of Common Stock: _____ Warrant No. _____

WARRANT

To Purchase Common Stock of
ATLANTIC PHARMACEUTICALS, INC.

THIS IS TO CERTIFY THAT Joseph Stevens & Company, Inc., or registered assigns, is entitled, at any time during the Exercise Period (as hereinafter defined), to purchase from Atlantic Pharmaceuticals, Inc., a Delaware corporation ("Company"), _____ shares of Common Stock (as hereinafter defined and subject to adjustment as provided herein), in whole or in part, including fractional parts, at a purchase price of \$_____ 1per share (subject to adjustment as provided herein) all on the terms and conditions and pursuant to the provisions hereinafter set forth.

1. DEFINITIONS

Capitalized terms used in this Warrant but not defined have the meaning set forth in the Warrant Agreement (as defined below). The following terms have the respective meanings set forth below:

"Additional Shares of Common Stock" means all shares of Common Stock issued by the Company after the Closing Date, other than Warrant Stock.

"Business Day" means any day that is not a Saturday or Sunday or a day on which banks are required or permitted to be closed in the State of New York.

"Commission" means the Securities and Exchange Commission or any other federal agency then administering the Securities Act and other federal securities laws.

"Common Stock" means (except where the context otherwise indicates) the Common Stock, par value \$.001 per share, of Company as constituted on the Closing Date, and any capital stock into which such Common Stock may thereafter be changed, and shall also include (i) capital stock of Company of any other class (regardless of how denominated) issued to the holders of shares of Common Stock upon any reclassification thereof which is also not preferred as to dividends or assets over any other class of stock of Company and which is not subject to redemption and (ii) shares of common stock of any successor or acquiring corporation (as defined in Section 4.8) received by or

1 See Section 7 of the Financial Advisory Agreement.

distributed to the holders of Common Stock of Company in the circumstances contemplated by Section 4.8.

"Convertible Securities" means evidences of indebtedness, shares of stock or other securities which are convertible into or exchangeable, with or without payment of additional consideration in cash or property, for Additional Shares of Common Stock, either immediately or upon the occurrence of a specified date or a specified event.

"Current Market Price" means, in respect of a share of Common Stock on any date, either (a) if there shall not then be a public market for the Common Stock, the Fair Market Value per share of Common Stock as at such date or (b) if there shall then be a public market for the Common Stock, the average of the daily market prices for 20 consecutive Business Days commencing 30 days before such date. The daily market price for each such Business Day shall be (i) the last sale price on such day on the principal stock exchange or NASDAQ Small Cap Market ("NASDAQ") on which such Common Stock is then listed or admitted to trading, (ii) if no sale takes place on such day on any such exchange or NASDAQ, the average of the last reported closing bid and asked prices on such day as officially quoted on any such exchange or NASDAQ, (iii) if the Common Stock is not then listed or admitted to trading on any stock exchange or NASDAQ, the average of the last reported closing bid and asked prices on such day in the over-the-counter market, as furnished by the National Association of Securities Dealers Automatic Quotation System or the National Quotation Bureau, Inc., (iv) if neither such corporation at the time is engaged in the business of reporting such prices, as furnished by any similar firm then engaged in such business, or (v) if there is no such firm, as furnished by any member of the NASD selected mutually by the Majority Holders and Company or, if they cannot agree upon such selection, as selected by two such members of the NASD, one of which shall be selected by the Majority Holders and one of which shall be selected by Company.

"Exchange Act" means the Securities Exchange Act of 1934, as amended, or any similar federal statute, and the rules and regulations of the Commission thereunder, all as the same shall be in effect from time to time.

"Exercise Period" means the period during which this Warrant is exercisable pursuant to Section 2.1.

"Expiration Date" means January 4, 200__2.

"Financial Advisory Agreement" means the Financial Advisory and Consulting Agreement, dated January 4, 2000, by and between the Company and the Consultant.

"Fully Diluted Outstanding" means, on any date, all shares of Common Stock Outstanding on such date and all shares of Common Stock issuable in respect of this Warrant outstanding on such date, and other options or warrants to purchase, or

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2 See Section 7 of the Financial Advisory Agreement.

securities convertible into or exchangeable for, shares of Common Stock outstanding on such date, regardless of whether such options, warrants or other securities are then exercisable or convertible.

"GAAP" means generally accepted accounting principles in the United States of America as in effect from time to time.

"Holder" means the Person in whose name the Warrant set forth herein is registered on the books of Company maintained for such purpose.

"Majority Holders" means the holders of Warrants exercisable for in excess of 50% of the aggregate number of shares of Warrant Stock then purchasable upon exercise of all Warrants.

"NASD" means the National Association of Securities Dealers, Inc., or any successor corporation thereto.

"Other Property" has the meaning set forth in Section 4.8.

"Outstanding" means, when used with reference to Common Stock, on any date, all issued shares of Common Stock on such date, except shares then owned or held by or for the account of Company or any subsidiary thereof, and shall include all shares issuable in respect of outstanding scrip or any certificates representing fractional interests in shares of Common Stock.

"Permitted Issuances" means the issuance of shares of Common Stock upon the exercise or conversion of Company's presently outstanding convertible preferred stock, warrants and employee incentive options.

"Person" means any individual, sole proprietorship, partnership, limited liability company, joint venture, trust, incorporated organization, association, corporation, institution, public benefit corporation, entity or government (whether federal, state, county, city, municipal or otherwise, including, without limitation, any instrumentality, division, agency, body or department thereof).

"Securities Act" shall mean the Securities Act of 1933, as amended, or any similar federal statute, and the rules and regulations of the Commission thereunder, all as the same shall be in effect at the time.

"Transfer" shall mean any disposition of any Warrant or Warrant Stock or of any interest in either thereof, which would constitute a sale thereof within the meaning of the Securities Act.

"Transfer Notice" has the meaning set forth in Section 9.2.

"Warrant" means this Warrant and all warrants issued upon transfer, division or combination of, or in substitution for, this Warrant. All Warrants shall at all

times be identical as to terms and conditions and date, except as to the number of shares of Common Stock for which they may be exercised.

"Warrant Price" means an amount equal to (i) the number of shares of Common Stock being purchased upon exercise of this Warrant pursuant to Section 2.1, multiplied by (ii) \$_____, as adjusted from time to time pursuant to Section 4 of this Warrant.

"Warrant Stock" means the shares of Common Stock issued or issuable upon the exercise of this Warrant.

2. EXERCISE OF WARRANT

2.1 EXERCISE PERIOD. (a) From and after January 4, 200__3 and until 5:00 P.M., New York time, on the Expiration Date (the "Exercise Period"), Holder may exercise this Warrant, on any Business Day on which the condition set forth in Section 2.1(b) hereof is met, for all or any part of the Warrant Stock [which is then purchasable in accordance with the vesting schedule set forth below:

| Date | Shares purchasable upon exercise |
|-------------------|----------------------------------|
| January 4, 2000 | 12,500 |
| February 4, 2000 | 25,000 |
| March 4, 2000 | 37,500 |
| April 4, 2000 | 50,000 |
| May 4, 2000 | 62,500 |
| June 4, 2000 | 75,000 |
| July 4, 2000 | 87,500 |
| August 4, 2000 | 100,000 |
| September 4, 2000 | 112,500 |
| October 4, 2000 | 125,000 |
| November 4, 2000 | 137,500 |
| December 4, 2000 | 150,000 |

Upon any termination of the Financial Advisory Agreement pursuant to Section 14 thereof, the Warrant shall cease to vest and shall continue to be exercisable, in accordance with the terms set forth herein, for the number of shares of Warrant Stock which were purchasable on such date of termination.]4

(b) The Warrant may be exercised on any Business Day, except that it may only be exercised if the last sale price of a share of Common Stock on NASDAQ (or the principal stock exchange on which the Common Stock is then listed or admitted to

3 See Section 7 of the Financial Advisory Agreement.

4 This vesting schedule will only apply to the \$3.50 and \$4.50 exercise price warrants.

trading) on the immediately preceding Business Day was equal to or greater than \$1.00 plus the Exercise Price then in effect.

2.2 EXERCISE NOTICE; DELIVERY OF CERTIFICATES. In order to exercise this Warrant, Holder shall deliver to Company at its principal office at 150 Broadway, Suite 1100, New York, New York 10038, or at the office or agency designated by Company pursuant to Section 13.2, (i) a written notice of Holder's election to exercise this Warrant, specifying the number of shares of Common Stock to be purchased, (ii) payment of the Warrant Price and (iii) this Warrant. Such notice shall be substantially in the form of the subscription form appearing at the end of this Warrant as Exhibit A, duly executed by Holder or its agent or attorney. Upon receipt thereof, Company shall, as promptly as practicable, and in any event within five (5) Business Days thereafter, deliver to Holder a duly executed certificate or certificates representing the aggregate number of full shares of Common Stock issuable upon such exercise, together with cash in lieu of any fraction of a share, as hereinafter provided. Such stock certificate or certificates shall be in such denominations and registered in the name designated in the subscription form, subject to Section 9. Holder or any other Person so designated to be named therein shall be deemed to have become a holder of record of such shares of Warrant Stock for all purposes, as of the date on which all items in clauses (i)-(iii) above have been received by Company and all taxes required to be paid by Holder, if any, pursuant to Section 2.4 have been paid. If this Warrant shall have been exercised in part, Company shall deliver to Holder a new Warrant evidencing the rights of Holder to purchase the remaining shares of Common Stock issuable upon exercise of this Warrant, which new Warrant shall in all other respects be identical with this Warrant, or appropriate notation may be made on this Warrant and the same returned to Holder.

2.3 PAYMENT OF WARRANT PRICE. Payment of the Warrant Price shall be made at the option of the Holder by:

(i) certified or official bank check;

(ii) The surrender to Company of that number of shares of Warrant Stock (or the right to receive such number of shares) or shares of Common Stock having an aggregate Current Market Price equal to or greater than the Current Warrant Price for all shares then being purchased (including those being surrendered); or

(iii) any combination thereof, duly endorsed by or accompanied by appropriate duly executed instruments of transfer.

2.4 PAYMENT OF TAXES. All shares of Warrant Stock shall be validly issued, fully paid and nonassessable and without any preemptive rights. Company shall pay all expenses, taxes and other governmental charges with respect to the issue or delivery thereof, unless such tax or charge is imposed by law upon Holder. Company shall not be required, however, to pay any transfer tax or other similar charge imposed in connection with any transfer involved in the issue of any certificate for shares of Common Stock issuable upon exercise of this Warrant in any name other than that of Holder, and in such case Company shall not be required to issue or deliver any stock

certificate until such tax or other charge has been paid or it has been established to the satisfaction of Company that no such tax or other charge is due.

2.5 FRACTIONAL SHARES. Company shall not be required to issue a fractional share of Common Stock upon exercise of any Warrant. As to any fraction of a share which the Holder of one or more Warrants would otherwise be entitled to purchase upon such exercise, except as otherwise provided in Section 2.1, Company shall pay a cash adjustment in respect of such final fraction in an amount equal to the same fraction of the Current Market Price per share of Common Stock on the date of exercise.

3. TRANSFER, DIVISION AND COMBINATION

3.1 TRANSFER. Subject to compliance with Section 9 hereof, transfer of this Warrant and all rights hereunder, in whole or in part, shall be registered on the books of Company to be maintained for such purpose, upon surrender of this Warrant at the principal office of Company referred to in Section 2.1 or the office or agency designated by Company pursuant to Section 13.2, together with a duly executed written assignment of this Warrant substantially in the form of Exhibit B hereto and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, Company shall, subject to Section 9, execute and deliver a new Warrant or Warrants in the name of the assignee or assignees and in the denomination specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. A Warrant, if properly assigned in compliance with Section 9, may be exercised by a new Holder for the purchase of shares of Common Stock without having a new Warrant issued.

3.2 DIVISION AND COMBINATION. Subject to Section 9, this Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office or agency of Company, together with a duly executed written notice specifying the names and denominations in which new Warrants are to be issued. Subject to compliance with Section 3.1 and with Section 9, as to any transfer which may be involved in such division or combination, Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice.

3.3 EXPENSES. Company shall prepare, issue and deliver at its own expense (other than transfer taxes) the new Warrant or Warrants under this Section 3.

3.4 MAINTENANCE OF BOOKS. Company agrees to maintain, at its aforesaid office or agency, books for the registration and the registration of transfer of the Warrants.

4. ADJUSTMENTS

The number of shares of Common Stock for which this Warrant is exercisable, or the price at which such shares may be purchased upon exercise of this

Warrant, shall be subject to adjustment from time to time as set forth in this Section 4. Company shall give each Holder notice of any event described below which requires an adjustment pursuant to this Section 4 at the time of such event.

4.1 STOCK DIVIDENDS, SUBDIVISIONS AND COMBINATIONS. If at any time Company shall:

(a) take a record of the holders of its Common Stock for the purpose of entitling them to receive a dividend payable in, or other distribution of, Common Stock,

(b) subdivide its outstanding shares of Common Stock into a larger number of shares of Common Stock, or

(c) combine its outstanding shares of Common Stock into a smaller number of shares of Common Stock,

then (i) the number of shares of Common Stock for which this Warrant is exercisable immediately after the occurrence of any such event shall be adjusted to equal the number of shares of Common Stock which a record holder of the same number of shares of Common Stock for which this Warrant is exercisable immediately prior to the occurrence of such event would own or be entitled to receive after the happening of such event, and (ii) the Warrant Price shall be adjusted to equal (A) the Warrant Price multiplied by the number of shares of Common Stock for which this Warrant is exercisable immediately prior to the adjustment divided by (B) the number of shares for which this Warrant is exercisable immediately after such adjustment.

4.2 CERTAIN OTHER DISTRIBUTIONS AND ADJUSTMENTS.

(a) If at any time Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive any dividend or other distribution of:

(i) cash in excess of earned surplus,

(ii) any evidences of its indebtedness, any shares of its stock or any other securities or property of any nature whatsoever (other than cash, Convertible Securities or Additional Shares of Common Stock), or

(iii) any warrants or other rights to subscribe for or purchase any evidences of its indebtedness, any shares of its stock or any other securities or property of any nature whatsoever (other than cash, Convertible Securities or Additional Shares of Common Stock),

then the Exercise Price shall be reduced, without any further action by the parties hereto, by the Per Share Value (as hereinafter defined) of the dividend. For purposes of this Section 4.2 the "Per Share Value" of cash dividend or other distribution shall be the dollar amount of the distribution on each share of Common Stock and the "Per Share Value" of any dividend or distribution other than cash shall be equal to the fair market

value of such non-cash distribution on each share of Common Stock, as determined in good faith by the Board of Directors of the Company.

(b) A reclassification of the Common Stock (other than a change in par value) into shares of Common Stock and shares of any other class of stock shall be deemed a distribution by Company to the holders of its Common Stock of such shares of such other class of stock within the meaning of paragraph (a) above, and if the outstanding shares of Common Stock shall be changed into a larger or smaller number of shares of Common Stock as a part of such reclassification, such change shall be deemed a subdivision or combination, as the case may be, of the outstanding shares of Common Stock within the meaning of Section 4.1.

4.3 ISSUANCE OF ADDITIONAL SHARES OF COMMON STOCK.

(a) If at any time Company shall (except as hereinafter provided) issue or sell any Additional Shares of Common Stock, other than Permitted Issuances, in exchange for consideration in an amount per Additional Share of Common Stock less than the Current Market Price, then

(i) the Warrant Price as to the number of shares for which this Warrant is exercisable prior to such adjustment shall be reduced to a price determined by dividing (A) an amount equal to the sum of (x) the number of shares of Common Stock Outstanding immediately prior to such issue or sale multiplied by the Current Market Price plus (y) the consideration, if any, received by Company upon such issue or sale as determined pursuant to Section 4.7(a), by (B) the total number of shares of Common Stock Outstanding immediately after such issue or sale; and (ii) the number of shares of Common Stock for which this Warrant is exercisable shall be adjusted to equal the product obtained by multiplying the Warrant Price in effect immediately prior to such issue or sale by the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such issue or sale and dividing the product thereof by the Warrant Price resulting from the adjustment made pursuant to clause (i) above.

(b) The provision of paragraph (a) shall not apply to any issuance of Additional Shares of Common Stock for which an adjustment is provided under Section 4.1 or 4.2. No adjustment of the number of shares of Common Stock for which this Warrant shall be exercisable shall be made under paragraph (a) upon the issuance of any Additional Shares of Common Stock which are issued pursuant to the exercise of any warrants or other subscription or purchase rights or pursuant to the exercise of any conversion or exchange rights in any Convertible Securities, if any such adjustment shall previously have been made upon the issuance of such warrants or other rights or upon the issuance of such Convertible Securities (or upon the issuance of any warrant or other rights therefor) pursuant to Sections 4.4 or 4.5 hereof.

4.4 ISSUANCE OF WARRANTS OR OTHER RIGHTS. If at any time Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a distribution of, or shall in any manner (whether directly or by assumption in a merger in which Company is the surviving corporation) issue or sell, any warrants or

other rights to subscribe for or purchase any Additional Shares of Common Stock or any Convertible Securities, whether or not the rights to exchange or convert thereunder are immediately exercisable, and the price per share for which Common Stock is issuable upon the exercise of such warrants or other rights or upon conversion or exchange of such Convertible Securities shall be less than the Current Market Price in effect immediately prior to the time of such issue or sale, then the number of shares for which this Warrant is exercisable and the Current Warrant Price shall be adjusted as provided in Section 4.3 on the basis that the maximum number of Additional Shares of Common Stock issuable pursuant to all such warrants or other rights or necessary to effect the conversion or exchange of all such Convertible Securities shall be deemed to have been issued and outstanding and Company shall be deemed to have received all of the consideration payable therefor, if any, as of the date of the issuance of such warrants or other rights.

4.5 ISSUANCE OF CONVERTIBLE SECURITIES. If at any time Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a distribution of, or shall in any manner (whether directly or by assumption in a merger in which Company is the surviving corporation) issue or sell, any Convertible Securities, whether or not the rights to exchange or convert thereunder are immediately exercisable, and the price per share for which Common Stock is issuable upon such conversion or exchange shall be less than the Current Market Price in effect immediately prior to the time of such issue or sale, then the number of Shares for which this Warrant is exercisable and the Warrant Price shall be adjusted as provided in Section 4.3 on the basis that the maximum number of Additional Shares of Common Stock necessary to effect the conversion or exchange of all such Convertible Securities shall be deemed to have been issued and outstanding and Company shall have received all of the consideration payable therefor, if any, as of the date of issuance of such Convertible Securities. No adjustment of the number of Shares for which this Warrant is exercisable and the Warrant Price shall be made under this Section 4.5 upon the issuance of any Convertible Securities which are issued pursuant to the exercise of any warrants or other subscription or purchase rights therefor, if any such adjustment shall previously have been made upon the issuance of such warrants or other rights pursuant to Section 4.4. If any issue or sale of Convertible Securities is made upon exercise of any warrant or other right to subscribe for or to purchase any such Convertible Securities for which adjustments of the number of Shares for which this Warrant is exercisable and the Warrant Price have been or are to be made pursuant to Section 4.4, no further adjustments of the number of Shares for which this Warrant is exercisable and the Warrant Price shall be made by reason of such issue or sale.

4.6 SUPERSEDING ADJUSTMENT. If, at any time after any adjustment of the number of shares of Common Stock for which this Warrant is exercisable and the Warrant Price shall have been made pursuant to Section 4.4 or Section 4.5 as the result of any issuance of warrants, rights or Convertible Securities,

(a) such warrants or rights, or the right of conversion or exchange in such other Convertible Securities, shall expire, and all or a portion of such warrants or rights,

or the right of conversion or exchange with respect to all or a portion of such other Convertible Securities, as the case may be, shall not have been exercised, or

(b) the consideration per share for which shares of Common Stock are issuable pursuant to such warrants or rights, or the terms of such other Convertible Securities, shall be increased solely by virtue of provisions therein contained for an automatic increase in such consideration per share upon the occurrence of a specified date or event,

then for each outstanding Warrant such previous adjustment shall be rescinded and annulled and the Additional Shares of Common Stock which were deemed to have been issued by virtue of the computation made in connection with the adjustment so rescinded and annulled shall no longer be deemed to have been issued by virtue of such computation. Thereupon, a recomputation shall be made of the effect of such rights or options or other Convertible Securities on the basis of

(c) treating the number of Additional Shares of Common Stock or other property, if any, theretofore actually issued or issuable pursuant to the previous exercise of any such warrants or rights or any such right of conversion or exchange, as having been issued on the date or dates of any such exercise and for the consideration actually received and receivable therefor, and

(d) treating any such warrants or rights or any such other Convertible Securities which then remain outstanding as having been granted or issued immediately after the time of such increase of the consideration per share for which shares of Common Stock or other property are issuable under such warrants or rights or other Convertible Securities; whereupon a new adjustment of the number of shares of Common Stock for which this Warrant is exercisable and the Warrant Price shall be made, which new adjustment shall supersede the previous adjustment so rescinded and annulled.

4.7 OTHER PROVISIONS APPLICABLE TO ADJUSTMENTS UNDER THIS SECTION. The following provisions shall be applicable to the making of adjustments of the number of shares of Common Stock for which this Warrant is exercisable and the Warrant Price provided for in this Section 4:

(a) Computation of Consideration. To the extent that any Additional Shares of Common Stock or any Convertible Securities or any warrants or other rights to subscribe for or purchase any Additional Shares of Common Stock or any Convertible Securities shall be issued for cash consideration, the consideration received by Company therefor shall be the amount of the cash received by Company therefor, or, if such Additional Shares of Common Stock or Convertible Securities are offered by Company for subscription, the subscription price, or, if such Additional Shares of Common Stock or Convertible Securities are sold to underwriters or dealers for public offering without a subscription offering, the initial public offering price (in any such case subtracting any amounts paid or receivable for accrued interest or accrued dividends and without taking into account any compensation, discounts or expenses paid or incurred by Company for and in the underwriting of, or otherwise in connection with, the issuance thereof). To the

extent that such issuance shall be for a consideration other than cash, then, except as herein otherwise expressly provided, the amount of such consideration shall be deemed to be the fair market value of such consideration at the time of such issuance as determined in good faith by the Board of Directors of Company. In case any Additional Shares of Common Stock or any Convertible Securities or any warrants or other rights to subscribe for or purchase such Additional Shares of Common Stock or Convertible Securities shall be issued in connection with any merger in which Company issues any securities, the amount of consideration therefor shall be deemed to be the fair value, as determined in good faith by the Board of Directors of Company, of such portion of the assets and business of the nonsurviving corporation as such Board in good faith shall determine to be attributable to such Additional Shares of Common Stock, Convertible Securities, warrants or other rights, as the case may be. The consideration for any Additional Shares of Common Stock issuable pursuant to any warrants or other rights to subscribe for or purchase the same shall be the consideration received by Company for issuing such warrants or other rights plus the additional consideration payable to Company upon exercise of such warrants or other rights. The consideration for any Additional Shares of Common Stock issuable pursuant to the terms of any Convertible Securities shall be the consideration received by Company for issuing warrants or other rights to subscribe for or purchase such Convertible Securities, plus the consideration paid or payable to Company in respect of the subscription for or purchase of such Convertible Securities, plus the additional consideration, if any, payable to Company upon the exercise of the right of conversion or exchange in such Convertible Securities. In case of the issuance at any time of any Additional Shares of Common Stock or Convertible Securities in payment or satisfaction of any dividends upon any class of stock other than Common Stock, Company shall be deemed to have received for such Additional Shares of Common Stock or Convertible Securities a consideration equal to the amount of such dividend so paid or satisfied.

(b) When Adjustments to Be Made. The adjustments required by this Section 4 shall be made whenever and as often as any specified event requiring an adjustment shall occur, except that any adjustment of the number of shares of Common Stock for which this Warrant is exercisable that would otherwise be required may be postponed (except in the case of a subdivision or combination of shares of Common Stock, as provided for in Section 4.1) up to, but not beyond the date of exercise if such adjustment either by itself or with other adjustments not previously made adds or subtracts less than 1% of the shares of Common Stock for which this Warrant is exercisable immediately prior to the making of such adjustment. Any adjustment representing a change of less than such minimum amount (except as aforesaid) which is postponed shall be carried forward and made as soon as such adjustment, together with other adjustments required by this Section 4 and not previously made, would result in a minimum adjustment or on the date of exercise. For the purpose of any adjustment, any specified event shall be deemed to have occurred at the close of business on the date of its occurrence.

(c) Fractional Interests. In computing adjustments under this Section 4, fractional interests in Common Stock shall be taken into account to the nearest 1/10th of a share.

(d) When Adjustment Not Required. If Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a dividend or distribution or subscription or purchase rights and shall, thereafter and before the distribution to stockholders thereof, legally abandon its plan to pay or deliver such dividend, distribution, subscription or purchase rights, then thereafter no adjustment shall be required by reason of the taking of such record and any such adjustment previously made in respect thereof shall be rescinded and annulled.

(e) Escrow of Warrant Stock. If after any property becomes distributable pursuant to this Section 4 by reason of the taking of any record of the holders of Common Stock, but prior to the occurrence of the event for which such record is taken, and Holder exercises this Warrant, any Additional Shares of Common Stock issuable upon exercise by reason of such adjustment shall be deemed the last shares of Common Stock for which this Warrant is exercised (notwithstanding any other provision to the contrary herein) and such shares or other property shall be held in escrow for Holder by Company to be issued to Holder upon and to the extent that the event actually takes place, upon payment of the Warrant Price. Notwithstanding any other provision to the contrary herein, if the event for which such record was taken fails to occur or is rescinded, then such escrowed shares shall be cancelled by Company and escrowed property returned to Company.

(f) Challenge to Good Faith Determination. Whenever the Board of Directors of Company shall be required to make a determination in good faith of the fair market value of any item under this Section 4, such determination may be challenged in good faith by the Majority Holders, and any dispute shall be resolved by an investment banking or valuation firm of recognized national standing selected by Company and acceptable to the Majority Holders.

4.8 REORGANIZATION, RECLASSIFICATION, MERGER, CONSOLIDATION OR DISPOSITION OF ASSETS. In case Company shall reorganize its capital, reclassify its capital stock, consolidate or merge with or into another corporation (where Company is not the surviving corporation or where there is a change in or distribution with respect to the Common Stock of Company), or sell, transfer or otherwise dispose of all or substantially all its property, assets or business to another corporation and, pursuant to the terms of such reorganization, reclassification, merger, consolidation or disposition of assets, shares of common stock of the successor or acquiring corporation, or any cash, shares of stock or other securities or property of any nature whatsoever (including warrants or other subscription or purchase rights) in addition to or in lieu of common stock of the successor or acquiring corporation ("Other Property"), are to be received by or distributed to the holders of Common Stock of Company, then each Holder shall have the right thereafter to receive, upon exercise of such Warrant, the number of shares of common stock of the successor or acquiring corporation or of Company, if it is the surviving corporation, and Other Property receivable upon or as a result of such reorganization, reclassification, merger, consolidation or disposition of assets by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such event. In case of any such reorganization, reclassification, merger, consolidation or disposition of assets, the successor or acquiring corporation (if other than Company) shall expressly assume the due and punctual observance and

performance of each and every covenant and condition of this Warrant to be performed and observed by Company and all the obligations and liabilities hereunder, subject to such modifications as may be deemed appropriate (as determined by resolution of the Board of Directors of Company) in order to provide for adjustments of shares of Common Stock for which this Warrant is exercisable which shall be as nearly equivalent as practicable to the adjustments provided for in this Section 4. For purposes of this Section 4.8, "common stock of the successor or acquiring corporation" shall include stock of such corporation of any class which is not preferred as to dividends or assets over any other class of stock of such corporation and which is not subject to redemption and shall also include any evidences of indebtedness, shares of stock or other securities which are convertible into or exchangeable for any such stock, either immediately or upon the arrival of a specified date or the happening of a specified event and any warrants or other rights to subscribe for or purchase any such stock. The foregoing provisions of this Section 4.8 shall similarly apply to successive reorganizations, reclassifications, mergers, consolidations or disposition of assets.

4.9 OTHER ACTION AFFECTING COMMON STOCK. In case at any time or from time to time Company shall take any action in respect of its Common Stock, other than any action described in this Section 4, then, unless such action will not have a materially adverse effect upon the rights of the Holders, the number of shares of Common Stock or other stock for which this Warrant is exercisable and/or the purchase price thereof shall be adjusted in such manner as may be equitable in the circumstances.

5. NOTICES TO WARRANT HOLDERS

5.1 NOTICE OF ADJUSTMENTS. Whenever an adjustment to this Warrant is made pursuant to Section 4, Company shall prepare a certificate to be executed by the chief financial officer of Company setting forth, in reasonable detail, the event requiring the adjustment and the method by which such adjustment was calculated, specifying the number of shares of Common Stock for which this Warrant is exercisable and (if such adjustment was made pursuant to Section 4.8 or 4.9) describing the number and kind of any other shares of stock or Other Property for which this Warrant is exercisable, and any change in the purchase price or prices thereof, after giving effect to such adjustment or change. Company shall promptly cause a signed copy of such certificate to be delivered to each Holder. Company shall keep at its office or agency designated pursuant to Section 15 copies of all such certificates and cause the same to be available for inspection at said office during normal business hours by any Holder or any prospective purchaser of a Warrant designated by a Holder thereof.

5.2 NOTICE OF CORPORATE ACTION. If at any time

(a) Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a dividend or other distribution, or any right to subscribe for or purchase any evidences of its indebtedness, any shares of stock of any class or any other securities or property, or to receive any other right, or

(b) there shall be any capital reorganization of Company, any reclassification or recapitalization of the capital stock of Company or any consolidation or merger of Company with, or any sale, transfer or other disposition of all or substantially all the property, assets or business of Company to, another corporation, or

(c) there shall be a voluntary or involuntary dissolution, liquidation or winding up of Company;

then, in any one or more of such cases, Company shall give to Holder (i) at least 30 days' prior written notice of the date on which a record date shall be selected in respect of such event and (ii) in the case of any such event, at least 30 days' prior written notice of the date when the same shall take place. Such notice in accordance with the foregoing clause also shall specify (i) the date on which the holders of Common Stock shall be entitled to any such dividend, distribution or right, and the amount and character thereof and (ii) the date on which any such reorganization, reclassification, merger, consolidation, sale, transfer, disposition, dissolution, liquidation or winding up is to take place and the time, if any such time is to be fixed, as of which the holders of Common Stock shall be entitled to exchange their shares of Common Stock for securities or other property deliverable upon such reorganization, reclassification, merger, consolidation, sale, transfer, disposition, dissolution, liquidation or winding up.

6. NO IMPAIRMENT

Company shall not by any action, including, without limitation, amending its articles of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder against impairment. Without limiting the generality of the foregoing, Company will take all such action as may be necessary or appropriate in order that Company may validly and legally issue fully paid and nonassessable shares of Common Stock upon the exercise of this Warrant, including taking such action as is necessary for the Warrant Price to be not less than the par value of the shares of Common Stock issuable upon exercise of this Warrant. The Company will use its best efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof as may be necessary to enable Company to perform its obligations under this Warrant.

7. RESERVATION AND AUTHORIZATION OF COMMON STOCK

From and after the Closing Date, Company shall at all times reserve and keep available for issue upon the exercise of Warrants such number of its authorized but unissued shares of Common Stock as will be sufficient to permit the exercise in full of all outstanding Warrants. All shares of Common Stock which shall be so issuable, when issued upon exercise of any Warrant and payment therefor in accordance with the terms

of such Warrant, shall be duly and validly issued and fully paid and nonassessable, and not subject to preemptive rights.

8. TAKING OF RECORD; STOCK AND WARRANT TRANSFER BOOKS

In the case of all dividends or other distributions by Company to the holders of its Common Stock with respect to which any provision of Section 4 refers to the taking of a record of such holders, Company will in each such case take such a record and will take such record as of the close of business on a Business Day. Company will not at any time, except upon dissolution, liquidation or winding up of Company, close its stock transfer books or Warrant transfer books so as to result in preventing or delaying the exercise or transfer of any Warrant.

9. RESTRICTIONS ON TRANSFERABILITY

The Warrants and the Warrant Stock shall not be transferred, hypothecated or assigned before satisfaction of the conditions specified in this Section 9, which conditions are intended to ensure compliance with the provisions of the Securities Act with respect to the Transfer of any Warrant or any Warrant Stock. Holder, by acceptance of this Warrant, agrees to be bound by the provisions of this Section 9.

9.1 RESTRICTIVE LEGEND. 1. Except as otherwise provided in this Section 9, each certificate for Warrant Stock initially issued upon the exercise of this Warrant, and each certificate for Warrant Stock issued to any subsequent transferee of any such certificate, shall be stamped or otherwise imprinted with a legend in substantially the following form:

"The shares represented by this certificate have not been registered under the Securities Act of 1933, as amended, and may not be transferred in violation of such Act or the rules and regulations thereunder."

(b) Except as otherwise provided in this Section 9, each Warrant shall be stamped or otherwise imprinted with a legend in substantially the following form:

"This Warrant and the securities represented hereby have not been registered under the Securities Act of 1933, as amended, and may not be transferred in violation of such Act, the rules and regulations thereunder or the provisions of this Warrant."

9.2 NOTICE OF PROPOSED TRANSFERS; REQUESTS FOR REGISTRATION. Prior to or promptly following any Transfer of any Warrants or any shares of Restricted Common Stock, the holder of such Warrants or Restricted Common Stock shall give written notice (a "Transfer Notice") to Company of such Transfer. Each certificate, if any, evidencing such shares of Restricted Common Stock issued upon such Transfer shall bear the restrictive legend set forth in Section 9.1(a), and each Warrant issued upon such Transfer

shall bear the restrictive legend set forth in Section 9.1(b), unless in the opinion of counsel to such holder which is reasonably acceptable to Company such legend is not required in order to ensure compliance with the Securities Act.

9.3 TERMINATION OF RESTRICTIONS. Notwithstanding the foregoing provisions of Section 9, the restrictions imposed by this Section upon the transferability of the Warrants and the Warrant Stock, and the legend requirements of Section 9.1, shall terminate as to any particular Warrant or share of Warrant Stock (i) when and so long as such security shall have been effectively registered under the Securities Act and disposed of pursuant thereto or (ii) when Company shall have received an opinion of counsel reasonably satisfactory to it that such security may be transferred without registration thereof under the Securities Act. Whenever the restrictions imposed by Section 9 shall terminate as to this Warrant, as hereinabove provided, the Holder hereof shall be entitled to receive from Company, at the expense of Company, a new Warrant without the restrictive legend set forth in Section 9.1(b). Whenever the restrictions imposed by this Section shall terminate as to any share of Warrant Stock, as hereinabove provided, the holder thereof shall be entitled to receive from Company, at Company's expense, a new certificate representing such Warrant Stock not bearing the restrictive legend set forth in Section 9.1(a).

10. SUPPLYING INFORMATION

Company shall cooperate with each Holder of a Warrant or Warrant Stock in supplying such information as may be reasonably necessary for such holder to complete and file any information reporting forms presently or hereafter required by the Commission as a condition to the availability of an exemption from the Securities Act for the sale of any Warrant or Warrant Stock.

11. LOSS OR MUTILATION

Upon receipt by Company from any Holder of evidence reasonably satisfactory to it of the ownership of and the loss, theft, destruction or mutilation of this Warrant and indemnity reasonably satisfactory to it (it being understood that the written agreement of Holder shall be sufficient indemnity), and in case of mutilation upon surrender and cancellation hereof, Company will execute and deliver in lieu hereof a new Warrant of like tenor to such Holder; provided, in the case of mutilation, no indemnity shall be required if this Warrant in identifiable form is surrendered to Company for cancellation.

12. LIMITATION OF LIABILITY

No provision hereof, in the absence of affirmative action by Holder to purchase shares of Common Stock, and no enumeration herein of the rights or privileges of Holder hereof, shall give rise to any liability of such Holder for the purchase price of any Common Stock or as a stockholder of Company, whether such liability is asserted by Company or by creditors of Company.

13. MISCELLANEOUS

13.1 NONWAIVER AND EXPENSES. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice Holder's rights, powers or remedies. If Company fails to make, when due, any payments provided for hereunder, or fails to comply with any other provision of this Warrant, Company shall pay to Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

13.2 NOTICE GENERALLY. Any notice, demand, request, consent, approval, declaration, delivery or other communication hereunder to be made pursuant to the provisions of this Warrant shall be sufficiently given or made if in writing and either delivered in person with receipt acknowledged or sent by registered or certified mail, return receipt requested, postage prepaid, or by telecopy and confirmed by telecopy answerback, addressed as follows:

(a) If to any Holder or holder of Warrant Stock, at its last known address appearing on the books of Company maintained for such purpose.

(b) If to Company at:

Atlantic Pharmaceuticals, Inc.
150 Broadway
Suite 1100
New York, NY 10038
Attn: A. Joseph Rudick

or at such other address as may be substituted by notice given as herein provided. The giving of any notice required hereunder may be waived in writing by the party entitled to receive such notice. Every notice, demand, request, consent, approval, declaration, delivery or other communication hereunder shall be deemed to have been duly given or served on the date on which personally delivered, with receipt acknowledged, telecopied and confirmed by telecopy answerback, or three (3) Business Days after the same shall have been deposited in the United States mail. Failure or delay in delivering copies of any notice, demand, request, approval, declaration, delivery or other communication to the person designated above to receive a copy shall in no way adversely affect the effectiveness of such notice, demand, request, approval, declaration, delivery or other communication.

13.3 SUCCESSORS AND ASSIGNS. Subject to the provisions of Sections 3.1 and 9, this Warrant and the rights evidenced hereby shall inure to the benefit of and be binding upon the successors of Company and the successors and assigns of Holder. The provisions of this Warrant are intended to be for the benefit of all Holders from time to time of this Warrant and shall be enforceable by any such Holder.

13.4 AMENDMENT. This Warrant and all other Warrants may be modified or amended or the provisions hereof waived with the written consent of Company and the Majority Holders, provided that no such Warrant may be modified or amended to reduce the number of shares of Common Stock for which such Warrant is exercisable or to increase the price at which such shares may be purchased upon exercise of such Warrant (before giving effect to any adjustment as provided therein) without the prior written consent of the Holder thereof.

13.5 SEVERABILITY. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Warrant.

13.6 HEADINGS. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

13.7 GOVERNING LAW. This Warrant shall be governed by the laws of the State of Delaware, without regard to the provisions thereof relating to conflict of laws.

[SIGNATURES BEGIN ON NEXT PAGE]

IN WITNESS WHEREOF, Company has caused this warrant to be duly executed and attested by its Secretary or an Assistant Secretary.

Dated:

ATLANTIC PHARMACEUTICALS, INC.

By: _____
Name:
Title:

Attest:

By: _____
Name:
Title:

A-20

EXHIBIT A TO WARRANT

SUBSCRIPTION FORM

[To be executed only upon exercise of Warrant]

The undersigned registered owner of this Warrant irrevocably exercises this Warrant for the purchase of _____ Shares of Common Stock of Atlantic Pharmaceuticals, Inc. and herewith makes payment therefor, all at the price and on the terms and conditions specified in this Warrant and requests that certificates for the shares of Common Stock hereby purchased (and any securities or other property issuable upon such exercise) be issued in the name of and delivered to _____ whose address is _____ and, if such shares of Common Stock shall not include all of the shares of Common Stock issuable as provided in this Warrant, that a new Warrant of like tenor and date for the balance of the shares of Common Stock issuable hereunder be delivered to the undersigned.

(Name of Registered Owner)

(Signature of Registered Owner)

(Street Address)

(City) (State) (Zip Code)

NOTICE: The signature on this subscription must correspond with the name as written upon the face of the within Warrant in every particular, without alteration or enlargement or any change whatsoever.

EXHIBIT B TO WARRANT

ASSIGNMENT FORM

FOR VALUE RECEIVED the undersigned registered owner of this Warrant hereby sells, assigns and transfers unto the Assignee named below all of the rights of the undersigned under this Warrant, with respect to the number of shares of Common Stock set forth below:

Name and Address of Assignee _____ No. of Shares of Common Stock _____

and does hereby irrevocably constitute and appoint _____ attorney-in-fact to register such transfer on the books of Atlantic Pharmaceuticals, Inc. maintained for the purpose, with full power of substitution in the premises.

Dated: _____ Print Name: _____

Signature: _____

Witness: _____

NOTICE: The signature on this assignment must correspond with the name as written upon the face of the within Warrant in every particular, without alteration or enlargement or any change whatsoever.

EXHIBIT B
FORM OF LETTER AGREEMENT

Atlantic Pharmaceuticals, Inc.
1017 Main Campus Drive
Suite 3900
Raleigh, NC 27607

Joseph Stevens & Company, Inc.
33 Maiden Lane
8th Floor
New York, New York 10038

Re: Amendment to Underwriters Warrant Agreement

Ladies and Gentlemen:

With reference to that certain Underwriter's Warrant Agreement, dated as of _____, 1995, between Atlantic Pharmaceuticals, Inc. ("Company") and Joseph Stevens & Company, L.P. (the "Original Warrant Agreement"), we wish to provide that the shares of common stock, par value \$.001 per share, of the Company ("Common Stock") issuable upon exercise of the warrants to be issued to you ("Warrants") pursuant to that certain Financial Advisory and Consulting Agreement, dated as of the date hereof, shall be subject to Sections 7.2 through 7.5 of the Original Warrant Agreement. Notwithstanding anything to the contrary in the Original Warrant Agreement, (i) the piggyback registration rights granted pursuant to Section 7.2 shall be effective for seven years from the date hereof and (ii) the demand registration rights granted pursuant to section 7.3 shall be effective for five years from the date hereof, in each case with respect to all shares of Common Stock issuable upon the exercise of Warrants held by Joseph Stevens & Company, Inc. and its affiliates, and all shares of Common Stock issuable upon the exercise of warrants issued pursuant to the Original Warrant Agreement.

Very truly yours,

ATLANTIC PHARMACEUTICALS INC.

By: _____
Name:
Title:

Agreed and Acknowledged

JOSEPH STEVENS & COMPANY, INC.

By: _____
Name:
Title:

EXHIBIT C
FORM OF INDEMNIFICATION AGREEMENT

Atlantic Pharmaceuticals, Inc.
1017 Main Campus Drive
Suite 3900
Raleigh, NC 27607

January 4, 2000

JOSEPH STEVENS & COMPANY, INC.
33 Maiden Lane
8th Floor
New York, New York 10038

Ladies and Gentlemen:

In connection with the engagement by Atlantic Pharmaceuticals, Inc. (the "Company") of JOSEPH STEVENS & COMPANY, INC. (the "Consultant") as the Company's financial advisor and investment banker, the Company hereby agrees to indemnify and hold the Consultant and its affiliates, and the directors, officers, partners, shareholders, agents and employees of the Consultant (collectively the "Indemnified Persons"), harmless from and against any and all claims, actions, suits, proceedings (including those of shareholders), damages, liabilities and expenses incurred by any of them (including, but not limited to, fees and expenses of counsel) which are (A) related to or arise out of (i) any actions taken or omitted to be taken (including any untrue statements made or any statements omitted to be made) by the Company, or (ii) any actions taken or omitted to be taken by any Indemnified Person in connection with our engagement of the Consultant pursuant to the Financial Advisory and Consulting Agreement, of even date herewith, between the Consultant and the Company (the "Consulting Agreement"), or (B) otherwise related to or arising out of the Consultant's activities on the Company's behalf pursuant to the Consultant's engagement under the Consulting Agreement, and the Company shall reimburse any Indemnified Person for all expenses (including, but not limited to, fees and expenses of counsel) incurred by such Indemnified Person in connection with investigating, preparing or defending any such claim, action, suit or proceeding (collectively a "Claim"), whether or not in connection with pending or threatened litigation in which any Indemnified Person is a party. The Company will not, however, be responsible for any Claim which is finally judicially determined to have resulted exclusively from the gross negligence or willful misconduct of any person seeking indemnification hereunder. The Company further agrees that no Indemnified Person shall have any liability to the Company for or in connection with the Consultant's engagement under the Consulting Agreement except for any Claim incurred by the Company solely as a direct result of any Indemnified Person's gross negligence or willful misconduct.

The Company further agrees that the Company will not, without the prior written consent of the Consultant, settle, compromise or consent to the entry of any judgment in any pending or threatened Claim in respect of which indemnification may be sought hereunder (whether or not any Indemnified Person is an actual or potential party to such Claim), unless such settlement, compromise or consent includes a legally binding, unconditional, and irrevocable release of each Indemnified Person hereunder from any and all liability arising out of such Claim.

Promptly upon receipt by an Indemnified Person of notice of any complaint or the assertion or institution of any Claim with respect to which indemnification is being sought hereunder, such Indemnified Person shall notify the Company in writing of such complaint or of such assertion or institution, but failure to so notify the Company shall not relieve the Company from any obligation the Company may have hereunder, unless, and only to the extent that, such failure results in the forfeiture by the Company of substantial rights and defenses, and such failure to so notify the Company will not in any event relieve the Company from any other obligation or liability the Company may have to any Indemnified Person otherwise than under this Agreement. If the Company so elects or is requested by such Indemnified Person, the Company will assume the defense of such Claim, including the employment of counsel reasonably satisfactory to such Indemnified Person and the payment of the fees and expenses of such counsel. In the event, however, that such Indemnified Person reasonably determines in its sole judgment that having common counsel would present such counsel with a conflict of interest or such Indemnified Person concludes that there may be legal defenses available to it or other Indemnified Persons that are different from or in addition to those available to the Company, then such Indemnified Person may employ its own separate counsel to represent or defend it in any such Claim and the Company shall pay the reasonable fees and expenses of such counsel. Notwithstanding anything herein to the contrary, if the Company fails timely or diligently to defend, contest, or otherwise protect against any Claim, the relevant Indemnified Party shall have the right, but not the obligation, to defend, contest, compromise, settle, assert crossclaims or counterclaims, or otherwise protect against the same, and shall be fully indemnified by the Company therefor, including, but not limited to, for the fees and expenses of its counsel and all amounts paid as a result of such Claim or the compromise or settlement thereof. In any Claim in which the Company assumes the defense, the Indemnified Person shall have the right to participate in such defense and to retain its own counsel therefor at its own expense.

The Company agrees that if any indemnity sought by an Indemnified Person hereunder is held by a court to be unavailable for any reason, then (whether or not the Consultant is the Indemnified Person) the Company and the Consultant shall contribute to the Claim for which such indemnity is held unavailable in such proportion as is appropriate to reflect the relative benefits to the Company, on the one hand, and the Consultant, on the other, in connection with the Consultant's engagement by the Company under the Consulting Agreement, subject to the limitation that in no event shall the amount of the Consultant's contribution to such Claim exceed the amount of fees actually received by the Consultant from the Company pursuant to the

Consultant's engagement under the Consulting Agreement. The Company hereby agrees that the relative benefits to the Company, on the one hand, and the Consultant, on the other, with respect to the Consultant's engagement under the Consulting Agreement shall be deemed to be in the same proportion as (a) the total value paid or proposed to be paid or received by the Company or the Company's shareholders as the case may be, pursuant to the transaction (whether or not consummated) for which the Consultant is engaged to render services bears to (b) the fee paid or proposed to be paid to the Consultant in connection with such engagement.

Our indemnity, reimbursement and contribution obligations under this Agreement shall be in addition to, and shall in no way limit or otherwise adversely affect any rights that any Indemnified Party may have at law or at equity.

Should the Consultant, or any of its directors, officers, partners, shareholders, agents or employees, be required or be requested by us to provide documentary evidence or testimony in connection with any proceeding arising from or relating to the Consultant's engagement under the Consulting Agreement, the Company agrees to pay all reasonable expenses (including, but not limited to, fees and expenses of counsel) in complying therewith and one thousand dollars (\$1,000) per day for any sworn testimony or preparation therefor, payable in advance.

The Company hereby consents to personal jurisdiction and service of process and venue in any court in which any claim for indemnity is brought by any Indemnified Person.

It is understood that, in connection with the Consultant's engagement under the Consulting Agreement, the Consultant may be engaged to act in one or more additional capacities and that the terms of the original engagement or any such additional engagement may be embodied in one or more separate written agreements. The provisions of this Agreement shall apply to the original engagement and any such additional engagement and shall remain in full force and effect following the completion or termination of the Consultant's engagement(s).

Very truly yours,

ATLANTIC PHARMACEUTICALS, INC.

By: _____
Name:
Title:

CONFIRMED AND AGREED TO:

JOSEPH STEVENS & COMPANY, INC.

By: _____
Name:
Title:

WARRANT

To Purchase Common Stock of
ATLANTIC PHARMACEUTICALS, INC.

Warrant No. 1

No. of Shares of Common Stock: 150,000

THIS WARRANT AND THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE TRANSFERRED IN VIOLATION OF SUCH ACT, THE RULES AND REGULATIONS THEREUNDER OR THE PROVISIONS OF THIS WARRANT.

No. of Shares of Common Stock: 150,000

Warrant No. 1

WARRANT

To Purchase Common Stock of
ATLANTIC PHARMACEUTICALS, INC.

THIS IS TO CERTIFY THAT Joseph Stevens & Company, Inc., or registered assigns, is entitled, at any time during the Exercise Period (as hereinafter defined), to purchase from Atlantic Pharmaceuticals, Inc., a Delaware corporation ("Company"), 150,000 shares of Common Stock (as hereinafter defined and subject to adjustment as provided herein), in whole or in part, including fractional parts, at a purchase price of \$2.50 per share (subject to adjustment as provided herein) all on the terms and conditions and pursuant to the provisions hereinafter set forth.

1. DEFINITIONS

Capitalized terms used in this Warrant but not defined have the meaning set forth in the Warrant Agreement (as defined below). The following terms have the respective meanings set forth below:

"Additional Shares of Common Stock" means all shares of Common Stock issued by the Company after the Closing Date, other than Warrant Stock.

"Business Day" means any day that is not a Saturday or Sunday or a day on which banks are required or permitted to be closed in the State of New York.

"Commission" means the Securities and Exchange Commission or any other federal agency then administering the Securities Act and other federal securities laws.

"Common Stock" means (except where the context otherwise indicates) the Common Stock, par value \$.001 per share, of Company as constituted on the Closing Date, and any capital stock into which such Common Stock may thereafter be changed, and shall also include (i) capital stock of Company of any other class (regardless of how denominated) issued to the holders of shares of Common Stock upon any reclassification thereof which is also not preferred as to dividends or assets over any other class of stock of Company and which is not subject to redemption and (ii) shares of common stock of any successor or acquiring corporation (as defined in Section 4.8) received by or distributed to the holders of Common Stock of Company in the circumstances contemplated by Section 4.8.

"Convertible Securities" means evidences of indebtedness, shares of stock or other securities which are convertible into or exchangeable, with or without payment of additional consideration in cash or property, for Additional Shares of Common Stock, either immediately or upon the occurrence of a specified date or a specified event.

"Current Market Price" means, in respect of a share of Common Stock on any date, either (a) if there shall not then be a public market for the Common Stock, the Fair Market Value per share of Common Stock as at such date or (b) if there shall then be a public market for the Common Stock, the average of the daily market prices for 20 consecutive Business Days commencing 30 days before such date. The daily market price for each such Business Day shall be (i) the last sale price on such day on the principal stock exchange or NASDAQ Small Cap Market ("NASDAQ") on which such Common Stock is then listed or admitted to trading, (ii) if no sale takes place on such day on any such exchange or NASDAQ, the average of the last reported closing bid and asked prices on such day as officially quoted on any such exchange or NASDAQ, (iii) if the Common Stock is not then listed or admitted to trading on any stock exchange or NASDAQ, the average of the last reported closing bid and asked prices on such day in the over-the-counter market, as furnished by the National Association of Securities Dealers Automatic Quotation System or the National Quotation Bureau, Inc., (iv) if neither such corporation at the time is engaged in the business of reporting such prices, as furnished by any similar firm then engaged in such business, or (v) if there is no such firm, as furnished by any member of the NASD selected mutually by the Majority Holders and Company or, if they cannot agree upon such selection, as selected by two such members of the NASD, one of which shall be selected by the Majority Holders and one of which shall be selected by Company.

"Exchange Act" means the Securities Exchange Act of 1934, as amended, or any similar federal statute, and the rules and regulations of the Commission thereunder, all as the same shall be in effect from time to time.

"Exercise Period" means the period during which this Warrant is exercisable pursuant to Section 2.1.

"Expiration Date" means January 4, 2005.

"Financial Advisory Agreement" means the Financial Advisory and Consulting Agreement, dated January 4, 2000, by and between the Company and the Consultant.

"Fully Diluted Outstanding" means, on any date, all shares of Common Stock Outstanding on such date and all shares of Common Stock issuable in respect of this Warrant outstanding on such date, and other options or warrants to purchase, or securities convertible into or exchangeable for, shares of Common Stock outstanding on such date, regardless of whether such options, warrants or other securities are then exercisable or convertible.

"GAAP" means generally accepted accounting principles in the United States of America as in effect from time to time.

"Holder" means the Person in whose name the Warrant set forth herein is registered on the books of Company maintained for such purpose.

"Majority Holders" means the holders of Warrants exercisable for in excess of 50% of the aggregate number of shares of Warrant Stock then purchasable upon exercise of all Warrants.

"NASD" means the National Association of Securities Dealers, Inc., or any successor corporation thereto.

"Other Property" has the meaning set forth in Section 4.8.

"Outstanding" means, when used with reference to Common Stock, on any date, all issued shares of Common Stock on such date, except shares then owned or held by or for the account of Company or any subsidiary thereof, and shall include all shares issuable in respect of outstanding scrip or any certificates representing fractional interests in shares of Common Stock.

"Permitted Issuances" means the issuance of shares of Common Stock upon the exercise or conversion of Company's presently outstanding convertible preferred stock, warrants and employee incentive options.

"Person" means any individual, sole proprietorship, partnership, limited liability company, joint venture, trust, incorporated organization, association, corporation, institution, public benefit corporation, entity or government (whether federal, state, county, city, municipal or otherwise, including, without limitation, any instrumentality, division, agency, body or department thereof).

"Securities Act" shall mean the Securities Act of 1933, as amended, or any similar federal statute, and the rules and regulations of the Commission thereunder, all as the same shall be in effect at the time.

"Transfer" shall mean any disposition of any Warrant or Warrant Stock or of any interest in either thereof, which would constitute a sale thereof within the meaning of the Securities Act.

"Transfer Notice" has the meaning set forth in Section 9.2.

"Warrant" means this Warrant and all warrants issued upon transfer, division or combination of, or in substitution for, this Warrant. All Warrants shall at all times be identical as to terms and conditions and date, except as to the number of shares of Common Stock for which they may be exercised.

"Warrant Price" means an amount equal to (i) the number of shares of Common Stock being purchased upon exercise of this Warrant pursuant to Section 2.1,

multiplied by (ii) \$2.50, as adjusted from time to time pursuant to Section 4 of this Warrant.

"Warrant Stock" means the shares of Common Stock issued or issuable upon the exercise of this Warrant.

2. EXERCISE OF WARRANT

2.1 EXERCISE PERIOD. (a) From and after January 4, 2000 and until 5:00 P.M., New York time, on the Expiration Date (the "Exercise Period"), Holder may exercise this Warrant, on any Business Day on which the condition set forth in Section 2.1(b) hereof is met, for all or any part of the Warrant Stock.

(b) The Warrant may be exercised on any Business Day, except that it may only be exercised if the last sale price of a share of Common Stock on NASDAQ (or the principal stock exchange on which the Common Stock is then listed or admitted to trading) on the immediately preceding Business Day was equal to or greater than \$1.00 plus the Exercise Price then in effect.

2.2 EXERCISE NOTICE; DELIVERY OF CERTIFICATES. In order to exercise this Warrant, Holder shall deliver to Company at its principal office at 150 Broadway, Suite 1100, New York, New York 10038, or at the office or agency designated by Company pursuant to Section 13.2, (i) a written notice of Holder's election to exercise this Warrant, specifying the number of shares of Common Stock to be purchased, (ii) payment of the Warrant Price and (iii) this Warrant. Such notice shall be substantially in the form of the subscription form appearing at the end of this Warrant as Exhibit A, duly executed by Holder or its agent or attorney. Upon receipt thereof, Company shall, as promptly as practicable, and in any event within five (5) Business Days thereafter, deliver to Holder a duly executed certificate or certificates representing the aggregate number of full shares of Common Stock issuable upon such exercise, together with cash in lieu of any fraction of a share, as hereinafter provided. Such stock certificate or certificates shall be in such denominations and registered in the name designated in the subscription form, subject to Section 9. Holder or any other Person so designated to be named therein shall be deemed to have become a holder of record of such shares of Warrant Stock for all purposes, as of the date on which all items in clauses (i)-(iii) above have been received by Company and all taxes required to be paid by Holder, if any, pursuant to Section 2.4 have been paid. If this Warrant shall have been exercised in part, Company shall deliver to Holder a new Warrant evidencing the rights of Holder to purchase the remaining shares of Common Stock issuable upon exercise of this Warrant, which new Warrant shall in all other respects be identical with this Warrant, or appropriate notation may be made on this Warrant and the same returned to Holder.

2.3 PAYMENT OF WARRANT PRICE. Payment of the Warrant Price shall be made at the option of the Holder by:

- (i) certified or official bank check;

(ii) The surrender to Company of that number of shares of Warrant Stock (or the right to receive such number of shares) or shares of Common Stock having an aggregate Current Market Price equal to or greater than the Current Warrant Price for all shares then being purchased (including those being surrendered); or

(iii) any combination thereof, duly endorsed by or accompanied by appropriate duly executed instruments of transfer.

2.4 PAYMENT OF TAXES. All shares of Warrant Stock shall be validly issued, fully paid and nonassessable and without any preemptive rights. Company shall pay all expenses, taxes and other governmental charges with respect to the issue or delivery thereof, unless such tax or charge is imposed by law upon Holder. Company shall not be required, however, to pay any transfer tax or other similar charge imposed in connection with any transfer involved in the issue of any certificate for shares of Common Stock issuable upon exercise of this Warrant in any name other than that of Holder, and in such case Company shall not be required to issue or deliver any stock certificate until such tax or other charge has been paid or it has been established to the satisfaction of Company that no such tax or other charge is due.

2.5 FRACTIONAL SHARES. Company shall not be required to issue a fractional share of Common Stock upon exercise of any Warrant. As to any fraction of a share which the Holder of one or more Warrants would otherwise be entitled to purchase upon such exercise, except as otherwise provided in Section 2.1, Company shall pay a cash adjustment in respect of such final fraction in an amount equal to the same fraction of the Current Market Price per share of Common Stock on the date of exercise.

3. TRANSFER, DIVISION AND COMBINATION

3.1 TRANSFER. Subject to compliance with Section 9 hereof, transfer of this Warrant and all rights hereunder, in whole or in part, shall be registered on the books of Company to be maintained for such purpose, upon surrender of this Warrant at the principal office of Company referred to in Section 2.1 or the office or agency designated by Company pursuant to Section 13.2, together with a duly executed written assignment of this Warrant substantially in the form of Exhibit B hereto and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, Company shall, subject to Section 9, execute and deliver a new Warrant or Warrants in the name of the assignee or assignees and in the denomination specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. A Warrant, if properly assigned in compliance with Section 9, may be exercised by a new Holder for the purchase of shares of Common Stock without having a new Warrant issued.

3.2 DIVISION AND COMBINATION. Subject to Section 9, this Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office or agency of Company, together with a duly executed written notice specifying the names and denominations in which new Warrants are to be issued. Subject to compliance with

Section 3.1 and with Section 9, as to any transfer which may be involved in such division or combination, Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice.

3.3 EXPENSES. Company shall prepare, issue and deliver at its own expense (other than transfer taxes) the new Warrant or Warrants under this Section 3.

3.4 MAINTENANCE OF BOOKS. Company agrees to maintain, at its aforesaid office or agency, books for the registration and the registration of transfer of the Warrants.

4. ADJUSTMENTS

The number of shares of Common Stock for which this Warrant is exercisable, or the price at which such shares may be purchased upon exercise of this Warrant, shall be subject to adjustment from time to time as set forth in this Section 4. Company shall give each Holder notice of any event described below which requires an adjustment pursuant to this Section 4 at the time of such event.

4.1 STOCK DIVIDENDS, SUBDIVISIONS AND COMBINATIONS. If at any time Company shall:

(a) take a record of the holders of its Common Stock for the purpose of entitling them to receive a dividend payable in, or other distribution of, Common Stock,

(b) subdivide its outstanding shares of Common Stock into a larger number of shares of Common Stock, or

(c) combine its outstanding shares of Common Stock into a smaller number of shares of Common Stock,

then (i) the number of shares of Common Stock for which this Warrant is exercisable immediately after the occurrence of any such event shall be adjusted to equal the number of shares of Common Stock which a record holder of the same number of shares of Common Stock for which this Warrant is exercisable immediately prior to the occurrence of such event would own or be entitled to receive after the happening of such event, and (ii) the Warrant Price shall be adjusted to equal (A) the Warrant Price multiplied by the number of shares of Common Stock for which this Warrant is exercisable immediately prior to the adjustment divided by (B) the number of shares for which this Warrant is exercisable immediately after such adjustment.

4.2 CERTAIN OTHER DISTRIBUTIONS AND ADJUSTMENTS.

(a) If at any time Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive any dividend or other distribution of:

(i) cash in excess of earned surplus,

(ii) any evidences of its indebtedness, any shares of its stock or any other securities or property of any nature whatsoever (other than cash, Convertible Securities or Additional Shares of Common Stock), or

(iii) any warrants or other rights to subscribe for or purchase any evidences of its indebtedness, any shares of its stock or any other securities or property of any nature whatsoever (other than cash, Convertible Securities or Additional Shares of Common Stock),

then the Exercise Price shall be reduced, without any further action by the parties hereto, by the Per Share Value (as hereinafter defined) of the dividend. For purposes of this Section 4.2 the "Per Share Value" of cash dividend or other distribution shall be the dollar amount of the distribution on each share of Common Stock and the "Per Share Value" of any dividend or distribution other than cash shall be equal to the fair market value of such non-cash distribution on each share of Common Stock, as determined in good faith by the Board of Directors of the Company.

(b) A reclassification of the Common Stock (other than a change in par value) into shares of Common Stock and shares of any other class of stock shall be deemed a distribution by Company to the holders of its Common Stock of such shares of such other class of stock within the meaning of paragraph (a) above, and if the outstanding shares of Common Stock shall be changed into a larger or smaller number of shares of Common Stock as a part of such reclassification, such change shall be deemed a subdivision or combination, as the case may be, of the outstanding shares of Common Stock within the meaning of Section 4.1.

4.3 ISSUANCE OF ADDITIONAL SHARES OF COMMON STOCK.

(a) If at any time Company shall (except as hereinafter provided) issue or sell any Additional Shares of Common Stock, other than Permitted Issuances, in exchange for consideration in an amount per Additional Share of Common Stock less than the Current Market Price, then

(i) the Warrant Price as to the number of shares for which this Warrant is exercisable prior to such adjustment shall be reduced to a price determined by dividing (A) an amount equal to the sum of (x) the number of shares of Common Stock Outstanding immediately prior to such issue or sale multiplied by the Current Market Price plus (y) the consideration, if any, received by Company upon such issue or sale as determined pursuant to Section 4.7(a), by (B) the total number of shares of Common Stock Outstanding immediately after such issue or sale; and (ii) the number of shares of Common Stock for which this Warrant is exercisable shall be adjusted to equal the product obtained by multiplying the Warrant Price in effect immediately prior to such issue or sale by the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such issue or sale and dividing the product thereof by the Warrant Price resulting from the adjustment made pursuant to clause (i) above.

(b) The provision of paragraph (a) shall not apply to any issuance of Additional Shares of Common Stock for which an adjustment is provided under Section 4.1 or 4.2. No adjustment of the number of shares of Common Stock for which this Warrant shall be exercisable shall be made under paragraph (a) upon the issuance of any Additional Shares of Common Stock which are issued pursuant to the exercise of any warrants or other subscription or purchase rights or pursuant to the exercise of any conversion or exchange rights in any Convertible Securities, if any such adjustment shall previously have been made upon the issuance of such warrants or other rights or upon the issuance of such Convertible Securities (or upon the issuance of any warrant or other rights therefor) pursuant to Sections 4.4 or 4.5 hereof.

4.4 ISSUANCE OF WARRANTS OR OTHER RIGHTS. If at any time Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a distribution of, or shall in any manner (whether directly or by assumption in a merger in which Company is the surviving corporation) issue or sell, any warrants or other rights to subscribe for or purchase any Additional Shares of Common Stock or any Convertible Securities, whether or not the rights to exchange or convert thereunder are immediately exercisable, and the price per share for which Common Stock is issuable upon the exercise of such warrants or other rights or upon conversion or exchange of such Convertible Securities shall be less than the Current Market Price in effect immediately prior to the time of such issue or sale, then the number of shares for which this Warrant is exercisable and the Current Warrant Price shall be adjusted as provided in Section 4.3 on the basis that the maximum number of Additional Shares of Common Stock issuable pursuant to all such warrants or other rights or necessary to effect the conversion or exchange of all such Convertible Securities shall be deemed to have been issued and outstanding and Company shall be deemed to have received all of the consideration payable therefor, if any, as of the date of the issuance of such warrants or other rights.

4.5 ISSUANCE OF CONVERTIBLE SECURITIES. If at any time Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a distribution of, or shall in any manner (whether directly or by assumption in a merger in which Company is the surviving corporation) issue or sell, any Convertible Securities, whether or not the rights to exchange or convert thereunder are immediately exercisable, and the price per share for which Common Stock is issuable upon such conversion or exchange shall be less than the Current Market Price in effect immediately prior to the time of such issue or sale, then the number of Shares for which this Warrant is exercisable and the Warrant Price shall be adjusted as provided in Section 4.3 on the basis that the maximum number of Additional Shares of Common Stock necessary to effect the conversion or exchange of all such Convertible Securities shall be deemed to have been issued and outstanding and Company shall have received all of the consideration payable therefor, if any, as of the date of issuance of such Convertible Securities. No adjustment of the number of Shares for which this Warrant is exercisable and the Warrant Price shall be made under this Section 4.5 upon the issuance of any Convertible Securities which are issued pursuant to the exercise of any warrants or other subscription or purchase rights therefor, if any such adjustment shall previously have been made upon the issuance of such warrants or other rights pursuant to Section 4.4. If any issue or sale of Convertible Securities is made upon exercise of any warrant or other

right to subscribe for or to purchase any such Convertible Securities for which adjustments of the number of Shares for which this Warrant is exercisable and the Warrant Price have been or are to be made pursuant to Section 4.4, no further adjustments of the number of Shares for which this Warrant is exercisable and the Warrant Price shall be made by reason of such issue or sale.

4.6 SUPERSEDING ADJUSTMENT. If, at any time after any adjustment of the number of shares of Common Stock for which this Warrant is exercisable and the Warrant Price shall have been made pursuant to Section 4.4 or Section 4.5 as the result of any issuance of warrants, rights or Convertible Securities,

(a) such warrants or rights, or the right of conversion or exchange in such other Convertible Securities, shall expire, and all or a portion of such warrants or rights, or the right of conversion or exchange with respect to all or a portion of such other Convertible Securities, as the case may be, shall not have been exercised, or

(b) the consideration per share for which shares of Common Stock are issuable pursuant to such warrants or rights, or the terms of such other Convertible Securities, shall be increased solely by virtue of provisions therein contained for an automatic increase in such consideration per share upon the occurrence of a specified date or event,

then for each outstanding Warrant such previous adjustment shall be rescinded and annulled and the Additional Shares of Common Stock which were deemed to have been issued by virtue of the computation made in connection with the adjustment so rescinded and annulled shall no longer be deemed to have been issued by virtue of such computation. Thereupon, a recomputation shall be made of the effect of such rights or options or other Convertible Securities on the basis of

(c) treating the number of Additional Shares of Common Stock or other property, if any, theretofore actually issued or issuable pursuant to the previous exercise of any such warrants or rights or any such right of conversion or exchange, as having been issued on the date or dates of any such exercise and for the consideration actually received and receivable therefor, and

(d) treating any such warrants or rights or any such other Convertible Securities which then remain outstanding as having been granted or issued immediately after the time of such increase of the consideration per share for which shares of Common Stock or other property are issuable under such warrants or rights or other Convertible Securities; whereupon a new adjustment of the number of shares of Common Stock for which this Warrant is exercisable and the Warrant Price shall be made, which new adjustment shall supersede the previous adjustment so rescinded and annulled.

4.7 OTHER PROVISIONS APPLICABLE TO ADJUSTMENTS UNDER THIS SECTION. The following provisions shall be applicable to the making of adjustments of the number of shares of Common Stock for which this Warrant is exercisable and the Warrant Price provided for in this Section 4:

(a) Computation of Consideration. To the extent that any Additional Shares of Common Stock or any Convertible Securities or any warrants or other rights to subscribe for or purchase any Additional Shares of Common Stock or any Convertible Securities shall be issued for cash consideration, the consideration received by Company therefor shall be the amount of the cash received by Company therefor, or, if such Additional Shares of Common Stock or Convertible Securities are offered by Company for subscription, the subscription price, or, if such Additional Shares of Common Stock or Convertible Securities are sold to underwriters or dealers for public offering without a subscription offering, the initial public offering price (in any such case subtracting any amounts paid or receivable for accrued interest or accrued dividends and without taking into account any compensation, discounts or expenses paid or incurred by Company for and in the underwriting of, or otherwise in connection with, the issuance thereof). To the extent that such issuance shall be for a consideration other than cash, then, except as herein otherwise expressly provided, the amount of such consideration shall be deemed to be the fair market value of such consideration at the time of such issuance as determined in good faith by the Board of Directors of Company. In case any Additional Shares of Common Stock or any Convertible Securities or any warrants or other rights to subscribe for or purchase such Additional Shares of Common Stock or Convertible Securities shall be issued in connection with any merger in which Company issues any securities, the amount of consideration therefor shall be deemed to be the fair value, as determined in good faith by the Board of Directors of Company, of such portion of the assets and business of the nonsurviving corporation as such Board in good faith shall determine to be attributable to such Additional Shares of Common Stock, Convertible Securities, warrants or other rights, as the case may be. The consideration for any Additional Shares of Common Stock issuable pursuant to any warrants or other rights to subscribe for or purchase the same shall be the consideration received by Company for issuing such warrants or other rights plus the additional consideration payable to Company upon exercise of such warrants or other rights. The consideration for any Additional Shares of Common Stock issuable pursuant to the terms of any Convertible Securities shall be the consideration received by Company for issuing warrants or other rights to subscribe for or purchase such Convertible Securities, plus the consideration paid or payable to Company in respect of the subscription for or purchase of such Convertible Securities, plus the additional consideration, if any, payable to Company upon the exercise of the right of conversion or exchange in such Convertible Securities. In case of the issuance at any time of any Additional Shares of Common Stock or Convertible Securities in payment or satisfaction of any dividends upon any class of stock other than Common Stock, Company shall be deemed to have received for such Additional Shares of Common Stock or Convertible Securities a consideration equal to the amount of such dividend so paid or satisfied.

(b) When Adjustments to Be Made. The adjustments required by this Section 4 shall be made whenever and as often as any specified event requiring an adjustment shall occur, except that any adjustment of the number of shares of Common Stock for which this Warrant is exercisable that would otherwise be required may be postponed (except in the case of a subdivision or combination of shares of Common Stock, as provided for in Section 4.1) up to, but not beyond the date of exercise if such adjustment either by itself or with other adjustments not previously made adds or

subtracts less than 1% of the shares of Common Stock for which this Warrant is exercisable immediately prior to the making of such adjustment. Any adjustment representing a change of less than such minimum amount (except as aforesaid) which is postponed shall be carried forward and made as soon as such adjustment, together with other adjustments required by this Section 4 and not previously made, would result in a minimum adjustment or on the date of exercise. For the purpose of any adjustment, any specified event shall be deemed to have occurred at the close of business on the date of its occurrence.

(c) Fractional Interests. In computing adjustments under this Section 4, fractional interests in Common Stock shall be taken into account to the nearest 1/10th of a share.

(d) When Adjustment Not Required. If Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a dividend or distribution or subscription or purchase rights and shall, thereafter and before the distribution to stockholders thereof, legally abandon its plan to pay or deliver such dividend, distribution, subscription or purchase rights, then thereafter no adjustment shall be required by reason of the taking of such record and any such adjustment previously made in respect thereof shall be rescinded and annulled.

(e) Escrow of Warrant Stock. If after any property becomes distributable pursuant to this Section 4 by reason of the taking of any record of the holders of Common Stock, but prior to the occurrence of the event for which such record is taken, and Holder exercises this Warrant, any Additional Shares of Common Stock issuable upon exercise by reason of such adjustment shall be deemed the last shares of Common Stock for which this Warrant is exercised (notwithstanding any other provision to the contrary herein) and such shares or other property shall be held in escrow for Holder by Company to be issued to Holder upon and to the extent that the event actually takes place, upon payment of the Warrant Price. Notwithstanding any other provision to the contrary herein, if the event for which such record was taken fails to occur or is rescinded, then such escrowed shares shall be cancelled by Company and escrowed property returned to Company.

(f) Challenge to Good Faith Determination. Whenever the Board of Directors of Company shall be required to make a determination in good faith of the fair market value of any item under this Section 4, such determination may be challenged in good faith by the Majority Holders, and any dispute shall be resolved by an investment banking or valuation firm of recognized national standing selected by Company and acceptable to the Majority Holders.

4.8 REORGANIZATION, RECLASSIFICATION, MERGER, CONSOLIDATION OR DISPOSITION OF ASSETS. In case Company shall reorganize its capital, reclassify its capital stock, consolidate or merge with or into another corporation (where Company is not the surviving corporation or where there is a change in or distribution with respect to the Common Stock of Company), or sell, transfer or otherwise dispose of all or substantially all its property, assets or business to another corporation and, pursuant to the terms of such reorganization, reclassification, merger, consolidation or disposition of assets,

shares of common stock of the successor or acquiring corporation, or any cash, shares of stock or other securities or property of any nature whatsoever (including warrants or other subscription or purchase rights) in addition to or in lieu of common stock of the successor or acquiring corporation ("Other Property"), are to be received by or distributed to the holders of Common Stock of Company, then each Holder shall have the right thereafter to receive, upon exercise of such Warrant, the number of shares of common stock of the successor or acquiring corporation or of Company, if it is the surviving corporation, and Other Property receivable upon or as a result of such reorganization, reclassification, merger, consolidation or disposition of assets by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such event. In case of any such reorganization, reclassification, merger, consolidation or disposition of assets, the successor or acquiring corporation (if other than Company) shall expressly assume the due and punctual observance and performance of each and every covenant and condition of this Warrant to be performed and observed by Company and all the obligations and liabilities hereunder, subject to such modifications as may be deemed appropriate (as determined by resolution of the Board of Directors of Company) in order to provide for adjustments of shares of Common Stock for which this Warrant is exercisable which shall be as nearly equivalent as practicable to the adjustments provided for in this Section 4. For purposes of this Section 4.8, "common stock of the successor or acquiring corporation" shall include stock of such corporation of any class which is not preferred as to dividends or assets over any other class of stock of such corporation and which is not subject to redemption and shall also include any evidences of indebtedness, shares of stock or other securities which are convertible into or exchangeable for any such stock, either immediately or upon the arrival of a specified date or the happening of a specified event and any warrants or other rights to subscribe for or purchase any such stock. The foregoing provisions of this Section 4.8 shall similarly apply to successive reorganizations, reclassifications, mergers, consolidations or disposition of assets.

4.9 OTHER ACTION AFFECTING COMMON STOCK. In case at any time or from time to time Company shall take any action in respect of its Common Stock, other than any action described in this Section 4, then, unless such action will not have a materially adverse effect upon the rights of the Holders, the number of shares of Common Stock or other stock for which this Warrant is exercisable and/or the purchase price thereof shall be adjusted in such manner as may be equitable in the circumstances.

5. NOTICES TO WARRANT HOLDERS

5.1 NOTICE OF ADJUSTMENTS. Whenever an adjustment to this Warrant is made pursuant to Section 4, Company shall prepare a certificate to be executed by the chief financial officer of Company setting forth, in reasonable detail, the event requiring the adjustment and the method by which such adjustment was calculated, specifying the number of shares of Common Stock for which this Warrant is exercisable and (if such adjustment was made pursuant to Section 4.8 or 4.9) describing the number and kind of any other shares of stock or Other Property for which this Warrant is exercisable, and any change in the purchase price or prices thereof, after giving effect to such adjustment or

change. Company shall promptly cause a signed copy of such certificate to be delivered to each Holder. Company shall keep at its office or agency designated pursuant to Section 15 copies of all such certificates and cause the same to be available for inspection at said office during normal business hours by any Holder or any prospective purchaser of a Warrant designated by a Holder thereof.

5.2 NOTICE OF CORPORATE ACTION. If at any time

(a) Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a dividend or other distribution, or any right to subscribe for or purchase any evidences of its indebtedness, any shares of stock of any class or any other securities or property, or to receive any other right, or

(b) there shall be any capital reorganization of Company, any reclassification or recapitalization of the capital stock of Company or any consolidation or merger of Company with, or any sale, transfer or other disposition of all or substantially all the property, assets or business of Company to, another corporation, or

(c) there shall be a voluntary or involuntary dissolution, liquidation or winding up of Company;

then, in any one or more of such cases, Company shall give to Holder (i) at least 30 days' prior written notice of the date on which a record date shall be selected in respect of such event and (ii) in the case of any such event, at least 30 days' prior written notice of the date when the same shall take place. Such notice in accordance with the foregoing clause also shall specify (i) the date on which the holders of Common Stock shall be entitled to any such dividend, distribution or right, and the amount and character thereof and (ii) the date on which any such reorganization, reclassification, merger, consolidation, sale, transfer, disposition, dissolution, liquidation or winding up is to take place and the time, if any such time is to be fixed, as of which the holders of Common Stock shall be entitled to exchange their shares of Common Stock for securities or other property deliverable upon such reorganization, reclassification, merger, consolidation, sale, transfer, disposition, dissolution, liquidation or winding up.

6. NO IMPAIRMENT

Company shall not by any action, including, without limitation, amending its articles of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder against impairment. Without limiting the generality of the foregoing, Company will take all such action as may be necessary or appropriate in order that Company may validly and legally issue fully paid and nonassessable shares of Common Stock upon the exercise of this Warrant, including taking such action as is necessary for the Warrant Price to be not less than the par value of the shares of Common Stock issuable upon

exercise of this Warrant. The Company will use its best efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof as may be necessary to enable Company to perform its obligations under this Warrant.

7. RESERVATION AND AUTHORIZATION OF COMMON STOCK

From and after the Closing Date, Company shall at all times reserve and keep available for issue upon the exercise of Warrants such number of its authorized but unissued shares of Common Stock as will be sufficient to permit the exercise in full of all outstanding Warrants. All shares of Common Stock which shall be so issuable, when issued upon exercise of any Warrant and payment therefor in accordance with the terms of such Warrant, shall be duly and validly issued and fully paid and nonassessable, and not subject to preemptive rights.

8. TAKING OF RECORD; STOCK AND WARRANT TRANSFER BOOKS

In the case of all dividends or other distributions by Company to the holders of its Common Stock with respect to which any provision of Section 4 refers to the taking of a record of such holders, Company will in each such case take such a record and will take such record as of the close of business on a Business Day. Company will not at any time, except upon dissolution, liquidation or winding up of Company, close its stock transfer books or Warrant transfer books so as to result in preventing or delaying the exercise or transfer of any Warrant.

9. RESTRICTIONS ON TRANSFERABILITY

The Warrants and the Warrant Stock shall not be transferred, hypothecated or assigned before satisfaction of the conditions specified in this Section 9, which conditions are intended to ensure compliance with the provisions of the Securities Act with respect to the Transfer of any Warrant or any Warrant Stock. Holder, by acceptance of this Warrant, agrees to be bound by the provisions of this Section 9.

9.1 RESTRICTIVE LEGEND. 1. Except as otherwise provided in this Section 9, each certificate for Warrant Stock initially issued upon the exercise of this Warrant, and each certificate for Warrant Stock issued to any subsequent transferee of any such certificate, shall be stamped or otherwise imprinted with a legend in substantially the following form:

"The shares represented by this certificate have not been registered under the Securities Act of 1933, as amended, and may not be transferred in violation of such Act or the rules and regulations thereunder."

(b) Except as otherwise provided in this Section 9, each Warrant shall be stamped or otherwise imprinted with a legend in substantially the following form:

"This Warrant and the securities represented hereby have not been registered under the Securities Act of 1933, as amended, and may not be transferred in violation of such Act, the rules and regulations thereunder or the provisions of this Warrant."

9.2 NOTICE OF PROPOSED TRANSFERS; REQUESTS FOR REGISTRATION.

Prior to or promptly following any Transfer of any Warrants or any shares of Restricted Common Stock, the holder of such Warrants or Restricted Common Stock shall give written notice (a "Transfer Notice") to Company of such Transfer. Each certificate, if any, evidencing such shares of Restricted Common Stock issued upon such Transfer shall bear the restrictive legend set forth in Section 9.1(a), and each Warrant issued upon such Transfer shall bear the restrictive legend set forth in Section 9.1(b), unless in the opinion of counsel to such holder which is reasonably acceptable to Company such legend is not required in order to ensure compliance with the Securities Act.

9.3 TERMINATION OF RESTRICTIONS. Notwithstanding the foregoing provisions of Section 9, the restrictions imposed by this Section upon the transferability of the Warrants and the Warrant Stock, and the legend requirements of Section 9.1, shall terminate as to any particular Warrant or share of Warrant Stock (i) when and so long as such security shall have been effectively registered under the Securities Act and disposed of pursuant thereto or (ii) when Company shall have received an opinion of counsel reasonably satisfactory to it that such security may be transferred without registration thereof under the Securities Act. Whenever the restrictions imposed by Section 9 shall terminate as to this Warrant, as hereinabove provided, the Holder hereof shall be entitled to receive from Company, at the expense of Company, a new Warrant without the restrictive legend set forth in Section 9.1(b). Whenever the restrictions imposed by this Section shall terminate as to any share of Warrant Stock, as hereinabove provided, the holder thereof shall be entitled to receive from Company, at Company's expense, a new certificate representing such Warrant Stock not bearing the restrictive legend set forth in Section 9.1(a).

10. SUPPLYING INFORMATION

Company shall cooperate with each Holder of a Warrant or Warrant Stock in supplying such information as may be reasonably necessary for such holder to complete and file any information reporting forms presently or hereafter required by the Commission as a condition to the availability of an exemption from the Securities Act for the sale of any Warrant or Warrant Stock.

11. LOSS OR MUTILATION

Upon receipt by Company from any Holder of evidence reasonably satisfactory to it of the ownership of and the loss, theft, destruction or mutilation of this Warrant and indemnity reasonably satisfactory to it (it being understood that the written agreement of Holder shall be sufficient indemnity), and in case of mutilation upon

surrender and cancellation hereof, Company will execute and deliver in lieu hereof a new Warrant of like tenor to such Holder; provided, in the case of mutilation, no indemnity shall be required if this Warrant in identifiable form is surrendered to Company for cancellation.

12. LIMITATION OF LIABILITY

No provision hereof, in the absence of affirmative action by Holder to purchase shares of Common Stock, and no enumeration herein of the rights or privileges of Holder hereof, shall give rise to any liability of such Holder for the purchase price of any Common Stock or as a stockholder of Company, whether such liability is asserted by Company or by creditors of Company.

13. MISCELLANEOUS

13.1 NONWAIVER AND EXPENSES. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice Holder's rights, powers or remedies. If Company fails to make, when due, any payments provided for hereunder, or fails to comply with any other provision of this Warrant, Company shall pay to Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

13.2 NOTICE GENERALLY. Any notice, demand, request, consent, approval, declaration, delivery or other communication hereunder to be made pursuant to the provisions of this Warrant shall be sufficiently given or made if in writing and either delivered in person with receipt acknowledged or sent by registered or certified mail, return receipt requested, postage prepaid, or by telecopy and confirmed by telecopy answerback, addressed as follows:

(a) If to any Holder or holder of Warrant Stock, at its last known address appearing on the books of Company maintained for such purpose.

(b) If to Company at:

Atlantic Pharmaceuticals, Inc.
150 Broadway
Suite 1100
New York, NY 10038
Attn: A. Joseph Rudick

or at such other address as may be substituted by notice given as herein provided. The giving of any notice required hereunder may be waived in writing by the party entitled to receive such notice. Every notice, demand, request, consent, approval, declaration, delivery or other communication hereunder shall be deemed to have been duly given or

served on the date on which personally delivered, with receipt acknowledged, telecopied and confirmed by telecopy answerback, or three (3) Business Days after the same shall have been deposited in the United States mail. Failure or delay in delivering copies of any notice, demand, request, approval, declaration, delivery or other communication to the person designated above to receive a copy shall in no way adversely affect the effectiveness of such notice, demand, request, approval, declaration, delivery or other communication.

13.3 SUCCESSORS AND ASSIGNS. Subject to the provisions of Sections 3.1 and 9, this Warrant and the rights evidenced hereby shall inure to the benefit of and be binding upon the successors of Company and the successors and assigns of Holder. The provisions of this Warrant are intended to be for the benefit of all Holders from time to time of this Warrant and shall be enforceable by any such Holder.

13.4 AMENDMENT. This warrant and all other Warrants may be modified or amended or the provisions hereof waived with the written consent of Company and the Majority Holders, provided that no such Warrant may be modified or amended to reduce the number of shares of Common Stock for which such Warrant is exercisable or to increase the price at which such shares may be purchased upon exercise of such Warrant (before giving effect to any adjustment as provided therein) without the prior written consent of the Holder thereof.

13.5 SEVERABILITY. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Warrant.

13.6 HEADINGS. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

13.7 GOVERNING LAW. This Warrant shall be governed by the laws of the State of Delaware, without regard to the provisions thereof relating to conflict of laws.

[SIGNATURES BEGIN ON NEXT PAGE]

IN WITNESS WHEREOF, Company has caused this Warrant to be duly executed and attested by its Secretary or an Assistant Secretary.

Dated: January 4, 2000

ATLANTIC PHARMACEUTICALS, INC.

By: /s/ A. Joseph Rudick

Name: A. Joseph Rudick
Title: President

Attest:

By: /s/ John Brancaccio

Name: John Brancaccio
Title: CFO

EXHIBIT A TO WARRANT

SUBSCRIPTION FORM

[To be executed only upon exercise of Warrant]

The undersigned registered owner of this Warrant irrevocably exercises this Warrant for the purchase of _____ Shares of Common Stock of Atlantic Pharmaceuticals, Inc. and herewith makes payment therefor, all at the price and on the terms and conditions specified in this Warrant and requests that certificates for the shares of Common Stock hereby purchased (and any securities or other property issuable upon such exercise) be issued in the name of and delivered to _____ whose address is _____ and, if such shares of Common Stock shall not include all of the shares of Common Stock issuable as provided in this Warrant, that a new Warrant of like tenor and date for the balance of the shares of Common Stock issuable hereunder be delivered to the undersigned.

(Name of Registered Owner)

(Signature of Registered Owner)

(Street Address)

(City) (State) (Zip Code)

NOTICE: The signature on this subscription must correspond with the name as written upon the face of the within Warrant in every particular, without alteration or enlargement or any change whatsoever.

EXHIBIT B TO WARRANT

ASSIGNMENT FORM

FOR VALUE RECEIVED the undersigned registered owner of this Warrant hereby sells, assigns and transfers unto the Assignee named below all of the rights of the undersigned under this Warrant, with respect to the number of shares of Common Stock set forth below:

| Name and Address of Assignee | No. of Shares of Common Stock |
|------------------------------|-------------------------------|
| ----- | ----- |

and does hereby irrevocably constitute and appoint _____ attorney-in-fact to register such transfer on the books of Atlantic Pharmaceuticals, Inc. maintained for the purpose, with full power of substitution in the premises.

Dated: _____ Print Name: _____
Signature: _____
Witness: _____

NOTICE: The signature on this assignment must correspond with the name as written upon the face of the within Warrant in every particular, without alteration or enlargement or any change whatsoever.

WARRANT

To Purchase Common Stock of
ATLANTIC PHARMACEUTICALS, INC.

Warrant No. 2

No. of Shares of Common Stock: 150,000

THIS WARRANT AND THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE TRANSFERRED IN VIOLATION OF SUCH ACT, THE RULES AND REGULATIONS THEREUNDER OR THE PROVISIONS OF THIS WARRANT.

No. of Shares of Common Stock: 150,000

Warrant No. 2

WARRANT

To Purchase Common Stock of
ATLANTIC PHARMACEUTICALS, INC.

THIS IS TO CERTIFY THAT Joseph Stevens & Company, Inc., or registered assigns, is entitled, at any time during the Exercise Period (as hereinafter defined), to purchase from Atlantic Pharmaceuticals, Inc., a Delaware corporation ("Company"), 150,000 shares of Common Stock (as hereinafter defined and subject to adjustment as provided herein), in whole or in part, including fractional parts, at a purchase price of \$3.50 per share (subject to adjustment as provided herein) all on the terms and conditions and pursuant to the provisions hereinafter set forth.

1. DEFINITIONS

Capitalized terms used in this Warrant but not defined have the meaning set forth in the Warrant Agreement (as defined below). The following terms have the respective meanings set forth below:

"Additional Shares of Common Stock" means all shares of Common Stock issued by the Company after the Closing Date, other than Warrant Stock.

"Business Day" means any day that is not a Saturday or Sunday or a day on which banks are required or permitted to be closed in the State of New York.

"Commission" means the Securities and Exchange Commission or any other federal agency then administering the Securities Act and other federal securities laws.

"Common Stock" means (except where the context otherwise indicates) the Common Stock, par value \$.001 per share, of Company as constituted on the Closing Date, and any capital stock into which such Common Stock may thereafter be changed, and shall also include (i) capital stock of Company of any other class (regardless of how denominated) issued to the holders of shares of Common Stock upon any reclassification thereof which is also not preferred as to dividends or assets over any other class of stock of Company and which is not subject to redemption and (ii) shares of common stock of any successor or acquiring corporation (as defined in Section 4.8) received by or distributed to the holders of Common Stock of Company in the circumstances contemplated by Section 4.8.

"Convertible Securities" means evidences of indebtedness, shares of stock or other securities which are convertible into or exchangeable, with or without payment of additional consideration in cash or property, for Additional Shares of Common Stock, either immediately or upon the occurrence of a specified date or a specified event.

"Current Market Price" means, in respect of a share of Common Stock on any date, either (a) if there shall not then be a public market for the Common Stock, the Fair Market Value per share of Common Stock as at such date or (b) if there shall then be a public market for the Common Stock, the average of the daily market prices for 20 consecutive Business Days commencing 30 days before such date. The daily market price for each such Business Day shall be (i) the last sale price on such day on the principal stock exchange or NASDAQ Small Cap Market ("NASDAQ") on which such Common Stock is then listed or admitted to trading, (ii) if no sale takes place on such day on any such exchange or NASDAQ, the average of the last reported closing bid and asked prices on such day as officially quoted on any such exchange or NASDAQ, (iii) if the Common Stock is not then listed or admitted to trading on any stock exchange or NASDAQ, the average of the last reported closing bid and asked prices on such day in the over-the-counter market, as furnished by the National Association of Securities Dealers Automatic Quotation System or the National Quotation Bureau, Inc., (iv) if neither such corporation at the time is engaged in the business of reporting such prices, as furnished by any similar firm then engaged in such business, or (v) if there is no such firm, as furnished by any member of the NASD selected mutually by the Majority Holders and Company or, if they cannot agree upon such selection, as selected by two such members of the NASD, one of which shall be selected by the Majority Holders and one of which shall be selected by Company.

"Exchange Act" means the Securities Exchange Act of 1934, as amended, or any similar federal statute, and the rules and regulations of the Commission thereunder, all as the same shall be in effect from time to time.

"Exercise Period" means the period during which this Warrant is exercisable pursuant to Section 2.1.

"Expiration Date" means January 4, 2006.

"Financial Advisory Agreement" means the Financial Advisory and Consulting Agreement, dated January 4, 2000, by and between the Company and the Consultant.

"Fully Diluted Outstanding" means, on any date, all shares of Common Stock Outstanding on such date and all shares of Common Stock issuable in respect of this Warrant outstanding on such date, and other options or warrants to purchase, or securities convertible into or exchangeable for, shares of Common Stock outstanding on such date, regardless of whether such options, warrants or other securities are then exercisable or convertible.

"GAAP" means generally accepted accounting principles in the United States of America as in effect from time to time.

"Holder" means the Person in whose name the Warrant set forth herein is registered on the books of Company maintained for such purpose.

"Majority Holders" means the holders of Warrants exercisable for in excess of 50% of the aggregate number of shares of Warrant Stock then purchasable upon exercise of all Warrants.

"NASD" means the National Association of Securities Dealers, Inc., or any successor corporation thereto.

"Other Property" has the meaning set forth in Section 4.8.

"Outstanding" means, when used with reference to Common Stock, on any date, all issued shares of Common Stock on such date, except shares then owned or held by or for the account of Company or any subsidiary thereof, and shall include all shares issuable in respect of outstanding scrip or any certificates representing fractional interests in shares of Common Stock.

"Permitted Issuances" means the issuance of shares of Common Stock upon the exercise or conversion of Company's presently outstanding convertible preferred stock, warrants and employee incentive options.

"Person" means any individual, sole proprietorship, partnership, limited liability company, joint venture, trust, incorporated organization, association, corporation, institution, public benefit corporation, entity or government (whether federal, state, county, city, municipal or otherwise, including, without limitation, any instrumentality, division, agency, body or department thereof).

"Securities Act" shall mean the Securities Act of 1933, as amended, or any similar federal statute, and the rules and regulations of the Commission thereunder, all as the same shall be in effect at the time.

"Transfer" shall mean any disposition of any Warrant or Warrant Stock or of any interest in either thereof, which would constitute a sale thereof within the meaning of the Securities Act.

"Transfer Notice" has the meaning set forth in Section 9.2.

"Warrant" means this Warrant and all warrants issued upon transfer, division or combination of, or in substitution for, this Warrant. All Warrants shall at all times be identical as to terms and conditions and date, except as to the number of shares of Common Stock for which they may be exercised.

"Warrant Price" means an amount equal to (i) the number of shares of Common Stock being purchased upon exercise of this Warrant pursuant to Section 2.1,

multiplied by (ii) \$3.50, as adjusted from time to time pursuant to Section 4 of this Warrant.

"Warrant Stock" means the shares of Common Stock issued or issuable upon the exercise of this Warrant.

2. EXERCISE OF WARRANT

2.1 EXERCISE PERIOD. (a) From and after January 4, 2001 and until 5:00 P.M., New York time, on the Expiration Date (the "Exercise Period"), Holder may exercise this Warrant, on any Business Day on which the condition set forth in Section 2.1(b) hereof is met, for all or any part of the Warrant Stock which is then purchasable in accordance with the vesting schedule set forth below:

| Date | Shares purchasable upon exercise |
|-------------------|----------------------------------|
| January 4, 2000 | 12,500 |
| February 4, 2000 | 25,000 |
| March 4, 2000 | 37,500 |
| April 4, 2000 | 50,000 |
| May 4, 2000 | 62,500 |
| June 4, 2000 | 75,000 |
| July 4, 2000 | 87,500 |
| August 4, 2000 | 100,000 |
| September 4, 2000 | 112,500 |
| October 4, 2000 | 125,000 |
| November 4, 2000 | 137,500 |
| December 4, 2000 | 150,000 |

Upon any termination of the Financial Advisory Agreement pursuant to Section 14 thereof, the Warrant shall cease to vest and shall continue to be exercisable, in accordance with the terms set forth herein, for the number of shares of Warrant Stock which were purchasable on such date of termination.

(b) The Warrant may be exercised on any Business Day, except that it may only be exercised if the last sale price of a share of Common Stock on NASDAQ (or the principal stock exchange on which the Common Stock is then listed or admitted to trading) on the immediately preceding Business Day was equal to or greater than \$1.00 plus the Exercise Price then in effect.

2.2 EXERCISE NOTICE; DELIVERY OF CERTIFICATES. In order to exercise this Warrant, Holder shall deliver to Company at its principal office at 150 Broadway, Suite 1100, New York, New York 10038, or at the office or agency designated by Company pursuant to Section 13.2, (i) a written notice of Holder's election to exercise this Warrant, specifying the number of shares of Common Stock to be purchased, (ii) payment of the Warrant Price and (iii) this Warrant. Such notice shall be substantially in the form of the

subscription form appearing at the end of this Warrant as Exhibit A, duly executed by Holder or its agent or attorney. Upon receipt thereof, Company shall, as promptly as practicable, and in any event within five (5) Business Days thereafter, deliver to Holder a duly executed certificate or certificates representing the aggregate number of full shares of Common Stock issuable upon such exercise, together with cash in lieu of any fraction of a share, as hereinafter provided. Such stock certificate or certificates shall be in such denominations and registered in the name designated in the subscription form, subject to Section 9. Holder or any other Person so designated to be named therein shall be deemed to have become a holder of record of such shares of Warrant Stock for all purposes, as of the date on which all items in clauses (i)-(iii) above have been received by Company and all taxes required to be paid by Holder, if any, pursuant to Section 2.4 have been paid. If this Warrant shall have been exercised in part, Company shall deliver to Holder a new Warrant evidencing the rights of Holder to purchase the remaining shares of Common Stock issuable upon exercise of this Warrant, which new Warrant shall in all other respects be identical with this Warrant, or appropriate notation may be made on this Warrant and the same returned to Holder.

2.3 PAYMENT OF WARRANT PRICE. Payment of the Warrant Price shall be made at the option of the Holder by:

(i) certified or official bank check;

(ii) The surrender to Company of that number of shares of Warrant Stock (or the right to receive such number of shares) or shares of Common Stock having an aggregate Current Market Price equal to or greater than the Current Warrant Price for all shares then being purchased (including those being surrendered); or

(iii) any combination thereof, duly endorsed by or accompanied by appropriate duly executed instruments of transfer.

2.4 PAYMENT OF TAXES. All shares of Warrant Stock shall be validly issued, fully paid and nonassessable and without any preemptive rights. Company shall pay all expenses, taxes and other governmental charges with respect to the issue or delivery thereof, unless such tax or charge is imposed by law upon Holder. Company shall not be required, however, to pay any transfer tax or other similar charge imposed in connection with any transfer involved in the issue of any certificate for shares of Common Stock issuable upon exercise of this Warrant in any name other than that of Holder, and in such case Company shall not be required to issue or deliver any stock certificate until such tax or other charge has been paid or it has been established to the satisfaction of Company that no such tax or other charge is due.

2.5 FRACTIONAL SHARES. Company shall not be required to issue a fractional share of Common Stock upon exercise of any Warrant. As to any fraction of a share which the Holder of one or more Warrants would otherwise be entitled to purchase upon such exercise, except as otherwise provided in Section 2.1, Company shall pay a cash adjustment in respect of such final fraction in an amount equal to the same fraction of the Current Market Price per share of Common Stock on the date of exercise.

3. TRANSFER, DIVISION AND COMBINATION

3.1 TRANSFER. Subject to compliance with Section 9 hereof, transfer of this Warrant and all rights hereunder, in whole or in part, shall be registered on the books of Company to be maintained for such purpose, upon surrender of this Warrant at the principal office of Company referred to in Section 2.1 or the office or agency designated by Company pursuant to Section 13.2, together with a duly executed written assignment of this Warrant substantially in the form of Exhibit B hereto and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, Company shall, subject to Section 9, execute and deliver a new Warrant or Warrants in the name of the assignee or assignees and in the denomination specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. A Warrant, if properly assigned in compliance with Section 9, may be exercised by a new Holder for the purchase of shares of Common Stock without having a new Warrant issued.

3.2 DIVISION AND COMBINATION. Subject to Section 9, this Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office or agency of Company, together with a duly executed written notice specifying the names and denominations in which new Warrants are to be issued. Subject to compliance with Section 3.1 and with Section 9, as to any transfer which may be involved in such division or combination, Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice.

3.3 EXPENSES. Company shall prepare, issue and deliver at its own expense (other than transfer taxes) the new Warrant or Warrants under this Section 3.

3.4 MAINTENANCE OF BOOKS. Company agrees to maintain, at its aforesaid office or agency, books for the registration and the registration of transfer of the Warrants.

4. ADJUSTMENTS

The number of shares of Common Stock for which this Warrant is exercisable, or the price at which such shares may be purchased upon exercise of this Warrant, shall be subject to adjustment from time to time as set forth in this Section 4. Company shall give each Holder notice of any event described below which requires an adjustment pursuant to this Section 4 at the time of such event.

4.1 STOCK DIVIDENDS, SUBDIVISIONS AND COMBINATIONS. If at any time Company shall:

(a) take a record of the holders of its Common Stock for the purpose of entitling them to receive a dividend payable in, or other distribution of, Common Stock,

(b) subdivide its outstanding shares of Common Stock into a larger number of shares of Common Stock, or

(c) combine its outstanding shares of Common Stock into a smaller number of shares of Common Stock,

then (i) the number of shares of Common Stock for which this Warrant is exercisable immediately after the occurrence of any such event shall be adjusted to equal the number of shares of Common Stock which a record holder of the same number of shares of Common Stock for which this Warrant is exercisable immediately prior to the occurrence of such event would own or be entitled to receive after the happening of such event, and (ii) the Warrant Price shall be adjusted to equal (A) the Warrant Price multiplied by the number of shares of Common Stock for which this Warrant is exercisable immediately prior to the adjustment divided by (B) the number of shares for which this Warrant is exercisable immediately after such adjustment.

4.2 CERTAIN OTHER DISTRIBUTIONS AND ADJUSTMENTS.

(a) If at any time Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive any dividend or other distribution of:

(i) cash in excess of earned surplus,

(ii) any evidences of its indebtedness, any shares of its stock or any other securities or property of any nature whatsoever (other than cash, Convertible Securities or Additional Shares of Common Stock), or

(iii) any warrants or other rights to subscribe for or purchase any evidences of its indebtedness, any shares of its stock or any other securities or property of any nature whatsoever (other than cash, Convertible Securities or Additional Shares of Common Stock),

then the Exercise Price shall be reduced, without any further action by the parties hereto, by the Per Share Value (as hereinafter defined) of the dividend. For purposes of this Section 4.2 the "Per Share Value" of cash dividend or other distribution shall be the dollar amount of the distribution on each share of Common Stock and the "Per Share Value" of any dividend or distribution other than cash shall be equal to the fair market value of such non-cash distribution on each share of Common Stock, as determined in good faith by the Board of Directors of the Company.

(b) A reclassification of the Common Stock (other than a change in par value) into shares of Common Stock and shares of any other class of stock shall be deemed a distribution by Company to the holders of its Common Stock of such shares of such other class of stock within the meaning of paragraph (a) above, and if the outstanding shares of Common Stock shall be changed into a larger or smaller number of shares of Common Stock as a part of such reclassification, such change shall be deemed a

subdivision or combination, as the case may be, of the outstanding shares of Common Stock within the meaning of Section 4.1.

4.3 ISSUANCE OF ADDITIONAL SHARES OF COMMON STOCK.

(a) If at any time Company shall (except as hereinafter provided) issue or sell any Additional Shares of Common Stock, other than Permitted Issuances, in exchange for consideration in an amount per Additional Share of Common Stock less than the Current Market Price, then

(i) the Warrant Price as to the number of shares for which this Warrant is exercisable prior to such adjustment shall be reduced to a price determined by dividing (A) an amount equal to the sum of (x) the number of shares of Common Stock Outstanding immediately prior to such issue or sale multiplied by the Current Market Price plus (y) the consideration, if any, received by Company upon such issue or sale as determined pursuant to Section 4.7(a), by (B) the total number of shares of Common Stock Outstanding immediately after such issue or sale; and (ii) the number of shares of Common Stock for which this Warrant is exercisable shall be adjusted to equal the product obtained by multiplying the Warrant Price in effect immediately prior to such issue or sale by the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such issue or sale and dividing the product thereof by the Warrant Price resulting from the adjustment made pursuant to clause (i) above.

(b) The provision of paragraph (a) shall not apply to any issuance of Additional Shares of Common Stock for which an adjustment is provided under Section 4.1 or 4.2. No adjustment of the number of shares of Common Stock for which this Warrant shall be exercisable shall be made under paragraph (a) upon the issuance of any Additional Shares of Common Stock which are issued pursuant to the exercise of any warrants or other subscription or purchase rights or pursuant to the exercise of any conversion or exchange rights in any Convertible Securities, if any such adjustment shall previously have been made upon the issuance of such warrants or other rights or upon the issuance of such Convertible Securities (or upon the issuance of any warrant or other rights therefor) pursuant to Sections 4.4 or 4.5 hereof.

4.4 ISSUANCE OF WARRANTS OR OTHER RIGHTS. If at any time Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a distribution of, or shall in any manner (whether directly or by assumption in a merger in which Company is the surviving corporation) issue or sell, any warrants or other rights to subscribe for or purchase any Additional Shares of Common Stock or any Convertible Securities, whether or not the rights to exchange or convert thereunder are immediately exercisable, and the price per share for which Common Stock is issuable upon the exercise of such warrants or other rights or upon conversion or exchange of such Convertible Securities shall be less than the Current Market Price in effect immediately prior to the time of such issue or sale, then the number of shares for which this Warrant is exercisable and the Current Warrant Price shall be adjusted as provided in Section 4.3 on the basis that the maximum number of Additional Shares of Common Stock issuable pursuant to all such warrants or other rights or necessary to effect the conversion or

exchange of all such Convertible Securities shall be deemed to have been issued and outstanding and Company shall be deemed to have received all of the consideration payable therefor, if any, as of the date of the issuance of such warrants or other rights.

4.5 ISSUANCE OF CONVERTIBLE SECURITIES. If at any time Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a distribution of, or shall in any manner (whether directly or by assumption in a merger in which Company is the surviving corporation) issue or sell, any Convertible Securities, whether or not the rights to exchange or convert thereunder are immediately exercisable, and the price per share for which Common Stock is issuable upon such conversion or exchange shall be less than the Current Market Price in effect immediately prior to the time of such issue or sale, then the number of Shares for which this Warrant is exercisable and the Warrant Price shall be adjusted as provided in Section 4.3 on the basis that the maximum number of Additional Shares of Common Stock necessary to effect the conversion or exchange of all such Convertible Securities shall be deemed to have been issued and outstanding and Company shall have received all of the consideration payable therefor, if any, as of the date of issuance of such Convertible Securities. No adjustment of the number of Shares for which this Warrant is exercisable and the Warrant Price shall be made under this Section 4.5 upon the issuance of any Convertible Securities which are issued pursuant to the exercise of any warrants or other subscription or purchase rights therefor, if any such adjustment shall previously have been made upon the issuance of such warrants or other rights pursuant to Section 4.4. If any issue or sale of Convertible Securities is made upon exercise of any warrant or other right to subscribe for or to purchase any such Convertible Securities for which adjustments of the number of Shares for which this Warrant is exercisable and the Warrant Price have been or are to be made pursuant to Section 4.4, no further adjustments of the number of Shares for which this Warrant is exercisable and the Warrant Price shall be made by reason of such issue or sale.

4.6 SUPERSEDING ADJUSTMENT. If, at any time after any adjustment of the number of shares of Common Stock for which this Warrant is exercisable and the Warrant Price shall have been made pursuant to Section 4.4 or Section 4.5 as the result of any issuance of warrants, rights or Convertible Securities,

(a) such warrants or rights, or the right of conversion or exchange in such other Convertible Securities, shall expire, and all or a portion of such warrants or rights, or the right of conversion or exchange with respect to all or a portion of such other Convertible Securities, as the case may be, shall not have been exercised, or

(b) the consideration per share for which shares of Common Stock are issuable pursuant to such warrants or rights, or the terms of such other Convertible Securities, shall be increased solely by virtue of provisions therein contained for an automatic increase in such consideration per share upon the occurrence of a specified date or event,

then for each outstanding Warrant such previous adjustment shall be rescinded and annulled and the Additional Shares of Common Stock which were deemed to have been

issued by virtue of the computation made in connection with the adjustment so rescinded and annulled shall no longer be deemed to have been issued by virtue of such computation. Thereupon, a recomputation shall be made of the effect of such rights or options or other Convertible Securities on the basis of

(c) treating the number of Additional Shares of Common Stock or other property, if any, theretofore actually issued or issuable pursuant to the previous exercise of any such warrants or rights or any such right of conversion or exchange, as having been issued on the date or dates of any such exercise and for the consideration actually received and receivable therefor, and

(d) treating any such warrants or rights or any such other Convertible Securities which then remain outstanding as having been granted or issued immediately after the time of such increase of the consideration per share for which shares of Common Stock or other property are issuable under such warrants or rights or other Convertible Securities; whereupon a new adjustment of the number of shares of Common Stock for which this Warrant is exercisable and the Warrant Price shall be made, which new adjustment shall supersede the previous adjustment so rescinded and annulled.

4.7 OTHER PROVISIONS APPLICABLE TO ADJUSTMENTS UNDER THIS SECTION. The following provisions shall be applicable to the making of adjustments of the number of shares of Common Stock for which this Warrant is exercisable and the Warrant Price provided for in this Section 4:

(a) Computation of Consideration. To the extent that any Additional Shares of Common Stock or any Convertible Securities or any warrants or other rights to subscribe for or purchase any Additional Shares of Common Stock or any Convertible Securities shall be issued for cash consideration, the consideration received by Company therefor shall be the amount of the cash received by Company therefor, or, if such Additional Shares of Common Stock or Convertible Securities are offered by Company for subscription, the subscription price, or, if such Additional Shares of Common Stock or Convertible Securities are sold to underwriters or dealers for public offering without a subscription offering, the initial public offering price (in any such case subtracting any amounts paid or receivable for accrued interest or accrued dividends and without taking into account any compensation, discounts or expenses paid or incurred by Company for and in the underwriting of, or otherwise in connection with, the issuance thereof). To the extent that such issuance shall be for a consideration other than cash, then, except as herein otherwise expressly provided, the amount of such consideration shall be deemed to be the fair market value of such consideration at the time of such issuance as determined in good faith by the Board of Directors of Company. In case any Additional Shares of Common Stock or any Convertible Securities or any warrants or other rights to subscribe for or purchase such Additional Shares of Common Stock or Convertible Securities shall be issued in connection with any merger in which Company issues any securities, the amount of consideration therefor shall be deemed to be the fair value, as determined in good faith by the Board of Directors of Company, of such portion of the assets and business of the nonsurviving corporation as such Board in good faith shall determine to be attributable to such Additional Shares of Common Stock, Convertible Securities,

warrants or other rights, as the case may be. The consideration for any Additional Shares of Common Stock issuable pursuant to any warrants or other rights to subscribe for or purchase the same shall be the consideration received by Company for issuing such warrants or other rights plus the additional consideration payable to Company upon exercise of such warrants or other rights. The consideration for any Additional Shares of Common Stock issuable pursuant to the terms of any Convertible Securities shall be the consideration received by Company for issuing warrants or other rights to subscribe for or purchase such Convertible Securities, plus the consideration paid or payable to Company in respect of the subscription for or purchase of such Convertible Securities, plus the additional consideration, if any, payable to Company upon the exercise of the right of conversion or exchange in such Convertible Securities. In case of the issuance at any time of any Additional Shares of Common Stock or Convertible Securities in payment or satisfaction of any dividends upon any class of stock other than Common Stock, Company shall be deemed to have received for such Additional Shares of Common Stock or Convertible Securities a consideration equal to the amount of such dividend so paid or satisfied.

(b) When Adjustments to Be Made. The adjustments required by this Section 4 shall be made whenever and as often as any specified event requiring an adjustment shall occur, except that any adjustment of the number of shares of Common Stock for which this Warrant is exercisable that would otherwise be required may be postponed (except in the case of a subdivision or combination of shares of Common Stock, as provided for in Section 4.1) up to, but not beyond the date of exercise if such adjustment either by itself or with other adjustments not previously made adds or subtracts less than 1% of the shares of Common Stock for which this Warrant is exercisable immediately prior to the making of such adjustment. Any adjustment representing a change of less than such minimum amount (except as aforesaid) which is postponed shall be carried forward and made as soon as such adjustment, together with other adjustments required by this Section 4 and not previously made, would result in a minimum adjustment or on the date of exercise. For the purpose of any adjustment, any specified event shall be deemed to have occurred at the close of business on the date of its occurrence.

(c) Fractional Interests. In computing adjustments under this Section 4, fractional interests in Common Stock shall be taken into account to the nearest 1/10th of a share.

(d) When Adjustment Not Required. If Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a dividend or distribution or subscription or purchase rights and shall, thereafter and before the distribution to stockholders thereof, legally abandon its plan to pay or deliver such dividend, distribution, subscription or purchase rights, then thereafter no adjustment shall be required by reason of the taking of such record and any such adjustment previously made in respect thereof shall be rescinded and annulled.

(e) Escrow of Warrant Stock. If after any property becomes distributable pursuant to this Section 4 by reason of the taking of any record of the holders of Common

Stock, but prior to the occurrence of the event for which such record is taken, and Holder exercises this Warrant, any Additional Shares of Common Stock issuable upon exercise by reason of such adjustment shall be deemed the last shares of Common Stock for which this Warrant is exercised (notwithstanding any other provision to the contrary herein) and such shares or other property shall be held in escrow for Holder by Company to be issued to Holder upon and to the extent that the event actually takes place, upon payment of the Warrant Price. Notwithstanding any other provision to the contrary herein, if the event for which such record was taken fails to occur or is rescinded, then such escrowed shares shall be cancelled by Company and escrowed property returned to Company.

(f) Challenge to Good Faith Determination. Whenever the Board of Directors of Company shall be required to make a determination in good faith of the fair market value of any item under this Section 4, such determination may be challenged in good faith by the Majority Holders, and any dispute shall be resolved by an investment banking or valuation firm of recognized national standing selected by Company and acceptable to the Majority Holders.

4.8 REORGANIZATION, RECLASSIFICATION, MERGER, CONSOLIDATION OR DISPOSITION OF ASSETS. In case Company shall reorganize its capital, reclassify its capital stock, consolidate or merge with or into another corporation (where Company is not the surviving corporation or where there is a change in or distribution with respect to the Common Stock of Company), or sell, transfer or otherwise dispose of all or substantially all its property, assets or business to another corporation and, pursuant to the terms of such reorganization, reclassification, merger, consolidation or disposition of assets, shares of common stock of the successor or acquiring corporation, or any cash, shares of stock or other securities or property of any nature whatsoever (including warrants or other subscription or purchase rights) in addition to or in lieu of common stock of the successor or acquiring corporation ("Other Property"), are to be received by or distributed to the holders of Common Stock of Company, then each Holder shall have the right thereafter to receive, upon exercise of such Warrant, the number of shares of common stock of the successor or acquiring corporation or of Company, if it is the surviving corporation, and Other Property receivable upon or as a result of such reorganization, reclassification, merger, consolidation or disposition of assets by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such event. In case of any such reorganization, reclassification, merger, consolidation or disposition of assets, the successor or acquiring corporation (if other than Company) shall expressly assume the due and punctual observance and performance of each and every covenant and condition of this Warrant to be performed and observed by Company and all the obligations and liabilities hereunder, subject to such modifications as may be deemed appropriate (as determined by resolution of the Board of Directors of Company) in order to provide for adjustments of shares of Common Stock for which this Warrant is exercisable which shall be as nearly equivalent as practicable to the adjustments provided for in this Section 4. For purposes of this Section 4.8, "common stock of the successor or acquiring corporation" shall include stock of such corporation of any class which is not preferred as to dividends or assets over any other class of stock of such corporation and which is not subject to redemption and shall also include any evidences of indebtedness, shares of stock or other securities

which are convertible into or exchangeable for any such stock, either immediately or upon the arrival of a specified date or the happening of a specified event and any warrants or other rights to subscribe for or purchase any such stock. The foregoing provisions of this Section 4.8 shall similarly apply to successive reorganizations, reclassifications, mergers, consolidations or disposition of assets.

4.9 OTHER ACTION AFFECTING COMMON STOCK. In case at any time or from time to time Company shall take any action in respect of its Common Stock, other than any action described in this Section 4, then, unless such action will not have a materially adverse effect upon the rights of the Holders, the number of shares of Common Stock or other stock for which this Warrant is exercisable and/or the purchase price thereof shall be adjusted in such manner as may be equitable in the circumstances.

5. NOTICES TO WARRANT HOLDERS

5.1 NOTICE OF ADJUSTMENTS. Whenever an adjustment to this Warrant is made pursuant to Section 4, Company shall prepare a certificate to be executed by the chief financial officer of Company setting forth, in reasonable detail, the event requiring the adjustment and the method by which such adjustment was calculated, specifying the number of shares of Common Stock for which this Warrant is exercisable and (if such adjustment was made pursuant to Section 4.8 or 4.9) describing the number and kind of any other shares of stock or Other Property for which this Warrant is exercisable, and any change in the purchase price or prices thereof, after giving effect to such adjustment or change. Company shall promptly cause a signed copy of such certificate to be delivered to each Holder. Company shall keep at its office or agency designated pursuant to Section 15 copies of all such certificates and cause the same to be available for inspection at said office during normal business hours by any Holder or any prospective purchaser of a Warrant designated by a Holder thereof.

5.2 NOTICE OF CORPORATE ACTION. If at any time

(a) Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a dividend or other distribution, or any right to subscribe for or purchase any evidences of its indebtedness, any shares of stock of any class or any other securities or property, or to receive any other right, or

(b) there shall be any capital reorganization of Company, any reclassification or recapitalization of the capital stock of Company or any consolidation or merger of Company with, or any sale, transfer or other disposition of all or substantially all the property, assets or business of Company to, another corporation, or

(c) there shall be a voluntary or involuntary dissolution, liquidation or winding up of Company;

then, in any one or more of such cases, Company shall give to Holder (i) at least 30 days' prior written notice of the date on which a record date shall be selected in respect of such event and (ii) in the case of any such event, at least 30 days' prior written notice of the

date when the same shall take place. Such notice in accordance with the foregoing clause also shall specify (i) the date on which the holders of Common Stock shall be entitled to any such dividend, distribution or right, and the amount and character thereof and (ii) the date on which any such reorganization, reclassification, merger, consolidation, sale, transfer, disposition, dissolution, liquidation or winding up is to take place and the time, if any such time is to be fixed, as of which the holders of Common Stock shall be entitled to exchange their shares of Common Stock for securities or other property deliverable upon such reorganization, reclassification, merger, consolidation, sale, transfer, disposition, dissolution, liquidation or winding up.

6. NO IMPAIRMENT

Company shall not by any action, including, without limitation, amending its articles of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder against impairment. Without limiting the generality of the foregoing, Company will take all such action as may be necessary or appropriate in order that Company may validly and legally issue fully paid and nonassessable shares of Common Stock upon the exercise of this Warrant, including taking such action as is necessary for the Warrant Price to be not less than the par value of the shares of Common Stock issuable upon exercise of this Warrant. The Company will use its best efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof as may be necessary to enable Company to perform its obligations under this Warrant.

7. RESERVATION AND AUTHORIZATION OF COMMON STOCK

From and after the Closing Date, Company shall at all times reserve and keep available for issue upon the exercise of Warrants such number of its authorized but unissued shares of Common Stock as will be sufficient to permit the exercise in full of all outstanding Warrants. All shares of Common Stock which shall be so issuable, when issued upon exercise of any Warrant and payment therefor in accordance with the terms of such Warrant, shall be duly and validly issued and fully paid and nonassessable, and not subject to preemptive rights.

8. TAKING OF RECORD; STOCK AND WARRANT TRANSFER BOOKS

In the case of all dividends or other distributions by Company to the holders of its Common Stock with respect to which any provision of Section 4 refers to the taking of a record of such holders, Company will in each such case take such a record and will take such record as of the close of business on a Business Day. Company will not at any time, except upon dissolution, liquidation or winding up of Company, close its

stock transfer books or Warrant transfer books so as to result in preventing or delaying the exercise or transfer of any Warrant.

9. RESTRICTIONS ON TRANSFERABILITY

The Warrants and the Warrant Stock shall not be transferred, hypothecated or assigned before satisfaction of the conditions specified in this Section 9, which conditions are intended to ensure compliance with the provisions of the Securities Act with respect to the Transfer of any Warrant or any Warrant Stock. Holder, by acceptance of this Warrant, agrees to be bound by the provisions of this Section 9.

9.1 RESTRICTIVE LEGEND. 1. Except as otherwise provided in this Section 9, each certificate for Warrant Stock initially issued upon the exercise of this Warrant, and each certificate for Warrant Stock issued to any subsequent transferee of any such certificate, shall be stamped or otherwise imprinted with a legend in substantially the following form:

"The shares represented by this certificate have not been registered under the Securities Act of 1933, as amended, and may not be transferred in violation of such Act or the rules and regulations thereunder."

(b) Except as otherwise provided in this Section 9, each Warrant shall be stamped or otherwise imprinted with a legend in substantially the following form:

"This Warrant and the securities represented hereby have not been registered under the Securities Act of 1933, as amended, and may not be transferred in violation of such Act, the rules and regulations thereunder or the provisions of this Warrant."

9.2 NOTICE OF PROPOSED TRANSFERS; REQUESTS FOR REGISTRATION. Prior to or promptly following any Transfer of any Warrants or any shares of Restricted Common Stock, the holder of such Warrants or Restricted Common Stock shall give written notice (a "Transfer Notice") to Company of such Transfer. Each certificate, if any, evidencing such shares of Restricted Common Stock issued upon such Transfer shall bear the restrictive legend set forth in Section 9.1(a), and each Warrant issued upon such Transfer shall bear the restrictive legend set forth in Section 9.1(b), unless in the opinion of counsel to such holder which is reasonably acceptable to Company such legend is not required in order to ensure compliance with the Securities Act.

9.3 TERMINATION OF RESTRICTIONS. Notwithstanding the foregoing provisions of Section 9, the restrictions imposed by this Section upon the transferability of the Warrants and the Warrant Stock, and the legend requirements of Section 9.1, shall terminate as to any particular Warrant or share of Warrant Stock (i) when and so long as such security shall have been effectively registered under the Securities Act and disposed of pursuant thereto or (ii) when Company shall have received an opinion of counsel

reasonably satisfactory to it that such security may be transferred without registration thereof under the Securities Act. Whenever the restrictions imposed by Section 9 shall terminate as to this Warrant, as hereinabove provided, the Holder hereof shall be entitled to receive from Company, at the expense of Company, a new Warrant without the restrictive legend set forth in Section 9.1(b). Whenever the restrictions imposed by this Section shall terminate as to any share of Warrant Stock, as hereinabove provided, the holder thereof shall be entitled to receive from Company, at Company's expense, a new certificate representing such Warrant Stock not bearing the restrictive legend set forth in Section 9.1(a).

10. SUPPLYING INFORMATION

Company shall cooperate with each Holder of a Warrant or Warrant Stock in supplying such information as may be reasonably necessary for such holder to complete and file any information reporting forms presently or hereafter required by the Commission as a condition to the availability of an exemption from the Securities Act for the sale of any Warrant or Warrant Stock.

11. LOSS OR MUTILATION

Upon receipt by Company from any Holder of evidence reasonably satisfactory to it of the ownership of and the loss, theft, destruction or mutilation of this Warrant and indemnity reasonably satisfactory to it (it being understood that the written agreement of Holder shall be sufficient indemnity), and in case of mutilation upon surrender and cancellation hereof, Company will execute and deliver in lieu hereof a new Warrant of like tenor to such Holder; provided, in the case of mutilation, no indemnity shall be required if this Warrant in identifiable form is surrendered to Company for cancellation.

12. LIMITATION OF LIABILITY

No provision hereof, in the absence of affirmative action by Holder to purchase shares of Common Stock, and no enumeration herein of the rights or privileges of Holder hereof, shall give rise to any liability of such Holder for the purchase price of any Common Stock or as a stockholder of Company, whether such liability is asserted by Company or by creditors of Company.

13. MISCELLANEOUS

13.1 NONWAIVER AND EXPENSES. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice Holder's rights, powers or remedies. If Company fails to make, when due, any payments provided for hereunder, or fails to comply with any other provision of this Warrant, Company shall pay to Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by Holder in collecting

any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

13.2 NOTICE GENERALLY. Any notice, demand, request, consent, approval, declaration, delivery or other communication hereunder to be made pursuant to the provisions of this Warrant shall be sufficiently given or made if in writing and either delivered in person with receipt acknowledged or sent by registered or certified mail, return receipt requested, postage prepaid, or by telecopy and confirmed by telecopy answerback, addressed as follows:

(a) If to any Holder or holder of Warrant Stock, at its last known address appearing on the books of Company maintained for such purpose.

(b) If to Company at:

Atlantic Pharmaceuticals, Inc.
150 Broadway
Suite 1100
New York, NY 10038
Attn: A. Joseph Rudick

or at such other address as may be substituted by notice given as herein provided. The giving of any notice required hereunder may be waived in writing by the party entitled to receive such notice. Every notice, demand, request, consent, approval, declaration, delivery or other communication hereunder shall be deemed to have been duly given or served on the date on which personally delivered, with receipt acknowledged, telecopied and confirmed by telecopy answerback, or three (3) Business Days after the same shall have been deposited in the United States mail. Failure or delay in delivering copies of any notice, demand, request, approval, declaration, delivery or other communication to the person designated above to receive a copy shall in no way adversely affect the effectiveness of such notice, demand, request, approval, declaration, delivery or other communication.

13.3 SUCCESSORS AND ASSIGNS. Subject to the provisions of Sections 3.1 and 9, this Warrant and the rights evidenced hereby shall inure to the benefit of and be binding upon the successors of Company and the successors and assigns of Holder. The provisions of this Warrant are intended to be for the benefit of all Holders from time to time of this Warrant and shall be enforceable by any such Holder.

13.4 AMENDMENT. This Warrant and all other Warrants may be modified or amended or the provisions hereof waived with the written consent of Company and the Majority Holders, provided that no such Warrant may be modified or amended to reduce the number of shares of Common Stock for which such Warrant is exercisable or to increase the price at which such shares may be purchased upon exercise of such Warrant (before giving effect to any adjustment as provided therein) without the prior written consent of the Holder thereof.

13.5 SEVERABILITY. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Warrant.

13.6 HEADINGS. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

13.7 GOVERNING LAW. This Warrant shall be governed by the laws of the State of Delaware, without regard to the provisions thereof relating to conflict of laws.

[SIGNATURES BEGIN ON NEXT PAGE]

IN WITNESS WHEREOF, Company has caused this Warrant to be duly executed and attested by its Secretary or an Assistant Secretary.

Dated: January 4, 2000

ATLANTIC PHARMACEUTICALS, INC.

By: /s/ A. Joseph Rudick

Name: A. Joseph Rudick
Title: President

Attest:

By: /s/ John Brancaccio

Name: John Brancaccio
Title: CFO

EXHIBIT A TO WARRANT

SUBSCRIPTION FORM

[To be executed only upon exercise of Warrant]

The undersigned registered owner of this Warrant irrevocably exercises this Warrant for the purchase of _____ Shares of Common Stock of Atlantic Pharmaceuticals, Inc. and herewith makes payment therefor, all at the price and on the terms and conditions specified in this Warrant and requests that certificates for the shares of Common Stock hereby purchased (and any securities or other property issuable upon such exercise) be issued in the name of and delivered to _____ whose address is _____ and, if such shares of Common Stock shall not include all of the shares of Common Stock issuable as provided in this Warrant, that a new Warrant of like tenor and date for the balance of the shares of Common Stock issuable hereunder be delivered to the undersigned.

(Name of Registered Owner)

(Signature of Registered Owner)

(Street Address)

(City) (State) (Zip Code)

NOTICE: The signature on this subscription must correspond with the name as written upon the face of the within Warrant in every particular, without alteration or enlargement or any change whatsoever.

EXHIBIT B TO WARRANT

ASSIGNMENT FORM

FOR VALUE RECEIVED the undersigned registered owner of this Warrant hereby sells, assigns and transfers unto the Assignee named below all of the rights of the undersigned under this Warrant, with respect to the number of shares of Common Stock set forth below:

| Name and Address of Assignee | No. of Shares of Common Stock |
|------------------------------|-------------------------------|
| ----- | ----- |

and does hereby irrevocably constitute and appoint _____ attorney-in-fact to register such transfer on the books of Atlantic Pharmaceuticals, Inc. maintained for the purpose, with full power of substitution in the premises.

Dated: _____ Print Name: _____
Signature: _____
Witness: _____

NOTICE: The signature on this assignment must correspond with the name as written upon the face of the within Warrant in every particular, without alteration or enlargement or any change whatsoever.

=====

WARRANT

To Purchase Common Stock of
ATLANTIC PHARMACEUTICALS, INC.

Warrant No. 3

No. of Shares of Common Stock: 150,000

=====

THIS WARRANT AND THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND MAY NOT BE TRANSFERRED IN VIOLATION OF SUCH ACT, THE RULES AND REGULATIONS THEREUNDER OR THE PROVISIONS OF THIS WARRANT.

No. of Shares of Common Stock: 150,000

Warrant No. 3

WARRANT

To Purchase Common Stock of
ATLANTIC PHARMACEUTICALS, INC.

THIS IS TO CERTIFY THAT Joseph Stevens & Company, Inc., or registered assigns, is entitled, at any time during the Exercise Period (as hereinafter defined), to purchase from Atlantic Pharmaceuticals, Inc., a Delaware corporation ("Company"), 150,000 shares of Common Stock (as hereinafter defined and subject to adjustment as provided herein), in whole or in part, including fractional parts, at a purchase price of \$4.50 per share (subject to adjustment as provided herein) all on the terms and conditions and pursuant to the provisions hereinafter set forth.

1. DEFINITIONS

Capitalized terms used in this Warrant but not defined have the meaning set forth in the Warrant Agreement (as defined below). The following terms have the respective meanings set forth below:

"Additional Shares of Common Stock" means all shares of Common Stock issued by the Company after the Closing Date, other than Warrant Stock.

"Business Day" means any day that is not a Saturday or Sunday or a day on which banks are required or permitted to be closed in the State of New York.

"Commission" means the Securities and Exchange Commission or any other federal agency then administering the Securities Act and other federal securities laws.

"Common Stock" means (except where the context otherwise indicates) the Common Stock, par value \$.001 per share, of Company as constituted on the Closing Date, and any capital stock into which such Common Stock may thereafter be changed, and shall also include (i) capital stock of Company of any other class (regardless of how denominated) issued to the holders of shares of Common Stock upon any reclassification thereof which is also not preferred as to dividends or assets over any other class of stock of Company and which is not subject to redemption and (ii) shares of common stock of any successor or acquiring corporation (as defined in Section 4.8) received by or distributed to the holders of Common Stock of Company in the circumstances contemplated by Section 4.8.

"Convertible Securities" means evidences of indebtedness, shares of stock or other securities which are convertible into or exchangeable, with or without payment of additional consideration in cash or property, for Additional Shares of Common Stock, either immediately or upon the occurrence of a specified date or a specified event.

"Current Market Price" means, in respect of a share of Common Stock on any date, either (a) if there shall not then be a public market for the Common Stock, the Fair Market Value per share of Common Stock as at such date or (b) if there shall then be a public market for the Common Stock, the average of the daily market prices for 20 consecutive Business Days commencing 30 days before such date. The daily market price for each such Business Day shall be (i) the last sale price on such day on the principal stock exchange or NASDAQ Small Cap Market ("NASDAQ") on which such Common Stock is then listed or admitted to trading, (ii) if no sale takes place on such day on any such exchange or NASDAQ, the average of the last reported closing bid and asked prices on such day as officially quoted on any such exchange or NASDAQ, (iii) if the Common Stock is not then listed or admitted to trading on any stock exchange or NASDAQ, the average of the last reported closing bid and asked prices on such day in the over-the-counter market, as furnished by the National Association of Securities Dealers Automatic Quotation System or the National Quotation Bureau, Inc., (iv) if neither such corporation at the time is engaged in the business of reporting such prices, as furnished by any similar firm then engaged in such business, or (v) if there is no such firm, as furnished by any member of the NASD selected mutually by the Majority Holders and Company or, if they cannot agree upon such selection, as selected by two such members of the NASD, one of which shall be selected by the Majority Holders and one of which shall be selected by Company.

"Exchange Act" means the Securities Exchange Act of 1934, as amended, or any similar federal statute, and the rules and regulations of the Commission thereunder, all as the same shall be in effect from time to time.

"Exercise Period" means the period during which this Warrant is exercisable pursuant to Section 2.1.

"Expiration Date" means January 4, 2007.

"Financial Advisory Agreement" means the Financial Advisory and Consulting Agreement, dated January 4, 2000, by and between the Company and the Consultant.

"Fully Diluted Outstanding" means, on any date, all shares of Common Stock Outstanding on such date and all shares of Common Stock issuable in respect of this Warrant outstanding on such date, and other options or warrants to purchase, or securities convertible into or exchangeable for, shares of Common Stock outstanding on such date, regardless of whether such options, warrants or other securities are then exercisable or convertible.

"GAAP" means generally accepted accounting principles in the United States of America as in effect from time to time.

"Holder" means the Person in whose name the Warrant set forth herein is registered on the books of Company maintained for such purpose.

"Majority Holders" means the holders of Warrants exercisable for in excess of 50% of the aggregate number of shares of Warrant Stock then purchasable upon exercise of all Warrants.

"NASD" means the National Association of Securities Dealers, Inc., or any successor corporation thereto.

"Other Property" has the meaning set forth in Section 4.8.

"Outstanding" means, when used with reference to Common Stock, on any date, all issued shares of Common Stock on such date, except shares then owned or held by or for the account of Company or any subsidiary thereof, and shall include all shares issuable in respect of outstanding scrip or any certificates representing fractional interests in shares of Common Stock.

"Permitted Issuances" means the issuance of (a) shares of Common Stock (i) upon exercise of currently outstanding warrants or (ii) upon exercise of currently outstanding options and (b) up to 100,000 shares of Common Stock after the date hereof in connection with any duly authorized employee stock option plan, stock purchase plan or restricted stock award plan of the Company.

"Person" means any individual, sole proprietorship, partnership, limited liability company, joint venture, trust, incorporated organization, association, corporation, institution, public benefit corporation, entity or government (whether federal, state, county, city, municipal or otherwise, including, without limitation, any instrumentality, division, agency, body or department thereof).

"Securities Act" shall mean the Securities Act of 1933, as amended, or any similar federal statute, and the rules and regulations of the Commission thereunder, all as the same shall be in effect at the time.

"Transfer" shall mean any disposition of any Warrant or Warrant Stock or of any interest in either thereof, which would constitute a sale thereof within the meaning of the Securities Act.

"Transfer Notice" has the meaning set forth in Section 9.2.

"Warrant" means this Warrant and all warrants issued upon transfer, division or combination of, or in substitution for, this Warrant. All Warrants shall at all times be identical as to terms and conditions and date, except as to the number of shares of Common Stock for which they may be exercised.

"Warrant Price" means an amount equal to (i) the number of shares of Common Stock being purchased upon exercise of this Warrant pursuant to Section 2.1,

multiplied by (ii) \$4.50, as adjusted from time to time pursuant to Section 4 of this Warrant.

"Warrant Stock" means the shares of Common Stock issued or issuable upon the exercise of this Warrant.

2. EXERCISE OF WARRANT

2.1. Exercise Period. (a) From and after January 4, 2002 and until 5:00 P.M., New York time, on the Expiration Date (the "Exercise Period"), Holder may exercise this Warrant, on any Business Day on which the condition set forth in Section 2.1(b) hereof is met, for all or any part of the Warrant Stock which is then purchasable in accordance with the vesting schedule set forth below:

| Date | Shares purchasable upon exercise |
|-------------------|----------------------------------|
| January 4, 2000 | 12,500 |
| February 4, 2000 | 25,000 |
| March 4, 2000 | 37,500 |
| April 4, 2000 | 50,000 |
| May 4, 2000 | 62,500 |
| June 4, 2000 | 75,000 |
| July 4, 2000 | 87,500 |
| August 4, 2000 | 100,000 |
| September 4, 2000 | 112,500 |
| October 4, 2000 | 125,000 |
| November 4, 2000 | 137,500 |
| December 4, 2000 | 150,000 |

Upon any termination of the Financial Advisory Agreement pursuant to Section 14 thereof, the Warrant shall cease to vest and shall continue to be exercisable, in accordance with the terms set forth herein, for the number of shares of Warrant Stock which were purchasable on such date of termination.

(b) The Warrant may be exercised on any Business Day, except that it may only be exercised if the last sale price of a share of Common Stock on NASDAQ (or the principal stock exchange on which the Common Stock is then listed or admitted to trading) on the immediately preceding Business Day was equal to or greater than \$1.00 plus the Exercise Price then in effect.

2.2. Exercise Notice; Delivery of Certificates. In order to exercise this Warrant, Holder shall deliver to Company at its principal office at 150 Broadway, Suite 1100, New York, New York 10038, or at the office or agency designated by Company pursuant to Section 13.2, (i) a written notice of Holder's election to exercise this Warrant, specifying the number of shares of Common Stock to be purchased, (ii) payment of the Warrant Price and (iii) this Warrant. Such notice shall be substantially in the form of the

subscription form appearing at the end of this Warrant as Exhibit A, duly executed by Holder or its agent or attorney. Upon receipt thereof, Company shall, as promptly as practicable, and in any event within five (5) Business Days thereafter, deliver to Holder a duly executed certificate or certificates representing the aggregate number of full shares of Common Stock issuable upon such exercise, together with cash in lieu of any fraction of a share, as hereinafter provided. Such stock certificate or certificates shall be in such denominations and registered in the name designated in the subscription form, subject to Section 9. Holder or any other Person so designated to be named therein shall be deemed to have become a holder of record of such shares of Warrant Stock for all purposes, as of the date on which all items in clauses (i)-(iii) above have been received by Company and all taxes required to be paid by Holder, if any, pursuant to Section 2.4 have been paid. If this Warrant shall have been exercised in part, Company shall deliver to Holder a new Warrant evidencing the rights of Holder to purchase the remaining shares of Common Stock issuable upon exercise of this Warrant, which new Warrant shall in all other respects be identical with this Warrant, or appropriate notation may be made on this Warrant and the same returned to Holder.

2.3. Payment of Warrant Price. Payment of the Warrant Price shall be made at the option of the Holder by:

(i) certified or official bank check;

(ii) The surrender to Company of that number of shares of Warrant Stock (or the right to receive such number of shares) or shares of Common Stock having an aggregate Current Market Price equal to or greater than the Current Warrant Price for all shares then being purchased (including those being surrendered); or

(iii) any combination thereof, duly endorsed by or accompanied by appropriate duly executed instruments of transfer.

2.4. Payment of Taxes. All shares of Warrant Stock shall be validly issued, fully paid and nonassessable and without any preemptive rights. Company shall pay all expenses, taxes and other governmental charges with respect to the issue or delivery thereof, unless such tax or charge is imposed by law upon Holder. Company shall not be required, however, to pay any transfer tax or other similar charge imposed in connection with any transfer involved in the issue of any certificate for shares of Common Stock issuable upon exercise of this Warrant in any name other than that of Holder, and in such case Company shall not be required to issue or deliver any stock certificate until such tax or other charge has been paid or it has been established to the satisfaction of Company that no such tax or other charge is due.

2.5. Fractional Shares. Company shall not be required to issue a fractional share of Common Stock upon exercise of any Warrant. As to any fraction of a share which the Holder of one or more Warrants would otherwise be entitled to purchase upon such exercise, except as otherwise provided in Section 2.1, Company shall pay a cash adjustment in respect of such final fraction in an amount equal to the same fraction of the Current Market Price per share of Common Stock on the date of exercise.

3. TRANSFER, DIVISION AND COMBINATION

3.1. Transfer. Subject to compliance with Section 9 hereof, transfer of this Warrant and all rights hereunder, in whole or in part, shall be registered on the books of Company to be maintained for such purpose, upon surrender of this Warrant at the principal office of Company referred to in Section 2.1 or the office or agency designated by Company pursuant to Section 13.2, together with a duly executed written assignment of this Warrant substantially in the form of Exhibit B hereto and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, Company shall, subject to Section 9, execute and deliver a new Warrant or Warrants in the name of the assignee or assignees and in the denomination specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. A Warrant, if properly assigned in compliance with Section 9, may be exercised by a new Holder for the purchase of shares of Common Stock without having a new Warrant issued.

3.2. Division and Combination. Subject to Section 9, this Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office or agency of Company, together with a duly executed written notice specifying the names and denominations in which new Warrants are to be issued. Subject to compliance with Section 3.1 and with Section 9, as to any transfer which may be involved in such division or combination, Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice.

3.3. Expenses. Company shall prepare, issue and deliver at its own expense (other than transfer taxes) the new Warrant or Warrants under this Section 3.

3.4. Maintenance of Books. Company agrees to maintain, at its aforesaid office or agency, books for the registration and the registration of transfer of the Warrants.

4. ADJUSTMENTS

The number of shares of Common Stock for which this Warrant is exercisable, or the price at which such shares may be purchased upon exercise of this Warrant, shall be subject to adjustment from time to time as set forth in this Section 4. Company shall give each Holder notice of any event described below which requires an adjustment pursuant to this Section 4 at the time of such event.

4.1. Stock Dividends, Subdivisions and Combinations. If at any time Company shall:

(a) take a record of the holders of its Common Stock for the purpose of entitling them to receive a dividend payable in, or other distribution of, Common Stock,

(b) subdivide its outstanding shares of Common Stock into a larger number of shares of Common Stock, or

(c) combine its outstanding shares of Common Stock into a smaller number of shares of Common Stock,

then (i) the number of shares of Common Stock for which this Warrant is exercisable immediately after the occurrence of any such event shall be adjusted to equal the number of shares of Common Stock which a record holder of the same number of shares of Common Stock for which this Warrant is exercisable immediately prior to the occurrence of such event would own or be entitled to receive after the happening of such event, and (ii) the Warrant Price shall be adjusted to equal (A) the Warrant Price multiplied by the number of shares of Common Stock for which this Warrant is exercisable immediately prior to the adjustment divided by (B) the number of shares for which this Warrant is exercisable immediately after such adjustment.

4.2. Certain Other Distributions and Adjustments.

(a) If at any time Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive any dividend or other distribution of:

(i) cash in excess of earned surplus,

(ii) any evidences of its indebtedness, any shares of its stock or any other securities or property of any nature whatsoever (other than cash, Convertible Securities or Additional Shares of Common Stock), or

(iii) any warrants or other rights to subscribe for or purchase any evidences of its indebtedness, any shares of its stock or any other securities or property of any nature whatsoever (other than cash, Convertible Securities or Additional Shares of Common Stock),

then the Exercise Price shall be reduced, without any further action by the parties hereto, by the Per Share Value (as hereinafter defined) of the dividend. For purposes of this Section 4.2 the "Per Share Value" of cash dividend or other distribution shall be the dollar amount of the distribution on each share of Common Stock and the "Per Share Value" of any dividend or distribution other than cash shall be equal to the fair market value of such non-cash distribution on each share of Common Stock, as determined in good faith by the Board of Directors of the Company.

(b) A reclassification of the Common Stock (other than a change in par value) into shares of Common Stock and shares of any other class of stock shall be deemed a distribution by Company to the holders of its Common Stock of such shares of such other class of stock within the meaning of paragraph (a) above, and if the outstanding shares of Common Stock shall be changed into a larger or smaller number of shares of Common Stock as a part of such reclassification, such change shall be deemed a

subdivision or combination, as the case may be, of the outstanding shares of Common Stock within the meaning of Section 4.1.

4.3. Issuance of Additional Shares of Common Stock.

(a) If at any time Company shall (except as hereinafter provided) issue or sell any Additional Shares of Common Stock, other than Permitted Issuances, in exchange for consideration in an amount per Additional Share of Common Stock less than the Current Market Price, then

(i) the Warrant Price as to the number of shares for which this Warrant is exercisable prior to such adjustment shall be reduced to a price determined by dividing (A) an amount equal to the sum of (x) the number of shares of Common Stock Outstanding immediately prior to such issue or sale multiplied by the Current Market Price plus (y) the consideration, if any, received by Company upon such issue or sale as determined pursuant to Section 4.7(a), by (B) the total number of shares of Common Stock Outstanding immediately after such issue or sale; and (ii) the number of shares of Common Stock for which this Warrant is exercisable shall be adjusted to equal the product obtained by multiplying the Warrant Price in effect immediately prior to such issue or sale by the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such issue or sale and dividing the product thereof by the Warrant Price resulting from the adjustment made pursuant to clause (i) above.

(b) The provision of paragraph (a) shall not apply to any issuance of Additional Shares of Common Stock for which an adjustment is provided under Section 4.1 or 4.2. No adjustment of the number of shares of Common Stock for which this Warrant shall be exercisable shall be made under paragraph (a) upon the issuance of any Additional Shares of Common Stock which are issued pursuant to the exercise of any warrants or other subscription or purchase rights or pursuant to the exercise of any conversion or exchange rights in any Convertible Securities, if any such adjustment shall previously have been made upon the issuance of such warrants or other rights or upon the issuance of such Convertible Securities (or upon the issuance of any warrant or other rights therefor) pursuant to Sections 4.4 or 4.5 hereof.

4.4. Issuance of Warrants or Other Rights. If at any time Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a distribution of, or shall in any manner (whether directly or by assumption in a merger in which Company is the surviving corporation) issue or sell, any warrants or other rights to subscribe for or purchase any Additional Shares of Common Stock or any Convertible Securities, whether or not the rights to exchange or convert thereunder are immediately exercisable, and the price per share for which Common Stock is issuable upon the exercise of such warrants or other rights or upon conversion or exchange of such Convertible Securities shall be less than the Current Market Price in effect immediately prior to the time of such issue or sale, then the number of shares for which this Warrant is exercisable and the Current Warrant Price shall be adjusted as provided in Section 4.3 on the basis that the maximum number of Additional Shares of Common Stock issuable pursuant to all such warrants or other rights or necessary to effect the conversion or

exchange of all such Convertible Securities shall be deemed to have been issued and outstanding and Company shall be deemed to have received all of the consideration payable therefor, if any, as of the date of the issuance of such warrants or other rights.

4.5. Issuance of Convertible Securities. If at any time Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a distribution of, or shall in any manner (whether directly or by assumption in a merger in which Company is the surviving corporation) issue or sell, any Convertible Securities, whether or not the rights to exchange or convert thereunder are immediately exercisable, and the price per share for which Common Stock is issuable upon such conversion or exchange shall be less than the Current Market Price in effect immediately prior to the time of such issue or sale, then the number of Shares for which this Warrant is exercisable and the Warrant Price shall be adjusted as provided in Section 4.3 on the basis that the maximum number of Additional Shares of Common Stock necessary to effect the conversion or exchange of all such Convertible Securities shall be deemed to have been issued and outstanding and Company shall have received all of the consideration payable therefor, if any, as of the date of issuance of such Convertible Securities. No adjustment of the number of Shares for which this Warrant is exercisable and the Warrant Price shall be made under this Section 4.5 upon the issuance of any Convertible Securities which are issued pursuant to the exercise of any warrants or other subscription or purchase rights therefor, if any such adjustment shall previously have been made upon the issuance of such warrants or other rights pursuant to Section 4.4. If any issue or sale of Convertible Securities is made upon exercise of any warrant or other right to subscribe for or to purchase any such Convertible Securities for which adjustments of the number of Shares for which this Warrant is exercisable and the Warrant Price have been or are to be made pursuant to Section 4.4, no further adjustments of the number of Shares for which this Warrant is exercisable and the Warrant Price shall be made by reason of such issue or sale.

4.6. Superseding Adjustment. If, at any time after any adjustment of the number of shares of Common Stock for which this Warrant is exercisable and the Warrant Price shall have been made pursuant to Section 4.4 or Section 4.5 as the result of any issuance of warrants, rights or Convertible Securities,

(a) such warrants or rights, or the right of conversion or exchange in such other Convertible Securities, shall expire, and all or a portion of such warrants or rights, or the right of conversion or exchange with respect to all or a portion of such other Convertible Securities, as the case may be, shall not have been exercised, or

(b) the consideration per share for which shares of Common Stock are issuable pursuant to such warrants or rights, or the terms of such other Convertible Securities, shall be increased solely by virtue of provisions therein contained for an automatic increase in such consideration per share upon the occurrence of a specified date or event,

then for each outstanding Warrant such previous adjustment shall be rescinded and annulled and the Additional Shares of Common Stock which were deemed to have been

issued by virtue of the computation made in connection with the adjustment so rescinded and annulled shall no longer be deemed to have been issued by virtue of such computation. Thereupon, a recomputation shall be made of the effect of such rights or options or other Convertible Securities on the basis of

(c) treating the number of Additional Shares of Common Stock or other property, if any, theretofore actually issued or issuable pursuant to the previous exercise of any such warrants or rights or any such right of conversion or exchange, as having been issued on the date or dates of any such exercise and for the consideration actually received and receivable therefor, and

(d) treating any such warrants or rights or any such other Convertible Securities which then remain outstanding as having been granted or issued immediately after the time of such increase of the consideration per share for which shares of Common Stock or other property are issuable under such warrants or rights or other Convertible Securities; whereupon a new adjustment of the number of shares of Common Stock for which this Warrant is exercisable and the Warrant Price shall be made, which new adjustment shall supersede the previous adjustment so rescinded and annulled.

4.7. Other Provisions Applicable to Adjustments under This Section. The following provisions shall be applicable to the making of adjustments of the number of shares of Common Stock for which this Warrant is exercisable and the Warrant Price provided for in this Section 4:

(a) Computation of Consideration. To the extent that any Additional Shares of Common Stock or any Convertible Securities or any warrants or other rights to subscribe for or purchase any Additional Shares of Common Stock or any Convertible Securities shall be issued for cash consideration, the consideration received by Company therefor shall be the amount of the cash received by Company therefor, or, if such Additional Shares of Common Stock or Convertible Securities are offered by Company for subscription, the subscription price, or, if such Additional Shares of Common Stock or Convertible Securities are sold to underwriters or dealers for public offering without a subscription offering, the initial public offering price (in any such case subtracting any amounts paid or receivable for accrued interest or accrued dividends and without taking into account any compensation, discounts or expenses paid or incurred by Company for and in the underwriting of, or otherwise in connection with, the issuance thereof). To the extent that such issuance shall be for a consideration other than cash, then, except as herein otherwise expressly provided, the amount of such consideration shall be deemed to be the fair market value of such consideration at the time of such issuance as determined in good faith by the Board of Directors of Company. In case any Additional Shares of Common Stock or any Convertible Securities or any warrants or other rights to subscribe for or purchase such Additional Shares of Common Stock or Convertible Securities shall be issued in connection with any merger in which Company issues any securities, the amount of consideration therefor shall be deemed to be the fair value, as determined in good faith by the Board of Directors of Company, of such portion of the assets and business of the nonsurviving corporation as such Board in good faith shall determine to be attributable to such Additional Shares of Common Stock, Convertible Securities,

warrants or other rights, as the case may be. The consideration for any Additional Shares of Common Stock issuable pursuant to any warrants or other rights to subscribe for or purchase the same shall be the consideration received by Company for issuing such warrants or other rights plus the additional consideration payable to Company upon exercise of such warrants or other rights. The consideration for any Additional Shares of Common Stock issuable pursuant to the terms of any Convertible Securities shall be the consideration received by Company for issuing warrants or other rights to subscribe for or purchase such Convertible Securities, plus the consideration paid or payable to Company in respect of the subscription for or purchase of such Convertible Securities, plus the additional consideration, if any, payable to Company upon the exercise of the right of conversion or exchange in such Convertible Securities. In case of the issuance at any time of any Additional Shares of Common Stock or Convertible Securities in payment or satisfaction of any dividends upon any class of stock other than Common Stock, Company shall be deemed to have received for such Additional Shares of Common Stock or Convertible Securities a consideration equal to the amount of such dividend so paid or satisfied.

(b) When Adjustments to Be Made. The adjustments required by this Section 4 shall be made whenever and as often as any specified event requiring an adjustment shall occur, except that any adjustment of the number of shares of Common Stock for which this Warrant is exercisable that would otherwise be required may be postponed (except in the case of a subdivision or combination of shares of Common Stock, as provided for in Section 4.1) up to, but not beyond the date of exercise if such adjustment either by itself or with other adjustments not previously made adds or subtracts less than 1% of the shares of Common Stock for which this Warrant is exercisable immediately prior to the making of such adjustment. Any adjustment representing a change of less than such minimum amount (except as aforesaid) which is postponed shall be carried forward and made as soon as such adjustment, together with other adjustments required by this Section 4 and not previously made, would result in a minimum adjustment or on the date of exercise. For the purpose of any adjustment, any specified event shall be deemed to have occurred at the close of business on the date of its occurrence.

(c) Fractional Interests. In computing adjustments under this Section 4, fractional interests in Common Stock shall be taken into account to the nearest 1/10th of a share.

(d) When Adjustment Not Required. If Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a dividend or distribution or subscription or purchase rights and shall, thereafter and before the distribution to stockholders thereof, legally abandon its plan to pay or deliver such dividend, distribution, subscription or purchase rights, then thereafter no adjustment shall be required by reason of the taking of such record and any such adjustment previously made in respect thereof shall be rescinded and annulled.

(e) Escrow of Warrant Stock. If after any property becomes distributable pursuant to this Section 4 by reason of the taking of any record of the holders of Common

Stock, but prior to the occurrence of the event for which such record is taken, and Holder exercises this Warrant, any Additional Shares of Common Stock issuable upon exercise by reason of such adjustment shall be deemed the last shares of Common Stock for which this Warrant is exercised (notwithstanding any other provision to the contrary herein) and such shares or other property shall be held in escrow for Holder by Company to be issued to Holder upon and to the extent that the event actually takes place, upon payment of the Warrant Price. Notwithstanding any other provision to the contrary herein, if the event for which such record was taken fails to occur or is rescinded, then such escrowed shares shall be cancelled by Company and escrowed property returned to Company.

(f) Challenge to Good Faith Determination. Whenever the Board of Directors of Company shall be required to make a determination in good faith of the fair market value of any item under this Section 4, such determination may be challenged in good faith by the Majority Holders, and any dispute shall be resolved by an investment banking or valuation firm of recognized national standing selected by Company and acceptable to the Majority Holders.

4.8. Reorganization, Reclassification, Merger, Consolidation or Disposition of Assets. In case Company shall reorganize its capital, reclassify its capital stock, consolidate or merge with or into another corporation (where Company is not the surviving corporation or where there is a change in or distribution with respect to the Common Stock of Company), or sell, transfer or otherwise dispose of all or substantially all its property, assets or business to another corporation and, pursuant to the terms of such reorganization, reclassification, merger, consolidation or disposition of assets, shares of common stock of the successor or acquiring corporation, or any cash, shares of stock or other securities or property of any nature whatsoever (including warrants or other subscription or purchase rights) in addition to or in lieu of common stock of the successor or acquiring corporation ("Other Property"), are to be received by or distributed to the holders of Common Stock of Company, then each Holder shall have the right thereafter to receive, upon exercise of such Warrant, the number of shares of common stock of the successor or acquiring corporation or of Company, if it is the surviving corporation, and Other Property receivable upon or as a result of such reorganization, reclassification, merger, consolidation or disposition of assets by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such event. In case of any such reorganization, reclassification, merger, consolidation or disposition of assets, the successor or acquiring corporation (if other than Company) shall expressly assume the due and punctual observance and performance of each and every covenant and condition of this Warrant to be performed and observed by Company and all the obligations and liabilities hereunder, subject to such modifications as may be deemed appropriate (as determined by resolution of the Board of Directors of Company) in order to provide for adjustments of shares of Common Stock for which this Warrant is exercisable which shall be as nearly equivalent as practicable to the adjustments provided for in this Section 4. For purposes of this Section 4.8, "common stock of the successor or acquiring corporation" shall include stock of such corporation of any class which is not preferred as to dividends or assets over any other class of stock of such corporation and which is not subject to redemption and shall also include any evidences of indebtedness, shares of stock or other securities

which are convertible into or exchangeable for any such stock, either immediately or upon the arrival of a specified date or the happening of a specified event and any warrants or other rights to subscribe for or purchase any such stock. The foregoing provisions of this Section 4.8 shall similarly apply to successive reorganizations, reclassifications, mergers, consolidations or disposition of assets.

4.9. Other Action Affecting Common Stock. In case at any time or from time to time Company shall take any action in respect of its Common Stock, other than any action described in this Section 4, then, unless such action will not have a materially adverse effect upon the rights of the Holders, the number of shares of Common Stock or other stock for which this Warrant is exercisable and/or the purchase price thereof shall be adjusted in such manner as may be equitable in the circumstances.

5. NOTICES TO WARRANT HOLDERS

5.1. Notice of Adjustments. Whenever an adjustment to this Warrant is made pursuant to Section 4, Company shall prepare a certificate to be executed by the chief financial officer of Company setting forth, in reasonable detail, the event requiring the adjustment and the method by which such adjustment was calculated, specifying the number of shares of Common Stock for which this Warrant is exercisable and (if such adjustment was made pursuant to Section 4.8 or 4.9) describing the number and kind of any other shares of stock or Other Property for which this Warrant is exercisable, and any change in the purchase price or prices thereof, after giving effect to such adjustment or change. Company shall promptly cause a signed copy of such certificate to be delivered to each Holder. Company shall keep at its office or agency designated pursuant to Section 15 copies of all such certificates and cause the same to be available for inspection at said office during normal business hours by any Holder or any prospective purchaser of a Warrant designated by a Holder thereof.

5.2. Notice of Corporate Action. If at any time

(a) Company shall take a record of the holders of its Common Stock for the purpose of entitling them to receive a dividend or other distribution, or any right to subscribe for or purchase any evidences of its indebtedness, any shares of stock of any class or any other securities or property, or to receive any other right, or

(b) there shall be any capital reorganization of Company, any reclassification or recapitalization of the capital stock of Company or any consolidation or merger of Company with, or any sale, transfer or other disposition of all or substantially all the property, assets or business of Company to, another corporation, or

(c) there shall be a voluntary or involuntary dissolution, liquidation or winding up of Company;

then, in any one or more of such cases, Company shall give to Holder (i) at least 30 days' prior written notice of the date on which a record date shall be selected in respect of such event and (ii) in the case of any such event, at least 30 days' prior written notice of the

date when the same shall take place. Such notice in accordance with the foregoing clause also shall specify (i) the date on which the holders of Common Stock shall be entitled to any such dividend, distribution or right, and the amount and character thereof and (ii) the date on which any such reorganization, reclassification, merger, consolidation, sale, transfer, disposition, dissolution, liquidation or winding up is to take place and the time, if any such time is to be fixed, as of which the holders of Common Stock shall be entitled to exchange their shares of Common Stock for securities or other property deliverable upon such reorganization, reclassification, merger, consolidation, sale, transfer, disposition, dissolution, liquidation or winding up.

6. NO IMPAIRMENT

Company shall not by any action, including, without limitation, amending its articles of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder against impairment. Without limiting the generality of the foregoing, Company will take all such action as may be necessary or appropriate in order that Company may validly and legally issue fully paid and nonassessable shares of Common Stock upon the exercise of this Warrant, including taking such action as is necessary for the Warrant Price to be not less than the par value of the shares of Common Stock issuable upon exercise of this Warrant. The Company will use its best efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof as may be necessary to enable Company to perform its obligations under this Warrant.

7. RESERVATION AND AUTHORIZATION OF COMMON STOCK

From and after the Closing Date, Company shall at all times reserve and keep available for issue upon the exercise of Warrants such number of its authorized but unissued shares of Common Stock as will be sufficient to permit the exercise in full of all outstanding Warrants. All shares of Common Stock which shall be so issuable, when issued upon exercise of any Warrant and payment therefor in accordance with the terms of such Warrant, shall be duly and validly issued and fully paid and nonassessable, and not subject to preemptive rights.

8. TAKING OF RECORD; STOCK AND WARRANT TRANSFER BOOKS

In the case of all dividends or other distributions by Company to the holders of its Common Stock with respect to which any provision of Section 4 refers to the taking of a record of such holders, Company will in each such case take such a record and will take such record as of the close of business on a Business Day. Company will not at any time, except upon dissolution, liquidation or winding up of Company, close its

stock transfer books or Warrant transfer books so as to result in preventing or delaying the exercise or transfer of any Warrant.

9. RESTRICTIONS ON TRANSFERABILITY

The Warrants and the Warrant Stock shall not be transferred, hypothecated or assigned before satisfaction of the conditions specified in this Section 9, which conditions are intended to ensure compliance with the provisions of the Securities Act with respect to the Transfer of any Warrant or any Warrant Stock. Holder, by acceptance of this Warrant, agrees to be bound by the provisions of this Section 9.

9.1. Restrictive Legend. (a) Except as otherwise provided in this Section 9, each certificate for Warrant Stock initially issued upon the exercise of this Warrant, and each certificate for Warrant Stock issued to any subsequent transferee of any such certificate, shall be stamped or otherwise imprinted with a legend in substantially the following form:

"The shares represented by this certificate have not been registered under the Securities Act of 1933, as amended, and may not be transferred in violation of such Act or the rules and regulations thereunder."

(b) Except as otherwise provided in this Section 9, each Warrant shall be stamped or otherwise imprinted with a legend in substantially the following form:

"This Warrant and the securities represented hereby have not been registered under the Securities Act of 1933, as amended, and may not be transferred in violation of such Act, the rules and regulations thereunder or the provisions of this Warrant."

9.2. Notice of Proposed Transfers; Requests for Registration. Prior to or promptly following any Transfer of any Warrants or any shares of Restricted Common Stock, the holder of such Warrants or Restricted Common Stock shall give written notice (a "Transfer Notice") to Company of such Transfer. Each certificate, if any, evidencing such shares of Restricted Common Stock issued upon such Transfer shall bear the restrictive legend set forth in Section 9.1(a), and each Warrant issued upon such Transfer shall bear the restrictive legend set forth in Section 9.1(b), unless in the opinion of counsel to such holder which is reasonably acceptable to Company such legend is not required in order to ensure compliance with the Securities Act.

9.3. Termination of Restrictions. Notwithstanding the foregoing provisions of Section 9, the restrictions imposed by this Section upon the transferability of the Warrants and the Warrant Stock, and the legend requirements of Section 9.1, shall terminate as to any particular Warrant or share of Warrant Stock (i) when and so long as such security shall have been effectively registered under the Securities Act and disposed of pursuant thereto or (ii) when Company shall have received an opinion of counsel

reasonably satisfactory to it that such security may be transferred without registration thereof under the Securities Act. Whenever the restrictions imposed by Section 9 shall terminate as to this Warrant, as hereinabove provided, the Holder hereof shall be entitled to receive from Company, at the expense of Company, a new Warrant without the restrictive legend set forth in Section 9.1(b). Whenever the restrictions imposed by this Section shall terminate as to any share of Warrant Stock, as hereinabove provided, the holder thereof shall be entitled to receive from Company, at Company's expense, a new certificate representing such Warrant Stock not bearing the restrictive legend set forth in Section 9.1(a).

10. SUPPLYING INFORMATION

Company shall cooperate with each Holder of a Warrant or Warrant Stock in supplying such information as may be reasonably necessary for such holder to complete and file any information reporting forms presently or hereafter required by the Commission as a condition to the availability of an exemption from the Securities Act for the sale of any Warrant or Warrant Stock.

11. LOSS OR MUTILATION

Upon receipt by Company from any Holder of evidence reasonably satisfactory to it of the ownership of and the loss, theft, destruction or mutilation of this Warrant and indemnity reasonably satisfactory to it (it being understood that the written agreement of Holder shall be sufficient indemnity), and in case of mutilation upon surrender and cancellation hereof, Company will execute and deliver in lieu hereof a new Warrant of like tenor to such Holder; provided, in the case of mutilation, no indemnity shall be required if this Warrant in identifiable form is surrendered to Company for cancellation.

12. LIMITATION OF LIABILITY

No provision hereof, in the absence of affirmative action by Holder to purchase shares of Common Stock, and no enumeration herein of the rights or privileges of Holder hereof, shall give rise to any liability of such Holder for the purchase price of any Common Stock or as a stockholder of Company, whether such liability is asserted by Company or by creditors of Company.

13. MISCELLANEOUS

13.1. Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice Holder's rights, powers or remedies. If Company fails to make, when due, any payments provided for hereunder, or fails to comply with any other provision of this Warrant, Company shall pay to Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by Holder in collecting

any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

13.2. Notice Generally. Any notice, demand, request, consent, approval, declaration, delivery or other communication hereunder to be made pursuant to the provisions of this Warrant shall be sufficiently given or made if in writing and either delivered in person with receipt acknowledged or sent by registered or certified mail, return receipt requested, postage prepaid, or by telecopy and confirmed by telecopy answerback, addressed as follows:

(a) If to any Holder or holder of Warrant Stock, at its last known address appearing on the books of Company maintained for such purpose.

(b) If to Company at:

Atlantic Pharmaceuticals, Inc.
150 Broadway
Suite 1100
New York, NY 10038
Attn: A. Joseph Rudick

or at such other address as may be substituted by notice given as herein provided. The giving of any notice required hereunder may be waived in writing by the party entitled to receive such notice. Every notice, demand, request, consent, approval, declaration, delivery or other communication hereunder shall be deemed to have been duly given or served on the date on which personally delivered, with receipt acknowledged, telecopied and confirmed by telecopy answerback, or three (3) Business Days after the same shall have been deposited in the United States mail. Failure or delay in delivering copies of any notice, demand, request, approval, declaration, delivery or other communication to the person designated above to receive a copy shall in no way adversely affect the effectiveness of such notice, demand, request, approval, declaration, delivery or other communication.

13.3. Successors and Assigns. Subject to the provisions of Sections 3.1 and 9, this Warrant and the rights evidenced hereby shall inure to the benefit of and be binding upon the successors of Company and the successors and assigns of Holder. The provisions of this Warrant are intended to be for the benefit of all Holders from time to time of this Warrant and shall be enforceable by any such Holder.

13.4. Amendment. This Warrant and all other Warrants may be modified or amended or the provisions hereof waived with the written consent of Company and the Majority Holders, provided that no such Warrant may be modified or amended to reduce the number of shares of Common Stock for which such Warrant is exercisable or to increase the price at which such shares may be purchased upon exercise of such Warrant (before giving effect to any adjustment as provided therein) without the prior written consent of the Holder thereof.

13.5. Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provision or the remaining provisions of this Warrant.

13.6. Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

13.7. Governing Law. This Warrant shall be governed by the laws of the State of Delaware, without regard to the provisions thereof relating to conflict of laws.

[SIGNATURES BEGIN ON NEXT PAGE]

IN WITNESS WHEREOF, Company has caused this warrant to be duly executed and attested by its Secretary or an Assistant Secretary.

Dated: January 4, 2000

ATLANTIC PHARMACEUTICALS, INC.

By:/s/ A. Joseph Rudick

Name:A. Joseph Rudick
Title:President

Attest:

By:/s/ John Brancaccio

Name:John Brancaccio
Title:CFO

EXHIBIT A TO WARRANT

SUBSCRIPTION FORM

[To be executed only upon exercise of Warrant]

The undersigned registered owner of this Warrant irrevocably exercises this Warrant for the purchase of _____ Shares of Common Stock of Atlantic Pharmaceuticals, Inc. and herewith makes payment therefor, all at the price and on the terms and conditions specified in this Warrant and requests that certificates for the shares of Common Stock hereby purchased (and any securities or other property issuable upon such exercise) be issued in the name of and delivered to _____ whose address is _____ and, if such shares of Common Stock shall not include all of the shares of Common Stock issuable as provided in this Warrant, that a new Warrant of like tenor and date for the balance of the shares of Common Stock issuable hereunder be delivered to the undersigned.

(Name of Registered Owner)

(Signature of Registered Owner)

(Street Address)

(City) (State) (Zip Code)

NOTICE: The signature on this subscription must correspond with the name as written upon the face of the within Warrant in every particular, without alteration or enlargement or any change whatsoever.

EXHIBIT B TO WARRANT

ASSIGNMENT FORM

FOR VALUE RECEIVED the undersigned registered owner of this Warrant hereby sells, assigns and transfers unto the Assignee named below all of the rights of the undersigned under this Warrant, with respect to the number of shares of Common Stock set forth below:

| Name and Address of Assignee | No. of Shares of Common Stock |
|------------------------------|-------------------------------|
| ----- | ----- |

and does hereby irrevocably constitute and appoint _____ attorney-in-fact to register such transfer on the books of Atlantic Pharmaceuticals, Inc. maintained for the purpose, with full power of substitution in the premises.

Dated: _____ Print Name: _____
Signature: _____
Witness: _____

NOTICE: The signature on this assignment must correspond with the name as written upon the face of the within Warrant in every particular, without alteration or enlargement or any change whatsoever.

Accountants' Consent

The Board of Directors

Atlantic Technology Ventures, Inc. (formerly Atlantic Pharmaceuticals, Inc.):

We consent to incorporation by reference in the registration statements (No. 333-34379, 333-35079 and 333-65393) on Form S-3 and (No. 333-15807 and 333-48531) on Form S-8 of Atlantic Technology Ventures, Inc. (formerly Atlantic Pharmaceuticals, Inc.) (a development stage company) of our report dated March 15, 2000, relating to the consolidated balance sheets of Atlantic Technology Ventures, Inc. (formerly Atlantic Pharmaceuticals, Inc.) and subsidiaries as of December 31, 1999 and 1998, and the related consolidated statements of operations, changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 1999, and for the period from July 13, 1993 (inception) to December 31, 1999, which report appears in the December 31, 1999 annual report on Form 10-K of Atlantic Technology Ventures, Inc. (formerly Atlantic Pharmaceuticals, Inc.).

/s/ KPMG LLP
KPMG LLP

Short Hills, New Jersey
March 30, 2000

KPMG LLP

Short Hills, New Jersey
March 29, 2000

THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 1999 AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH FINANCIAL STATEMENTS

0001001316
ATLANTIC TECHNOLOGY VENTURES INC.
1000

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| | JAN-31-1999 | |
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| | | 3,473,321 |
| | | 0 |
| | | 337,323 |
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| | | 0 |
| | 3,828,058 | |
| | | 131,832 |
| | 221,171 | |
| | 3,959,890 | |
| | 542,759 | |
| | | 0 |
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| | | 610 |
| | | 4,816 |
| | 3,411,705 | |
| 3,959,890 | | |
| | | 0 |
| | 1,159,579 | |
| | | 0 |
| | | 0 |
| | 3,898,725 | |
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| | (292,630) | |
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Amounts inapplicable or not disclose as a separate line on the Statement of Financial or Results of Operations are reported as 0 herein.