

NEUROLOGIX INC/DE
Form 10KSB
March 30, 2005

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

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, 2004

- ☐ 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 0-13347

NEUROLOGIX, INC.

DELAWARE
(State or other jurisdiction of
Incorporation or organization)

06-1582875
I.R.S. Employer
Identification No.)

ONE BRIDGE PLAZA, FORT LEE, NEW
JERSEY

(Address of principal executive offices)

07024

(Zip Code)

(201) 592-6451
(Issuer's telephone number,
including area code)

N/A
(Former name, former address and
former fiscal year, if changed since
last report)

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

Securities registered pursuant to Section 12(g) of the Act:

Common Stock, par value \$.001 per share
(Title of Class)

Check whether the issuer (1) filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during

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the past 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Check here if there is no disclosure of delinquent filers in response to Item 405 of Regulation S-B contained in this form, and no disclosure will be contained, to the best of the Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this 10-KSB or any amendment to this Form 10-KSB. ☐

The Registrant had no revenues during the year ended December 31, 2004.

The aggregate market value of the Registrant's voting and non-voting common equity held by non-affiliates as of March 24, 2005 was approximately \$32,440,000.

State the number of shares outstanding of each of the issuer's classes of common equity, as of the latest practicable date:

As of March 25, 2005, there were outstanding 24,956,856 shares of the Registrant's Common Stock, \$.001 par value.

DOCUMENTS INCORPORATED BY REFERENCE

Certain information required in Part III of this Annual Report on Form 10-KSB is incorporated herein by reference to the registrant's Proxy Statement for its 2005 Annual Meeting of Stockholders.

Transitional Small Business Disclosure Format: Yes o No x

PART I

Item 1. Description of Business

BACKGROUND INFORMATION

Arinco Computer Systems Inc. (formerly known as Change Technology Partners, Inc. and referred to herein as “Arinco”), the predecessor to Neurologix, Inc. (collectively with its wholly-owned subsidiary, the “Company” or “Neurologix”), was incorporated in New Mexico on March 31, 1978 for the principal purpose of serving its subsidiary operations, which included the sale of telecommunications equipment and services and the retail sales of computers. Arinco, which became public in 1982, did not have any business operations from 1985 to March 2000. At that time, an investor group acquired control of Arinco and commenced a new consulting business strategy focusing on internet and e-services and digital media solutions.

Thereafter, until approximately July 2001, the Company provided a broad range of consulting services, including e-services and technology strategy, online branding, web architecture and design, systems integration, systems architecture and outsourcing. However, the Company was not successful with its business strategy and therefore, the Company’s Board of Directors (the “Board”) voted to divest the Company of a majority of its then existing operations. On September 30, 2002, the Board adopted a plan of liquidation and dissolution in order to maximize stockholder value.

During the period from December 2001 through June 30, 2003, Canned Interactive, which designs and produces interactive media such as digital video discs (DVDs) and web sites, primarily for entertainment, consumer goods, sports and technology companies, was the Company’s sole source of operating revenues. On June 30, 2003, the Company sold all of the issued and outstanding shares of Canned Interactive to a limited partnership of which Canned Interactive’s managing director was the general partner. With the sale of Canned Interactive, the Company ceased to have any continuing operations.

On February 10, 2004, the Company completed a merger (the “Merger”) of its newly-formed, wholly-owned subsidiary with Neurologix Research, Inc. (formerly known as “Neurologix, Inc.” and sometimes referred to herein as “NRI”). As a result of the Merger, NRI became a wholly-owned subsidiary of the Company and stockholders of NRI received an aggregate number of shares of Neurologix Common Stock representing approximately 68% of the total number shares of the Company’s Common Stock outstanding after the Merger. In addition, the Board and management of the Company are now controlled by members of the board of directors and management of NRI.

Accordingly, the Merger has been accounted for as a reverse acquisition, with NRI being the accounting parent and Neurologix being the accounting subsidiary. The consolidated financial statements include the operations of Neurologix, the accounting subsidiary, from the date of acquisition. Since the Merger was accounted for as a reverse acquisition, the accompanying consolidated financial statements reflect the historical financial statements of NRI, the accounting acquiror, as adjusted for the effects of the exchange of shares on its equity accounts, the inclusion of net liabilities of the accounting subsidiary as of February 10, 2004 on their historical basis and the inclusion of the accounting subsidiary’s results of operations from that date.

BUSINESS OF THE COMPANY

The Company is a development stage company, which through its wholly-owned subsidiary, NRI, is engaged in the research and development of proprietary treatments for disorders of the brain and central nervous system primarily utilizing gene therapies. These treatments are designed as alternatives to conventional surgical and pharmacological treatments. From the formation of NRI in 1999 to 2002, NRI conducted its gene therapy research through sponsorship agreements with Thomas Jefferson University, The Rockefeller University and the University of Auckland. In October 2002, it established and staffed its own laboratory facility to manufacture the gene therapy products required for its pre-clinical trials and to continue the research and development of additional gene therapy products.

NRI's scientific co-founders, Dr. Matthew J. During and Dr. Michael G. Kaplitt, have collaborated for more than ten years in working with central nervous system disorders. Their research spans from animal studies (for gene therapy in Parkinson's disease and epilepsy) to the currently open Phase I human clinical trial for the treatment of Parkinson's disease. They both remain as consultants to NRI and serve on its Scientific Advisory Board ("SAB").

Unless the context otherwise requires, in describing the business herein, references to the "Company" shall collectively refer to both Neurologix and NRI.

The Company's initial development efforts have been focused on gene therapy products for treating Parkinson's disease and, more recently, epilepsy. The Company's core gene therapy technology, which it refers to as NLX, is currently being tested in a Phase I human clinical trial, sponsored by the Company, to treat Parkinson's disease. A Phase I clinical trial is designed to test the safety, as opposed to efficacy, of a proposed treatment. The clinical trial is being conducted by Dr. Kaplitt and Dr. During. As part of this clinical trial, twelve patients with Parkinson's disease will undergo surgical gene therapy at The New York Presbyterian Hospital/Weill Medical College of Cornell University. The first of these surgeries was performed in August 2003 and marked the first time that gene therapy products have been used in a human to attempt to treat Parkinson's disease. As of March 22, 2005, the gene transfer surgery has been performed on a total of 10 patients and, depending upon obtaining the informed consent of qualified patients, the Company currently expects the remaining 2 gene transfer surgeries to be completed by the end of 2005. With guidance during the approval process from the National Institutes of Health and the Food and Drug Administration ("FDA"), Dr. During and Dr. Kaplitt designed a clinical trial aimed at minimizing complications to patients participating in the study. Subject to the successful completion of the Phase I clinical trial, the Company expects to proceed with a Phase II human clinical trial to determine the efficacy of NLX in treating Parkinson's disease.

In October 2004, motivated by encouraging rodent studies, the Company entered into an agreement with Universida Federal de Sao Paulo to commence a non-human primate study for evaluating the toxicity and efficacy of using its NLX technology in the brain for the treatment of epilepsy. The study is expected to begin and be completed by the end of 2005. If this study is successfully completed, the Company plans to submit an Investigational New Drug application to the FDA in the fourth quarter of 2005 for permission to begin a Phase I clinical trial in temporal lobe epilepsy. The proposed clinical protocol was presented to the NIH Recombinant DNA Advisory Committee on September 23, 2004 and reviewed favorably.

Business Strategy

The Company's objective is to develop and commercialize long-term, cost-effective treatments for disorders of the brain and central nervous system. Key elements of the Company's strategy are:

· *Focus resources on development of NLX technology.* The Company intends to focus its research and development efforts on what it believes are achievable technologies having practical applications. Consequently, the Company expects to initially allocate the majority of its resources and efforts to the development of its first-generation NLX products for the treatment of Parkinson's disease and epilepsy.

· *Focus on central nervous system disorders that are likely to be receptive to gene therapy treatment.* To attempt to reduce the technical and commercial risks inherent in the development of new gene therapies, the Company intends to pursue treatments for neurological diseases for which:

o the therapeutic gene function is reasonably well understood;

o animal studies, which may include those studies involving non-human primates, have indicated that gene therapy technology may be effective in treating the disease;

o partial correction of the disease is expected to be established;

o clinical testing can be conducted in a relatively small number of patients within a reasonably short time period.

· *Establish strategic relationships to facilitate research and manufacturing.* The Company intends to seek to establish collaborative research and manufacturing relationships with universities and companies involved in the development of gene therapy and other technologies. The Company believes that such relationships, if established, will make additional resources available to Company for the manufacture of gene therapy products and for the clinical trials involving these products.

Technology Overview

Deoxyribonucleic acid ("DNA") is organized into segments called genes, with each gene representing the information necessary to make one particular protein. Occasionally, the DNA for one or more genes can be defective, resulting in the absence or improper production of a functioning protein in the cell. This improper expression can alter a cell's normal function and can frequently result in a disease. One goal of gene therapy is to treat these diseases by delivering DNA containing the corrected gene into cells. Also, gene therapy can increase or decrease the synthesis of gene products, or introduce new genes in a cell and thus provide new or augmented functions to that cell. There are several different ways of delivering genes to cells. Each of the methods of delivery uses carriers, called "vectors," to transport the genes into cells. Similar to the relationship between a delivery truck and its cargo, the vector (the "truck") provides a mode of transport and the therapeutic agent (the "cargo") provides the disease remedy. These carriers can be either man-made components or modified viruses. The use of viruses takes advantage of their natural ability to introduce DNA into cells. Gene therapy takes advantage of this property by replacing viral DNA with a payload consisting of a specific gene. Once the vector inserts the gene into the cell, the gene acts as a blueprint directing the cell to make the therapeutic protein.

For its first-generation of products, the Company intends to exclusively utilize the adeno-associated virus (“AAV”) vector. In 1994, Dr. Michael Kaplitt and Dr. Matthew During demonstrated that AAV could be a safe and effective vehicle for gene therapy in the brain. Since that time, AAV has been used safely in a variety of clinical gene therapy trials and, to the Company’s knowledge the virus has not been associated with any human disease.

The Company believes that the benefits of AAV vector gene therapy technology include:

- *Safety.* AAV vectors are based on a virus that, to the Company’s knowledge, has not been associated with a human disease.
- *Efficiency of Delivery.* AAV vectors are effective at delivering genes to cells. Once in the cell, genes delivered by AAV vectors in animal models have produced effective amounts of protein on a continuous basis, often for months or longer from a single administration.
- *Ability to Deliver Many Different Genes.* The vast majority of the coding part of genes (cDNA) fit into AAV vectors and have been successfully delivered to a wide range of cell types.
- *A Simpler and Safer Option than Standard Surgery.* The Company intends to administer the AAV vector-based products in a procedure that is simpler and safer than other established neurosurgical procedures.
- *Stability.* Unlike some other viruses, AAV is stable under a wide range of conditions. This allows AAV vectors to be handled like normal pharmaceutical products, lending themselves to traditional shipping and storing procedures.

Product Development

The Company’s initial focus is to develop therapeutic products (i) to meet the needs of patients suffering from Parkinson’s disease and (ii) the needs of patients suffering from a type of epilepsy known as temporal lobe epilepsy or “TLE”.

Parkinson’s Disease

Parkinson’s disease is a neurodegenerative disorder; it arises from the gradual death of nerve cells. Parkinson’s disease is a progressive and debilitating disease that affects the control of movement and is characterized by four principal symptoms:

- *tremor of the limbs,*
- *rigidity of the limbs,*
- *bradykinesia of the limbs and body evidenced by difficulty and slowness of movement, and*
- *postural instability.*

Physicians and patients have long recognized that this disease, or treatment complications, can cause a wide spectrum of other symptoms, including dementia, abnormal speech, sleep disturbances, swallowing problems, sexual dysfunction, and depression.

Rigidity, tremor, and bradykinesia result, primarily, from a loss of dopamine in two regions of the brain: the substantia nigra and striatum (caudate and putamen). Dopamine is a chemical, or neurotransmitter, that is a chemical released from nerve cells (neurons), which helps regulate the flow of impulses from the substantia nigra to neurons in the caudate and putamen. Standard therapy for Parkinson's disease often involves use of levodopa, a drug which stimulates production of dopamine. However, over extended periods of time levodopa often declines in its effectiveness. In advanced stages of Parkinson's disease, as the disease becomes more and more debilitating, it becomes necessary and advisable to accept a riskier and potentially more invasive medical procedure to treat the disease. It is at this juncture that surgical procedures (deep brain stimulators, lesioning, etc.) are commonly advised. The Company believes that the glutamic acid decarboxylase ("GAD"), gene can be used to selectively mimic normal physiology and alter the neural circuitry affected in Parkinson's disease. The Company's technology inserts a GAD gene into the AAV-based viral vector, introducing it directly into an area of the brain know as the sub-thalamic nucleus. The GAD gene is responsible for making gamma aminobutyric acid (GABA), which is released by nerve cells to inhibit or dampen activity. The Company's gene therapy is designed to reset the overactive brain cells (e.g. reduce tremors, rigidity and slowness of movement) to inhibit electrical activity and return brain network activity to more normal levels without destroying brain tissue and without implanting a permanent medical device.

According to the National Parkinson Foundation, there are approximately 1.5 million Parkinson's patients in America, with approximately 60,000 new cases diagnosed each year. While the peak onset of Parkinson's disease is age 60 years, Parkinson's disease is not just a disease of middle or old age: 15% of Parkinson's disease patients are 50 years or less and 10% are 40 years or less.

Epilepsy

Epilepsy, a group of diseases associated with recurrent seizures, is caused by periodic episodes of repetitive, abnormal electrochemical disturbance in the central nervous system, beginning in the brain. Generalized seizures happen when massive bursts of electrical energy sweep through the whole brain at once, causing loss of consciousness, falls, convulsions or intense muscle spasms. Partial seizures happen when the disturbance occurs in only one part of the brain, affecting the physical or mental activity that area of the brain controls. Seizures may also begin as partial or focal seizures and then generalize.

The Company believes that its technology can be applied to the treatment of epilepsy with advantages over the currently available treatments. The Company's proposed treatment uses gene-transfer technology to deliver genes which restore the chemical balance but only in the areas in which the disease process is occurring.

According to the Epilepsy Foundation (USA), epilepsy affects approximately 2.5 million Americans of all ages and backgrounds, making it one of the most common neurological diseases in this country. Approximately 181,000 new cases of seizures and epilepsy occur each year, with 72% of epileptic Americans below age 65. Despite optimal medical (drug) treatment, as many as 50% of people with epilepsy continue to have seizures and are potential candidates for surgery, including gene therapy.

Patents and Other Proprietary Rights

The Company believes that its success depends upon its ability to develop and protect proprietary products and technology. Accordingly, whenever practicable, the Company applies for U.S. patents (and, in some instances, foreign patents as well) covering those developments that it believes are innovative, technologically significant and have commercial potential to its field of operations. Presently, it holds the exclusive license to 4 issued U.S. patents, 4 pending U.S. patent applications and 5 pending foreign patent applications. In addition, the Company owns 1 issued U.S. patent and 4 U.S. pending patent applications covering gene therapy technologies and holds a non-exclusive license to a U.S. patent covering delivery mechanisms for gene therapy.

The exclusive patent licenses were granted by Rockefeller University (“Rockefeller”) and Thomas Jefferson University (“TJU”) pursuant to research agreements which the Company had with these institutions. The non-exclusive license is provided pursuant to an agreement the Company has with Rockefeller University and Yale University. In each instance, Dr. Michael Kaplitt and/or Dr. Matthew During are named as one of the co-inventors in the patent.

In accordance with TJU’s Intellectual Property Policy, an aggregate of 40% of all income it receives from licensing transactions is paid to the inventors. Dr. During has advised the Company that during 2004 and 2003 he received approximately \$17,000 and \$22,000, respectively, from TJU as a result of payments made by the Company to TJU under two exclusive license agreements. The amounts received by Dr. During represent approximately 18% of the total payments made by the Company to TJU during 2004 and 2003. Dr. During will also have a similar interest in future royalties that may become payable under the agreement with TJU.

In accordance with Rockefeller’s Intellectual Property Policy, an aggregate of one-third of all income it receives from licensing transactions is paid to the inventors. Dr. Kaplitt has advised the Company that he received less than \$2,000 in each of 2004 and 2003 from Rockefeller as a result of payments made by the Company to Rockefeller under a non-exclusive license agreement. In December 2002, the Company issued to Rockefeller 368,761 shares of the Company’s Common Stock in exchange for the cancellation of certain fees under its exclusive patent license agreement with the Company. When, and if, Rockefeller sells these shares, Dr. Kaplitt estimates that he will be entitled to approximately 25% of the proceeds. Dr. Kaplitt will also have a similar interest in future royalties that may become payable under the agreement with Rockefeller.

Currently, the Company has an agreement with Cornell University for its Medical College (“Cornell”) to fund the ongoing Phase I clinical trial for the treatment of Parkinson’s disease and the development of gene therapy approaches for neurodegenerative disorder, including Parkinson’s disease, Huntington’s disease, Alzheimer’s disease and epilepsy. Under this agreement, the Company has the right of first refusal to obtain from Cornell, upon commercially reasonable terms, exclusive license rights to any intellectual property developed in the course of the sponsored research projects.

In addition to patents, the Company relies on trade secrets, technical know-how and continuing technological innovation to develop and maintain its competitive position. The Company requires all of its employees and scientific consultants to execute confidentiality and assignment of invention agreements. These agreements typically provide that (i) all materials and confidential information developed or made known to the individual during the course of the individual’s relationship with the Company is to be kept confidential and not disclosed to third parties except in specific circumstances and (ii) all inventions arising out of the relationship with the Company shall be the Company’s exclusive property. While the Company takes these and other measures to protect its trade secrets, they do not assure against the unauthorized use and/or disclosure of its confidential information.

Manufacturing

Pursuant to an agreement, Auckland UniServices, Ltd ("AUL") a New Zealand based company, has manufactured and delivered to the Company in bulk form all of the AAV that it requires to complete the pending Phase I clinical trial. The Company's laboratory purifies the AAV that it gets from AUL to the final product form that is used in the trial.

Competition

The Company is aware of other companies currently conducting clinical trials of gene therapy products in humans to treat Parkinson's disease or epilepsy, and recognizes that it faces intense competition from pharmaceutical companies, biotechnology companies, universities, governmental entities and other healthcare providers developing alternative treatments for these diseases. Alternative treatments include surgery, deep brain stimulator implants and the use of pharmaceuticals. The Company may also face competition from companies and institutions involved in developing gene therapy and cell therapy treatments for other diseases, whose technologies may be adapted for the treatment of central nervous system disorders. Some companies, such as Avigen, Inc. ("Avigen"), Cell Genesys, Inc., and Targeted Genetics Corporation, have significant experience in developing and using AAV vectors to deliver gene therapy products.

In August 2004, Avigen announced that the FDA authorized it to initiate a Phase I/II clinical trial of gene therapy for the treatment of Parkinson's disease using AV201, an AAV vector containing the gene for AADC (aromatic amino acid decarboxylase) which is delivered directly to the part of the brain that requires dopamine to control movement. Avigen commenced such trial with its first patient undergoing gene transfer surgery in December, 2004.

Many of the Company's competitors have significantly greater research and development, marketing, manufacturing, financial and/or managerial resources than the Company enjoys. Moreover, developments by others may render the Company's products or technologies noncompetitive or obsolete.

Government Regulation

The production and marketing of the Company's proposed products and research and development activities are subject to extensive regulation for safety, efficacy and quality by numerous governmental authorities in the United States and potentially other foreign countries. In the United States, the FDA regulates, among other things, the testing, manufacturing, safety, efficacy, labeling, storage, record keeping, advertising and promotional practices and import and export of drugs and biological products.

In addition, in the event that the Company seeks to commercialize a product embodying technology covered by a patent that was exclusively licensed to the Company by an educational or other non-profit institution in the United States, the Company may be required to manufacture such product substantially in the United States, if the technology resulted from federally funded research.

Employees

As of December 31, 2004, the Company had four full-time employees, including three research scientists with doctoral degrees. These research scientists have expertise in virology, protein chemistry and molecular biology. In addition to its research staff, the Company's executive Chairman and former President and Chief Executive Officer, Dr. Martin J. Kaplitt (who is the father of Dr. Michael G. Kaplitt, one of the Company's scientific co-founders) is paid a management fee and Mark S. Hoffman serves as the Company's Secretary-Treasurer, without any compensation.

The Company's employees are not subject to any collective bargaining agreements and it regards its relations with its employees to be good.

Scientific Advisory Board ("SAB")

The Company has assembled the SAB to advise the Company on the selection, implementation and prioritization of its research programs. The SAB, which currently consists of the following seven scientists, will hold its first annual meeting in May 2005.

Paul Greengard, Ph.D. Dr. Greengard has been a member and chairman of the SAB since July 2003. Dr. Greengard is the Vincent Astor Professor and Chairman of the Laboratory of Molecular and Cellular Neuroscience at The Rockefeller University. Dr. Greengard was awarded the 2000 Nobel Prize in Physiology or Medicine. Dr. Greengard received a Ph.D. in biophysics from Johns Hopkins University. Prior to joining The Rockefeller University in 1983, Dr. Greengard was the director of biochemical research at the Geigy Research Laboratories and subsequently Professor of Pharmacology and Professor of Psychiatry at the Yale University School of Medicine. Dr. Greengard is an elected member of the U.S. National Academy of Sciences and its Institute of Medicine and of the American Academy of Arts and Sciences. He is also a foreign member of the Royal Swedish Academy of Sciences and a member of the Norwegian Academy of Science and Letters.

Andrew J. Brooks, Ph.D. Dr. Brooks has been a member of the SAB since January 2002. Dr. Brooks is currently the Director of the Center for Functional Genomics in the Aab Institute for Biomedical Science at the University of Rochester from which he also received his Ph.D.

Matthew J. During, M.D., D.Sc. Dr. During, one of the Company's scientific co-founders, has been a member of the SAB since October 1999. Since June 2004, he has been the Research Lab Director of the Department of Neurological Surgery at Cornell. He is also a Professor of Molecular Medicine and Pathology at the University of Auckland in New Zealand where he directs neuroscience and gene therapy programs. He served as Director of the CNS Gene Therapy Center and Professor of Neurosurgery at Jefferson Medical College from 1998 through 2002. From 1989 through 1998, Dr. During was a faculty member at Yale University where he directed a translational neuroscience program and headed Yale's first gene therapy protocol. Dr. During is a graduate of the University of Auckland School of Medicine and did further postgraduate training at M.I.T. from 1985 to 1987, Harvard Medical School from 1986 to 1989 and Yale University from 1988 to 1989.

Michael G. Kaplitt, M.D., Ph.D. Dr. Kaplitt, one of the Company's scientific co-founders, has been a member of the SAB since October 1999. Dr. Kaplitt is Assistant Professor of Neurosurgery, Director of Stereotactic and Functional Neurosurgery and Director of the Laboratory of Molecular Neurosurgery at Weill Medical College of Cornell University. He is also a Clinical Assistant Attending, Division of Neurosurgery, Department of Surgery at Memorial-Sloan Kettering Cancer Center, and Adjunct Faculty, Laboratory of Neurobiology and Behavior at The Rockefeller University. Dr. Kaplitt graduated magna cum laude with a bachelor's degree in molecular biology from Princeton University. He received his M.D. from Cornell University School of Medicine in 1995, where he completed his residency in Neurosurgery and a Ph.D. in molecular neurobiology from The Rockefeller University. Dr. Michael Kaplitt is the son of Dr. Martin Kaplitt.

Daniel H. Lowenstein, M.D. Dr. Lowenstein has been a member of the SAB since January 2005. Dr. Lowenstein is Professor and Vice Chairman in the Department of Neurology at the University of California, San Francisco (“UCSF”), Director of the UCSF Epilepsy Center and Director of Physician-Scientist Training Programs for the UCSF School of Medicine. He received his M.D. degree from Harvard Medical School in 1983. Dr. Lowenstein established the UCSF Epilepsy Research Laboratory, and was the Robert B. and Ellinor Aird Professor of Neurology from 1998 to 2000. He then joined Harvard Medical School as the Dean for Medical Education and Carl W. Walter Professor of Neurology for two and a half years, and in 2003, moved back to UCSF in his current position. During 2004, he served as the President of the American Epilepsy Society. His interests include the molecular and cellular changes in neural networks following seizure activity and injury and the contribution of neurogenesis to seizure-induced network reorganization in the adult central nervous system. He has received several national awards for excellence in teaching and numerous academic honors and awards, including the American Epilepsy Society’s 2001 Basic Research Award. Among his numerous publications, he has authored approximately 80 papers in peer-reviewed journals, 80 research abstracts and 43 review articles, editorials and book chapters.

Andres M. Lozano, M.D., Ph.D. Dr. Lozano has been a member of the SAB since April 2001. He is currently Professor of Neurosurgery and holds the Ronald Tasker Chair in Stereotactic and Functional Neurosurgery at The University of Toronto. Dr. Lozano received his M.D. from the University of Ottawa and a Ph.D. from McGill University. He completed a residency in Neurosurgery at the Montreal Neurological Institute prior to joining the staff at the University of Toronto. Dr. Lozano is currently the President of the American Society for Stereotactic and Functional Neurosurgery and the President-elect of the World Society for Stereotactic and Functional Neurosurgery.

Eric J. Nestler, M.D., Ph.D. Dr. Nestler has been a member of the SAB since May 2004. Dr. Nestler’s research focuses on ways in which the brain responds to repeated perturbations under normal and pathological conditions, with a primary focus on drug addiction and depression. He has authored or edited seven books, and published more than 300 articles and reviews and 267 abstracts relating to the field of neuropsychopharmacology. Since 2000, he has been the Lou and Ellen McGinley Distinguished Chair in Psychiatric Research and Professor and Chairman of the Department of Psychiatry at the University of Texas Southwestern Medical Center. From 1992 to 2000, he was Director of the Abraham Ribicoff Research Facilities and of the Division of Molecular Psychiatry at Yale University. Dr. Nestler’s awards and honors include the Pfizer Scholars Award (1987), Sloan Research Fellowship (1987), McKnight Scholar Award (1989), Efron Award of the American College of Neuropsychopharmacology (1994) and Pasarow Foundation Award for Neuropsychiatric Research (1998).

Risk Factors

The following sets forth some of the business risks and challenges facing the Company as it seeks to develop its business:

- The Company is still in the development stage and has not generated any revenues. From inception through December 31, 2004 it has incurred net losses of \$8,774,000 and negative cash flows from operating activities of \$7,741,000. Management believes that the Company will continue to incur net losses and cash flow deficiencies from operating activities for the foreseeable future. Because it may take years to develop, test and obtain regulatory approval for a gene-based therapy product before it can be sold, the Company likely will continue to incur significant losses for the foreseeable future. Accordingly, it may never be profitable and, if it does become profitable, it may be unable to sustain profitability.

- The Company has not demonstrated that it can:
 - discover gene therapies that will be effective in treating Parkinson's disease or any other disease;
 - obtain the regulatory approvals necessary to commercialize product candidates that it may develop in the future;
 - manufacture, or arrange for third-parties to manufacture, future product candidates in a manner that will enable the company to be profitable;
 - attract, retain and manage a large, diverse staff of physicians and researchers;
 - establish many of the business functions necessary to operate, including sales, marketing, administrative and financial functions, and establish appropriate financial controls;
 - develop relationships with third-party collaborators to assist in the marketing and/or distribution of the technologies that the Company may develop;
 - make, use and sell future product candidates without infringing upon third party intellectual property rights;
 - secure meaningful intellectual property protection covering its future product candidates; or
 - respond effectively to competitive pressures.
- If the pending Phase I clinical trial for treatment of Parkinson's disease is unsuccessful, future operations and the potential for profitability will be significantly adversely affected and the business may not succeed.
- Since the Company's existing resources will not be sufficient to enable it to obtain the regulatory approvals necessary to commercialize its current or future product candidates, it will need to raise additional funds through public or private equity offerings, debt financings or additional corporate collaboration and licensing arrangements. Availability of financing depends upon a number of factors beyond the Company's control, including market conditions and interest rates. The Company does not know whether additional financing will be available when needed or if available; will be on acceptable or favorable terms to it or its stockholders.

- The Company's future success depends, to a significant degree, on the skills, experience and efforts of its current key physicians and researchers, including Dr. Matthew During and Dr. Michael Kaplitt. If either Dr. During or Dr. Kaplitt were unable or unwilling to continue present relationships with the Company, it is likely that its business, financial condition, operating results and future prospects would be materially adversely affected.

- The industry in which the Company competes is subject to stringent regulation by certain regulatory authorities. The Company may not obtain regulatory approval for any future product candidates it develops. To market a pharmaceutical product in the United States requires rigorous preclinical testing and clinical trials, which must be completed and an extensive regulatory approval process implemented by the FDA. To the Company's knowledge, to date, neither the FDA nor any other regulatory agency has approved a gene therapy product for sale in the United States. Satisfaction of regulatory requirements typically takes many years, is dependent upon the type, complexity and novelty of the product and requires the expenditure of substantial resources. The Company may encounter delays or rejections in the regulatory approval process resulting from additional governmental regulation or changes in policy during the period of product development, clinical trials and FDA regulatory review.

- Failure to comply with applicable FDA or other applicable regulatory requirements may result in criminal prosecution, civil penalties, recall or seizure of products, total or partial suspension of production or injunction, as well as other regulatory action against the Company's future product candidates or the Company itself. Outside the United States, the ability to market a product is also contingent upon receiving clearances from appropriate foreign regulatory authorities. The non-U.S. regulatory approval process includes similar risks to those associated with FDA clearance.

- The Company will need to conduct significant additional research and animal testing, referred to as preclinical testing, before clinical trials involving other future product candidates can be conducted. It may take many years to complete preclinical testing and clinical trials and failure could occur at any stage of testing. Acceptable results in early testing or trials may not be repeated in later tests. Whether any products in preclinical testing or early stage clinical trials will receive approval is unknown. Before applications can be filed with the FDA for product approval, it must be demonstrated that a particular future product candidate is safe and effective. The Company's failure to adequately demonstrate the safety and efficacy of future product candidates would prevent the FDA from approving them. The Company's product development costs will increase if it experiences delays in testing or regulatory approvals or if it becomes necessary to perform more or larger clinical trials than planned. If the delays are significant, they could negatively affect the Company's financial results, ability to raise capital and the commercial prospects for future product candidates.

- The Company's future success depends upon health care administrators and providers, patients and third-party payors' (including, without limitation, health insurance companies, Medicaid and Medicare) acceptance of its products. Market acceptance will depend on numerous factors, many of which are outside the Company's control, including:

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- the safety and efficacy of future product candidates, as demonstrated in clinical trials;
 - favorable regulatory approval and product labeling;
 - the frequency of product use;
- the availability, safety, efficacy and ease of use of alternative therapies;
- the price of future product candidates relative to alternative therapies; and
 - the availability of third-party reimbursement.

· Patient complications that may occur in gene-based clinical trials conducted by the Company and other companies and the resulting publicity surrounding them, as well as any other serious adverse events in the field of gene therapy that may occur in the future, may result in greater governmental regulation of future product candidates and potential regulatory delays relating to the testing or approval of them. Even with the requisite approval, the commercial success of the Company's product candidates will depend in part on public acceptance of the use of gene therapies for the prevention or treatment of human disease. Public attitudes may be influenced by claims that gene therapy is unsafe, and gene therapy may not gain the acceptance of the public or the medical community. Negative public reaction to gene therapy could result in greater governmental regulation, stricter clinical trial oversight and commercial product labeling requirements of gene therapies and could negatively affect demand for any products the Company may develop.

· Unanticipated side effects, patient discomfort, defects or unfavorable publicity concerning any of the Company's future product candidates, or any other product incorporating technology similar to that used by future product candidates, could have a material adverse effect on the Company's ability to commercialize its products or achieve market acceptance.

· The Company does not have any experience in manufacturing products for commercial sale and if the Company is not successful in engaging a third-party to manufacture its products, no assurance can be provided that it will be able to:

- develop and implement large-scale manufacturing processes and purchase needed equipment and machinery on favorable terms;
- hire and retain skilled personnel to oversee manufacturing operations;