UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

x **Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the fiscal year ended December 31, 2004

OR

o **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 000-23186

BIOCRYST PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

DELAWARE	**62-1413174**
(State of other jurisdiction of incorporation or organization)	**(I.R.S. employer identification no.)**

2190 Parkway Lake Drive; Birmingham, Alabama 35244
(Address of principal executive offices)

(205) 444-4600
(Registrant's telephone number, including area code)

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

Title of each class	**Name of each exchange on which registered**
None	**None**

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

Title of each class
Common Stock, $.01 Par Value

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

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

Indicate by a check mark whether the registrant is an accelerated filer (as defined in Exchange Act Rule 12b-2). Yes x No o.

The Registrant estimates that the aggregate market value of the Common Stock on June 30, 2004 (based upon the closing price shown on the Nasdaq National Market on June 30, 2004) held by non-affiliates was approximately $101,943,781. For this computation, the Registrant has excluded the market value of all shares of its Common Stock reported as beneficially owned by officers, directors and certain significant stockholders of the Registrant. Such exclusion shall not be deemed to constitute an admission that any such stockholder is an affiliate of the Registrant.

The number of shares of Common Stock, par value $.01, of the Registrant outstanding as of February 23, 2005 was 26,147,393 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive Proxy Statement to be filed in connection with the solicitation of proxies for its 2005 Annual Meeting of Stockholders are incorporated by reference into Items 10, 11, 12, 13 and 14 under Part III hereof.

PART I

ITEM 1. BUSINESS

Overview

BioCryst Pharmaceuticals, Inc. is a biotechnology company focused on designing, optimizing and developing novel small molecule pharmaceuticals that block key enzymes essential for cancer, cardiovascular diseases, autoimmune diseases and viral infections. Our most advanced drug candidate, forodesine hydrochloride ("BCX-1777" or "forodesine"), is an investigational purine nucleoside phosphorylase ("PNP") inhibitor for the treatment of T-cell mediated disorders.

Our Business Strategy

Our business strategy is to use structure-based drug design technologies to develop innovative, small-molecule pharmaceuticals to treat a variety of diseases and disorders. We focus our drug development efforts on building potent, selective inhibitors of enzymes associated with targeted diseases. Enzymes are proteins that cause or enable biological reactions necessary for the progression of the disease or disorder. The specific enzymes on which we focus are called enzyme targets. The Company aims to design compounds that will inhibit an enzyme target by fitting the active site of a particular enzyme. Inhibition means interfering with the functioning of an enzyme target, thereby stopping or slowing the progression of the disease or disorder. The principal elements of our strategy are:

- ***Select and License Promising Enzyme Targets for the Development of Small-Molecule Pharmaceuticals.*** We use our technical expertise and network of academic and industry contacts to evaluate and select promising enzyme targets to license for the development of small-molecule pharmaceuticals. We choose enzyme targets that meet as many of the following criteria as possible:
  - serve important functions in disease pathways;
  - have known animal or cell-based models that would be indicative of results in humans;
  - address large potential markets and significant unmet medical needs, including pursuing niche markets where the results have potential application to broader markets and needs;
  - have multiple potential clinical applications; and
  - offer rapid development and commercialization opportunities.
- ***Focus on High Value-Added Structure-Based Drug Design Technologies.*** We focus our drug discovery activities and expenditures on applications of structure-based drug design technologies to design and develop drug candidates. Structure-based drug design is a process by which we design a drug candidate through detailed analysis of the enzyme target, which the drug candidate must inhibit in order to stop the progression of the disease or disorder. We believe that structure-based drug design is a powerful tool for efficient development of small-molecule drug candidates that have the potential to be safe, effective and relatively inexpensive to manufacture. Our structure-based drug design technologies typically allow us to design and synthesize multiple drug candidates that inhibit the same enzyme target. We believe this strategy can lead to broad patent protection and enhance the competitive advantages of our compounds.
- ***Develop or License Inhibitors that are Promising Candidates for Commercialization.*** We test multiple compounds to identify those that are most promising for clinical development. We base our selection of promising development candidates on desirable product characteristics, such as initial indications of safety and efficacy. We believe that this focused strategy allows us to eliminate unpromising candidates from consideration sooner without incurring substantial clinical costs. In addition, we select drug candidates on the basis of their potential for relatively efficient Phase I and Phase II clinical trials that require fewer patients to initially indicate safety and efficacy. We will consider, however, more complex candidates with longer development cycles if we believe that they offer promising commercial opportunities.

An important element of our business strategy is to control fixed costs and overhead through contracting and entering into license agreements with other parties. We maintain a streamlined corporate infrastructure that focuses on our strongest areas of expertise. By contracting with other specialty organizations, we believe that we can control costs, enable our drug candidates to reach the market more quickly and reduce our business risk. Key elements of our contracting strategy include:

- ***Entering Into Relationships with Academic Institutions and Biotechnology Companies.*** Many academic institutions and biotechnology companies perform extensive research on the molecular and structural biology of potential drug development targets. By entering into relationships with these institutions, we believe we can significantly reduce the time, cost and risks involved in drug development. Our collaborative relationships with such organizations may lead to the licensing of one or more drug targets or compounds. Upon licensing a drug target or promising compound from one of these institutions, the scientists from the institution typically become working partners as members of our structure-based drug design teams. We believe this makes us a more attractive development partner to these scientists. In addition, we collaborate with outside experts in a number of areas, including crystallography, molecular modeling, combinatorial chemistry, biology, pharmacology, oncology, cardiology, immunology and infectious diseases. These collaborations enable us to complement our internal capabilities without adding costly overhead. We believe this strategy allows us to save valuable time and expense, and further diversify and strengthen our portfolio of drug candidates. An example of such a collaborative relationship is the arrangement that we have with The University of Alabama at Birmingham ("UAB"), which has resulted in the initiation of several of our early drug development programs.

- ***Developing Drug Development Candidates or Licensing Them to Other Parties.*** We generally plan to advance drug candidates through initial and/or early-stage drug development. For larger disease indications requiring complex clinical trials, our strategy is to license drug candidates to pharmaceutical or biotechnology partners for final development and global marketing. We believe partnerships are a good source of development payments, license fees, milestone payments and royalties. They also reduce the costs and risks, and increase the effectiveness, of late-stage product development, regulatory approval, manufacturing and marketing. We believe that focusing on discovery and early-stage drug development while benefiting from our partners' proven development and commercialization expertise will reduce our internal expenses and allow us to have a larger number of drug candidates progress to late-stage drug development. However, after establishing a lead product candidate, we are willing to license that candidate during any stage of the development process we determine to be beneficial to the company and to the ultimate development and commercialization of that drug candidate. For some smaller niche disease indications markets, we may choose to complete development, manufacture, and where appropriate market and distribute any approved drugs ourselves, such as forodesine hydrochloride for T-cell leukemias.

Products in Development

The following table summarizes BioCryst's active development projects as of February 23, 2005:

Program and Candidate Disease Category/Indication	Delivery Form	Development Stage	Worldwide Rights
PNP Inhibitor (forodesine HCl, BCX-1777)	Intravenous	Phase II	BioCryst
Oncology	Oral	Phase I	BioCryst
PNP Inhibitor (BCX-4208) Autoimmune diseases	Oral	Phase I	BioCryst
Hepatitis C Polymerase Inhibitors Viral	Oral	Lead Optimization	BioCryst
Tissue Factor/Factor VIIa Inhibitors Cardiovascular / Oncology	Oral	Lead Optimization	BioCryst

T-cell Related Diseases

Overview. The link between T-cell proliferation and the purine nucleoside phosphorylase, or PNP, enzyme was first discovered approximately twenty-five years ago when a patient, who was genetically deficient in PNP, exhibited limited T-cell activity, but reasonably normal activity of other immune functions. In other patients lacking PNP activity, the T-cell population was selectively depleted; however, B-cell function tended to be normal. Based on these findings and the results of cell culture studies, inhibiting PNP appears to produce selective suppression of T-cells without significantly impairing the function of other cells.

The human immune system employs specialized cells, including T-cells, to control infection by recognizing and attacking disease-causing viruses, bacteria and parasites. T-cells are an essential part of the body's immune system that serve a dual purpose to both orchestrate and participate in the body's immune response. For the most part, this system works flawlessly to protect the body. However, when T-cells multiply uncontrollably, T-cell proliferative diseases, such as T-cell cancers, can occur.

Acute Lymphoblastic Leukemia. The most common form of leukemia in children is acute lymphoblastic leukemia (also known as ALL). According to the American Cancer Society, 3,970 new cases (adult and children combined) will be diagnosed in the United States in 2005 (T-cell and B-cell). ALL results from an acquired injury to the DNA of a single cell in the bone marrow.

T-cell Lymphoma. Lymphoma is a general term for a group of cancers that originate in the lymphatic system. About 56,000 Americans will be diagnosed with a non-Hodgkin's lymphoma in 2005 and approximately 15% of these will be considered T-cell lymphomas. T-cell lymphoma results when a T-lymphocyte (a type of white blood cell) undergoes a malignant change and begins to multiply, eventually crowding out healthy cells and creating tumors, which enlarge the lymph nodes and invade other sites in the body. Cutaneous T-cell lymphoma ("CTCL") is a primary skin neoplasm and accounts for nearly 50% of all T-cell malignancies.

T-cell Mediated Autoimmune Diseases. Diseases such as psoriasis, rheumatoid arthritis, multiple sclerosis, and Crohn's disease appear to have activated T-cells as a major part of their pathogenesis. Therefore, inhibition and/or elimination of such cells could have a beneficial effect on these diseases.

PNP Inhibition. PNP is an enzyme that plays an important role in T-cell proliferation, because it is necessary to maintain normal DNA synthesis in human T-cells. Selective inhibition of PNP causes certain nucleosides, including deoxyguanosine, to accumulate. As the concentration of deoxyguanosine increases within T-cells, it is converted by specific enzymes to deoxyguanosine triphosphate. A high concentration of deoxyguanosine triphosphate in T-cells causes an imbalance in the intra-cellular trinucleotide pool and thus causes cell death.

Our PNP Inhibitor(s)

Background. In June 2000, we licensed a series of potent inhibitors of PNP from Albert Einstein College of Medicine of Yeshiva University ("AECOM") and Industrial Research, Ltd, New Zealand ("IRL"). The lead drug candidate from this collaboration, forodesine hydrochloride, is a more potent inhibitor of human lymphocyte proliferation than other previously known PNP inhibitors. Extensive preclinical studies and early patient data indicate that forodesine can modulate T-cell activities. Forodesine is an investigational PNP inhibitor for the potential treatment of T-cell leukemias and lymphomas.

During 2002, we exercised the option to add a new compound, BCX-4208, to the series of inhibitors of PNP licensed from AECOM and IRL. Preclinical results indicate that BCX-4208 is a more potent inhibitor than forodesine. We plan to develop BCX-4208 for autoimmune diseases such as psoriasis and rheumatoid arthritis.

PNP Inhibitor (forodesine hydrochloride, BCX-1777)

Overview

The first clinical trial with an intravenous formulation of forodesine was a Phase I clinical trial that enrolled T-cell leukemia patients at the M.D. Anderson Cancer Center in Houston, Texas. The Phase I trial was an open-label dose-escalation study of forodesine in relapsed or refractory patients. Because of the clinical results seen in the initial trial and some additional testing by our colleagues at the M.D. Anderson Cancer Center, we started three additional trials in 2003 for refractory patients with other types of hematologic malignancies, cutaneous T-cell lymphoma, and solid tumors. Preclinical studies at the M.D. Anderson Cancer Center indicate that forodesine induces the same biochemical changes in various other types of leukemia cells that are responsible for the inhibition of T-leukemia cells, which suggest that forodesine may be even more broadly applicable than originally expected. Initial Phase I clinical results in patients with B-cell acute lymphoblastic leukemia have been encouraging, and we plan to pursue additional B-cell leukemia clinical studies during 2005.

Current Development Strategy

Forodesine Clinical Development for Aggressive T-cell Malignancies. During 2004, we initiated a Phase IIa trial to enroll up to 20 patients with aggressive T-cell malignancies. Despite encouraging results observed with other T-cell specific agents, the prognosis for patients with relapsed or refractory leukemia or lymphoma is poor and treatment options remain limited. The goal of the Phase IIa clinical trial is to determine the therapeutic effect produced by forodesine as it relates to the proposed mechanism of action in the inhibition of proliferating T-lymphocytes in patients with T-cell ALL and to demonstrate this effect can be sustained over a 30 day period.

We have obtained orphan drug status for forodesine in multiple indications. Our strategy for future development is to pursue with the FDA fast-track designation, and using the results obtained to date in the Phase IIa study to negotiate a Special Protocol Assessment (“SPA”) for the design of a Phase IIb trial, which depending on the results, could serve as the pivotal trial for the filing of a New Drug Application (“NDA”) in T-cell acute lymphoblastic leukemia. Our current intent is for the Company itself to market and distribute forodesine in the United States for treatment of T-cell cancers.

During the fourth quarter of 2004, we also initiated a Phase I trial with an oral formulation of forodesine for treatment of patients with CTCL. This Phase I trial initially consisted of nine patients, including three cohorts of patients at three different dose levels, to determine the safety and pharmacokinetic profile of the oral formulation. Assuming successful completion of the Phase I study, our plan is to transition this trial into a Phase II study during 2005 to determine the efficacy of this oral formulation and to establish the optimum dose that will be required for future clinical trials in CTCL.

During 2005, we plan to initiate a Phase I/II study in patients with B-cell ALL based on the results we observed in our previous Phase I trial which were presented at the American Society of Hematology in December 2004.

PNP Inhibitor (BCX-4208)

Overview

We believe that the results to date from our Phase I trials of forodesine support the principle that inhibition of PNP has a direct effect on proliferation of activated T-lymphocytes. We are now developing BCX-4208, a second-generation PNP inhibitor, as a drug candidate for the treatment of T-cell mediated autoimmune diseases, including psoriasis. Although BCX-4208 and forodesine are both investigational PNP inhibitors, BCX-4208 differs from forodesine in significant ways. For example, BCX-4208 is more potent, and has the ability to suppress PNP for longer periods of time. Thus, BCX-4208 has potential advantages over forodesine for the treatment of diseases requiring long-term, chronic administration of a PNP inhibitor.

Current Development Strategy

During the first half of 2004, we conducted a series of preclinical toxicology studies with BCX-4208 and during the fourth quarter of 2004 we initiated a Phase I clinical trial with BCX-4208 in healthy volunteers. This initial trial was started to determine the safety, oral bioavailability and pharmacokinetics of BCX-4208 by enrolling eighty-four subjects, twelve subjects in seven different cohorts with each cohort having a dose escalation over the previous cohort. Assuming successful results from this trial, our plan is to initiate a multi-dose Phase I trial during the second quarter and begin a Phase II trial during the second half of 2005 in psoriasis patients.

Tissue Factor/Factor VIIa

Overview

A series of complicated reactions takes place in the body whenever a blood clot begins to form. The major initiator of these reactions is an enzyme system called the tissue factor/factor VIIa ("TF/FVIIa") complex. Animal tests show that various inhibitors of the TF/FVIIa complex can minimize blood clot formation as well as inflammatory responses. This sort of inhibition has been tested with a number of biological agents including the natural inhibitor of the pathway, synthetic peptides and protein inhibitors, and antibodies against tissue factor. However, there are no small molecule drugs currently on the market that intervene at the TF/FVIIa level.

We believe that small molecule inhibitors of TF/FVIIa may potentially be useful for treating acute coronary syndromes and complications associated with cardiovascular procedures, such as coronary angioplasty and stent insertions, because any type of damage to arteries and blood vessels exposes tissue factor, which then triggers clot formation. Myocardial infarction, unstable angina, and restenosis during and following angioplasty procedures are all potential treatment targets. In addition, tissue factor is involved in angiogenesis, or new blood vessel growth, and inhibitors of the TF/FVIIa complex are believed to have potential as anti-angiogenesis agents for use in oncology.

Background. We have an agreement with Sunol Molecular Corporation ("Sunol") to expedite the discovery of new drug candidates designed to inhibit TF/FVIIa. Under the terms of this agreement, Sunol supplies us protein for our drug design program.

Current Development Strategy

We are continuing to design and synthesize groups of compounds that are potent and selective inhibitors of TF/FVIIa and further optimization is ongoing to identify a compound for preclinical development of a TF/FVIIa inhibitor in oral form. We are also looking at potential opportunities for drug eluting stent applications with some of our earlier compounds that have effective potency, but low oral bioavailability.

Hepatitis C

Overview

Hepatitis C virus ("HCV") infection has been described in the New England Journal of Medicine as the nation's most common chronic blood-borne infection. Up to 3% of the world's population has been infected with HCV. According to the National Centers for Disease Control, as many as 75-85% of those infected with HCV will have chronic infection and 70% of those will develop chronic liver disease. While there are several approved treatments for chronic HCV using a combination therapy of interferon and ribavirin, there are some potentially severe side effects to these treatments.

Background. In June 2000, we licensed intellectual property from Emory University ("Emory") related to the hepatitis C polymerase target associated with hepatitis C viral infections. Under the original terms of the agreement, the research investigators from Emory provided us with materials and technical insight into the target.

Current Development Strategy

We are targeting HCV polymerase through collaborative and in-house efforts. Specifically, we are focused on development of orally active inhibitors against the RNA-dependent RNA polymerase. Competition for this target is less intense than for the HCV protease target and history suggests the likelihood of designing a useful inhibitor against this target may be better than designing inhibitors against the protease.

Currently, we are designing, synthesizing and screening potential compounds against HCV polymerase. Specifically, our scientists are measuring the potency and ability of potential drug candidates to block the replication of HCV polymerase in vitro, or in test tubes. These experiments measure the potency of each selected compound's ability to block replication. Advanced screening is also underway to measure the fit of promising compounds in the HCV polymerase active site using X-ray crystallography and computer molecular modeling. The goal is to identify a series of compounds that are potent in vitro inhibitors of the active site of the HCV polymerase for further testing and lead optimization.

We also have agreements in place with the National Institute of Allergy and Infectious Diseases, a unit of The National Institutes of Health, and the U.S. Army Medical Research Institute of Infectious Diseases to assay promising inhibitors from the HCV polymerase program for activity against Severe Acute Respiratory Syndrome (SARS), West Nile and Ebola viruses.

Additional Products

In addition to our four active programs, the Company also retains exclusive rights to potent inhibitors of influenza neuraminidase and parainfluenza neuraminidase and maintains the patent portfolio for these inhibitors. The Company will continue to take the necessary steps to retain the value of these programs with the goal of eventually partnering these programs.

Structure-Based Drug Design

Structure-based drug design is a drug discovery approach by which we design synthetic compounds from detailed structural knowledge of the active sites of enzyme targets associated with particular diseases. Enzymes are proteins that act as catalysts for many vital biological reactions. Our goal generally is to design a compound that will fit in the active site of an enzyme (the active site of an enzyme is the area into which a chemical or biological molecule fits to initiate a biochemical reaction) and thereby interfere with the progression of disease.

Our structure-based drug design involves the application of both traditional biology and medicinal chemistry and an array of advanced technologies. We use X-ray crystallography, computer modeling of molecular structures and advanced chemistry techniques to focus on the three-dimensional molecular structure and active site characteristics of the enzymes that control cellular biology.

We believe that structure-based drug design technologies are superior to drug screening techniques. By identifying the target enzyme in advance and by discovering the chemical and molecular structure of the enzyme, we believe it is possible to design a better drug to interact with the enzyme. In addition, the structural data obtained by X-ray crystallographic analysis allow additional analysis and compound modification at each stage of the biological evaluation. This capability makes structure-based drug design a powerful tool for efficient development of drugs that are highly specific for particular enzyme target sites.

Research and Development

We initiated our research and development program in 1986, with drug synthesis beginning in 1987. We have assembled a scientific research staff with expertise in a broad base of advanced research technologies including protein biochemistry, X-ray crystallography, chemistry and pharmacology. Our research facilities include protein biochemistry and organic synthesis laboratories, testing facilities, X-ray crystallography, computer and graphics equipment and facilities to make drug candidates on a small scale for early stage clinical trials.

During the years ended December 31, 2002, 2003 and 2004, we spent an aggregate of $45.9 million on research and development. Approximately $25.0 million of that amount was spent on in-house research and development, and $20.9 million was spent on contract research and development.

Collaborative Relationships

Corporate Alliances

Sunol Molecular Corp. In April 1999, we entered into an agreement with Sunol. This agreement requires Sunol to conduct research and supply us with protein targets for drug design to expedite the discovery of new drug candidates designed to inhibit tissue factor/factor VIIa for our cardiovascular program.

Academic Alliances

The University of Alabama at Birmingham. We have had a close relationship with UAB since our formation. Our Chairman and Chief Executive Officer, Dr. Charles E. Bugg, was the previous Director of the UAB Center for Macromolecular Crystallography, and our President, Chief Operating Officer and Medical Director, Dr. J. Claude Bennett, was the former President of UAB, the former Chairman of the Department of Medicine at UAB and a former Chairman of the Department of Microbiology at UAB. Several of our consultants are employed by UAB. UAB has a large X-ray crystallography center with approximately 121 full-time staff members and approximately $16.5 million in research grants and contract funding in 2004. Several of our early programs originated at UAB.

We currently have agreements with UAB for influenza neuraminidase and complement inhibitors. Under the terms of these agreements, UAB performed specific research for us in return for research payments and license fees. UAB has granted us certain rights to any discoveries in these areas resulting from research developed by UAB or jointly developed with us. We have agreed to pay royalties on sales of any resulting product and to share in future payments received from other third-party collaborators. We have completed the research under the UAB influenza agreement. We funded the research program under the complement inhibitors agreement through March 2002, which entitled us to an assignment of, or a right to an exclusive license for, any inhibitors of specified complement enzymes developed by UAB scientists during the period of support or for a one-year period thereafter. These two agreements have initial 25-year terms, are automatically renewable for five-year terms throughout the life of the last patent and are terminable by us upon three months notice and by UAB under certain circumstances.

Albert Einstein College of Medicine of Yeshiva University and Industrial Research, Ltd, New Zealand. In June 2000, we licensed a series of potent inhibitors of PNP from AECOM and IRL. The lead drug candidate from this collaboration is forodesine. We have the rights to develop and ultimately distribute this, or any other, drug candidate that might arise from research on these inhibitors. For example, in 2002 we obtained the rights to another compound from this series, BCX-4208, which is currently in the early phase of clinical development. We have agreed to pay certain milestone payments for future development of these inhibitors, pay certain royalties on sales of any resulting product, and to share in future payments received from other third-party collaborators, if any. We can terminate this agreement at any time by giving 60 days advance notice.

Emory University. In June 2000, we licensed intellectual property from Emory related to the hepatitis C polymerase target associated with hepatitis C viral infections. Under the original terms of the agreement, the research investigators from Emory provided us with materials and technical insight into the target. We have agreed to pay Emory royalties on sales of any resulting product and to share in future payments received from other third party collaborators, if any. We can terminate this agreement at any time by giving 90 days advance notice.

Patents and Proprietary Information

Our success will depend in part on our ability to obtain and enforce patent protection for our products, methods, processes and other proprietary technologies, preserve our trade secrets, and operate without infringing on the proprietary rights of other parties, both in the United States and in other countries. We own or have rights to certain proprietary information, proprietary technology, issued and allowed patents and patent applications which relate to compounds we are developing. We actively seek, when appropriate, protection for our products, proprietary technology and proprietary information by means of U.S. and foreign patents, trademarks and contractual arrangements. In addition, we rely upon trade secrets and contractual arrangements to protect certain of our proprietary information, proprietary technology and products.

As of January 31, 2005, we have been issued 24 U.S. patents that expire between 2009 and 2023 and that relate to our PNP, serine protease and neuraminidase inhibitor compounds. We have licensed four additional patents and two pending patents from AECOM and IRL, plus one patent from Emory. We have also filed patent applications for new processes to prepare certain PNP inhibitors. Additionally, we have 20 U.S. patent applications pending related to PNP, neuraminidase, RNA viral polymerase, paramyxovirus neuraminidase, and serine protease inhibitors. Our pending applications may not result in issued patents, and our patents may not provide us with sufficient protection against competitive products or otherwise be commercially available.

Our success is also dependent upon the skills, knowledge and experience of our scientific and technical personnel, none of which is patentable. To help protect our rights, we require all employees, consultants, advisors and collaborators to enter into confidentiality agreements, which prohibit the disclosure of confidential information to anyone outside of our company and requires disclosure and assignment to us of their ideas, developments, discoveries and inventions. These agreements may not provide adequate protection for our trade secrets, know-how or other proprietary information in the event of any unauthorized use or disclosure or the lawful development by others of such information.

Marketing and Sales

We currently plan to market, distribute and sell forodesine in the U.S. for use in treatment of T-cell cancers. Although our general strategy is to rely on major marketing companies for worldwide commercialization of most products we may develop, we believe that we can manage the highly specialized oncology market for forodesine within the U.S. Most patients with advanced T-cell malignancies in the U.S. are treated at major referral cancer centers, and we expect that many of these centers will be participating in our Phase II trials and will thus be familiar with forodesine if it reaches the market. However, we lack experience in marketing, distributing and selling pharmaceutical products. Our general strategy is to rely on collaborators, licensees or arrangements with others to provide for the marketing, distribution and sales of products we may develop. We may not be able to establish and maintain acceptable commercial arrangements with collaborators, licensees or others to perform such activities.

Competition

The pharmaceutical and biotechnology industries are intensely competitive. Many companies, including biotechnology, chemical and pharmaceutical companies, are actively engaged in activities similar to ours, including research and development of drugs for the treatment of cancer, infectious, inflammatory and cardiovascular diseases and disorders. Many of these companies have substantially greater financial and other resources, larger research and development staffs, and more extensive marketing and manufacturing organizations than we do. In addition, some of them have considerable experience in preclinical testing, clinical trials and other regulatory approval procedures. For example, in December 2004, Bioenvision, Inc. received approval from the FDA to market Clofarabine for the treatment of pediatric ALL. We are currently testing forodesine in T-cell ALL and have plans to initiate clinical trials in patients with B-cell ALL during 2005. There are also academic institutions, governmental agencies and other research organizations that are conducting research in areas in which we are working. They may also market commercial products, either on their own or through collaborative efforts.

We expect to encounter significant competition for any of the pharmaceutical products we plan to develop. Companies that complete clinical trials, obtain required regulatory approvals and commence commercial sales of their products before their competitors may achieve a significant competitive advantage. In addition, several pharmaceutical and biotechnology firms, including major pharmaceutical companies and specialized structure-based drug design companies, have announced efforts in the field of structure-based drug design and in the fields of PNP, hepatitis C, and tissue factor/factor VIIa.

In order to compete successfully, we must develop proprietary positions in patented drugs for therapeutic markets that have not been satisfactorily addressed by conventional research strategies and, in the process, expand our expertise in structure-based drug design. Our products, even if successfully tested and developed, may not be adopted by physicians over other products and may not offer economically feasible alternatives to other therapies.

Government Regulation

The FDA regulates the pharmaceutical and biotechnology industries in the United States, and our drug candidates are subject to extensive and rigorous domestic government regulations prior to commercialization. The FDA regulates, among other things, the development, testing, manufacture, safety, efficacy, record-keeping, labeling, storage, approval, advertising, promotion, sale and distribution of pharmaceutical products. In foreign countries, our products are also subject to extensive regulation by foreign governments. These government regulations will be a significant factor in the production and marketing of any pharmaceutical products that we develop. Failure to comply with applicable FDA and other regulatory requirements at any stage during the regulatory process may subject us to sanctions, including:

- delays;
- warning letters;
- fines;
- product recalls or seizures;
- injunctions;
- penalties;
- refusal of the FDA to review pending market approval applications or supplements to approval applications;
- total or partial suspension of production;
- civil penalties;
- withdrawals of previously approved marketing applications; and
- criminal prosecutions.

The regulatory review and approval process is lengthy, expensive and uncertain. Before obtaining regulatory approvals for the commercial sale of any products, we or our licensees must demonstrate that our product candidates are safe and effective for use in humans. The approval process takes many years, substantial expenses may be incurred and significant time may be devoted to clinical development.

Before testing potential candidates in humans, we carry out laboratory and animal studies to determine safety and biological activity. After completing preclinical trials, we must file an investigational new drug application, including a proposal to begin clinical trials, with the FDA. We have filed eleven investigational new drug applications to date and plan to file, or rely on future partners to file, additional investigational new drug applications in the future as our potential drug candidates advance to that stage of development. Thirty days after filing an investigational new drug application, a Phase I human clinical trial can start unless the FDA places a hold on the study.

Our Phase I trials are designed to determine safety in a small group of patients or healthy volunteers. We also assess tolerances and the metabolic and pharmacologic actions of our drug candidates at different doses. After we complete the initial trials, we conduct Phase II trials to assess safety and efficacy and establish the optimal dose in patients. If Phase II trials are successful, we or our licensees conduct Phase III trials to verify the results in a larger patient population. Phase III trials are required for FDA approval to market a drug. A Phase III trial may require hundreds or even thousands of patients and is the most expensive to conduct. The goal in Phase III is to collect enough safety and efficacy data to obtain FDA approval for treatment of a particular disease. For some clinical indications that are especially serious and for which there are no effective treatments, such as refractory cancers, conditional approval can be obtained following Phase II trials.

Initiation and completion of the clinical trial phases are dependent on several factors including things that are beyond our control. For example, the clinical trials are dependent on patient enrollment, but the rate at which patients enroll in the study depends on:

- the size of the patient population we intend to treat;
- the availability of patients;
- the willingness of patients to participate; and
- the patients meeting the eligibility criteria.

Delays in planned patient enrollment may result in increased expense and longer development timelines.

After completion of the clinical trials of a product, we or our licensees must submit a new drug application to the FDA for marketing approval before commercialization of the product. The FDA may not grant approval on a timely basis, if at all. The FDA, as a result of the Food and Drug Administration Modernization Act of 1997, has six months to review and act upon license applications for priority therapeutics that are for life-threatening or unmet medical needs. Standard reviews can take between one and two years, and can even take longer if significant questions arise during the review process. The FDA may withdraw any required approvals, once obtained.

In addition to clinical development regulations, we and our contract manufacturers and collaborators must comply with the applicable FDA current good manufacturing practice ("GMP") regulations. GMP regulations include requirements relating to quality control and quality assurance as well as the corresponding maintenance of records and documentation. Manufacturing facilities are subject to inspection by the FDA. Such facilities must be approved before we can use them in commercial manufacturing of our potential products. We or our contract manufacturers may not be able to comply with the applicable GMP requirements and other FDA regulatory requirements. If we or our contract manufacturers fail to comply, our business, financial condition and results of operations will be materially adversely affected.

Human Resources

As of February 28, 2005, we had 50 employees, of whom 37 were engaged in research and development and 13 were in general and administrative functions. Our scientific staff, 20 of whom hold Ph.D. or M.D. degrees, has diversified experience in biochemistry, pharmacology, X-ray crystallography, synthetic organic chemistry, computational chemistry, and medicinal chemistry. We consider our relations with our employees to be satisfactory.

Scientific Advisory Board and Consultants

Our scientific advisory board is comprised of five scientific advisors who are leaders in certain of our core disciplines or who otherwise have specific expertise in our therapeutic focus areas. We also have consulting agreements with a number of other scientists with expertise in our core disciplines or who are specialists in diseases or treatments on which we focus. The scientific advisory board meets as a group at scheduled meetings and the consultants meet more frequently, on an individual basis, with our scientific personnel and management to discuss our ongoing research and drug discovery and development projects. The scientific advisory board consists of the following individuals:

Name	Position
Albert F. LoBuglio, M.D. (Chairman)	Director *Emeritus* and Distinguished Professor of The University Of Alabama at Birmingham Comprehensive Cancer Center.
Gordon N. Gill, M.D.	Professor of Medicine *Emeritus* at the University of California, San Diego School of Medicine.
Lorraine J. Gudas, Ph.D.	Professor and Chairman, Department of Pharmacology Weill Medical College of Cornell University, Revlon Pharmaceutical Professor of Pharmacology and Toxicology.
Herbert A. Hauptman, Ph.D.	President of the Hauptman-Woodward Medical Research Institute, Inc. (formerly the Medical Foundation (Buffalo), Inc.), and Research Professor in Biophysical Sciences and Distinguished Professor in Structural Biology at the State University of New York (Buffalo). Recipient of the Nobel Prize in Chemistry (1985).
Hamilton O. Smith, M.D.	Professor, Molecular Biology and Genetics Department at The Johns Hopkins University School of Medicine, retired, and Scientific Director of the Synthetic Biology and Biological Energy Groups at the J. Craig Venter Institute in Rockville, Maryland. Recipient of the Nobel Prize in Medicine (1978).

The scientific advisors and the consultants are reimbursed for their expenses and receive nominal cash compensation in connection with their service and have been issued options and/or shares of common stock. The scientific advisors and the consultants are all employed by or have consulting agreements with entities other than us, some of which may compete with us in the future. The scientific advisors and the consultants are expected to devote only a small portion of their time to our business, although no specific time commitment has been established. They are not expected to participate actively in our affairs or in the development of our technology. Several of the institutions with which the scientific advisors and the consultants are affiliated may adopt new regulations or policies that limit the ability of the scientific advisors and the consultants to consult with us. The loss of the services of the scientific advisors and the consultants could adversely affect us to the extent that we are pursuing research or development in areas relevant to the scientific advisors' and consultants' expertise. To the extent members of our scientific advisory board or the consultants have consulting arrangements with or become employed by any of our competitors, we could be materially adversely affected.

Any inventions or processes independently discovered by the scientific advisors or the consultants may not become our property and will probably remain the property of such persons or of such persons' employers. In addition, the institutions with which the scientific advisors and the consultants are affiliated may make available the research services of their personnel, including the scientific advisors and the consultants, to our competitors pursuant to sponsored research agreements. We require the scientific advisors and the consultants to enter into confidentiality agreements which prohibit the disclosure of confidential information to anyone outside of our company and require disclosure and assignment to us of their ideas, developments, discoveries or inventions. However, our competitors may gain access to trade secrets and other proprietary information developed by us and disclosed to the scientific advisors and the consultants.

Available Information

We have available a website on the Internet. Our address is www.biocryst.com. We make available at our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. We also make available at our website copies of our audit committee charter, compensation committee charter, corporate governance and nominating committee charter and our code of business conduct, which applies to all employees of BioCryst as well as the members of our Board of Directors.

ITEM 2. PROPERTIES

Our administrative offices and principal research facility are located in 57,350 square feet of leased office space in Riverchase Industrial/Research Park in Birmingham, Alabama. The lease runs through June 30, 2010 with an option to lease for an additional five years at current market rates. We believe that our facilities are adequate for our current operations.

ITEM 3. LEGAL PROCEEDINGS

None.

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

None.

PART II

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

The Company's common stock trades on the Nasdaq National Market tier of The Nasdaq Stock Market[SM] under the symbol BCRX. The following table sets forth the low and high prices of our common stock as reported by Nasdaq for each quarter in 2004 and 2003:

	2004		2003	
	Low	High	Low	High
First quarter	$ 6.24	$ 8.75	$ .82	$ 2.00
Second quarter	6.75	11.25	1.23	4.51
Third quarter	4.37	7.56	2.88	7.37
Fourth quarter	4.63	6.94	6.00	9.41

The last sale price of the common stock on February 23, 2005 as reported by Nasdaq was $5.75 per share.

As of February 23, 2005, there were approximately 325 holders of record of our common stock.

The Company has never paid cash dividends and does not anticipate paying cash dividends in the foreseeable future.

ITEM 6. SELECTED FINANCIAL DATA

	Years Ended December 31, (Dollars in thousands, except per share)				
	2004	2003	2002	2001	2000
Statement of Operations Data:					
Total revenues (See attached financial statements and notes)	$ 337	$ 653	$ 0	$ 7,737	$ 3,316
Research and development expenses	18,868	11,522	15,473	13,091	9,590
Loss before cumulative effect of change in accounting principle	(21,104)	(12,700)	(16,929)	(4,986)	(5,490)
Cumulative effect of change in accounting principle	—	—	—	—	(6,088)
Net loss	$ (21,104)	$ (12,700)	$ (16,929)	$ (4,986)	$ (11,578)
Amounts per common share:					
Loss before cumulative effect of change in accounting principle	$ (1.00)	$ (.72)	$ (.96)	$ (.28)	$ (.31)
Cumulative effect of change in accounting principle	—	—	—	—	(.35)
Basic and diluted net loss per share	$ (1.00)	$ (.72)	$ (.96)	$ (.28)	$ (.66)
Weighted average shares outstanding (in thousands)	21,165	17,703	17,643	17,560	17,467

	December 31, (Dollars in thousands)				
	2004	2003	2002	2001	2000
Balance Sheet Data:					
Cash, cash equivalents and securities	$ 28,704	$ 25,732	$ 36,163	$ 52,941	$ 65,583
Total assets	32,469	30,096	41,300	59,096	70,826
Accumulated deficit	(125,764)	(104,660)	(91,960)	(75,031)	(70,045)
Total stockholders' equity	29,334	28,447	40,128	56,814	61,481

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

This Annual Report on Form 10-K contains certain statements of a forward-looking nature relating to future events or the future financial performance of the Company. Such statements are only predictions and the actual events or results may differ materially from the results discussed in the forward-looking statements. Factors that could cause or contribute to such differences include those discussed below as well as those discussed in other filings made by the Company with the Securities and Exchange Commission.

Overview

Since our inception in 1986, we have been engaged in research and development activities and organizational efforts, including:

- identification and licensing of enzyme targets;
- drug discovery;
- structure-based design of drug candidates;
- small-scale synthesis of compounds;
- conducting preclinical studies and clinical trials;
- recruiting our scientific and management personnel;
- establishing laboratory facilities; and
- raising capital.

Our revenues have generally been limited to license fees, milestone payments, interest income, and collaboration research and development fees. The Company recognizes revenue in accordance with SEC Staff Accounting Bulletin No. 104, *Revenue Recognition* ("SAB No. 104"). Research and development revenue on cost-reimbursement agreements is recognized as expenses are incurred, up to contractual limits. Research and development fees, license fees and milestone payments are recognized as revenue when the earnings process is complete, the Company has no further continuing performance obligations and has completed its performance under the terms of the agreement, in accordance with SAB No. 104. License fees and milestone payments received under licensing agreements that are related to future performance are deferred and recognized as earned over the estimated drug development period. The Company has not received any revenues or royalties from the sale of licensed pharmaceutical products. It could be several years, if ever, before we will recognize significant revenue from royalties received pursuant to our license agreements or revenue directly from product sales. Future revenues, if any, are likely to fluctuate substantially from quarter to quarter.

We have incurred operating losses since our inception. Our accumulated deficit at December 31, 2004 was $125.8 million. We will require substantial expenditures relating to the development of our current and future drug candidates. During the three years ended December 31, 2004, we spent 45.5% of our research and development expenses on contract research and development, including:

- payments to consultants;
- funding of research at academic institutions;
- large scale synthesis and formulation of compounds;
- preclinical studies;

- engaging investigators to conduct clinical trials;
- hiring contract research organizations for regulatory and clinical functions; and
- using statisticians to evaluate the results of clinical trials.

The above expenditures for contract research and development for our current and future drug candidates will vary from quarter-to-quarter depending on the status of our research and development projects. For example, during the first quarter of 2004, we entered a Phase II trial for our lead drug candidate, forodesine, an inhibitor of PNP. In addition, during the fourth quarter of 2004, we initiated a Phase I trial for forodesine in CTCL and a Phase I trial with BCX-4208 in healthy volunteers. As these trials progress and additional trials are started in other indications, our costs for clinical studies will increase significantly. In addition, the costs associated with the manufacturing of forodesine hydrochloride and BCX-4208 will increase as we scale up to the larger production runs required for both clinical development and additional toxicology studies.

Changes in our existing and future research and development and collaborative relationships will also impact the status of our research and development projects. Although we may, in some cases, be able to control the timing of development expenses, in part by accelerating or decelerating certain of these costs, many of these costs will be incurred irrespective of whether we are able to discover drug candidates or obtain collaborative partners for commercialization. As a result, we believe that quarter-to-quarter comparisons of our financial results are not necessarily meaningful and should not be relied upon as an indication of future performance. If we fail to meet the research, clinical and financial expectations of securities analysts and investors, it could have a material adverse effect on the price of our common stock.

Year Ended December 31, 2004 Compared with the Year Ended December 31, 2003

Collaborative and other research and development revenues decreased in 2004 to $337,000 compared to $653,000 in the same period last year, primarily due to a payment in 2003 from 3-Dimensional Pharmaceuticals Inc. (“3DP”), a wholly-owned subsidiary of Johnson & Johnson, for certain rights related to complement system inhibitors discovered during the term of our collaborative research agreement. Our 2004 revenue was entirely related to grants from the National Institutes of Health (“NIH”) for support of our hepatitis C and tissue factor programs, while for 2003 our revenue included only $153,000 from the NIH.

Research and development expenses increased 63.8% to $18,868,000 for 2004 from $11,522,000 in 2003. The increase in expenses during 2004 was directly related to contract and clinical costs associated with the development of both of our lead drug candidates during 2004. These costs primarily consisted of manufacturing, toxicology, clinical development and regulatory affairs charges, which were essential to the continuing development of these programs.

General and administrative expenses increased 14.2% to $3,212,000 in 2004 from $2,812,000 in 2003, primarily due to an increase in consulting and professional fees related to compliance with section 404 of the Sarbanes-Oxley Act of 2002 and for the strategic development of our lead drug candidate.

Interest income for 2004 was $648,000, a 33.9% decrease compared to $980,000 in 2003. This decrease was due to a lower interest rate environment in 2004.

The net loss for the year ended December 31, 2004 was $21,104,000, or $1.00 per share, compared to a net loss of $12,700,000, or $0.72 per share in 2003.

Year Ended December 31, 2003 Compared with the Year Ended December 31, 2002

Collaborative and other research and development revenues increased in 2003 to $653,000 compared to $0 in the same period of the prior year, primarily due to a payment from 3DP for certain rights related to complement system inhibitors discovered during the term of our collaborative research agreement. In addition, our revenues include $153,000 from the NIH related to the $300,000 first year grant received during 2003 for our hepatitis C inhibitor program.

Research and development expenses decreased 25.5% to $11,522,000 for 2003 from $15,473,000 in 2002. The decrease in expenses during 2003 was primarily due to the costs incurred by BioCryst during 2002 to complete a Phase III clinical trial for peramivir, a drug candidate that was discontinued in June 2002. In addition, personnel costs were 34% lower during 2003 as a result of the reduction in our staff following the termination of the peramivir program.

General and administrative expenses decreased slightly to $2,812,000 in 2003 from $2,856,000 in 2002. In addition, as a result of the termination of the peramivir program effective June 25, 2002, we recorded a non-cash impairment loss of $373,900 in 2002 related to the influenza patents. There were no impairment charges recorded in 2003.

Interest income for 2003 was $980,000, a 44.8% decrease compared to $1,775,000 in 2002. This decrease was due to a reduction in cash and a lower interest rate environment in 2003.

The net loss for the year ended December 31, 2003 was $12,700,000, or $0.72 per share, compared to a net loss of $16,929,000, or $0.96 per share in 2002.

Liquidity and Capital Resources

Cash expenditures have exceeded revenues since the Company's inception. Our operations have principally been funded through public offerings and private placements of equity and debt securities. For example, during February 2004, we raised $21.4 million (approximately $20.3 million net of expenses) through the sale of 3,571,667 shares of our common stock. Other sources of funding have included the following:

- equipment lease financing,
- facility leases,
- collaborative and other research and development agreements (including licenses and options for licenses),
- research grants and
- interest income.

In addition, we have attempted to contain costs and reduce cash flow requirements by renting scientific equipment and facilities, contracting with other parties to conduct certain research and development and using consultants. We expect to incur additional expenses, potentially resulting in significant losses, as we continue to pursue our research and development activities and undertake additional preclinical studies and clinical trials of compounds which have been or may be discovered. We also expect to incur substantial expenses related to the filing, prosecution, maintenance, defense and enforcement of patent and other intellectual property claims.

The Company invests its excess cash principally in U.S. marketable securities from a diversified portfolio of institutions with strong credit ratings and in U.S. government and agency bills and notes, and by policy, limits the amount of credit exposure at any one institution. These investments are generally not collateralized and mature within three years. The Company has not realized any losses from such investments. In addition, at December 31, 2004, approximately $6.6 million was invested in the Merrill Lynch Premier Institutional Fund, which invests primarily in commercial paper, U.S. government and agency bills and notes, corporate notes, certificates of deposit and time deposits. The Merrill Lynch Premier Institutional Fund is not insured. At December 31, 2004, our cash, cash equivalents and securities held-to-maturity were $28.7 million, which included $2.1 million in certificates of deposit at two financial institutions.

We have financed some of our equipment purchases with lease lines of credit. In July 2000, we renegotiated our lease for our current facilities, which will expire on June 30, 2010. We have an option to renew the lease for an additional five years at the current market rate in effect on June 30, 2010 and a one-time option to terminate the lease on June 30, 2008 for a termination fee of approximately $124,000. The lease, as amended effective July 1, 2001 for an additional 7,200 square feet, requires us to pay monthly rent starting at $33,145 per month in July 2001 and escalating annually to a minimum of $47,437 per month in the final year, plus our pro rata share of operating expenses and real estate taxes in excess of base year amounts. As part of the lease, we have deposited a U.S. Treasury security in escrow for the payment of rent and performance of other obligations specified in the lease. This pledged amount is currently $265,000, which can be decreased by $65,000 annually throughout the term of the lease. Currently, we have approximately 14,000 square feet of space available for sublease, of which 3,600 square feet are currently being leased.

We have not incurred any significant charges related to new equipment or building renovations since 2001 and currently have no plans for any significant additional purchases or renovations.

At December 31, 2004, we had long-term operating lease obligations, which provide for aggregate minimum payments of $622,105 in 2005, $580,027 in 2006 and $535,746 in 2007. These obligations include the future rental of our operating facility.

We plan to finance our needs principally from the following:

- our existing capital resources and interest earned on that capital;
- payments under collaborative and licensing agreements with corporate partners; and
- lease or loan financing and future public or private financing.

We believe that our available funds will be sufficient to fund our operations at least through 2006. However, this is a forward looking statement, and there may be changes that would consume available resources significantly before such time. Our long-term capital requirements and the adequacy of our available funds will depend upon many factors, including:

- the progress of our research, drug discovery and development programs;
- changes in existing collaborative relationships;
- our ability to establish additional collaborative relationships;
- the magnitude of our research and development programs;
- the scope and results of preclinical studies and clinical trials to identify drug candidates;
- competitive and technological advances;
- the time and costs involved in obtaining regulatory approvals;
- the costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims;
- our dependence on others for development and commercialization of our product candidates, and
- successful commercialization of our products consistent with our licensing strategy.

In 2004, our operations consumed approximately $1,500,000 per month, but we expect that our monthly cash used by operations will continue to increase for the next several years. During 2005, we plan to both expand our existing clinical programs and initiate clinical programs for several new disease indications. These additional trials and the related manufacturing, personnel resources and testing required to support these studies will consume significant capital resources and significantly increase our expenses and our net loss. As of December 31, 2004, we had $28.7 million in cash, cash equivalents and securities. We raised an additional $23.9 million gross (approximately $22.7 million net of expenses) of capital during February 2005 to provide the resources necessary to continue the development of our existing programs, while prudently maintaining our cash position. We expect our monthly burn rate to increase to approximately $2 million during 2005, as our lead candidates advance through the clinical trials planned for 2005. This monthly burn rate could increase more as the year progresses and in future years depending on many factors, including our ability to raise additional capital, the progress of our current and proposed clinical trials for both forodesine and BCX-4208, and the progression of our discovery programs.

We will be required to raise additional capital to complete the development and commercialization of our current product candidates. Additional funding, whether through additional sales of securities or collaborative or other arrangements with corporate partners or from other sources, may not be available when needed or on terms acceptable to us. The issuance of preferred or common stock or convertible securities, with terms and prices significantly more favorable than those of the currently outstanding common stock, could have the effect of diluting or adversely affecting the holdings or rights of our existing stockholders. In addition, collaborative arrangements may require us to transfer certain material rights to such corporate partners. Insufficient funds may require us to delay, scale-back or eliminate certain of our research and development programs.

Off-Balance Sheet Arrangements

As part of our ongoing business, we do not participate in transactions that generate relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities ("SPEs"), which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. As of December 31, 2004, we are not involved in any material unconsolidated SPE or off-balance sheet arrangements.

Contractual Obligations

In the table below, we set forth our enforceable and legally binding obligations and future commitments and obligations related to all contracts that we are likely to continue regardless of the fact that they are cancelable as of December 31, 2004. Some of the amounts we include in this table are based on management's estimates and assumptions about these obligations, including their duration, the possibility of renewal, anticipated actions by third parties, and other factors. Because these estimates and assumptions are necessarily subjective, the obligations we will actually pay in future periods may vary from those reflected in the table.

	Payments due by period				
Contractual Obligations	**Total**	**Less than 1 year**	**1-3 years**	**3-5 years**	**More than 5 years**
Operating Lease Obligations	$ 3,129,232	$ 622,105	$ 1,661,553	$ 845,574	$ 0
Purchase Obligations (1)	8,016,511	6,680,261	736,250	600,000	0
Other Long-Term Liabilities Reflected on the Company's Balance Sheet Under GAAP	300,000	0	0	0	300,000
Total	$ 11,445,743	$ 7,302,366	$ 2,397,803	$ 1,445,574	$ 300,000

(1) Purchase obligations include commitments related to clinical development, manufacturing and research operations and other significant purchase commitments.

Critical Accounting Policies

We have established various accounting policies that govern the application of accounting principles generally accepted in the United States, which were utilized in the preparation of our financial statements. Certain accounting policies involve significant judgments and assumptions by management that have a material impact on the carrying value of certain assets and liabilities; management considers such accounting policies to be critical accounting policies. The judgments and assumptions used by management are based on historical experience and other factors, which are believed to be reasonable under the circumstances. Because of the nature of the judgments and assumptions made by management, actual results could differ from these judgments and estimates, which could have a material impact on the carrying values of assets and liabilities and the results of operations.

We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our financial statements.

Revenue Recognition

The Company recognizes revenue in accordance with SAB No. 104. Research and development revenue on cost-reimbursement agreements is recognized as expenses are incurred, up to contractual limits. Research and development fees, license fees and milestone payments are recognized as revenue when the earnings process is complete, the Company has no further continuing performance obligations and has completed its performance under the terms of the agreement, in accordance with SAB No. 104. License fees and milestone payments received under licensing agreements that are related to future performance are deferred and recognized as earned over the estimated drug development period. Revisions to revenue or profit estimates as a result of changes in the estimated drug development period are recognized prospectively.

Valuation of Financial Instruments

We carry our held-to-maturity securities at amortized cost, as adjusted for other-than-temporary declines in market value. In determining if and when a decline in market value below amortized cost is other-than-temporary, we evaluate the market conditions and other key measures for our held-to-maturity investments. Future adverse changes in market conditions could result in losses or an inability to recover the carrying value of the held-to-maturity investments that may not be reflected in an investment's current carrying value, thereby possibly requiring an impairment charge in the future. We have not incurred any other-than-temporary declines in market value that would require an impairment charge.

Deferred Taxes

We have not had taxable income since incorporation and, therefore, we have not paid any income tax. We have deferred tax assets related to net operating loss carryforwards and research and development credit carryforwards, and have recorded a valuation allowance to reduce our deferred tax assets to the amount that is more likely than not to be realized. While we have considered future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for the valuation allowance, in the event we were to determine that we would be able to realize the deferred tax assets in the future in excess of the net recorded amount, an adjustment to the deferred tax asset would increase income in the period such determination was made. Likewise, should we determine that we would not be able to realize all or part of the net deferred tax asset in the future, an adjustment to the deferred tax asset would be charged to income in the period such determination was made. For the current year, the Company has recorded a valuation allowance equivalent to the amount of deferred tax assets.

Patents and Licenses

Patents and licenses are recorded at cost and amortized on a straight-line basis over their estimated useful lives or 20 years, whichever is lesser. These costs are reviewed periodically in accordance with Statement of Financial Accounting Standards No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets* to determine any impairment that needs to be recognized. For 2004, we recognized an impairment charge of $8,339.

Research and Development Expenses

Major components of R&D expenses consist of personnel costs, including salaries and benefits, clinical, regulatory and toxicology services performed by contract research organizations (CRO's), materials and supplies, and overhead allocations consisting of various administrative and facilities related costs. We charge clinical and preclinical study costs to expense when incurred, consistent with Statement of Financial Accounting Standards No. 2, *Accounting for Research and Development Costs*. These costs are a significant component of R&D expenses. Most of our clinical and preclinical studies are performed by third-party CRO's. We accrue costs for studies performed by CRO's over the service periods specified in the contracts and adjust our estimates, if required, based upon our on-going review of the level of services actually performed by the CRO.

Risk Factors

An investment in our stock involves a high degree of risk. You should consider carefully the following risks, along with all of the other information included in our other filings with the Securities and Exchange Commission, before deciding to buy our common stock. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial may also impair our business operations. If we are unable to prevent events that have a negative effect from occurring, then our business may suffer. Negative events are likely to decrease our revenue, increase our costs, make our financial results poorer and/or decrease our financial strength, and may cause our stock price to decline. In that case, you may lose all or a part of your investment in our common stock.

Risks Relating to Our Business

We have incurred substantial losses since our inception in 1986, expect to continue to incur such losses and may never be profitable

Since our inception in 1986, we have not been profitable. We expect to incur additional losses for the foreseeable future, and our losses could increase as our research and development efforts progress. As of December 31, 2004, our accumulated deficit was approximately $125.8 million. To become profitable, we must successfully develop drug candidates, enter into profitable agreements with other parties and our drug candidates must receive regulatory approval. We or these other parties must then successfully manufacture and market our drug candidates. It could be several years, if ever, before we receive royalties from any future license agreements or revenues directly from product sales.

If we fail to obtain additional financing, we may be unable to complete the development and commercialization of our product candidates or continue our research and development programs.

To date, we have financed our operations primarily from sale of our equity securities and, to a lesser extent, revenues from collaborations and interest. In 2004, our operations consumed approximately $1,500,000 per month, but we expect that our monthly cash used by operations will continue to increase for the next several years. During 2005, we plan to both expand our existing clinical programs and initiate clinical programs for several new disease indications. These additional trials and the related manufacturing, personnel resources and testing required to support these studies will consume significant capital resources and significantly increase our expenses and our net loss.

As of December 31, 2004, we had $28.7 million in cash, cash equivalents and securities. We raised an additional $23.9 million gross (approximately $22.7 million net of expenses) of capital during February 2005 to provide the resources necessary to continue the development of our existing programs, while prudently maintaining our cash position. We expect our monthly burn rate to increase to approximately $2 million during 2005, as our lead candidates advance through the clinical trials planned for 2005. This monthly burn rate could increase more as the year progresses and in future years depending on many factors, including our ability to raise additional capital, the progress of our current and proposed clinical trials for both forodesine and BCX-4208, and the progression of our discovery programs. Our long-term capital requirements and the adequacy of our available funds will depend upon many factors, including:

- the progress of our research, drug discovery and development programs;
- changes in existing collaborative relationships;
- our ability to establish additional collaborative relationships;
- the magnitude of our research and development programs;
- the scope and results of preclinical studies and clinical trials to identify drug candidates;
- competitive and technological advances;
- the time and costs involved in obtaining regulatory approvals;
- the costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims;

- our dependence on others for development and commercialization of our product candidates; and
- successful commercialization of our products consistent with our licensing strategy.

We will be required to raise additional capital to complete the development and commercialization of our current product candidates. Additional funding, whether through additional sales of securities or collaborative or other arrangements with corporate partners or from other sources, may not be available when needed or on terms acceptable to us. The issuance of preferred or common stock or convertible securities, with terms and prices significantly more favorable than those of the currently outstanding common stock, could have the effect of diluting or adversely affecting the holdings or rights of our existing stockholders. In addition, collaborative arrangements may require us to transfer certain material rights to such corporate partners. Insufficient funds may require us to delay, scale-back or eliminate certain of our research and development programs.

We have not commercialized any products or technologies and our future revenue generation is uncertain

We have not yet commercialized any products or technologies, and we may never be able to do so. Our revenue from collaborative agreements is dependent upon the status of our preclinical and clinical programs. If we fail to advance these programs to the point of being able to enter into successful collaborations, we will not receive any future milestone or other collaborative payments.

Any future revenue directly from product sales would depend on our ability to successfully complete clinical studies, obtain regulatory approvals, manufacture, market and commercialize any approved drugs.

If our development collaborations with other parties fail, the development of our drug candidates will be delayed or stopped

We rely heavily upon other parties for many important stages of our drug development programs, including:

- discovery of proteins that cause or enable biological reactions necessary for the progression of the disease or disorder, called enzyme targets;
- licensing or design of enzyme inhibitors for development as drug candidates;
- execution of some preclinical studies and late-stage development for our compounds and drug candidates;
- management of our clinical trials, including medical monitoring and data management;
- management of our regulatory function; and
- manufacturing, sales, marketing and distribution of our drug candidates.

Our failure to engage in successful collaborations at any one of these stages would greatly impact our business. If we do not license enzyme targets or inhibitors from academic institutions or from other biotechnology companies on acceptable terms, our product development efforts would suffer. Similarly, if the contract research organizations that conduct our initial or late-stage clinical trials or manage our regulatory function breached their obligations to us, this would delay or prevent the development of our drug candidates.

Even more critical to our success is our ability to enter into successful collaborations for the late-stage clinical development, regulatory approval, manufacturing, marketing, sales and distribution of our drug candidates. Our general strategy is to rely upon other parties for all of these steps so that we can focus exclusively on the key areas of our expertise. For some smaller niche markets, we may perform these steps ourselves and outsource those functions where we do not have the internal expertise. This heavy reliance upon third parties for these critical functions presents several risks, including:

- these contracts may expire or the other parties to the contract may terminate them;
- our partners may choose to pursue alternative technologies, including those of our competitors;
- we may have disputes with a partner that could lead to litigation or arbitration;
- our partners may not devote sufficient capital or resources towards our drug candidates;
- our partners may not comply with applicable government regulatory requirements; and
- our manufacturing partners may not be able to manufacture our compounds in the quantities required or to the specifications required by the regulatory authorities.

Any problems encountered with our current or future partners could delay or prevent the development of our compounds, which would severely affect our business, because if our compounds do not reach the market in a timely manner, or at all, we may never receive any milestone, product or royalty payments.

If the clinical trials of our drug candidates fail, our drug candidates will not be marketed, which would result in a complete absence of product related revenue

To receive the regulatory approvals necessary for the sale of our drug candidates, we or our licensees must demonstrate through preclinical studies and clinical trials that each drug candidate is safe and effective. If we or our licensees are unable to demonstrate that our drug candidates are safe and effective, our drug candidates will not receive regulatory approval and will not be marketed, which would result in a complete absence of product related revenue. The clinical trial process is complex and uncertain. Because of the cost and duration of clinical trials, we may decide to discontinue development of product candidates that are either unlikely to show good results in the trials or unlikely to help advance a product to the point of a meaningful collaboration. Positive results from preclinical studies and early clinical trials do not ensure positive results in clinical trials designed to permit application for regulatory approval, called pivotal clinical trials. We may suffer significant setbacks in pivotal clinical trials, even after earlier clinical trials show promising results. Any of our drug candidates may produce undesirable side effects in humans. These side effects could cause us or regulatory authorities to interrupt, delay or halt clinical trials of a drug candidate. These side effects could also result in the FDA or foreign regulatory authorities refusing to approve the drug candidate for any targeted indications. We, our licensees, the FDA or foreign regulatory authorities may suspend or terminate clinical trials at any time if we or they believe the trial participants face unacceptable health risks. Clinical trials may fail to demonstrate that our drug candidates are safe or effective.

Clinical trials are lengthy and expensive. We or our licensees incur substantial expense for, and devote significant time to, preclinical testing and clinical trials, yet cannot be certain that the tests and trials will ever result in the commercial sale of a product. For example, clinical trials require adequate supplies of drug and sufficient patient enrollment. Delays in patient enrollment can result in increased costs and longer development times. Even if we or our licensees successfully complete clinical trials for our product candidates, we or our licensees might not file the required regulatory submissions in a timely manner and may not receive regulatory approval for the drug candidate.

If we or our licensees do not obtain and maintain governmental approvals for our products under development, we or our partners will not be able to sell these potential products, which would significantly harm our business because we will receive no revenue

We or our licensees must obtain regulatory approval before marketing or selling our future drug products. If we or our licensees are unable to receive regulatory approval and do not market or sell our future drug products, we will never receive any revenue from such product sales. In the United States, we or our partners must obtain FDA approval for each drug that we intend to commercialize. The FDA approval process is typically lengthy and expensive, and approval is never certain. Products distributed abroad are also subject to foreign government regulation. The FDA or foreign regulatory agencies have not approved any of our drug candidates. If we or our licensees fail to obtain regulatory approval we will be unable to market and sell our future drug products. We have several drug products in various stages of preclinical and clinical development; however, we are unable to determine when, if ever, any of these products will be commercially available. Because of the risks and uncertainties in biopharmaceutical development, our drug candidates could take a significantly longer time to gain regulatory approval than we expect or may never gain approval.

If the FDA delays regulatory approval of our drug candidates, our management's credibility, our company's value and our operating results may suffer. Even if the FDA or foreign regulatory agencies approve a drug candidate, the approval may limit the indicated uses for a drug candidate and/or may require post-marketing studies.

The FDA regulates, among other things, the record keeping and storage of data pertaining to potential pharmaceutical products. We currently store most of our preclinical research data at our facility. While we do store duplicate copies of most of our clinical data offsite, we could lose important preclinical data if our facility incurs damage. If we get approval to market our potential products, whether in the United States or internationally, we will continue to be subject to extensive regulatory requirements. These requirements are wide ranging and govern, among other things:

- adverse drug experience reporting regulations;
- product promotion;
- product manufacturing, including good manufacturing practice requirements; and
- product changes or modifications.

Our failure to comply with existing or future regulatory requirements, or our loss of, or changes to, previously obtained approvals, could have a material adverse effect on our business because we will not receive product or royalty revenues if we or our licensees do not receive approval of our products for marketing.

In June 1995, we notified the FDA that we submitted incorrect data for our Phase II studies of BCX-34 applied to the skin for cutaneous T-cell lymphoma and psoriasis. The FDA inspected us in November 1995 and issued us a List of Inspectional Observations, Form FDA 483, which cited our failure to follow good clinical practices. The FDA also inspected us in June 1996. The focus was on the two 1995 Phase II dose-ranging studies of topical BCX-34 for the treatment of cutaneous T-cell lymphoma and psoriasis. As a result of the investigation, the FDA issued us a Form FDA 483, which cited our failure to follow good clinical practices. We are no longer developing BCX-34; however, as a consequence of these two investigations, our ongoing and future clinical studies may receive increased scrutiny, which may delay the regulatory review process.

We may be unable to establish sales, marketing and distribution capabilities necessary to successfully commercialize products we may successfully develop

We currently have no marketing capability and no direct or third-party sales or distribution capabilities. If we successfully develop a drug candidate and decide to commercialize it ourselves rather than relying on third parties, as we currently intend to do in the United States for forodesine hydrochloride, we may be unable to establish marketing, sales and distribution capabilities necessary to commercialize and gain market acceptance for that product.

If our drug candidates do not achieve broad market acceptance, our business may never become profitable

Our drug candidates may not gain the market acceptance required for us to be profitable even if they successfully complete initial and final clinical trials and receive approval for sale by the FDA or foreign regulatory agencies. The degree of market acceptance of any drug candidates that we or our partners develop will depend on a number of factors, including:

- cost-effectiveness of our drug candidates;
- their safety and effectiveness relative to alternative treatments;
- reimbursement policies of government and third-party payers; and
- marketing and distribution support for our drug candidates.

Physicians, patients, payers or the medical community in general may not accept or use our drug candidates even after the FDA or foreign regulatory agencies approve the drug candidates. If our drug candidates do not achieve significant market acceptance, we will not have enough revenues to become profitable.

We face intense competition, and if we are unable to compete effectively, the demand for our products, if any, may be reduced

The biotechnology and pharmaceutical industries are highly competitive and subject to rapid and substantial technological change. We face, and will continue to face, competition in the licensing of desirable disease targets, licensing of desirable drug candidates, and development and marketing of our product candidates from academic institutions, government agencies, research institutions and biotechnology and pharmaceutical companies. Competition may also arise from, among other things:

- other drug development technologies;
- methods of preventing or reducing the incidence of disease, including vaccines; and
- new small molecule or other classes of therapeutic agents.

Developments by others may render our product candidates or technologies obsolete or noncompetitive.

We are performing research on or developing products for the treatment of several disorders including T-cell mediated disorders (T-cell cancers, psoriasis, and rheumatoid arthritis), cardiovascular, oncology, and hepatitis C, and there are a number of competitors to products in our research pipeline. If one or more of our competitors' products or programs are successful, the market for our products may be reduced or eliminated.

Compared to us, many of our competitors and potential competitors have substantially greater:

- capital resources;
- research and development resources, including personnel and technology;
- regulatory experience;
- preclinical study and clinical testing experience;
- manufacturing and marketing experience; and
- production facilities.

Any of these competitive factors could reduce demand for our products.

If we fail to adequately protect or enforce our intellectual property rights or secure rights to patents of others, the value of those rights would diminish

Our success will depend in part on our ability and the abilities of our licensors to obtain patent protection for our products, methods, processes and other technologies to preserve our trade secrets, and to operate without infringing the proprietary rights of third parties. If we or our partners are unable to adequately protect or enforce our intellectual property rights for our products, methods, processes and other technologies, the value of the drug candidates that we license to derive revenue would diminish. Additionally, if our products, methods, processes and other technologies infringe the proprietary rights of other parties, we could incur substantial costs. The U.S. Patent and Trademark Office has issued to us a number of U.S. patents for our various inventions and we have in-licensed several patents from various institutions. We have filed additional patent applications and provisional patent applications with the U.S. Patent and Trademark Office. We have filed a number of corresponding foreign patent applications and intend to file additional foreign and U.S. patent applications, as appropriate. We cannot assure you as to:

- the degree and range of protection any patents will afford against competitors with similar products;
- if and when patents will issue; or
- whether or not others will obtain patents claiming aspects similar to those covered by our patent applications.

If the U.S. Patent and Trademark Office upholds patents issued to others or if the U.S. Patent and Trademark Office grants patent applications filed by others, we may have to:

- obtain licenses or redesign our products or processes to avoid infringement;
- stop using the subject matter claimed in those patents; or
- pay damages.

We may initiate, or others may bring against us, litigation or administrative proceedings related to intellectual property rights, including proceedings before the U.S. Patent and Trademark Office. Any judgment adverse to us in any litigation or other proceeding arising in connection with a patent or patent application could materially and adversely affect our business, financial condition and results of operations. In addition, the costs of any such proceeding may be substantial whether or not we are successful.

Our success is also dependent upon the skills, knowledge and experience, none of which is patentable, of our scientific and technical personnel. To help protect our rights, we require all employees, consultants, advisors and collaborators to enter into confidentiality agreements that prohibit the disclosure of confidential information to anyone outside of our company and require disclosure and assignment to us of their ideas, developments, discoveries and inventions. These agreements may not provide adequate protection for our trade secrets, know-how or other proprietary information in the event of any unauthorized use or disclosure or the lawful development by others of such information, and if any of our proprietary information is disclosed, our business will suffer because our revenues depend upon our ability to license our technology and any such events would significantly impair the value of such a license.

If we fail to retain our existing key personnel or fail to attract and retain additional key personnel, the development of our drug candidates and the expansion of our business will be delayed or stopped

We are highly dependent upon our senior management and scientific team, the loss of whose services might impede the achievement of our development and commercial objectives. Competition for key personnel with the experience that we require is intense and is expected to continue to increase. Our inability to attract and retain the required number of skilled and experienced management, operational and scientific personnel, will harm our business because we rely upon these personnel for many critical functions of our business. In addition, we rely on members of our scientific advisory board and consultants to assist us in formulating our research and development strategy. All of the members of the scientific advisory board and all of our consultants are otherwise employed and each such member or consultant may have commitments to other entities that may limit their availability to us.

If users of our drug products are not reimbursed for use, future sales of our drug products will decline

The lack of reimbursement for the use of our product candidates by hospitals, clinics, patients or doctors will harm our business. Medicare, Medicaid, health maintenance organizations and other third-party payers may not authorize or otherwise budget for the reimbursement of our products. Governmental and third-party payers are increasingly challenging the prices charged for medical products and services. We cannot be sure that third-party payers would view our product candidates as cost-effective, that reimbursement will be available to consumers or that reimbursement will be sufficient to allow our product candidates to be marketed on a competitive basis. Changes in reimbursement policies, or attempts to contain costs in the health care industry could limit or restrict reimbursement for our product candidates and would materially and adversely affect our business, because future product sales would decline and we would receive less product or royalty revenue.

If we face clinical trial liability claims related to the use or misuse of our compounds in clinical trials, our management's time will be diverted and we will incur litigation costs

We face an inherent business risk of liability claims in the event that the use or misuse of our compounds results in personal injury or death. We have not experienced any clinical trial liability claims to date, but we may experience these claims in the future. After commercial introduction of our products we may experience losses due to product liability claims. We currently maintain clinical trial liability insurance coverage in the amount of $5.0 million per occurrence and $5.0 million in the aggregate, with an additional $2.0 million potentially available under our umbrella policy. The insurance policy may not be sufficient to cover claims that may be made against us. Clinical trial liability insurance may not be available in the future on acceptable terms, if at all. Any claims against us, regardless of their merit, could materially and adversely affect our financial condition, because litigation related to these claims would strain our financial resources in addition to consuming the time and attention of our management.

If our computer systems fail, our business will suffer

Our drug development activities depend on the security, integrity and performance of the computer systems supporting them, and the failure of our computer systems could delay our drug development efforts. We currently store most of our preclinical and clinical data at our facility. Duplicate copies of most critical data are stored off-site in a bank vault. Any significant degradation or failure of our computer systems could cause us to inaccurately calculate or lose our data. Loss of data could result in significant delays in our drug development process and any system failure could harm our business and operations.

If, because of our use of hazardous materials, we violate any environmental controls or regulations that apply to such materials, we may incur substantial costs and expenses in our remediation efforts

Our research and development involves the controlled use of hazardous materials, chemicals and various radioactive compounds. We are subject to federal, state and local laws and regulations governing the use, storage, handling and disposal of these materials and some waste products. Accidental contamination or injury from these materials could occur. In the event of an accident, we could be liable for any damages that result and any liabilities could exceed our resources. Compliance with environmental laws and regulations could require us to incur substantial unexpected costs, which would materially and adversely affect our results of operations.

Risks Relating to Our Common Stock

Our stock price is likely to be highly volatile and the value of your investment could decline significantly

The market prices for securities of biotechnology companies in general have been highly volatile and may continue to be highly volatile in the future. Moreover, our stock price has fluctuated frequently, and these fluctuations are often not related to our financial results. For the twelve months ended December 31, 2004, the 52-week range of the market price of our stock was from $4.37 to $11.25 per share. The following factors, in addition to other risk factors described in this section, may have a significant impact on the market price of our common stock:

- announcements of technological innovations or new products by us or our competitors;
- developments or disputes concerning patents or proprietary rights;
- status of new or existing licensing or collaborative agreements;
- we or our licensees achieving or failing to achieve development milestones;
- publicity regarding actual or potential medical results relating to products under development by us or our competitors;
- regulatory developments in both the United States and foreign countries;
- public concern as to the safety of pharmaceutical products;

- actual or anticipated fluctuations in our operating results;
- changes in financial estimates or recommendations by securities analysts;
- economic and other external factors or other disasters or crises; and
- period-to-period fluctuations in our financial results.

Because stock ownership is concentrated, you and other investors will have minimal influence on stockholder decisions

As of December 31, 2004, our directors, executive officers and some principal stockholders and their affiliates beneficially owned approximately 35.9% (directors and officers, together with their relevant affiliates owned 30.2%) of our outstanding common stock and common stock equivalents. As a result, these holders, if acting together, are able to significantly influence matters requiring stockholder approval, including the election of directors. This concentration of ownership may delay, defer or prevent a change in our control.

We have anti-takeover provisions in our corporate charter documents that may result in outcomes with which you do not agree

Our board of directors has the authority to issue up to 3,178,500 shares of undesignated preferred stock and to determine the rights, preferences, privileges and restrictions of those shares without further vote or action by our stockholders. The rights of the holders of any preferred stock that may be issued in the future may adversely affect the rights of the holders of common stock. The issuance of preferred stock could make it more difficult for third parties to acquire a majority of our outstanding voting stock.

In addition, our certificate of incorporation provides for staggered terms for the members of the board of directors and supermajority approval of the removal of any member of the board of directors and prevents our stockholders from acting by written consent. Our certificate also requires supermajority approval of any amendment of these provisions. These provisions and other provisions of our by-laws and of Delaware law applicable to us could delay or make more difficult a merger, tender offer or proxy contest involving us.

In June 2002, our board of directors adopted a stockholder rights plan and, pursuant thereto, issued preferred stock purchase rights (“Rights”) to the holders of our common stock. The Rights have certain anti-takeover effects. If triggered, the Rights would cause substantial dilution to a person or group of persons who acquires more than 15% (19.9% for William W. Featheringill, a Director who owned approximately 11% as of February 23, 2005, but owned more than 15% at the time the Rights were put in place) of our common stock on terms not approved by the board of directors.

We have never paid dividends on our common stock and do not anticipate doing so in the foreseeable future

We have never paid cash dividends on our stock. We currently intend to retain all future earnings, if any, for use in the operation of our business. Accordingly, we do not anticipate paying cash dividends on our common stock in the foreseeable future.

Information Regarding Forward-Looking Statements

This discussion contains forward-looking statements, which are subject to risks and uncertainties. These forward-looking statements can generally be identified by the use of words such as “may,” “will,” “intends,” “plans,” “believes,” “anticipates,” “expects,” “estimates,” “predicts,” “potential,” the negative of these words or similar expressions. Statements that describe our future plans, strategies, intentions, expectations, objectives, goals or prospects are also forward-looking statements. Discussions containing these forward-looking statements are principally contained in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” above, as well as any amendments we make to those sections in filings with the SEC.

These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties which may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Given these uncertainties, you should not place undue reliance on these forward-looking statements. We discuss many of these risks in greater detail in “Risk Factors.” Also, these forward-looking statements represent our estimates and assumptions only as of the date of this document.

You should read this discussion completely and with the understanding that our actual future results may be materially different from what we expect. We may not update these forward-looking statements, even though our situation may change in the future. We qualify all of our forward-looking statements by these cautionary statements.

7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

The primary objective of our investment activities is to preserve principal while maximizing the income we receive from our investments without significantly increasing our risk. We invest excess cash principally in U.S. marketable securities from a diversified portfolio of institutions with strong credit ratings and in U.S. government and agency bills and notes, and by policy, limit the amount of credit exposure at any one institution. Some of the securities we invest in may have market risk. This means that a change in prevailing interest rates may cause the principal amount of the investment to fluctuate. To minimize this risk, we schedule our investments to have maturities that coincide with our expected cash flow needs, thus avoiding the need to redeem an investment prior to its maturity date. Accordingly, we believe we have no material exposure to interest rate risk arising from our investments. Therefore, no quantitative tabular disclosure is provided.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

BALANCE SHEETS

	December 31,	
	2004	2003
Assets		
Cash and cash equivalents	$ 8,838,464	$ 8,348,003
Securities held-to-maturity	14,334,631	11,680,079
Prepaid expenses and other current assets	699,284	675,907
Total current assets	23,872,379	20,703,989
Securities held-to-maturity	5,530,452	5,704,399
Furniture and equipment, net	2,817,154	3,507,705
Patents and licenses, less accumulated amortization of $3,934 in 2004 and $955 in 2003	248,586	179,461
Total assets	$ 32,468,571	$ 30,095,554
Liabilities and Stockholders' Equity		
Accounts payable	$ 1,970,443	$ 640,349
Accrued expenses	563,961	467,690
Accrued vacation	299,955	240,372
Total current liabilities	2,834,359	1,348,411
Deferred revenue	300,000	300,000
Stockholders' equity:		
Preferred stock: shares authorized - 5,000,000		
Series A Convertible Preferred stock, $.01 par value; shares authorized - 1,800,000; shares issued and outstanding - none		
Series B Junior Participating Preferred stock, $.001 par value; shares authorized - 21,500; shares issued and outstanding - none		
Common stock, $.01 par value; shares authorized - 45,000,000; shares issued and outstanding - 21,758,287 - 2004; 17,871,289 - 2003	217,583	178,713
Additional paid-in capital	154,880,528	132,928,208
Accumulated deficit	(125,763,899)	(104,659,778)
Total stockholders' equity	29,334,212	28,447,143
Total liabilities and stockholders' equity	$ 32,468,571	$ 30,095,554

See accompanying notes to financial statements.

STATEMENTS OF OPERATIONS

	Years Ended December 31,		
	2004	2003	2002
Revenues:			
Collaborative and other research and development	$ 336,901	$ 653,255	$ —
Total revenues	336,901	653,255	—
Expenses:			
Research and development	18,868,112	11,521,982	15,473,491
General and administrative	3,212,316	2,811,605	2,855,804
Impairment of patents and licenses	8,339	—	373,900
Total expenses	22,088,767	14,333,587	18,703,195
Loss from operations	(21,751,866)	(13,680,332)	(18,703,195)
Interest and other income	647,745	980,249	1,774,524
Net loss	$ (21,104,121)	$ (12,700,083)	$ (16,928,671)
Basic and diluted net loss per common share:	$ (1.00)	$ (.72)	$ (.96)
Weighted average shares outstanding	21,165,311	17,703,441	17,642,746

See accompanying notes to financial statements.

STATEMENTS OF STOCKHOLDERS' EQUITY

	Common Stock	Additional Paid-in Capital	Accumulated Deficit	Total Stock-Holders' Equity
Balance at December 31, 2001	**$ 176,070**	**$ 131,668,665**	**$ (75,031,024)**	**$ 56,813,711**
Employee stock purchase plan sales, 50,127 shares	501	122,080	—	122,581
Stock-based compensation expense	—	120,190	—	120,190
Net loss	—	—	(16,928,671)	(16,928,671)
Balance at December 31, 2002	**176,571**	**131,910,935**	**(91,959,695)**	**40,127,811**
Exercise of stock options, 186,228 shares, net	1,862	877,198	—	879,060
Employee stock purchase plan sales, 27,964 shares	280	20,399	—	20,679
Stock-based compensation expense	—	119,676	—	119,676
Net loss	—	—	(12,700,083)	(12,700,083)
Balance at December 31, 2003	**178,713**	**132,928,208**	**(104,659,778)**	**28,447,143**
Sale of common stock, 3,571,667 shares	35,717	20,244,133	—	20,279,850
Exercise of stock options, 283,636 shares, net	2,836	1,077,500	—	1,080,336
Employee stock purchase plan sales, 31,695 shares	317	118,260	—	118,577
Stock-based compensation expense	—	512,427	—	512,427
Net loss	—	—	(21,104,121)	(21,104,121)
Balance at December 31, 2004	**$ 217,583**	**$ 154,880,528**	**$ (125,763,899)**	**$ 29,334,212**

See accompanying notes to financial statements.

STATEMENTS OF CASH FLOWS

	Years Ended December 31,		
	2004	2003	2002
Operating activities:			
Net loss	$ (21,104,121)	$ (12,700,083)	$ (16,928,671)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	966,470	1,101,311	1,246,417
Impairment of patents and licenses	8,339	—	373,900
Amortization of patents and licenses	2,979	202	201
Non-monetary compensation cost	512,427	119,676	120,190
Changes in operating assets and liabilities:			
Prepaid expenses and other current assets	(23,377)	(193,287)	(66,065)
Accounts payable	1,330,094	384,311	(361,548)
Accrued expenses	96,271	24,166	(688,769)
Accrued vacation	59,583	67,357	(59,710)
Net cash used in operating activities	**(18,151,335)**	**(11,196,347)**	**(16,364,055)**
Investing activities:			
Purchases of furniture and equipment	(275,919)	(51,729)	(407,880)
Purchases of patents and licenses	(80,443)	(82,140)	(128,599)
Purchases of marketable securities	(18,879,234)	(13,187,900)	(11,706,282)
Maturities of marketable securities	16,398,629	21,690,778	22,506,094
Net cash (used in) provided by investing activities	**(2,836,967)**	**8,369,009**	**10,263,333**
Financing activities:			
Sale of common stock, net of issuance costs	20,279,850	—	—
Exercise of stock options	1,080,336	879,060	—
Employee stock purchase plan stock sales	118,577	20,679	122,581
Net cash provided by financing activities	**21,478,763**	**899,739**	**122,581**
Increase (decrease) in cash and cash equivalents	490,461	(1,927,599)	(5,978,141)
Cash and equivalents at beginning of year	8,348,003	10,275,602	16,253,743
Cash and cash equivalents at end of year	**$ 8,838,464**	**$ 8,348,003**	**$ 10,275,602**

See accompanying notes to financial statements.

NOTES TO FINANCIAL STATEMENTS

Note 1 - Accounting Policies

The Company

BioCryst Pharmaceuticals, Inc., a Delaware corporation (the "Company"), is a biotechnology company focused on designing, optimizing and developing novel small molecule drugs that block key enzymes essential for cancer, cardiovascular and autoimmune diseases and viral infections. The Company has four research projects in different stages of development from early discovery to an ongoing Phase II trial of the Company's most advanced drug candidate, forodesine hydrochloride ("BCX-1777"). While the prospects for a project may increase as the project advances to the next stage of development, a project can be terminated at any stage of development. Until the Company generates revenues from either a research project or an approved product, its ability to continue research projects is dependent upon its ability to raise funds.

Cash and Cash Equivalents

The Company generally considers cash equivalents to be all cash held in money market accounts or investments in debt instruments with maturities of three months or less at the time of purchase in accordance with Statement of Financial Accounting Standards No. 95, *Statement of Cash Flows* ("Statement No. 95").

Securities Held-to-Maturity

The Company is required to classify debt and equity securities as held-to-maturity, available-for-sale or trading. The appropriateness of each classification is reassessed at each reporting date. As of December 31, 2004 and 2003, the Company classified all debt and equity securities as held-to-maturity. The only dispositions of securities classified as held-to-maturity related to actual maturities or securities called prior to their maturity. At December 31, 2004 and 2003, respectively, securities held-to-maturity totaling $19,865,083 and $17,384,478 consisted of U.S. Treasury and Agency securities carried at amortized cost totaling $17,775,804 and $13,791,523, respectively, and certificates of deposit from financial institutions totaling $2,089,279 and $3,592,955, respectively. All of the non-current portions of securities held-to-maturity are U.S. Agency securities that mature in 2006. The estimated fair value of all held-to-maturity securities at December 31, 2004 and 2003, respectively, was approximately $19,712,365 and $17,472,041. The Company has pledged $600,000 in securities to cover any future draw against its line of credit (see Note 5) and has deposited a U.S. Treasury security of $265,000 in escrow for the payment of rent and performance of other obligations specified in its lease dated July 12, 2000 (see Note 5). The amount deposited in escrow for the lease decreases $65,000 annually throughout the term of the lease.

Fair value of held-to-maturity investment securities are based on quoted, or other independent, market prices. While these securities have an unrealized loss position at December 31, 2004, management does not believe the loss represents an other-than-temporary impairment. The Company has the ability and the intent to hold the securities until maturity, at which time the cost of the investments will be recovered. These unrealized losses are mainly attributed to changes in interest rates and are individually less than one percent of their respective amortized cost.

Furniture and Equipment

Furniture and equipment are recorded at cost. Depreciation is computed using the straight-line method with estimated useful lives of five and seven years. Laboratory equipment, office equipment, leased equipment and software are depreciated over a life of five years. Furniture and fixtures are depreciated over a life of seven years. Leasehold improvements are amortized over the remaining lease period. The Company periodically reviews its furniture and fixtures for impairment in accordance with Statement of Financial Accounting Standards No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets* ("Statement No. 144"), to determine any impairment that needs to be recognized.

Patents and Licenses

Patents and licenses are recorded at cost and amortized on a straight-line basis over their estimated useful lives or 20 years, whichever is lesser. The Company periodically reviews its patents and licenses for impairment in accordance with Statement No. 144 to determine any impairment that needs to be recognized. During the quarter ended June 30, 2002, the Company abandoned the development of peramivir, its influenza neuraminidase inhibitor. As a result, the Company recognized an expense of $373,900 during the quarter ended June 30, 2002 related to the patents for the neuraminidase inhibitors, as they no longer have any readily determinable value to the Company.

Research and Development Expenses

Major components of R&D expenses consist of personnel costs, including salaries and benefits, clinical, regulatory and toxicology services performed by contract research organizations (CRO's), materials and supplies, and overhead allocations consisting of various administrative and facilities related costs. The Company charges clinical and preclinical study costs to expense when incurred, consistent with Statement of Financial Accounting Standards No. 2, *Accounting for Research and Development Costs* ("Statement No. 2"). These costs are a significant component of R&D expenses. Most of the Company's clinical and preclinical studies are performed by third-party CRO's. The Company accrues costs for studies performed by CRO's over the service periods specified in the contracts and adjust estimates, if required, based upon our on-going review of the level of services actually performed by the CRO.

Income Taxes

The liability method is used in accounting for income taxes in accordance with Statement of Financial Accounting Standards No. 109, *Accounting for Income Taxes* ("Statement No. 109"). Under this method, deferred tax assets and liabilities are determined based on differences between financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse.

Revenue Recognition

The Company recognizes revenue in accordance with SEC Staff Accounting Bulletin No. 104, *Revenue Recognition* ("SAB No. 104"). Research and development revenue on cost-reimbursement agreements is recognized as expenses are incurred, up to contractual limits. Research and development fees, license fees and milestone payments are recognized as revenue when the earnings process is complete, the Company has no further continuing performance obligations and has completed its performance under the terms of the agreement, in accordance with SAB No. 104. License fees and milestone payments received under licensing agreements that are related to future performance are deferred and recognized as earned over the estimated drug development period. Revisions to revenue or profit estimates as a result of changes in the estimated drug development period are recognized prospectively. The Company has not received any royalties from the sale of licensed pharmaceutical products.

Net Loss Per Share

The Company computes net loss per share in accordance with Statement of Financial Accounting Standards No. 128, *Earnings per Share* ("Statement No. 128"). Net loss per share is based upon the weighted average number of common shares outstanding during the period. Diluted loss per share includes common equivalent shares from unexercised stock options and shares expected to be issued under the Company's employee stock purchase plan. For all periods presented, diluted loss per share does not include the impact of potential common shares outstanding, as the impact of those shares is anti-dilutive.

Stock-Based Compensation

The Company accounts for stock-based compensation under Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees* ("APB No. 25"). Under APB No. 25, the Company's stock option and employee stock purchase plans qualify as noncompensatory plans. Under Financial Accounting Standards Board Interpretation No. 44, *Accounting for Certain Transactions involving Stock Compensation, an Interpretation of APB No. 25* ("FIN No. 44"), outside directors are considered employees for purposes of applying APB No. 25, if they are elected by the shareholders. Consequently, no compensation expense for employees and directors is recognized unless there has been a modification to their grants as was the case for the directors in May 2004, resulting in a recognized expense of $457,000 during 2004. Stock issued to non-employees is compensatory and compensation expense is recognized under Statement of Financial Accounting Standards No. 123, *Accounting for Stock-Based Compensation* ("Statement No. 123"), as amended by Statement of Financial Accounting Standards No. 148, *Accounting for Stock-Based Compensation-Transition and Disclosure* ("Statement No. 148").

The following table illustrates the pro forma effect on net loss and net loss per share had the Company applied the fair value recognition provisions of Statement No. 123 for the years ended December 31, 2004, 2003 and 2002. See Note 7 for the assumptions used to compute the pro forma amounts.

	2004	2003	2002
Net loss as reported	$ (21,104,121)	$ (12,700,083)	$ (16,928,671)
Add stock-based employee compensation expense included in reported net loss	512,427	119,676	120,190
Deduct total stock-based employee compensation expense determined under Statement No. 123	(2,260,551)	(2,178,781)	(1,922,788)
Pro forma net loss	$ (22,852,245)	$ (14,759,188)	$ (18,731,269)
Amounts per common share:			
Net loss per share, as reported	$ (1.00)	$ (.72)	$ (.96)
Pro forma net loss per share	$ (1.08)	$ (.83)	$ (1.06)

In December 2004, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards No. 123(R), *Share-Based Payment* ("Statement No. 123R"), which is a revision of Statement No. 123 and supersedes APB No. 25. The Statement addresses the accounting for transactions in which an enterprise receives employee services in exchange for (a) equity instruments of the enterprise or (b) liabilities that are based on the fair value of the enterprise's equity instruments or that may be settled by the issuance of such equity instruments. The Statement eliminates the ability to account for share-based compensation transactions using APB No. 25, and generally would require instead that such transactions be accounted for using a grant date fair-value based method. Companies will now be required to recognize an expense for compensation cost related to share-based payment arrangements including stock options and employee stock purchase plans. The new rules will be applied on a modified prospective basis as defined in Statement No. 123R, and would be effective for public companies as of the beginning of the first interim or annual reporting period that begins after June 15, 2005. The Company is currently evaluating option valuation methodologies and assumptions in light of Statement No. 123R and current estimates of option values using the Black-Scholes method (as shown above) may not be indicative of results from valuation methodologies ultimately adopted by the Company.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the financial statements. Examples include accrued clinical and preclinical expenses. Actual results could differ from those estimates.

Reclassifications

Certain amounts in the 2003 and 2002 financial statements have been reclassified to conform to the 2004 financial statement presentation. The changes had no effect on the results of operations previously reported.

Note 2 - Furniture and Equipment

Furniture and equipment consisted of the following at December 31:

	2004	2003
Furniture and fixtures	$ 330,677	$ 330,677
Office equipment	581,520	567,141
Software	489,873	490,037
Laboratory equipment	3,595,859	3,368,185
Leased equipment	62,712	62,712
Leasehold improvements	4,670,008	4,646,900
	9,730,649	9,465,652
Less accumulated depreciation and amortization	(6,913,495)	(5,957,947)
Furniture and equipment, net	$ 2,817,154	$ 3,507,705

Long-lived assets and certain identifiable intangible assets to be held and used are reviewed for impairment when events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. In the event that such cash flows are not expected to be sufficient to recover the carrying amount of the assets, the assets are written down to their estimated fair values. Long-lived assets and certain identifiable intangible assets to be disposed of are reported at the lower of carrying amount or fair value less cost to sell.

The Company has reviewed its furniture and equipment for possible impairment in accordance with Statement No. 144 for the year ended December 31, 2004. As a result, the Company recorded an impairment charge of $10,922 to write down some impaired assets to their estimated fair values. This charge, primarily related to laboratory equipment, has been charged to depreciation and amortization expense.

Note 3 - Concentration of Credit and Market Risk

The Company invests its excess cash principally in U.S. marketable securities from a diversified portfolio of institutions with strong credit ratings and in U.S. government and agency bills and notes and, by policy, limits the amount of credit exposure at any one institution. These investments are generally not collateralized and mature within less than three years. The Company has not realized any losses from such investments. At December 31, 2004, $6,589,931 was invested in the Merrill Lynch Premier Institutional Fund, which invests primarily in commercial paper, U.S. government and agency bills and notes, corporate notes, certificates of deposit and time deposits. The Merrill Lynch Premier Institutional Fund is not insured.

Note 4 - Accrued Expenses

Accrued expenses were comprised of the following at December 31:

	2004	2003
Accrued clinical trials	$ 330,920	$ 355,957
Accrued consulting	128,509	25,000
Stock purchase plan withholdings	54,476	49,195
Accrued other	50,056	37,538
Accrued expenses	$ 563,961	$ 467,690

Note 5 - Lease Obligations and Other Contingencies

The Company had an unused line of credit of $500,000 at December 31, 2004.

The Company has the following lease obligations at December 31, 2004:

	Operating Leases
2005	$ 622,105
2006	580,027
2007	535,746
2008	545,780
2009	560,952
Thereafter	284,622
Total minimum payments	$ 3,129,232

Rent expense for operating leases was $583,969, $603,996 and $651,506 in 2004, 2003 and 2002, respectively. The commitment for operating leases is primarily related to the building lease, which expires in June 2010. The lease, as amended effective July 1, 2001 for additional space, requires monthly rents of $33,145 beginning in July 2001 and escalating annually to a minimum of $47,437 per month in the final year. The Company has an option to renew the lease for an additional five years at the current market rate on the date of termination and a one-time option to terminate the lease on June 30, 2008, subject to a reasonable termination fee.

On August 5, 2002, at the request of the compensation committee, our Board of Directors approved a reduction in salary of 25% for Dr. Charles E. Bugg, Chairman and Chief Executive Officer and Dr. J. Claude Bennett, President, Chief Operating Officer and Medical Director, effective August 1, 2002. In the event of any change of control of the Company, any cumulative salary reductions up to the date of the change of control would become due and payable. The monthly amount of the reduction was $14,677 combined. On December 8, 2003, the Board of Directors approved the recommendation of the compensation committee to restore their salaries to their previous amounts effective January 1, 2004, leaving the cumulative reduction of $249,509 outstanding in the event of a change in control.

Note 6 - Income Taxes

The Company has not had taxable income since incorporation and, therefore, has not paid any income tax. Deferred tax assets of approximately $56,410,000 and $46,630,000 at December 31, 2004 and 2003, respectively, have been recognized principally for net operating loss and research and development credit carryforwards, and have been reduced by a valuation allowance of $56,410,000 and $46,630,000 at December 31, 2004 and 2003, respectively. The valuation allowance will remain at the full amount of the deferred tax asset until it is more likely than not that the related tax benefits will be realized.

At December 31, 2004, the Company had net operating loss and research and development credit carryforwards (“Carryforward Tax Benefits”) of approximately $114,100,000 and $12,300,000, respectively, which will expire at various dates beginning in 2005 and continuing through 2024. Use of the Carryforward Tax Benefits will be subject to a substantial annual limitation due to the change of ownership provisions of the Tax Reform Act of 1986. The annual limitation is expected to result in the expiration of a portion of the Carryforward Tax Benefits before utilization. The ownership change which occurred in 1996 has been considered by the Company in its computations under Statement No. 109. Due to recent stock issuances, it is possible that additional limitations could currently apply. The Company has not performed a detailed analysis to determine if an additional ownership change has occurred under the tax code or to determine its impact on its ability to use these net operating loss and research credit carryforwards. However, it is not anticipated that any such analysis would have a material impact on the balance sheet as a result of offsetting changes in the deferred tax valuation allowance.

Note 7 – Stockholders' Equity

On February 4, 2004, the Company entered into a Placement Agency Agreement with Leerink Swann & Company in connection with a registered direct offering of 3,571,667 shares of its common stock at an offering price of $6.00 per share. The common stock was issued pursuant to a prospectus supplement filed with the Securities and Exchange Commission pursuant to Rule 424(b)(2) of the Securities Act of 1933, as amended, the Securities Act, in connection with a shelf takedown from the Company's registration statement on Form S-3 (333-111226), filed on December 16, 2003 and which became effective on January 5, 2004.

On February 17, 2004, the Company entered into a Stock Purchase Agreement with Caduceus Private Investments II, LP, Caduceus Private Investments II (QP), LP and UBS Juniper Crossover Fund, L.L.C. As part of this agreement, the Company has granted these investors the right to appoint a member to its board of directors effective as of the closing of the offering. On February 18, 2004, the Company announced it had completed a $21.4 million registered direct offering of 3,571,667 shares of its common stock to a group of institutional investors.

In June 2002, the Board of Directors adopted a stockholder rights plan and, pursuant thereto, issued preferred stock purchase rights ("Rights") to the holders of our common stock. The Rights have certain anti-takeover effects. If triggered, the Rights would cause substantial dilution to a person or group of persons who acquires more than 15% (19.9% for William W. Featheringill, a Director who owned approximately 13% at December 31, 2004, but owned more than 15% at the time the Rights were put in place) of the Company's common stock on terms not approved by the Board of Directors. The rights are not exercisable until the distribution date, as defined in the Rights Agreement by and between the Company and American Stock Transfer & Trust Company, as Rights Agent. The Rights will expire at the close of business on June 24, 2012, unless that final expiration date is extended or unless the rights are earlier redeemed or exchanged by the Company.

Each Right entitles the registered holder to purchase from the Company one one-thousandth of a share of Series B Junior Participating Preferred Stock ("Series B"), par value $0.001 per share, at a purchase price of $26.00, subject to adjustment. Shares of Series B purchasable upon exercise of the Rights will not be redeemable. Each share of Series B will be entitled to a dividend of 1,000 times the dividend declared per share of common stock. In the event of liquidation, each share of Series B will be entitled to a payment of 1,000 times the payment made per share of common stock. Each share of Series B will have 1,000 votes, voting together with the common stock. Finally, in the event of any merger, consolidation, or other transaction in which shares of common stock are exchanged, each share of Series B will be entitled to receive 1,000 times the amount received per share of common stock.

In November 1991, the Board of Directors adopted the 1991 Stock Option Plan ("Plan") for key employees and consultants of the Company and reserved 500,000 shares of common stock for issuance under the Plan. The Plan was approved by the stockholders on December 19, 1991. The original term of the Plan was for ten years and included provisions for issuance of both incentive stock options and non-statutory options. The exercise price of options granted under the Plan shall not be less than the fair market value of common stock on the grant date. Options granted under the Plan generally vest 25% after one year and monthly thereafter on a pro rata basis over the next three years until fully vested after four years and expire ten years after the grant date. Options are generally granted to all full-time employees.

The Plan was amended and restated in February 1993 to effect the following changes: (i) divide the Plan into two separate incentive programs: the Discretionary Option Grant Program and the Automatic Option Grant Program (for outside Directors), (ii) increase the number of shares of the Company's common stock available for issuance under the Plan by 500,000 shares and (iii) expand the level of benefits available under the Plan. The Board amended the Plan on December 23, 1993 to increase the number of shares issuable under the Plan by 500,000 shares and subsequently amended and restated the Plan in its entirety on February 8, 1994. On March 16, 1995, the Board authorized another 500,000 shares for issuance under the Plan. The Plan was subsequently amended and restated effective March 3, 1997, which amendment and restatement included an increase of 1,000,000 shares. The Plan (as so amended and restated) was further amended March 1, 1999 to increase the share reserve by 400,000 shares. The Board amended and restated the Plan in its entirety on March 6, 2000, which increased the reserved shares by 1,200,000 and extended the term of the Plan for ten years from the date of the amendment. This restatement was approved by the Company's stockholders on May 17, 2000. The Plan was amended March 8, 2004 to increase the number of shares reserved for issuance by 1,000,000 and to amend the automatic option grant program related to initial grants, vesting and option terms. The automatic option grant program grants options to purchase 10,000 shares to new non-employee Board members, prorated from their initial appointment to the next Annual Meeting, and an additional 10,000 shares annually over such period of continued service all of which vest one-twelfth per month. Directors receiving options under the automatic option grant program will have the full term of the original option to exercise all options vested at the time of their cessation from service. This amendment was approved by the Company's stockholders on May 12, 2004. The vesting and exercise provisions of options granted under the Plan are subject to acceleration in the event of certain stockholder-approved transactions, or upon the occurrence of a Change in Control as defined by the Plan.

The following is an analysis of stock options for the three years ended December 31, 2004:

	Options Available	Options Outstanding	Weighted Average Exercise Price
Balance December 31, 2001	583,706	3,021,273	$ 9.43
Options granted	(443,735)	443,735	1.44
Options canceled	466,523	(466,523)	8.14
Balance December 31, 2002	606,494	2,998,485	8.45
Options granted	(546,000)	546,000	1.27
Options exercised	—	(186,228)	4.72
Options canceled	440,325	(440,325)	8.83
Balance December 31, 2003	500,819	2,917,932	7.29
Option plan amended	1,000,000	—	—
Options granted	(499,197)	499,197	8.76
Options exercised	—	(283,636)	3.81
Options canceled	34,149	(34,149)	4.10
Balance December 31, 2004	1,035,771	3,099,344	7.88

There were 2,220,583, 1,979,152 and 2,214,954 options exercisable at December 31, 2004, 2003 and 2002, respectively. The weighted-average exercise price for options exercisable was $8.94, $9.71 and $9.67 at December 31, 2004, 2003 and 2002, respectively.

The following table summarizes, at December 31, 2004, by price range: (1) for options outstanding, the number of options outstanding, their weighted-average remaining life and their weighted-average exercise price; and (2) for options exercisable, the number of options exercisable and their weighted-average exercise price:

	Outstanding			Exercisable	
Range	Number	Life	Price	Number	Price
$ 0 to $ 3	715,711	8.0	$ 1.12	345,982	$ 1.28
3 to 6	273,243	7.0	3.72	218,769	3.67
6 to 9	1,498,082	5.7	7.84	1,043,524	7.44
9 to 12	12,189	2.8	9.67	12,189	9.67
12 to 15	280,685	2.2	14.14	280,685	14.14
15 to 18	93,894	2.0	16.38	93,894	16.38
21 to 24	205,920	5.0	22.84	205,920	22.84
24 to 30	19,620	5.4	26.83	19,620	26.83
0 to 30	3,099,344	5.8	7.88	2,220,583	8.94

As of December 31, 2004, there were an aggregate of 4,286,416 shares reserved for future issuance under both the Plan and the Employee Stock Purchase Plan (“ESPP”) discussed in Note 8.

The Company follows APB No. 25 in accounting for both the Plan and the ESPP and, accordingly, does not recognize any compensation cost related to options granted to employees or non-employee Directors, unless there is a modification to the original option that would require recognition of compensation cost under FIN No. 44. For example, in May 2004, the stockholders approved an amendment to Automatic Option Grant Program for directors, which resulted in the Company recognizing $457,000 in compensation expense related to this amendment during 2004. The Company has adopted the disclosure requirements of Statement No. 123, as amended by Statement No. 148. Since Statement No. 123 is only applied to options granted after 1994, the pro forma disclosure should not necessarily be considered indicative of future pro forma results when the full four-year vesting (the period in which the compensation cost is recognized) is included in the disclosure in 2002. The fair value of each option is estimated on the grant date using the Black-Scholes option-pricing method with the following weighted-average assumptions used for grants in 2004, 2003 and 2002, respectively: no dividends; expected volatility of 103.1, 104.4 and 104.4 percent; risk-free interest rate of 4.0, 3.0 and 3.6 percent; and expected lives of five years. The weighted-average grant-date fair values of options granted during 2004 under the Plan and ESPP were $6.80 and $1.97, respectively. The compensation cost recorded for options issued to non-employee consultants, was $512,427, $119,676 and $120,190 for the years ended December 31, 2004, 2003 and 2002, respectively, which included $456,787 in 2004 related to the modification of options for outstanding directors as a result of the amendment to the Plan during 2004.

Note 8 - Employee Benefit Plans

On January 1, 1991, the Company adopted an employee retirement plan (“401(k) Plan”) under Section 401(k) of the Internal Revenue Code covering all employees. Employee contributions may be made to the 401(k) Plan up to limits established by the Internal Revenue Service. Company matching contributions may be made at the discretion of the Board of Directors. The Company made matching contributions of $171,601, $158,425 and $217,097 in 2004, 2003 and 2002, respectively.

On May 29, 1995, the stockholders approved the ESPP effective February 1, 1995. On May 15, 2002, the stockholders approved an amendment to the ESPP to reserve an additional 200,000 shares and eliminate the January 2005 termination date. The Company has reserved a total of 400,000 shares of common stock under the ESPP, of which 151,301 shares remain available for purchase at December 31, 2004. Eligible employees may authorize up to 15% of their salary to purchase common stock at the lower of 85% of the beginning or 85% of the ending price during the six-month purchase intervals. No more than 3,000 shares may be purchased by any one employee at the six-month purchase dates and no employee may purchase stock having a fair market value at the commencement date of $25,000 or more in any one calendar year. There were 31,695, 27,964 and 50,127 shares of common stock purchased under the ESPP in 2004, 2003 and 2002, respectively, at a weighted average price per share of $3.82, $0.74 and $2.45, respectively.

Note 9 - Collaborative and Other Research and Development Contracts

The Company granted Novartis Corporation, formerly Ciba-Geigy Corporation, an option in 1990 to acquire exclusive licenses to a class of inhibitors arising from research performed by the Company by February 1991. The option was exercised and a $500,000 fee was paid to the Company in 1993. Milestone payments are due upon approval of a new drug application. The Company will also receive royalties based upon a percentage of sales of any resultant products. Up to $300,000 of the initial fee received is refundable if sales of any resultant products are below specified levels and has been recorded as deferred revenue. This agreement has been inactive for several years.

On November 7, 1991, the Company entered into a joint research and license agreement with The University of Alabama at Birmingham (“UAB”). UAB performed specific research on Complement Factors for the Company for a period of approximately three years in return for research and license fees. The agreement was replaced by a new agreement on July 18, 1995 granting the Company a worldwide license in exchange for funding certain UAB research and sharing in any royalties or sublicense fees arising from the joint research. On November 17, 1994, the Company entered into another agreement for a joint research and license agreement on influenza neuraminidase granting the Company a worldwide license. Under this agreement, the Company funded certain UAB research and UAB shares in any royalties or sublicense fees arising from the joint research. The Company completed its research funding required by the agreements for both projects in 1998, but is still required to pay minimal annual license fees and share any future royalties with UAB.

On December 23, 2003, the Company transferred to 3-Dimensional Pharmaceuticals, Inc. (“3DP”), a wholly owned subsidiary of Johnson & Johnson, certain rights related to complement system inhibitors discovered during our collaborative research agreement with 3DP, which was terminated by BioCryst on October 18, 2003. BioCryst received an initial payment from 3DP, and will receive royalties on any future sales of complement inhibitors covered under the assignment.

In April 1999, the Company entered into an agreement with Sunol Molecular Corporation ("Sunol"). This agreement requires Sunol to conduct research and supply the Company with protein targets for drug design to expedite the discovery of new drug candidates designed to inhibit tissue factor/factor VIIa for the Company's cardiovascular program.

In June 2000, the Company licensed a series of potent inhibitors of purine nucleoside phosphorylase ("PNP"), from Albert Einstein College of Medicine of Yeshiva University and Industrial Research, Ltd, New Zealand. The lead drug candidate from this collaboration is forodesine hydrochloride. In 2002, the Company exercised the right to a second compound, BCX-4208 in this series of inhibitors The Company has the rights to develop and ultimately distribute these, or any other, drug candidates that might arise from research on these inhibitors. The Company has agreed to pay certain milestone payments for future development of these inhibitors, pay certain royalties on sales of any resulting product, and to share in future payments received from other third-party collaborators, if any.

In June 2000, the Company licensed intellectual property from Emory University ("Emory") related to the hepatitis C polymerase target associated with hepatitis C viral infections. Under the terms of the agreement, the research investigators from Emory provide the Company with materials and technical insight into the target. The Company has agreed to pay Emory royalties on sales of any resulting product and to share in future payments received from other third party collaborators, if any.

Note 10 – Subsequent Events

On February 9, 2005, the Company entered into a Placement Agency Agreement with Leerink Swann & Company in connection with a registered direct offering of 4,350,000 shares of its common stock at an offering price of $5.50 per share. The common stock was issued pursuant to a prospectus supplement filed with the Securities and Exchange Commission pursuant to Rule 424(b)(2) of the Securities Act of 1933, as amended, the Securities Act, in connection with a shelf takedown from the Company's registration statement on Form S-3 (333-111226), filed on December 16, 2003 and which became effective on January 5, 2004.

On February 17, 2005, the Company entered into a Stock Purchase Agreement with Baker Brothers Investments, L.P., Baker Brothers Investments II, L.P., Baker Biotech Fund I, L.P., Baker Biotech Fund II, L.P., Baker Biotech Fund II (Z), L.P., Baker Biotech Fund III, L.P., Baker Biotech Fund III (Z), L.P., Baker/Tisch Investments, L.P., and 14159, L.P., or the Baker investors for a total of 1,454,545 of the shares of common stock issued in the offering. As part of this agreement, the Company has granted these investors the right to appoint a member to its board of directors effective as of the closing of the offering, or for a period of twelve months following the closing. On February 22, 2005, the Company announced it had completed a $23.9 million registered direct offering of 4,350,000 shares of its common stock to a group of institutional investors.

Note 11 – Recent Accounting Pronouncements

In December 2004, the FASB issued Statement No. 123(R), which is a revision of Statement No. 123. Statement No. 123R requires all share-based payments to employees and directors to be recognized in the financial statements based on their fair values, superseding APB No. 25 and its related implementation guidance. Under APB No. 25, issuing stock options to employees could have resulted in no compensation cost. Statement No. 123R eliminates this alternative and requires entities to expense the cost of employee services received in exchange for stock options based on the grant date fair value of those awards. The Company currently accounts for its employee stock options in accordance with APB No. 25 while disclosing the pro forma effect of the options had they been recorded under the fair value method. As required by Statement No. 123R, the Company plans to adopt the revised statement on July 1, 2005. It is anticipated that the adoption of this statement will have an impact on the Company's results of operations, but the Company has not completed its evaluation of this impact.

In December 2004, the FASB issued Statement of Financial Accounting Standards No. 153, *Exchanges of Nonmonetary Assets – an amendment of Accounting Principles Board Opinion No. 29* ("Statement No. 153"). This statement addresses the measurement of exchanges of nonmonetary assets. It eliminates the exception from fair value measurement for nonmonetary exchanges of similar productive assets in paragraph 21(b) of Accounting Principles Board Opinion No. 29 and replaces it with an exception for exchanges that do not have commercial substance. Statement No. 153 is effective for nonmonetary asset exchanges occurring in fiscal periods beginning after June 15, 2005. The adoption of this statement will not have a significant impact on the Company's results of operations or financial position.

Note 12 - Quarterly Financial Information (Unaudited) (In thousands, except per share)

	First	Second	Third	Fourth
2004 Quarters				
Revenues	$ 0	$ 43	$ 116	$ 178
Net loss	(5,462)	(5,057)	(5,296)	(5,289)
Net loss per share	(.28)	(.23)	(.24)	(.24)
2003 Quarters				
Revenues	$ 0	$ 0	$ 0	$ 653
Net loss	(2,788)	(3,252)	(3,409)	(3,250)
Net loss per share	(.16)	(.18)	(.19)	(.18)

Net loss and net loss per share each year may differ from the total of the individual quarters due to rounding.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON FINANCIAL STATEMENTS

The Board of Directors and Shareholders
BioCryst Pharmaceuticals, Inc.

We have audited the accompanying balance sheets of BioCryst Pharmaceuticals, Inc. as of December 31, 2004 and 2003, and the related statements of operations, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2004. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of BioCryst Pharmaceuticals, Inc. as of December 31, 2004 and 2003, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2004, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the effectiveness of BioCryst Pharmaceuticals, Inc.'s internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 14, 2005 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

Birmingham, Alabama
March 14, 2005

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON INTERNAL CONTROL

The Board of Directors and Shareholders of BioCryst Pharmaceuticals, Inc.:

We have audited management's assessment, included in the accompanying Management's Report on Internal Control Over Financial Reporting, that BioCryst Pharmaceuticals, Inc. maintained effective internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("the COSO criteria"). BioCryst Pharmaceuticals, Inc.'s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express an opinion on management's assessment and an opinion on the effectiveness of the company's internal control over financial reporting based on our audit.

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

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

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

In our opinion, management's assessment that BioCryst Pharmaceuticals, Inc. maintained effective internal control over financial reporting as of December 31, 2004, is fairly stated, in all material respects, based on the COSO criteria. Also, in our opinion, BioCryst Pharmaceuticals, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2004, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the accompanying balance sheets of BioCryst Pharmaceuticals, Inc. as of December 31, 2004 and 2003, and the related statements of operations, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2004 of BioCryst Pharmaceuticals, Inc. and our report dated March 14, 2005 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

Birmingham, Alabama
March 14, 2005

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain a set of disclosure controls and procedures that are designed to ensure that information relating to BioCryst Pharmaceuticals, Inc. required to be disclosed in our periodic filings under the Securities Exchange Act is recorded, processed, summarized and reported in a timely manner under the Securities Exchange Act of 1934. We carried out an evaluation, under the supervision and with the participation of management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of December 31, 2004, the Company's disclosure controls and procedures are effective to ensure that information required to be disclosed by BioCryst in the reports filed or submitted by it under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and include controls and procedures designed to ensure that information required to be disclosed by BioCryst in such reports is accumulated and communicated to the Company's management, including the Chairman and Chief Executive Officer and Chief Financial Officer of BioCryst, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control Over Financial Reporting

Management of BioCryst Pharmaceuticals, Inc. (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting and for the assessment of the effectiveness of internal control over financial reporting. As defined by the Securities and Exchange Commission, internal control over financial reporting is a process designed by, or under the supervision of the Company's principal executive and principal financial officers and effected by the Company's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the consolidated financial statements in accordance with U.S. generally accepted accounting principles.

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

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

In connection with the preparation of the Company's annual financial statements, management has undertaken an assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO Framework). Management's assessment included an evaluation of the design of the Company's internal control over financial reporting and testing of the operational effectiveness of those controls.

Based on this assessment, management has concluded that as of December 31, 2004, the Company's internal control over financial reporting was effective to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles.

Ernst & Young LLP, the independent registered public accounting firm that audited the Company's financial statements included in this report, have issued an attestation report on management's assessment of internal control over financial reporting, a copy of which appears on page 43 of this annual report.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2004 that have materially affected, or are reasonably likely to materially affect, BioCryst's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The directors and executive officers of the Company are as follows:

Name	Age	Position(s) with the Company
Charles E. Bugg, Ph.D.	63	Chairman, Chief Executive Officer and Director
J. Claude Bennett, M.D.	71	President, Chief Operating Officer, Medical Director and Director
Michael A. Darwin	43	Chief Financial Officer, Secretary and Treasurer
Randall B. Riggs	38	Vice President, Business Development
William W. Featheringill	62	Director
Carl L. Gordon, CFA, Ph.D. (2)	40	Director
John L. Higgins (1)(2)	35	Director
Zola P. Horovitz, Ph.D. (1)	70	Director
Joseph H. Sherrill, Jr. (2)	64	Director
William M. Spencer, III	84	Director
Randolph C. Steer, M.D., Ph.D. (1)	55	Director

(1) Member of the Compensation Committee ("Compensation Committee").

(2) Member of the Audit Committee ("Audit Committee").

Charles E. Bugg, Ph.D., was named Chairman of the Board, Chief Executive Officer and Director in November 1993 and President in January 1995. He relinquished the position of President in December 1996 when Dr. J. Claude Bennett joined the Company in that position. Prior to joining the Company, Dr. Bugg had been a member of the faculty of the University of Alabama at Birmingham ("UAB") since 1968, having served as Professor of Biochemistry, Director of the Center for Macromolecular Crystallography, and Associate Director of the Comprehensive Cancer Center. He was a founder of BioCryst and served as the Company's first Chief Executive Officer from 1987-1988 while on a sabbatical from UAB. Dr. Bugg also served as Chairman of the Company's Scientific Advisory Board from January 1986 to November 1993. He continues to hold the position of Professor Emeritus in Biochemistry and Molecular Genetics at UAB, a position he has held since January 1994.

J. Claude Bennett, M.D., was named President and Chief Operating Officer in December 1996 and elected a Director in January 1997. Since 2001, Dr. Bennett has also served as the Medical Director. Prior to joining the Company, Dr. Bennett was President of The University of Alabama at Birmingham ("UAB") from October 1993 to December 1996 and Professor and Chairman of the Department of Medicine of UAB from January 1982 to October 1993. Dr. Bennett served on the Company's Scientific Advisory Board from 1989-96. He is a former co-editor of the *Cecil Textbook of Medicine* and former President of the Association of American Physicians. He is the immediate past chair of the Scientific Advisory Committee of the Massachusetts General Hospital, a member of the Scientific Advisory Boards of Zycogen, LLC and Aptamera, Inc., and continues to hold the position of Distinguished University Professor Emeritus at UAB, a position he has held since January 1997.

Michael A. Darwin joined BioCryst in June 2000 as Controller. Effective November 1, 2002, Mr. Darwin was appointed Chief Financial Officer, Secretary and Treasurer. Prior to joining BioCryst, from June 1990 to June 2000, Mr. Darwin was Chief Financial Officer of a privately held company in the food services industry. He began his career at Ernst & Young and spent six years in public accounting practice.

Randall B. Riggs joined BioCryst in February 2005 as Vice President, Business Development. Mr. Riggs served as Vice President, Business Development at TransMolecular, Inc. an emerging oncology company from September 2004 to February 2005. Before joining TransMolecular, he served as a Corporate Licensing and Business Development consultant for TRUBION Pharmaceuticals, Inc. from March 2004 to August 2004. Mr. Riggs was previously Senior Vice President, Corporate Licensing and Business Development at Lexicon Genetics Incorporated from February 2000 to March 2004 and served as Vice President, Business Development from December 1998 to February 2000. Prior to joining Lexicon Genetics, Mr. Riggs was Director of Business Development for the Infectious Disease Unit of GeneMedicine, Inc. Mr. Riggs began his pharmaceutical and biotechnology business development career with Eli Lilly and Company; starting as a District Sales Manager and advancing to Manager, Corporate Business Development.

William W. Featheringill was elected a Director in May 1995. Mr. Featheringill is Chairman of the Board, since June 1995, of Electronic Healthcare Systems, a software company, and President, Chief Executive Officer and director, since 1973, of Private Capital Corporation, a venture capital company. Mr. Featheringill was Chairman and Chief Executive Officer of MACESS Corporation, which designs and installs paperless data management systems for the managed care industry, from 1988 to November 1995. MACESS Corporation merged with Sungard Data Systems in late 1995. From 1985 to December 1994, Mr. Featheringill was the developer, Chairman and President of Complete Health Services, Inc., a health maintenance organization which grew, under his direction, to become one of the largest HMOs in the southeastern United States. Complete Health Services, Inc. was acquired by United HealthCare Corporation in June 1994.

Carl L. Gordon, CFA, Ph.D., was elected a Director in March 2004. Dr. Gordon is a founding General Partner of OrbiMed Advisors LLC, an asset management firm focused on the global healthcare industry, and has served in such capacity since 1998. Dr. Gordon was previously a senior biotechnology analyst at Mehta and Isaly, the predecessor firm to OrbiMed, from 1995-1997. Dr. Gordon received a Bachelor's degree from Harvard College, a Ph.D. in molecular biology from the Massachusetts Institute of Technology, and was a Fellow at the Rockefeller University.

John L. Higgins was elected a Director in May 2004. Mr. Higgins joined Connetics as Chief Financial Officer in 1997, and has served as Executive Vice President, Finance and Administration and Corporate Development since January 2002. He served as Executive Vice President, Finance and Administration, from January 2000 to December 2001, and as Vice President, Finance and Administration from September 1997 through December 1999. Before joining Connetics, he was a member of the executive management team at BioCryst. Before joining BioCryst in 1994, Mr. Higgins was a member of the healthcare banking team of Dillon, Read & Co. Inc., an investment banking firm. He currently serves as a director of a private company. He received his A.B. from Colgate University.

Zola P. Horovitz, Ph.D., was elected a Director in August 1994. Dr. Horovitz was Vice President of Business Development and Planning at Bristol-Myers Squibb from 1991 until his retirement in April 1994 and previously was Vice President of Licensing at the same company from 1990 to 1991. Prior to that he spent over 30 years with The Squibb Institute for Medical Research, most recently as Vice President Research, Planning, & Scientific Liaison. He has been an independent consultant in pharmaceutical sciences and business development since his retirement from Bristol-Myers Squibb in April 1994. He serves on the Boards of Directors of Avigen, Inc., Genaera Pharmaceuticals, Inc., Palatin Technologies, Inc., DOV Pharmaceuticals, GenVec, Inc., NitroMed, Inc. and Immunicon Corporation.

Joseph H. Sherrill, Jr., was elected a Director in May 1995. Mr. Sherrill served as President of R. J. Reynolds ("RJR") Asia Pacific, based in Hong Kong, where he oversaw RJR operations across Asia, including licensing, joint ventures and a full line of operating companies from August 1989 to his retirement in October 1994. Prior management positions with RJR include Senior Vice President of Marketing for R.J. Reynolds International, President and Chief Executive Officer of R.J. Reynolds Tabacos de Brazil, and President and General Manager of R.J. Reynolds Puerto Rico.

William M. Spencer, III, has been a Director of the Company since its inception. Mr. Spencer, who is retired, is also a private investor in Birmingham, Alabama. Mr. Spencer is a Founder of the Company, and served as Chairman of the Board of the Company from its founding in 1986 until April 1992. He co-founded and operated Motion Industries from 1946 through its merger into Genuine Parts Company in 1976. He has founded several businesses and has served on the Board of Directors of numerous public and private corporations.

Randolph C. Steer, M.D., Ph.D., was elected a Director in February 1993. Dr. Steer has been an independent pharmaceutical and biotechnology consultant since 1989, having a broad background in business development, medical marketing and regulatory affairs. He was formerly Chairman, President and CEO of Advanced Therapeutics Communications International, a leading drug regulatory group, and served as associate director of medical affairs at Marion Laboratories, and medical director at Ciba Consumer Pharmaceuticals. Dr. Steer serves on the Board of Directors of Techne Corporation and several privately held companies.

In accordance with the terms of the Company's Certificate of Incorporation, the Board of Directors has been divided into three classes with members of each class holding office for staggered three-year terms. Mr. Featheringill's, Mr. Sherrill's, and Mr. Spencer's terms expire at the 2005 annual meeting. Dr. Bennett's, Dr. Horovitz's and Dr. Steer's terms expire at the 2006 annual meeting, and Dr. Bugg's, Dr. Gordon's, and Mr. Higgins's terms expire at the 2007 annual meeting (in all cases subject to the election and qualification of their successors or to their earlier death, resignation or removal). At each annual stockholder meeting, the successors to the Directors whose terms expire are elected to serve from the time of their election and qualification until the third annual meeting of stockholders following their election and until a successor has been duly elected and qualified. The provisions of the Company's Certificate of Incorporation governing the staggered Director election procedure can be amended only by a shareholder's vote of at least 75% of the eligible voting securities. There are no family relationships among any of the directors and executive officers of the Company. The Board has by resolution established the number of directors of the Company at nine (9) commencing May 12, 2004. Currently, seven of our directors (Messrs. Featheringill, Gordon, Higgins, Horovitz, Sherrill, Spencer and Steer) are independent as defined by the current Nasdaq rules.

The Company has an Audit Committee, consisting of Messrs. Gordon, Higgins and Sherrill, which is responsible for the review of internal accounting controls, financial reporting and related matters. The Audit Committee also recommends to the Board the independent accountants selected to be the Company's auditors and reviews the audit plan, financial statements and audit results. The Board has adopted an Amended and Restated Audit Committee Charter that meets all the applicable rules of the Nasdaq National Market and the Securities and Exchange Commission. The Audit Committee Charter can be found on the Company's website at www.biocryst.com. The Audit Committee members are "independent" directors as defined by the Nasdaq National Market listing standards in effect as of the date hereof and meet Nasdaq's financial literacy requirements for audit committee members. The Board of Directors has determined that Mr. Higgins qualifies as the "audit committee financial expert".

The Company also has a Compensation Committee consisting of Messrs. Higgins, Horovitz and Steer. The Compensation Committee is responsible for the annual review of officer compensation and other incentive programs and is authorized to award options under the Company's Stock Option Plan. The Board has adopted a Compensation Committee Charter that meets all the applicable rules of the Nasdaq National Market and the Securities and Exchange Commission. The Charter can be found on the Company's website at www.biocryst.com. The Compensation Committee members are "independent" directors as defined by the Nasdaq National listing standards in effect as of the date hereof.

The Company has a Corporate Governance and Nominating Committee comprised of all independent directors with terms not expiring in the current year. The current members of the committee are Messrs. Gordon, Higgins, Horovitz and Steer. The Committee nominates persons for election or re-election as directors. The Board has adopted a Corporate Governance and Nominating Committee Charter that meets all the applicable rules of the Nasdaq National Market and the Securities and Exchange Commission. The Committee has established procedures/qualifications for selecting nominees and will consider nominees recommended in writing, including biographical information and personal references, by stockholders. All submissions by shareholders should be sent directly to the Chairman of the Board, Dr. Bugg at the corporate address.

The Company has adopted a Code of Business Conduct (the "Code") applicable to all employees, including executive officers, and all Board members. The Code is publicly available on the Company's website at www.biocryst.com. Any waivers of the Code will be disclosed through an Form 8-K filing with the Securities and Exchange Commission.

Section 16(a) Beneficial Ownership Reporting Compliance

Incorporated by reference from our definitive Proxy Statement to be filed in connection with the solicitation of proxies for our 2005 Annual Meeting of Stockholders.

ITEM 11. EXECUTIVE COMPENSATION

Incorporated by reference from our definitive Proxy Statement to be filed in connection with the solicitation of proxies for our 2005 Annual Meeting of Stockholders.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

Incorporated by reference from our definitive Proxy Statement to be filed in connection with the solicitation of proxies for our 2005 Annual Meeting of Stockholders.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Incorporated by reference from our definitive Proxy Statement to be filed in connection with the solicitation of proxies for our 2005 Annual Meeting of Stockholders.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Incorporated by reference from our definitive Proxy Statement to be filed in connection with the solicitation of proxies for our 2005 Annual Meeting of Stockholders.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) Financial Statements

	Page in Form 10-K
The following financial statements appear in Item 8 of this Form 10-K:	
Balance Sheets at December 31, 2004 and 2003	28
Statements of Operations for the years ended December 31, 2004, 2003 and 2002	29
Statements of Stockholders' Equity for the years ended December 31, 2004, 2003 and 2002	30
Statements of Cash Flows for the years ended December 31, 2004, 2003 and 2002	31
Notes to Financial Statements	32 to 41
Report of Independent Registered Public Accounting Firm	42-43

No financial statement schedules are included because the information is either provided in the financial statements or is not required under the related instructions or is inapplicable and such schedules therefore have been omitted.

(b) Exhibits

Number	Description
3.1	Composite Certificate of Incorporation of Registrant. Incorporated by reference to Exhibit 3.1 to the Company's Form 10-Q for the second quarter ending June 30, 1995 dated August 11, 1995.
3.2	Bylaws of Registrant as amended March 7, 2005. Incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed March 9, 2005.
4.1	Rights Agreement, dated as of June 17, 2002, by and between the Company and American Stock Transfer & Trust Company, as Rights Agent, which includes the Certificate of Designation for the Series B Junior Participating Preferred Stock as Exhibit A and the form of Rights Certificate as Exhibit B. Incorporated by reference to Exhibit 4.1 to the Company's Form 8-A dated June 17, 2002.
10.1	1991 Stock Option Plan, as amended and restated effective March 8, 2004. Incorporated by reference to Exhibit 10.1 to the Company's Form 10-Q for the second quarter ending June 30, 2004 dated August 10, 2004.
10.2#	License Agreement dated April 15, 1993 between Ciba-Geigy Corporation (now merged into Novartis) and the Registrant. Incorporated by reference to Exhibit 10.40 to the Company's Form S-1 Registration Statement (Registration No. 33-73868).
10.3	Employee Stock Purchase Plan. Incorporated by reference to Exhibit 99.1 to the Company's Form S-8 Registration Statement dated June 14, 2002 (Registration No. 333-90582).
10.4#	Stock Purchase Agreement dated as of September 14, 1998 between Registrant and Johnson & Johnson Development Corporation. Incorporated by reference to Exhibit 10.24 to the Company's Form 10-Q for the third quarter ending September 30, 1998 dated November 10, 1998.
10.5#	Stockholder's Agreement dated as of September 14, 1998 between Registrant and Johnson & Johnson Development Corporation. Incorporated by reference to Exhibit 10.25 to the Company's Form 10-Q for the third quarter ending September 30, 1998 dated November 10, 1998.
10.6	Warehouse Lease dated July 12, 2000 between RBP, LLC an Alabama Limited Liability Company and the Registrant for office/warehouse space. Incorporated by reference to Exhibit 10.8 to the Company's Form 10-Q for the second quarter ending June 30, 2000 dated August 8, 2000.
10.7	Termination Agreement dated as of September 21, 2001 between Registrant and The R.W. Johnson Pharmaceutical Research Institute and Ortho-McNeil Pharmaceutical, Inc. Incorporated by reference to Exhibit 10.9 to the Company's Form 10-Q for the second quarter ending June 30, 2002 dated August 7, 2002.
10.8	Stock Purchase Agreement, dated as of February 17, 2004, by and among BioCryst Pharmaceuticals, Inc., Caduceus Private Investments II, LP, Caduceus Private Investments II (QP), LP and UBS Juniper Crossover Fund, L.L.C. Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K dated February 17, 2004
10.9	Employment Agreement dated March 17, 2004 between the Registrant and Charles E. Bugg, Ph.D. Incorporated by reference to Exhibit 10.9 to the Company's Form 10-Q for the first quarter ending March 31, 2004 dated May 11, 2004.
10.10	Employment Agreement dated February 1, 2005 between the Registrant and Randall B. Riggs. Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K dated February 7, 2005.

10.11	Stock Purchase Agreement, dated as of February 17, 2005, by and among BioCryst Pharmaceuticals, Inc., Baker Bros. Investments, L.P., Baker Biotech Fund II, L.P., Baker Bros. Investments II, L.P., Baker Biotech Fund II (Z), L.P., Baker/Tisch Investments, L.P., Baker Biotech Fund III, L.P., Baker Biotech Fund I, L.P., Baker Biotech Fund III (Z), L.P. and 14159, L.P. Incorporated by reference to Exhibit 4.1 to the Company's Form 8-K dated February 17, 2005.
23	Consent of Ernst & Young, Independent Registered Public Accounting Firm.
31.1	Certification of the Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of the Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

Confidential treatment granted.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on this 14th day of March, 2005.

BIOCRYST PHARMACEUTICALS, INC.

By: /s/CHARLES E. BUGG

Charles E. Bugg, Ph.D.
Chairman and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934 this report has been signed by the following persons on behalf of the registrant and in the capacities indicated on March 14, 2005:

Signature	Title(s)
/s/CHARLES E. BUGG (Charles E. Bugg, Ph.D.)	Chairman, Chief Executive Officer and Director
/s/J. CLAUDE BENNETT (J. Claude Bennett, M.D.)	President, Chief Operating Officer, Medical Director and Director
/s/MICHAEL A. DARWIN (Michael A. Darwin)	Chief Financial Officer (Principal Financial and Accounting Officer), Secretary and Treasurer
/s/WILLIAM W. FEATHERINGILL (William W. Featheringill)	Director
/s/CARL L. GORDON (Carl L. Gordon, CFA, Ph.D.)	Director
/s/JOHN L. HIGGINS (John L. Higgins)	Director
/s/ZOLA P. HOROVITZ (Zola P. Horovitz, Ph.D.)	Director
/s/JOSEPH H. SHERRILL, JR. (Joseph H. Sherrill, Jr.)	Director
/s/WILLIAM M. SPENCER (William M. Spencer, III)	Director
/s/RANDOLPH C. STEER (Randolph C. Steer, M.D., Ph.D.)	Director

INDEX TO EXHIBITS

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Confidential treatment granted.

EXHIBIT 23

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8 Nos. 333-120345, 333-39484, 333-30751 and 33-95062) pertaining to the BioCryst Pharmaceuticals, Inc. 1991 Stock Option Plan, as amended and restated as of March 8, 2004, the Registration Statement (Form S-8 Nos. 333-90582 and 33-95062) pertaining to the BioCryst Pharmaceuticals, Inc. Employee Stock Purchase Plan and the Registration Statement (Form S-3 No. 333-111226) pertaining to the shelf registration of up to $60,000,000 of BioCryst Pharmaceuticals, Inc. common stock, of our reports dated March 14, 2005 with respect to the financial statements of BioCryst Pharmaceuticals, Inc., BioCryst Pharmaceuticals, Inc. management's assessment of the effectiveness of internal control over financial reporting, and the effectiveness of internal control over financial reporting of BioCryst Pharmaceuticals, Inc. included in this Annual Report (Form 10-K) for the year ended December 31, 2004.

/s/ ERNST & YOUNG LLP

Birmingham, Alabama
March 14, 2005

Exhibit 31.1

CERTIFICATIONS

I, Charles E. Bugg, certify that:

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

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

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

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

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

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

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

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

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

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

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

Date: March 14, 2005

/s/ CHARLES E. BUGG

Charles E. Bugg
Chairman and Chief Executive Officer

Exhibit 31.2

CERTIFICATIONS

I, Michael A. Darwin, certify that:

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

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

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

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

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

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

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

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

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

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

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

Date: March 14, 2005

/s/ MICHAEL A. DARWIN

Michael A. Darwin
Chief Financial Officer and Chief Accounting Officer

Exhibit 32.1

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

In connection with the Annual Report of BioCryst Pharmaceuticals, Inc. (the "Company") on Form 10-K for the period ending December 31, 2004 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Charles E. Bugg, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ CHARLES E. BUGG

Charles E. Bugg
Chief Executive Officer
March 14, 2005

Exhibit 32.2

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

In connection with the Annual Report of BioCryst Pharmaceuticals, Inc. (the "Company") on Form 10-K for the period ending December 31, 2004 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Michael A. Darwin, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ MICHAEL A. DARWIN

Michael A. Darwin
Chief Financial Officer
March 14, 2005