BIOCRYST PHARMACEUTICALS INC
Form S-3
August 22, 2007

Table of Contents

As filed with the United States Securities and Exchange Commission on August 22, 2007
Registration No. 333-

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

BioCryst Pharmaceuticals, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**62-1413174**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*

2190 Parkway Lake Drive
Birmingham, Alabama 35244
(205) 444-4600
(Address, including zip code and telephone number, including area code, of registrant s principal executive office)

Jon P. Stonehouse
President and Chief Executive Officer
2190 Parkway Lake Drive
Birmingham, Alabama 35244
(205) 444-4600
(Name, address, including zip code and telephone number, including area code, of agent for service)

With a copy to:

Richard R. Plumridge, Esq.
Jennifer D Alessandro, Esq.
Holme Roberts & Owen LLP
1700 Lincoln Street, Suite 4100
Denver, Colorado 80203
(303) 861-7000

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this Registration Statement, as determined by market conditions.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. o

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, please check the following box. þ

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a registration statement pursuant to General Instruction I.D. or a post effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. o

If this form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. o

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(2)	Proposed Maximum Offering Price per Share(3)	Proposed Maximum Aggregate Offering Price(3)	Amount of Registration Fee
Common Stock, $0.01 par value(1)	8,140,000	$10.06	$81,888,400	$2,513.97

(1) Each share of Common Stock includes the right to purchase one one-thousandth of a share of our Series B Junior Participating Preferred Stock.

(2) Pursuant to Rule 416 under the Securities Act, the shares being registered hereunder include such indeterminate number of shares of common stock as may be issuable with respect to the shares being registered hereunder as a result of stock splits, stock dividends or similar transactions.

(3) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457 under the Securities Act. The price per share and aggregate offering price are based on the average of the high and low sales prices of the registrant s common stock on August 16, 2007, as reported on the Nasdaq Global Market.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with section 8(a) of the Securities Act of 1933, as amended, or until this Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

Table of Contents

The information in this prospectus is not complete and may be changed. The selling stockholders may not sell these securities until the Registration Statement filed with the Securities and Exchange Commission becomes effective. This prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED AUGUST 21, 2007

PROSPECTUS

8,140,000 Shares of
Common Stock

This prospectus relates to the disposition from time to time of up to 8,140,000 shares of our outstanding common stock in the aggregate, which are held by the selling stockholders named on page 22 of this prospectus.

We will not be paying any underwriting discounts or commissions in this offering. We will not receive any proceeds from sale of shares included in this prospectus.

Our common stock, par value $0.01 per share, trades on the Nasdaq Global Market under the symbol BCRX. On August 21, 2007, the reported last sale price of our common stock on the Nasdaq Global Market was $10.98 per share.

The selling stockholders or their pledges, assignees or successors-in-interest may offer and sell or otherwise dispose of the shares of common stock described in this prospectus from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices. See Plan of Distribution beginning on page 23 for more information about how the selling stockholders may sell or dispose of their shares of common stock.

The selling stockholders may resell the common stock to or through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, concessions or commissions. The selling stockholders will bear all commissions and discounts, if any, attributable to the sales of shares. We will bear all costs, expenses and fees in connection with the registration of the shares.

Investing in our common stock involves a high degree of risk. See Risk Factors beginning on page 5 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities regulators have approved or disapproved of these securities, or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is , 2007.

TABLE OF CONTENTS

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or the SEC, using a shelf registration or continuous offering process. Under this shelf process, certain selling stockholders may from time to time sell the shares of common stock described in this prospectus in one or more offerings.

All references to Company we, our or us refer solely to BioCryst Pharmaceuticals, Inc. and not to the persons who manage us or sit on our Board of Directors. Reference to selling stockholders refers to those stockholders listed herein under Selling Stockholders beginning on page 21 of this prospectus, who may sell shares from time to time as described in this prospectus. All trade names used in this prospectus are either our registered trademarks or trademarks of their respective holders.

You should rely only on the information contained or incorporated by reference into this prospectus or any applicable prospectus supplement. We have not, and the selling stockholders have not, authorized anyone to provide you with different information. The selling stockholders are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where it is lawful to do so. The information in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of our common stock.

Table of Contents

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere or incorporated by reference into this prospectus. Because it is a summary, it does not contain all of the information that you should consider before investing in our securities. You should read this entire prospectus carefully, including the section entitled Risk Factors and the documents that we incorporate by reference into this prospectus, before making an investment decision.

Business of BioCryst Pharmaceuticals, Inc.

Overview

BioCryst Pharmaceuticals, Inc. is a biotechnology company that designs, optimizes and develops novel drugs that block key enzymes involved in viral infections, cancer, autoimmune diseases, and cardiovascular diseases. We integrate the necessary disciplines of biology, crystallography, medicinal chemistry and computer modeling to effectively use structure-based drug design to discover and develop small molecule pharmaceuticals.

Our business strategy is to increase the value of our drug candidate portfolio. We believe this is best achieved by retaining full product rights to drug product candidates within specialty markets, while relying on collaborative arrangements with third parties for drug product candidates within larger markets or outside our area of expertise. Potential third party alliances could include preclinical development, clinical development, regulatory approval, marketing, sales and distribution of our drug product candidates.

We have established collaborative relationships for development and commercialization of product candidates in their respective territories as follows:

F. Hoffmann-LaRoche and Hoffmann LaRoche Inc., which we call Roche, for BCX-4208 worldwide;

Mundipharma Internal Holdings Limited, which we call Mundipharma, for Fodosine™ in Europe, Asia and Australasia;

Shionogi & Co. Ltd., which we call Shionogi, for peramivir in Japan; and

Green Cross Corporation, which we call Green Cross, for peramivir in Korea.

The process of establishing and implementing collaborative relationships is difficult, time-consuming and involves significant uncertainty. See Risk Factors for further details.

Clinical Development Projects

Peramivir

Peramivir, a neuraminidase inhibitor, is in development for the treatment of influenza with two parenteral formulations, intramuscular and intravenous, which we call i.m and i.v.

Previous development of peramivir in an oral formulation was conducted through a worldwide license agreement between the Company and The R.W. Johnson Pharmaceutical Research Institute and Ortho-McNeil Pharmaceutical Inc. (both Johnson & Johnson companies). Johnson & Johnson made the business decision to terminate this agreement

in 2001 and returned all rights to us. In June 2002, we completed an ongoing Phase III trial that had been started by Johnson and Johnson and subsequently terminated development of our oral peramivir program as a result of missing the primary endpoint in this pivotal trial.

We re-initiated clinical development of peramivir during 2006 with a focus on i.m. and i.v. delivery. During 2006, we tested peramivir in multiple Phase I trials in healthy volunteers and early in 2007 initiated a Phase II trial with the i.m. formulation. In the third quarter of 2007, we enrolled our first patient in a Phase II trial with the i.v. formulation in patients hospitalized due to influenza. We plan to be ready to enroll patients in a pivotal Phase III program with the i.m. formulation, beginning in the 2007-2008 influenza season. Except for in Japan and Korea, where we have granted licenses to Shionogi and Green Cross, respectively, to commercialize peramivir, we have not licensed our rights to peramivir.

Table of Contents

In January 2007, we announced that the U.S. Department of Health and Human Services, or HHS, had awarded us a $102.6 million, four-year contract for the advanced development of peramivir. Funding from the contract will support manufacturing of clinical lots, process validation, clinical studies and other U.S. product approval requirements.

*Fodosine*tm

Fodosinetm is a transition-state analog inhibitor of the target enzyme purine nucleoside phosphorylase or PNP. In February 2006, we announced an exclusive licensing agreement with Mundipharma to develop and commercialize Fodosinetm in markets across Europe, Asia and Australia for use in oncology. We have retained full development and commercialization rights in the rest of the world, including North America.

We expect to begin enrollment during the third quarter of 2007 into a global pivotal Phase II with an oral formulation of Fodosinetm for patients with cutaneous T-cell lymphoma, commonly called CTCL. The trial will be conducted in the U.S. under a special protocol assessment, known as an SPA, negotiated with the U.S. Food and Drug Administration, or the FDA.

Additionally, Fodosinetm is currently in a Phase II trial for treatment of chronic lymphocytic leukemia, commonly called CLL and in other phases of development in various cancer settings.

Fodosinetm has been granted Orphan Drug status by the FDA for three indications:

T-cell non-Hodgkin s lymphoma, including CTCL;

CLL and related leukemias including T-cell prolymphocytic leukemia, adult T-cell leukemia, and hairy cell leukemia; and

B-cell acute lymphoblastic leukemia, commonly called B-ALL.

Additionally the FDA has granted fast track status to the development of Fodosinetm for the treatment of relapsed or refractory T-cell leukemia.

BCX-4208

BCX-4208 is our second generation PNP inhibitor being developed for the treatment of autoimmune diseases and for the prevention of acute rejection in transplantation. In November 2005, we announced that we had entered into an exclusive worldwide development and commercialization agreement with Roche. In the third quarter of 2007, we announced that Roche had begun enrollment of patients with moderate to severe psoriasis into a Phase IIa trial.

Early Stage Development Projects

We are also conducting exploratory work on several early stage projects. Based on our strategy, we have prioritized our early-stage candidates focusing on a set of additional PNP inhibitors in the areas of autoimmune diseases, gout and HIV. We retain the worldwide commercial rights to all these specific PNP inhibitors. In addition, we are pursuing preclinical work in hepatitis C and have selected for further development a recently discovered compound.

Because none of our products have been approved by regulatory authorities, we may not be able to generate significant revenue or attain profitability. Since our inception, we have not generated any product sales from our drug discovery and development efforts and we have a history of significant losses. Given that we expect to incur substantial net losses to develop our potential products, it is unclear when, if ever, we will become profitable. See Risk

Factors for a full discussion of these and other risks relating to our business and owning our capital stock.

Table of Contents

Recent Developments

On August 9, 2007, we sold to a group of existing stockholders in a private placement:

8,315,513 shares of the Company s common stock at a purchase price of $7.80 per share, the closing Nasdaq composite bid price on August 3, 2007, the last trading date prior to the agreement reached prior to the opening of trading on August 6, 2007; and

warrants (exercisable at $10.25 per share) to purchase 3,159,895 shares of the Company s common stock, for a purchase price of $0.125 per warrant share.

The aggregate purchase price was approximately $65.3 million. The investors included funds managed by Baker Brothers Investments, Kleiner Perkins Caufield & Byers, EHS Holdings, OrbiMed Advisors, Texas Pacific Group Ventures, and Stephens Investment Management, all of whom are current stockholders.

We relied upon the exemptions from registration provided by Section 4(2) of the Securities Act and Regulation D promulgated under that section. Each investor represented that it was an accredited investor, as such term is defined in Regulation D under the Securities Act, and that it was acquiring the common stock and warrants for its own account and not with a view to or for sale in connection with any distribution thereof, and appropriate legends are affixed to the common stock and warrants.

We have filed with the SEC all of our agreements regarding the private placement with the selling stockholders, with our Current Report on Form 8-K filed August 7, 2007 and our Quarterly Report on Form 10-Q filed August 9, 2007. We made no other agreements, plans or arrangements with the selling stockholders in connection with the private placement.

We paid no investment banking fees or commissions in connection with the private placement. We estimate the aggregate market value of our common stock held by non-affiliates (based upon the Nasdaq Global Market closing sales price on August 21, 2007) was approximately $268.1 million.

The shares and warrants included in the private placement have not been registered under the Securities Act of 1933, as amended. Under the purchase agreement for the private placement, we agreed to register for resale under the Securities Act the shares, the warrants and the shares issuable upon exercise of the warrants sold to the selling stockholders. If registration statements covering such shares, warrants and shares issuable upon exercise of the warrants are not filed by us or declared effective by the SEC, within the periods specified in the purchase agreement, or if effectiveness of a registration statement is suspended for longer than the periods specified in the purchase agreement, we must pay to each investor, as liquidated damages and not as a penalty, a cash payment equal to 1.5% of the aggregate purchase price per month, up to a maximum of 12%, paid by such investor to us with respect to the shares then held by such selling stockholder which are not then registered under an effective registration statement, until such event has been cured. No such amounts shall be payable by us in respect of the warrants or the shares issuable upon exercise of the warrants. We have agreed to maintain the effectiveness of the registration statements covering such securities until the earlier of August 9, 2009, the date all of such securities may be sold without restriction of the value limitations under Rule 144(e) of the Securities Act or the date all of such securities have been sold.

We are filing this registration statement and prospectus as required by the purchase agreement. We will not receive any proceeds from the resale of the common stock by the investors.

We expect to file a subsequent registration statement in the future for the resale by the selling stockholders of the balance of approximately 0.2 million shares of common stock purchased and the warrants to buy approximately 3.2 million shares of common stock, including shares to be issued upon exercise of the warrants.

The private placement

- increases our concentration of stock ownership, which could limit the influence of other stockholders and delay, defer or prevent a change in our control;

Table of Contents

upon registration of the shares covered by this prospectus, increases the number of shares of our common stock eligible for sale, which could depress our stock price and adversely affect the trading market for our stock; and

exercise of the warrants above their exercise price of $10.25 will result in dilution to our other stockholders and more shares eligible for sale, which could depress our stock price.

Please review the risk factors under the heading Risks Relating to Our Common Stock for more information on these risks.

BioCryst is a Delaware corporation originally founded in 1986. Our principal offices are located at 2190 Parkway Lake Drive, Birmingham, Alabama 35244, and our telephone number is (205) 444-4600. Our web site is located at http://www.biocryst.com. The information on our web site is not incorporated by reference into this prospectus.

The Offering

Issuer	BioCryst Pharmaceuticals, Inc.
Selling Stockholders	The selling stockholders identified in the table on page 22. They purchased our common stock and warrants in August 2007.
Securities Offered	8,140,000 shares of our common stock.
Use of Proceeds	We will not receive any proceeds from sales of the shares of common stock sold from time to time under this prospectus by the selling stockholders.
Risk Factors	An investment in our common stock involves a high degree of risk. See Risk Factors beginning on page 5 for a discussion of certain factors that you should consider when evaluating an investment in our common stock.
Nasdaq Global Market Symbol	BCRX

Table of Contents

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 or incorporated by reference into this prospectus and any prospectus supplement, 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 June 30, 2007, our accumulated deficit was approximately $211.3 million. To become profitable, we must successfully manufacture and develop drug product candidates, receive regulatory approval, and successfully commercialize or enter into profitable agreements with other parties. It could be several years, if ever, before we receive royalties from any current or future license agreements or revenues directly from product sales.

Because of the numerous risks and uncertainties associated with developing our product candidates and their potential for commercialization, we are unable to predict the extent of any future losses or when we will become profitable, if at all. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. If we are unable to achieve and sustain profitability, the market value of our common stock will likely decline.

Our success depends upon our ability to advance our products through the various stages of development, especially through the clinical trial process.

To receive the regulatory approvals necessary for the sale of our product candidates, we or our partners must demonstrate through preclinical studies and clinical trials that each product candidate is safe and effective. 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 unlikely to show good results in the trials, unlikely to help advance a product to the point of a meaningful collaboration, or unlikely to have a reasonable commercial potential. We may suffer significant setbacks in pivotal clinical trials, even after earlier clinical trials show promising results. Any of our product 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 product candidate. These side effects could also result in the FDA or foreign regulatory authorities refusing to approve the product candidate for any targeted indications. We, our partners, 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 product candidates are safe or effective and have acceptable commercial viability.

Our ability to successfully complete clinical trials is dependent upon many factors beyond our control, including but not limited to:

- our ability to find suitable clinical sites and investigators to enroll patients;

the availability of and willingness of patients to participate in our clinical trials;

difficulty in maintaining contact with patients to provide complete data after treatment;

our product candidates may not prove to be either safe or effective;

Table of Contents

manufacturing or quality problems could affect the supply of drug product for our trials;

delays or changes in requirements by governmental agencies.

Clinical trials are lengthy and expensive. We or our partners 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 partners successfully complete clinical trials for our product candidates, we or our partners might not file the required regulatory submissions in a timely manner and may not receive regulatory approval for the product candidate.

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 cash from collaborative and other research and development agreements including government contracts, and, to a lesser extent, interest. For the year, our cash, cash equivalents and marketable securities balance has decreased from $46.2 million as of December 31, 2006 to $42.5 million as of June 30, 2007, primarily due to the monthly cash burn from operations less the cash received from collaborations. Our gross cash burn for the first six months of 2007 was significantly offset by the reimbursement from Mundipharma for the clinical expenses incurred in 2006 and 2007, plus the event payment and upfront payment received from Mundipharma and Shionogi, respectively. We are continuing to project our net cash burn rate to average approximately $3.0 million per month in 2007. We caution that our revenues, our expenses and our cash flows will vary significantly from quarter to quarter due to the nature of the trials in influenza and the reimbursement from HHS. Given that our average monthly burn rate in the first six months of 2007 was much lower than $3 million, we expect the average monthly burn rate for the remaining six months of 2007 will be correspondingly higher.

As our clinical programs continue to grow and patient enrollment increases, our costs will increase. Our current and planned clinical trials plus the related development, manufacturing, regulatory approval process requirements, and additional personnel resources and testing required for supporting the development of our drug candidates will consume significant capital resources and will increase our expenses. Our expenses, revenues and burn rate could vary significantly depending on many factors, including our ability to raise additional capital, the development progress of our collaborative agreements for our drug candidates, the amount of funding we receive from HHS for peramivir, the amount of funding or assistance, if any, we receive from other governmental agencies or other new partnerships with third parties for the development of our drug candidates, the progress and results of our current and proposed clinical trials for our most advanced drug products, the progress made in the manufacturing of our lead products and the progression of our other programs.

As of June 30, 2007, we had $42.5 million in cash, cash equivalents and marketable securities. In August 2007, we completed a $65.3 million private placement of unregistered common stock and warrants to certain existing stockholders. Our outstanding common stock increased by approximately 8.3 million shares. Our fully-diluted outstanding shares increased by an additional approximately 3.2 million shares pursuant to warrants exercisable at $10.25 per share. We are required to register the shares within 90 days, or 120 days if reviewed by the SEC. Failure to have the shares registered in this timeframe would trigger liquidated damages of 1.5% per month on the common stock purchase price, up to a maximum of 12%, which could have a significant impact on our cash. With our currently available funds and the amounts to be received from HHS, Shionogi and our other collaborators, we believe these resources will be sufficient to fund our operations for at least the next twelve months. However, this is a forward looking statement, and there may be changes that would consume available resources significantly before such time.

Table of Contents

Our long-term capital requirements and the adequacy of our available funds will depend upon many factors, including, but not limited to:

- our ability to perform under the contract with HHS and receive reimbursement;
- the progress and magnitude of our research, drug discovery and development programs;
- changes in existing collaborative relationships or government contracts;
- our ability to establish additional collaborative relationships with academic institutions, biotechnology or pharmaceutical companies and governmental agencies or other third parties;
- the extent to which our partners, including governmental agencies will share in the costs associated with the development of our programs or run the development programs themselves;
- our ability to negotiate favorable development and marketing strategic alliances for certain drug candidates; or our ability to build or expand internal development and commercial capabilities;
- our ability to achieve successful commercialization of marketed products by either us or a partner;
- the scope and results of preclinical studies and clinical trials to identify and evaluate drug candidates;
- our ability to enroll sites and patients in our clinical trials;
- the scope of manufacturing of our drug candidates to support our preclinical research and clinical trials;
- increases in personnel and related costs to support the development of our drug candidates;
- the scope of validation for the manufacturing of our drug substance and drug products required for future NDA filings;
- competitive and technological advances;
- the time and costs involved in obtaining regulatory approvals; and
- the costs involved in all aspects of intellectual property strategy and protection including the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims;

We expect that 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, including governmental agencies, in general and from the HHS contract specifically, 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.

If HHS were to eliminate, reduce or delay funding from our contract or dispute some of our incurred costs, this would have a significant negative impact on our anticipated revenues and cash flows and the development of peramivir.

Our projections of revenues and incoming cash flows for 2007 are substantially dependent upon HHS reimbursement for the costs related to our peramivir program. If HHS were to eliminate, reduce or delay the funding for this program or disallow some of our incurred costs, we would have to obtain additional funding for development of this drug candidate or significantly reduce or stop the development effort.

In contracting with HHS, we are subject to various U.S. government contract requirements, including general clauses for a cost-reimbursement research and development contract, which may limit our reimbursement or if we are found to be in violation could result in contract termination. U.S. government contracts typically contain unfavorable termination provisions and are subject to audit and modification by the

Table of Contents

government at its sole discretion. The U.S. government may terminate its contract with us either for its convenience or if we default by failing to perform in accordance with the contract schedule and terms, which would have a significant negative impact on our cash flows and operations.

Our contract with HHS has special contracting requirements, which create additional risks of reduction or loss of funding.

We have entered into a contract with HHS for the advanced development of our neuraminidase inhibitor, peramivir. In contracting with HHS, we are subject to various U.S. government contract requirements, including general clauses for a cost-reimbursement research and development contract. U.S. government contracts typically contain unfavorable termination provisions and are subject to audit and modification by the government at its sole discretion, which subjects us to additional risks. These risks include the ability of the U.S. government to unilaterally:

terminate or reduce the scope of our contract; and

audit and object to our contract-related costs and fees, including allocated indirect costs.

The U.S. government may terminate its contract with us either for its convenience or if we default by failing to perform in accordance with the contract schedule and terms. Termination for convenience provisions generally enable us to recover only our costs incurred or committed, and settlement expenses and profit on the work completed prior to termination. Termination for default provisions do not permit these recoveries.

As a U.S. government contractor, we are required to comply with applicable laws, regulations and standards relating to our accounting practices and are subject to periodic audits and reviews. As part of any such audit or review, the U.S. government may review the adequacy of, and our compliance with, our internal control systems and policies, including those relating to our purchasing, property, estimating, compensation and management information systems. Based on the results of its audits, the U.S. government may adjust our contract-related costs and fees, including allocated indirect costs. In addition, if an audit or review uncovers any improper or illegal activity, we may be subject to civil and criminal penalties and administrative sanctions, including termination of our contracts, forfeiture of profits, suspension of payments, fines and suspension or prohibition from doing business with the U.S. government. We could also suffer serious harm to our reputation if allegations of impropriety were made against us. In addition, under U.S. government purchasing regulations, some of our costs may not be reimbursable or allowed under our contracts. Further, as a U.S. government contractor, we are subject to an increased risk of investigations, criminal prosecution, civil fraud, whistleblower lawsuits and other legal actions and liabilities as compared to private sector commercial companies.

If we fail to successfully commercialize or establish collaborative relationships to commercialize certain of our drug product candidates or if any partner terminates or fails to perform its obligations under agreements with us, potential revenues from commercialization of our product candidates could be reduced, delayed or eliminated.

Our business strategy is to increase the asset value of our drug candidate portfolio. We believe this is best achieved by retaining full product rights or through collaborative arrangements with third parties as appropriate. As needed, potential third party alliances could include preclinical development, clinical development, regulatory approval, marketing, sales and distribution of our drug product candidates.

Currently, we have established collaborative relationships with four pharmaceutical companies, Roche, Mundipharma, and Shionogi and Green Cross for development and commercialization of BCX-4208, Fodosine^{tm} and peramivir, respectively. The process of establishing and implementing collaborative relationships is difficult, time-consuming and involves significant uncertainty, including:

our partners may seek to renegotiate or terminate their relationships with us due to unsatisfactory clinical results, a change in business strategy, a change of control or other reasons;

our contracts for collaborative arrangements may expire;

our partners may choose to pursue alternative technologies, including those of our competitors;

Table of Contents

- we may have disputes with a partner that could lead to litigation or arbitration;
- we do not have day to day control over the activities of our partners and have limited control over their decisions;
- our ability to generate future event payments and royalties from our partners depends upon their abilities to establish the safety and efficacy of our drug candidates, obtain regulatory approvals and achieve market acceptance of products developed from our drug candidates;
- we or our partners may fail to properly initiate, maintain or defend our intellectual property rights, where applicable, or a party may utilize our proprietary information in such a way as to invite litigation that could jeopardize or potentially invalidate our proprietary information or expose us to potential liability;
- our partners may not devote sufficient capital or resources towards our product candidates; and
- our partners may not comply with applicable government regulatory requirements.

If any partner fails to fulfill its responsibilities in a timely manner, or at all, our commercialization efforts related to that collaboration could be reduced, delayed or terminated, or it may be necessary for us to assume responsibility for activities that would otherwise have been the responsibility of our partner. If we are unable to establish and maintain collaborative relationships on acceptable terms, we may have to delay or discontinue further development of one or more of our product candidates, undertake commercialization activities at our own expense or find alternative sources of funding. Any delay in the development or commercialization of our compounds would severely affect our business, because if our compounds do not progress through the development process or reach the market in a timely manner, or at all, we may not receive additional future event payments and may never receive product or royalty payments.

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

We have not 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 event or other collaborative payments.

Our ability to receive revenue from products we commercialize presents several risks, including:

- we or our collaborators may fail to successfully complete clinical trials sufficient to obtain FDA marketing approval;
- many competitors are more experienced and have significantly more resources;
- we may fail to employ a comprehensive and effective intellectual property strategy which could result in decreased commercial value of our company and our products;
- we may fail to employ a comprehensive and effective regulatory strategy which could result in a delay or failure in commercialization of our products;
- our ability to successfully commercialize our products are affected by the competitive landscape, which cannot be fully known at this time;

reimbursement is constantly changing which could greatly affect usage of our products;

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.

Table of Contents

If our contract research organizations do not successfully carry out their duties or if we lose our relationships with contract research organizations, our drug development efforts could be delayed.

We depend on contract research organizations, third-party vendors and investigators for preclinical testing and clinical trials related to our drug discovery and development efforts, including the HHS contract. We intend to depend on them to assist in our future discovery and development efforts. These parties are not our employees and we cannot control the amount or timing of resources that they devote to our programs. If they fail to devote sufficient time and resources to our drug development programs or if their performance is substandard, it will delay the approval of our products. The parties with which we contract for execution of our clinical trials play a significant role in the conduct of the trials and the subsequent collection and analysis of data. Their failure to meet their obligations could adversely affect clinical development of our products. Moreover, these parties may also have relationships with other commercial entities, some of which may compete with us. If they assist our competitors it could harm our competitive position.

If we lose our relationship with any one or more of these parties, we could experience a significant delay in both identifying another comparable provider and then contracting for its services. We may be unable to retain an alternative provider on reasonable terms, if at all. Even if we locate an alternative provider, it is likely that this provider may need additional time to respond to our needs and may not provide the same type or level of service as the original provider. In addition, any provider that we retain will be subject to current Good Laboratory Practices (cGLP), current Good Manufacturing Practices (cGMP), or current Good Clinical Practices (cGCP), and similar foreign standards and we do not have control over compliance with these regulations by these providers. Consequently, if these practices and standards are not adhered to by these providers, the development and commercialization of our product candidates could be delayed.

If our development collaborations with third parties, such as our development partners and contract research organizations, fail, the development of our drug product candidates will be delayed or stopped.

We rely heavily upon other parties for many important stages of our drug development programs, including but not limited to:

- discovery of compounds 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 product candidates;
- execution of some preclinical studies and late-stage development for our compounds and product candidates;
- management of our clinical trials, including medical monitoring and data management;
- obtaining, shipping, testing and storing patient samples from our clinical trials;
- execution of additional toxicology studies that may be required to obtain approval for our product candidates;
- manufacturing the starting materials and drug substance required to formulate our drug products and the drug products to be used in both our clinical trials and toxicology studies; and
- management of our regulatory function;

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, conduct our toxicology studies, manufacture our starting materials, drug substance and drug products or manage our regulatory function breached their obligations to us, this would delay or prevent the development of our product candidates.

Table of Contents

Our development of both intravenous and intramuscular dosing of peramivir for avian and seasonal influenza is subject to all disclosed drug development and potential commercialization risks and numerous additional risks. Any potential revenue benefits to us are highly speculative.

Further development and potential commercialization of peramivir is subject to all the risks and uncertainties disclosed in our other risk factors relating to drug development and commercialization. In addition, potential commercialization of peramivir is subject to further risks, including but not limited to the following:

- the injectable versions of peramivir are currently in Phase II clinical development, have been tested in a limited number of humans, and may not be safe or effective;
- necessary government or other third party funding for clinical testing and further development of peramivir may not be available timely, at all, or in sufficient amounts;
- the avian flu prevention or treatment concerns may not materialize at all, or in the near future;
- advances in flu vaccines could substantially replace potential demand for an antiviral such as peramivir;
- any substantial demand for avian flu treatments may occur before peramivir can be adequately developed and tested in clinical trials;
- injectable forms of peramivir may not prove to be accepted by patients and physicians as a treatment for seasonal influenza compared to the other currently marketed antiviral drugs, which would limit revenue from non-governmental entities;
- numerous large and well-established pharmaceutical and biotech companies will be competing to meet the market demand for avian flu drugs and vaccines;
- regulatory authorities may not make needed accommodations to accelerate the drug testing and approval process for peramivir; and
- in the next few years, it is expected that a limited number of governmental entities will be the primary potential customers for peramivir and if we are not successful at marketing peramivir to these entities for any reason, we will not receive substantial revenues.

If any or all of these and other risk factors occur, we will not attain significant revenues or gross margins from peramivir and our stock price will be adversely affected.

Because we have limited manufacturing experience, we depend on third-party manufacturers to manufacture our drug product candidates and the materials for our product candidates. If we cannot rely on third-party manufacturers, we will be required to incur significant costs and potential delays in finding new third-party manufacturers.

We have limited manufacturing experience and only a small scale manufacturing facility. We currently rely upon third-party manufacturers to manufacture the materials required for our drug product candidates and most of the preclinical and clinical quantities of our product candidates. We depend on these third-party manufacturers to perform their obligations in a timely manner and in accordance with applicable governmental regulations. Our third-party manufacturers may encounter difficulties with meeting our requirements, including but not limited to problems involving:

inconsistent production yields;

difficulties in scaling production to commercial and validation sizes;

interruption of the delivery of materials required for the manufacturing process;

scheduling of plant time with other vendors or unexpected equipment failure;

potential catastrophes that could strike their facilities;

Table of Contents

potential impurities in our drug substance or drug products that could affect availability of product for our clinical trials or future commercialization;

poor quality control and assurance or inadequate process controls; and

lack of compliance with regulations and specifications set forth by the FDA or other foreign regulatory agencies.

These contract manufacturers may not be able to manufacture the materials required or our drug product candidates at a cost or in quantities necessary to make them commercially viable. We also have no control over whether third-party manufacturers breach their agreements with us or whether they may terminate or decline to renew agreements with us. To date, our third party manufacturers have met our manufacturing requirements, but they may not continue to do so. Furthermore, changes in the manufacturing process or procedure, including a change in the location where the drug is manufactured or a change of a third-party manufacturer, may require prior review and approval in accordance with the FDA s cGMPs, and comparable foreign requirements. This review may be costly and time-consuming and could delay or prevent the launch of a product. The FDA or similar foreign regulatory agencies at any time may also implement new standards, or change their interpretation and enforcement of existing standards for manufacture, packaging or testing of products. If we or our contract manufacturers are unable to comply, we or they may be subject to regulatory action, civil actions or penalties.

If we are unable to enter into agreements with additional manufacturers on commercially reasonable terms, or if there is poor manufacturing performance on the part of our third party manufacturers, we may not be able to complete development of, or market, our product candidates.

Our raw materials, drug substances, and drug products are manufactured by a limited group of suppliers and some at a single facility. If any of these suppliers were unable to produce these items, this could significantly impact our supply of drugs for further preclinical testing and clinical trials.

If the clinical trials of our drug product candidates fail, our product candidates will not be marketed, and we will not realize product related revenue.

To receive the regulatory approvals necessary for the sale of our product candidates, we or our partners must demonstrate through preclinical studies and clinical trials that each product candidate is safe and effective. If we or other third party partners are unable to demonstrate that our product candidates are safe and effective, our product candidates will not receive regulatory approval and will not be marketed, and we will not realize 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 unlikely to show good results in the trials, unlikely to help advance a product to the point of a meaningful collaboration, or unlikely to have a reasonable commercial potential. 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 product 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 product candidate. These side effects could also result in the FDA or foreign regulatory authorities refusing to approve the product candidate for any targeted indications. We, our partners, 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 product candidates are safe or effective.

We negotiated a special protocol assessment, or SPA, with the FDA for the planned pivotal clinical trial of our lead anti-cancer compound, Fodosine[tm], for treatment of CTCL. A previous pivotal clinical trial under an SPA of Fodosine[tm] for treatment of T-cell acute lymphoblastic leukemia was voluntarily put on hold by us. An SPA is an agreement between an applicant and the FDA on the design and the size of clinical trials that is intended to form the basis of a New Drug Application (NDA). Once the FDA and an applicant reach an agreement on an SPA, the SPA cannot be changed after the clinical trial begins, except in limited

Table of Contents

circumstances such as a change in the science or clinical knowledge about the conditions being studied. Any significant change to the protocols for a clinical trial subject to an SPA would require prior FDA approval, which could delay implementation of such a change and continuation and completion of the related clinical trial. Receipt of the SPA does not ensure that Fodosine[tm] will receive FDA approval or that the process will be accelerated.

Clinical trials are lengthy and expensive. We or our partners 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 partners successfully complete clinical trials for our product candidates, we or our partners might not file the required regulatory submissions in a timely manner and may not receive regulatory approval for the product candidate.

If we or our partners 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 partners must obtain regulatory approval before marketing or selling our future drug products. If we or our partners 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. Neither the FDA nor foreign regulatory agencies have approved any of our drug product candidates. 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 product 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 product 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 product candidate, the approval may limit the indicated uses for a product 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, our clinical data and our manufacturing data at our facility. While we do store duplicate copies of most of our clinical data offsite and a significant portion of our data is included in regular backups of our systems, we could lose important 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 partners 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 CTCL and psoriasis. In November 1995, the FDA issued a List of Inspectional Observations, Form FDA 483, which cited our failure to follow good clinical practices. The FDA also

Table of Contents

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 CTCL 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.

If we fail to meet certain registration deadlines for common stock sold in August 2007, we face substantial liquidated damages.

We have agreed to meet certain registration deadlines relating to the common stock, warrants and underlying common stock we sold in August 2007. If we fail to meet such deadlines, we face liquidated damages of up to approximately $7.8 million in cash. This would adversely affect our cash resources and our stock price.

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

Our drug product 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 product candidates that we or our partners develop will depend on a number of factors, including but not limited to:

our clinical evidence of safety and efficacy;

cost-effectiveness, convenience and ease of use of our product candidates;

their safety, availability and effectiveness relative to alternative treatments;

the actual and potential side effects or other reactions;

reimbursement policies of government and third-party payers; and

the effectiveness of marketing and distribution support for our product candidates.

Physicians, patients, payers or the medical community in general may not accept or use our product candidates even after the FDA or foreign regulatory agencies approve the drug candidates. If our product 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 product 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 and our partners are performing research on or developing products for the treatment of several disorders including T-cell mediated disorders (T-cell cancers, psoriasis, transplant rejection, and rheumatoid arthritis), oncology, influenza, hepatitis C and cardiovascular disorders. We expect to encounter significant competition for any of the pharmaceutical products we plan to develop. Companies that complete clinical

Table of Contents

trials, obtain required regulatory approvals and commence commercial sales of their products before their competitors may achieve a significant competitive advantage. Such is the case with Eisai s Targretin for CTCL and the current neuraminidase inhibitors marketed by Glaxo Smith Kline and Roche for influenza. 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, influenza, hepatitis C, and in other therapeutic areas where we have discovery efforts ongoing. 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 partners to obtain, protect and enforce viable intellectual property rights including but not limited to trade name, trade mark and patent protection for our company and its products, methods, processes and other technologies we may license or develop, to preserve our trade secrets, and to operate without infringing the proprietary rights of third parties both domestically and abroad. The patent position of biotechnology and pharmaceutical companies is generally highly uncertain, involves complex legal and factual questions and has recently been the subject of much litigation. Neither the United States Patent and Trademark Office (USPTO), the Patent Cooperation Treaty offices, nor the courts of the United States and other jurisdictions have consistent policies nor predictable rulings regarding the breadth of claims allowed or the degree of protection afforded under many biotechnology and pharmaceutical patents. The validity, scope, enforceability and commercial value of these rights, therefore, is highly uncertain.

Our success depends in part on avoiding the infringement of other parties patents and other intellectual property rights as well as avoiding the breach of any licenses relating to our technologies and products. In the U.S., patent applications filed in recent years are confidential for 18 months, while older applications are not published until the patent issues. As a result, avoiding patent infringement may be difficult and we may inadvertently infringe third-party patents or proprietary rights. These third parties could bring claims against us, our partners or our licensors that even if resolved in our favor, could cause us to incur substantial expenses and, if resolved against us, could additionally cause us to pay substantial damages. Further, if a patent infringement suit were brought against us, our partners or our licensors, we or they could be forced to stop or delay research, development, manufacturing or sales of any infringing product in the country or countries covered by the patent we infringe, unless we can obtain a license from the patent holder. Such a license may not be available on acceptable terms, or at all, particularly if the third party is developing or marketing a product competitive with the infringing product. Even if we, our partners or our licensors were able to

obtain a license, the rights may be nonexclusive, which would give our competitors access to the same intellectual property.

If we or our partners are unable or fail to adequately, initiate, protect, defend or enforce our intellectual property rights in any area of commercial interest or in any part of the world where we wish to seek regulatory approval for our products, methods, processes and other technologies, the value of the drug product candidates

Table of Contents

to produce revenue would diminish. Additionally, if our products, methods, processes, and other technologies or our commercial use of such products, processes, and other technologies, including but not limited to any tradename, trademark or commercial strategy infringe the proprietary rights of other parties, we could incur substantial costs. The USPTO and the patent offices of other jurisdictions have issued to us a number of 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 USPTO. We have filed a number of corresponding foreign patent applications and intend to file additional foreign and U.S. patent applications, as appropriate. We have also filed certain trademark and tradename applications worldwide. 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;
- if patents do issue we can not be sure that we will be able to adequately defend such patents and whether or not we will be able to adequately enforce such patents; or
- whether or not others will obtain patents claiming aspects similar to those covered by our patent applications.

If the USPTO or other foreign patent office upholds patents issued to others or if the USPTO 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 USPTO or other foreign patent 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 partners 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 or commercialize our product candidates and any such events would significantly impair the value of such product candidates.

If we fail to retain our existing key personnel or fail to attract and retain additional key personnel, the development of our drug product 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.

Table of Contents

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

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

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.

The Medicare prescription drug coverage legislation and future legislative or regulatory reform of the healthcare system may affect our ability to sell our products profitably.

In the United States, there have been a number of legislative and regulatory proposals, at both the federal and state government levels, to change the healthcare system in ways that could affect our ability to sell our products profitably, if approved. For example, the Medicare Prescription Drug and Modernization Act of 2003 (MMA), went into effect in 2006 and has changed the types of drugs covered by Medicare, and the methodology used to determine the price for such drugs. Further federal and state proposals and healthcare reforms are likely. Our business could be harmed by the MMA, by the possible effect of this legislation on amounts that private payors will pay and by other healthcare reforms that may be enacted or adopted in the future.

There is a substantial risk of product liability claims in our business. If we are unable to obtain sufficient insurance, a product liability claim against us could adversely affect our business.

We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials and will face even greater risks upon any commercialization by us of our product candidates. We have product liability insurance covering our clinical trials in the amount of $10 million. Clinical trial and product liability insurance is becoming increasingly expensive. As a result, we may be unable to obtain sufficient insurance or increase our existing coverage at a reasonable cost to protect us against losses that could have a material adverse effect on our business. An individual may bring a product liability claim against us if one of our products or product candidates causes, or is claimed to have caused, an injury or is found to be unsuitable for consumer use. Any product liability claim brought against us, with or without merit, could result in:

- liabilities that substantially exceed our product liability insurance, which we would then be required to pay from other sources, if available;

- an increase of our product liability insurance rates or the inability to maintain insurance coverage in the future on acceptable terms, or at all;

withdrawal of clinical trial volunteers or patients;

damage to our reputation and the reputation of our products, resulting in lower sales;

Table of Contents

regulatory investigations that could require costly recalls or product modifications;

litigation costs; and

the diversion of management s attention from managing our business.

If our computer systems fail or our facility incurs damage, 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.

In addition, we store numerous clinical and stability samples at our facility that could be damaged if our facility incurred physical damage or in the event of an extended power failure. We have backup power systems in addition to backup generators to maintain power to all critical functions, but any loss of these samples could result in significant delays in our drug development process.

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 June 30, 2007, the 52-week range of the market price of our stock was from $6.57 to $14.94 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;

additional dilution through sales of our common stock or other derivative securities;

status of new or existing licensing or collaborative agreements and government contracts;

we or our partners achieving or failing to achieve development milestones;

publicity regarding actual or potential medical results relating to products under development by us or our competitors;

publicity regarding certain public health concerns for which we are or may be developing treatments;

regulatory developments in both the United States and foreign countries;

public concern as to the safety of pharmaceutical products;

Table of Contents

actual or anticipated fluctuations in our operating results;

changes in financial estimates or recommendations by securities analysts;

changes in the structure of healthcare payment systems, including developments in price control legislation;

announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;

additions or departures of key personnel or members of our board of directors;

purchases or sales of substantial amounts of our stock by existing stockholders, including officers or directors;

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 limited influence on stockholder decisions.

As of August 15, 2007, our directors, executive officers and our stockholders who hold 5% or greater of our outstanding common stock, beneficially owned approximately 54.3% of our outstanding common stock and common stock equivalents. As a result, these holders will likely be able to significantly influence our operations and matters requiring stockholder approval, including the election of directors. The interests of these stockholders may be different from the interests of other stockholders and they could take actions that might not be considered by other stockholders to be in their best interests. 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 4,955,000 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 10.1% as of August 15, 2007, 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. In August 2007, this plan was amended for a transaction involving funds managed by or affiliated with

Baker Brother Investments such that they could purchase up to 25% without triggering the Rights. After the closing of our August 2007 private placement, such group owns approximately 19.0% of our stock.

Table of Contents

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.

Upon the effective time of this registration statement, there will be a significant number of shares of our common stock eligible for sale, which could depress the market price of our stock and adversely affect the liquidity of the trading market for our stock.

As of August 2007, we had approximately 37.9 million shares of common stock outstanding. The approximately 8.1 million shares of common stock that may be sold by the selling stockholders under this prospectus will be freely tradable without restriction or further registration under the federal securities laws unless purchased by our affiliates. When we register them as expected in the first half of 2008, an additional approximately 3.3 million shares of additional common stock and common stock issuable upon exercise of outstanding warrants will be freely tradable without restriction or further registration under the federal securities laws unless purchased by our affiliates. We also expect to have registered on Form S-8, approximately 5.9 million shares of our common stock issuable under our Stock Incentive Plan, of which approximately 5.1 million shares were outstanding at August 15, 2007. If these or other stockholders sell substantial amounts of our common stock in the public market, or if the market perceives that these sales may occur, the market price of our common stock might decline. We are unable to estimate the amount, timing or nature of future sales of outstanding common stock.

The additional volume of shares available for trading could increase selling demand on our stock on the Nasdaq Global Market, and outstrip buying demand. This may make it difficult to sell substantial amounts of our stock without adversely impacting the stock price, and could depress the market price for our stock.

Exercise of outstanding options and warrants will dilute stockholders and could decrease the market price of our common stock.

As of August 15, 2007, we had issued and outstanding 37,870,878 shares of common stock, outstanding options to purchase approximately 5.1 million additional shares of common stock and warrants (exercisable at $10.25 per share) to purchase an additional 3,159,895 shares of our common stock. The existence of the outstanding options and warrants may adversely affect the market price of our common stock and the terms under which we could obtain additional equity capital.

INFORMATION REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the information we incorporate by reference, contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, referred to as the Exchange Act, which are subject to the safe harbor created in Section 21E. All statements other than statements of historical facts contained in this prospectus are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as may, could, will, should, expect, plan, anticipate, believe, estimate seek, potential or continue or 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. These forward-looking statements include, but are not limited to, statements about:

- the initiation, timing, progress and results of our preclinical and clinical trials, research and development programs;

the further preclinical or clinical development and commercialization of our product candidates, including our peramivir, Fodosine[tm] and other PNP inhibitor and hepatitis C development programs;

Table of Contents

- the implementation of our business model, strategic plans for our business, product candidates and technology;
- our ability to establish and maintain corporate collaborations;
- plans, programs, progress and potential success of our collaborations, including Roche for BCX-4208, Mundipharma for Fodosine[tm] and Shionogi and Green Cross for peramivir;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our product candidates and technology;
- our ability to operate our business without infringing the intellectual property rights of others;
- estimates of our expenses, future revenues, capital requirements and our needs for additional financing;
- the timing or likelihood of regulatory filings and approvals;
- our financial performance; and
- competitive companies, technologies and our industry.

These statements relate to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under Risk Factors and elsewhere in this prospectus. Any forward-looking statement in this prospectus reflects our current views with respect to future events and is subject to these and other risks, uncertainties and assumptions relating to our operations, results of operations, industry and future growth. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

Discussions containing these forward-looking statements are also contained in Management s Discussion and Analysis of Financial Condition and Results of Operations incorporated by reference from our most recent Annual Report on Form 10-K, our Quarterly Reports on Form 10-Q for the quarters ended since our most recent Annual Report, our Current Reports on Form 8-K, as well as any amendments we make to those filings with the SEC.

USE OF PROCEEDS

The proceeds from the sale or other disposition of the common stock covered by this prospectus are solely for the accounts of the selling stockholders named in this prospectus. We will not receive any proceeds from the sale or other disposition of these shares of common stock.

The selling stockholders will pay any underwriting discounts and commissions and expenses incurred by the selling stockholders for brokerage, accounting, tax or legal services or any other expenses incurred by the selling stockholders in disposing of the shares. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, without limitation, all registration and filing fees, Nasdaq listing fees and fees and expenses of our counsel and our independent registered public accounting firm.

SELLING STOCKHOLDERS

In August 2007, we sold 8,315,513 shares of common stock and warrants to purchase 3,159,895 additional shares of common stock at $10.25 per share to the selling stockholders in a private placement transaction. This prospectus covers the offer and sale or other disposition by the selling stockholders of up to an aggregate of 8,140,000 shares of common stock issued to the selling stockholders in the August 2007 private placement.

Table of Contents

We are registering the above-referenced shares to permit each of the selling stockholders and their pledgees, donees, transferees or other successors-in-interest that receive their shares after the date of this prospectus to resell or otherwise dispose of the shares in the manner contemplated under the Plan of Distribution .

The selling stockholders may sell some, all or none of their shares. We do not know how long the selling stockholders will hold the shares before selling them. We currently have no agreements, arrangements or understandings with the selling stockholders regarding the sale of any of the shares. The shares offered by this prospectus may be offered from time to time by the selling stockholders. We have agreed to keep the registration statement effective for each selling stockholder until the earlier of (a) August 9, 2009, (b) such time as all the shares owned by a selling stockholder covered by this prospectus, and all other warrants and underlying shares of common stock purchased in the August 2007 private placement have been sold by the selling stockholder or (c) all such shares, warrants and underlying shares may be sold by the selling stockholder in any three month period in reliance on Rule 144.

The following table sets forth the name of each selling stockholder, the number of shares beneficially owned (including warrant shares) by each of the respective selling stockholders, the number of shares that may be offered under this prospectus and the number of shares of our common stock to be owned by the selling stockholders after this offering is completed. The number of shares in the column Number of Shares Being Offered represents all of the shares that a selling stockholder may offer under this prospectus. Information regarding any position, office or other material relationship which any selling stockholder has had with us within the past three years is included in the footnotes to the table.

Beneficial ownership of a security is determined in accordance with the rules and regulations of the SEC. Under these rules, a person is deemed to beneficially own a share of our common stock if that person has or shares voting power or investment power with respect to that share, or has the right to acquire beneficial ownership of that share within 60 days, including through the exercise of any option or other right or the conversion or any other security. Shares issuable under stock options and warrants not subject to this offering are deemed outstanding for computing the percentage of the person holding options or warrants but are not outstanding for computing the percentage of any other person. The percentage of beneficial ownership for the following table is based upon 37,870,878 shares of common stock outstanding as of August 15, 2007.

	Number of Shares Beneficially Owned Prior to Offering		Shares Beneficially Owned After Offering	
Name		**Number of Shares Being Offered**	**Number of Shares**	**% of Class**
14159, L.P.(1)	162,972	91,734	71,238	*
Baker Biotech Fund I, L.P(1)	2,075,016	1,094,109	980,907	2.56
Baker Bros. Investments II, L.P.(1)	13,185	7,354	5,831	*
Baker Brothers Life Sciences, L.P.(1)	5,126,619	2,885,526	2,241,093	5.75
Caduceus Private Investments II, LP(2)	1,719,030	547,863	1,171,167	3.08
Caduceus Private Investments II (QP), LP(2)	643,817	205,132	438,685	1.16
EHS Holdings, Inc.(3)	1,147,523	813,987	333,536	*
KPCB Holdings, Inc.(4)	2,883,644	1,254,991	1,628,653	4.25
Nanocap Fund, L.P.(5)	3,771,226	152,356	3,159,418	8.29
Nanocap Qualified Fund, L.P.(5)	3,771,226	222,133	3,159,418	8.29

Orphan Fund, L.P.(5)	3,771,226	237,319	3,159,418	8.29
TPG Biotechnology Partners, L.P.(6)	1,627,559	627,496	1,000,063	2.62
TOTAL	19,170,591	8,140,000	11,030,591	26.58

* Represents less than 1%

(1) Includes (a) 35,611 shares issuable upon the exercise of warrants by 14159, L.P., (b) 424,726 shares issuable upon the exercise of warrants by Baker Biotech Fund I, L.P., (c) 2,854 shares issuable upon the exercise of

Table of Contents

warrants by Baker Bros. Investments II, L.P., and (d) 1,120,142 shares issuable upon the exercise of warrants by Baker Bros. Life Sciences, L.P. Julian C. Baker and Felix J. Baker, as managing members of these funds, have voting and investment control over these shares. Based on information provided to us by Messrs. Baker. Excludes shares beneficially owned by Stephen R. Biggar, M.D., Ph.D. a director of the Company appointed to the board under a Stock Purchase Agreement dated as of February 17, 2005. Dr. Biggar is a Partner at Baker Brothers Investments, an affiliate of these selling stockholders. Dr. Biggar and Messrs. Baker disclaim beneficial ownership of these securities, except to the extent of their pecuniary interest therein.

(2) Includes (a) 212,677 shares issuable upon the exercise of warrants by Caduceus Private Investments II, L.P., and (b) 79,631 shares issuable upon the exercise of warrants by Caduceus Private Investments II (QP), L.P. Based on information provided to us by OrbiMed Capital GP II, LLC, general partner of these selling stockholders. Carl L. Gordon, CFA, Ph.D., is a General Partner of OrbiMed Capital GP II, LLC and was a director of BioCryst from May 2004 until May 2007. Dr. Gordon disclaims beneficial ownership of these securities, except to the extent of his pecuniary interest therein.

(3) Includes 315,985 shares issuable upon the exercise of warrants. Based on information provided to us by EHS Holdings, Inc. William W. Featheringill has been a director of BioCryst since 1995 and is the Chairman of the Board of EHS Holdings, Inc.

(4) Includes 487,179 shares issuable upon the exercise of warrants. Based on information provided to us by KPCB Pandemic and Bio Defense Fund, LLC, for which KPCB Holdings, Inc. acts as nominee. Beth C. Seidenberg, M.D., has been a director of BioCryst since December 2005 under an agreement with us and is a Partner of Kleiner Perkins Caufield & Byers. Dr. Seidenberg disclaims beneficial ownership of these securities, except to the extent of her pecuniary interest therein.

(5) Includes (a) 59,143 shares issuable upon the exercise of warrants by Nanocap Fund, L.P., (b) 86,231 shares issuable upon the exercise of warrants by Nanocap Qualified Fund, L.P., and (c) 92,126 shares issuable upon the exercise of warrants by Orphan Fund, L.P. Based on information provided to us by Stephens Investment Management, LLC, general partner of each of these selling stockholders.

(6) Includes 243,590 shares issuable upon the exercise of warrants. Based on information provided to us by TPG Biotechnology Genpar, L.P., its general partner. Fred E. Cohen M.D., D. Phil., a Partner of TPG, has been a Board observer of BioCryst since December 2005 under an agreement with us. The selling stockholder has advised us it could be deemed to be an affiliate of a registered broker-dealer. The selling stockholder has represented to us that it purchased the shares in the ordinary course of its business and for its own account and, at the time of purchase, with no intention of distributing any of such shares or any arrangement or understanding with any other persons regarding the distribution of such shares. Dr. Cohen disclaims beneficial ownership of these securities, except to the extent of his pecuniary interest therein.

PLAN OF DISTRIBUTION

The selling stockholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling shares received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares:

ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;

purchases by a broker-dealer as principal and resale by the broker-dealer for its account;

an exchange distribution in accordance with the rules of the applicable exchange;

Table of Contents

privately negotiated transactions;

short sales effected after the date the registration statement of which this prospectus is a part is declared effective by the SEC;

through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;

broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;

a combination of any such methods of sale; or

any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus. The selling stockholders are not obligated to, and there is no assurance that the selling stockholders will, sell all or any of the shares we are registering. The selling stockholders may transfer, devise or gift such shares by other means not described in this prospectus.

In connection with the sale of our shares, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering. Upon any exercise of the warrants by payment of cash, however, we will receive the exercise price of the warrants.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. The selling stockholders do not expect these commissions and discounts to exceed what is customary in the types of transactions involved. Any profits on the resale of shares by a broker-dealer acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. Discounts, concessions, commissions and similar selling expenses, if any, attributable to the sale of shares will be borne by a selling stockholder. The selling stockholders may agree to indemnify any agent, dealer or broker-dealer that participates in transactions involving sales of the shares if liabilities are imposed on that person under the Securities Act.

We are required to pay certain fees and expenses incurred by the Company incident to the registration of the shares. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act. The selling stockholders have severally agreed to indemnify us against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

The selling stockholders, broker-dealers or agents that participate in the sale of the common stock may be underwriters within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act. Selling stockholders who are underwriters within the meaning of Section 2(11) of

Table of Contents

the Securities Act will be subject to the prospectus delivery requirements of the Securities Act. There is no underwriter or coordinating broker acting in connection with the proposed sale of the resale shares by the selling stockholders.

The selling stockholders may from time to time pledge or grant a security interest in some or all of the shares owned by them and, if they default in the performance of any of their secured obligations, the pledgees or secured parties may offer and sell the shares from time to time under this prospectus as it may be supplemented from time to time, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus.

To the extent required, the shares to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

In order to comply with the securities laws of some states, if applicable, the common stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the common stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

The anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. In addition, we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed with the selling stockholders to keep the registration statement of which this prospectus constitutes a part effective until the earlier of (1) August 9, 2009, (2) such time as all of the shares covered by this prospectus have been disposed of pursuant to and in accordance with the registration statement or (3) the date on which the shares may be sold pursuant to Rule 144(k) of the Securities Act.

LEGAL MATTERS

The validity of the common stock offered hereby will be passed on for us by Holme Roberts & Owen LLP, Denver, Colorado. As of August 15, 2007, a partner of Holme Roberts & Owen LLP beneficially owned a total of 5,000 shares of our common stock.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2006, and management s assessment of the effectiveness of our internal control over financial reporting as of December 31, 2006, as set forth in their reports, which are incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements and management s assessment are incorporated by reference in reliance on Ernst & Young LLP s reports, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file electronically with the Securities and Exchange Commission our annual reports on Form 10-K, quarterly interim 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 Securities Exchange Act of 1934. We make available on or through our website, free of charge, copies of these reports as soon as reasonably practicable after we

Table of Contents

electronically file or furnish it to the SEC. You can also request copies of such documents by contacting our Investor Relations Department at 2190 Parkway Lake Drive, Birmingham, Alabama 35244 or sending an email to info@biocryst.com. You may read and copy any document we file at the following location at the SEC:

100 F Street, N.E., Room 1580
Washington, D.C. 20549

You can also obtain copies of this information by mail from the Public Reference Room of the SEC, 100 F Street, N.E., Room 1580, Washington D.C. 20549, at prescribed rates. You may obtain information on the operation of the Public Reference Room by calling the SEC at (800) SEC-0330.

The SEC also maintains an Internet world wide web site that contains reports, proxy statements and other information about issuers, like BioCryst, that file electronically with the SEC. The address of that site is http://www.sec.gov.

We have filed with the SEC a registration statement on Form S-3 that registers the securities we are offering. The registration statement, including the attached exhibits and schedules, contains additional relevant information about us and our securities. The rules and regulations of the SEC allow us to omit certain information included in the registration statement from this prospectus.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference information into this prospectus. This means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be part of this prospectus, except for any information that is superseded by information that is included directly in this document.

This prospectus includes by reference the documents listed below that we have previously filed with the SEC and that are not included in or delivered with this document. They contain important information about us and our financial condition.

- Our Annual Report on Form 10-K for the year ended December 31, 2006, filed with the SEC on March 14, 2007;

- Our Quarterly Reports on Form 10-Q for the quarter ended March 31, 2007, filed with the SEC on May 10, 2007, and for the quarter ended June 30, 2007, filed with the SEC on August 9, 2007;

- Our Current Reports on Form 8-K filed with the SEC on January 11, March 6, March 27, July 18, July 24, July 26, August 6, August 7 and August 10, 2007;

- Our Definitive Proxy Statement on Schedule 14A filed with the SEC on April 10, 2007;

- The description of our common stock which is contained in our Registration Statement on Form 8-A (File No. 000-23186) filed with the SEC on January 8, 1994, including any amendment or reports filed for the purpose of updating such description; and

- The description of our preferred share purchase rights which is contained in our Registration Statement on Form 8-A filed with the SEC on June 17, 2002, including any amendment or reports filed for the purpose of updating such description.

All documents filed by us pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus and prior to the termination of this offering shall be deemed to be incorporated by reference herein and to be a part of this prospectus from the date of filing of such documents, excluding any information furnished under Item 2.02 or Item 7.01 of any Current Report on Form 8-K and exhibits filed on such form that are related to such items. We also specifically incorporate by reference any documents filed by us with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement and prior to the effectiveness of the registration statement. Any statement contained in a document incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein or in any other subsequently filed document which

Table of Contents

also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You can obtain any of the documents incorporated by reference in this document from us without charge, excluding any exhibits to those documents unless the exhibit is specifically incorporated by reference as an exhibit to this prospectus. You can obtain documents incorporated by reference in this prospectus by requesting them in writing or by telephone from us at the following address:

Investor Relations
BioCryst Pharmaceuticals, Inc.
2190 Parkway Lake Drive
Birmingham, Alabama 35244
(205) 444-4600

We have not, and the selling stockholders have not, authorized anyone to give any information or make any representation about us that is different from, or in addition to, that contained in this prospectus or in any of the materials that we have incorporated by reference into this document. Therefore, if anyone does give you information of this sort, you should not rely on it. If you are in a jurisdiction where offers to sell, or solicitations of offers to purchase, the securities offered by this document are unlawful, or if you are a person to whom it is unlawful to direct these types of activities, then the offer presented in this document does not extend to you.

Table of Contents

BioCryst Pharmaceuticals, Inc.

8,140,000 Shares of
Common Stock

PROSPECTUS

, 2007

Table of Contents

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. *OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.*

The following table sets forth all expenses payable by the Registrant in connection with the issuance and distribution of the securities, other than underwriting discounts and commissions. The Registrant will bear all of such expenses. All the amounts shown are estimates, except the registration fee.

Registration fee	$ 2,514
Accounting fees and expenses	15,000
Legal fees and expenses	40,000
Printing and engraving	10,000
Miscellaneous	486
Total	$ 68,000

ITEM 15. *INDEMNIFICATION OF DIRECTORS AND OFFICERS.*

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation s board of directors to grant, indemnification to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities (including reimbursement for expenses incurred) arising under the Securities Act. The registrant s Third Restated Certificate of Incorporation, as amended, which we call our certificate of incorporation, provides for indemnification of its directors and officers and permissible indemnification of employees and other agents to the maximum extent permitted by the Delaware General Corporation Law (DGCL). The registrant s certificate of incorporation provides that no directors of the registrant shall be liable to the registrant or its stockholders for monetary damages for breach of fiduciary duty as a director to the fullest extent permitted by the DGCL. The registrant has liability insurance for its directors and officers.

The Stock and Warrant Purchase Agreement between the registrant and the selling stockholders provides for cross-indemnification in connection with registration of the registrant s common stock on behalf of such investors.

The indemnification provisions noted above may be sufficiently broad to permit indemnification of the registrant s officers and directors for liabilities arising under the Securities Act.

ITEM 16. *EXHIBITS.*

Exhibit No.	Description
3.1	Third Restated Certificate of Incorporation of Registrant. Incorporated by reference to Exhibit 3.1 to the Company s Form 8-K filed December 22, 2006.
3.2	Certificate of Amendment to the Third Restated Certificate of Incorporation of Registrant. Incorporated by reference to Exhibit 3.1 to the Company s Form 8-K filed July 24, 2007.
3.3	

Bylaws of Registrant as amended December 15, 2005. Incorporated by reference to Exhibit 3.1 to the Company s Form 8-K filed December 16, 2005.

4.1 Rights Agreement, dated as of June 17, 2002, by and between the Registrant 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.

4.2 Amendment to Rights Agreement, dated as of August 5, 2007. Incorporated by reference to the Registrant s Form 10-Q filed August 9, 2007.

Table of Contents

Exhibit No.	Description
4.3	Stock and Warrant Purchase Agreement dated as of August 6, 2007, by and among BioCryst Pharmaceuticals, Inc. and each of the Investors identified on the signature pages thereto. Incorporated by reference to the Registrant s Form 8-K filed August 6, 2007.
4.4	Form of Warrant. Incorporated by reference to the Registrant s Form 8-K filed August 6, 2007.
4.5	Specimen Certificate for Registrant s Common Stock issued under the Stock and Warrant Purchase Agreement, and bearing the restrictive legends required pursuant to such agreement.
5.1	Opinion of Holme Roberts & Owen LLP.
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
23.2	Consent of Holme Roberts & Owen LLP (included in Exhibit 5.1).
24.1	Powers of Attorney (included on signature page).

ITEM 17. ***UNDERTAKINGS.***

The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(a) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(b) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement;

(c) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement; provided, however, that paragraphs (a)(i)(1) and (a)(i)(2) do not apply if the registration statement is on Form S-3, Form S-8 or Form F-3, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

PROVIDED, HOWEVER, that paragraphs (1)(a), (1)(b) and (1)(c) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) For purposes of determining any liability under the Securities Act, to any purchaser, if the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration

Table of Contents

statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

The Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant s annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to any charter provision, bylaw, contract, arrangement, statute, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted against the Registrant by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

Table of Contents

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Birmingham, State of Alabama, on the 22nd day of August, 2007.

BioCryst Pharmaceuticals, Inc.

By: /s/ Jon P. Stonehouse

Jon P. Stonehouse
President and Chief Executive Officer

POWER OF ATTORNEY

We, the undersigned officers and directors of BioCryst Pharmaceuticals, Inc. hereby severally constitute and appoint Jon P. Stonehouse and Michael A. Darwin, and each of them singly, our true and lawful attorneys, with full power to them and each of them singly, to sign for us in our names in the capacities indicated below, any and all amendments (including post-effective amendments or any abbreviated Registration Statement, and any amendments thereto, filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission; granting unto said attorneys-in-fact full power and authority to perform any other act on behalf of the undersigned required to be done in the premises, hereby ratifying and confirming all that said attorneys-in-fact lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement on Form S-3 has been signed by the following persons in the capacities indicated on the 22nd day of August, 2007.

Name	Title
/s/ Jon P. Stonehouse Jon P. Stonehouse	President, Chief Executive Officer and Director (Principal Executive Officer)
/s/ Michael A. Darwin Michael A. Darwin	Chief Financial Officer and Secretary (Principal Financial and Accounting Officer)
/s/ J. Claude Bennett J. Claude Bennett, M.D.	Director
/s/ William W. Featheringill William W. Featheringill	Director
/s/ Beth C. Seidenberg, M.D.	Director

Beth C. Seidenberg, M.D.

/s/ Stephen R. Biggar, M.D., Ph.D. Director

Stephen R. Biggar, M.D., Ph.D.

Table of Contents

Name	Title
/s/ John L. Higgins	Director
John L. Higgins	
/s/ Zola P. Horovitz	Director
Zola P. Horovitz, Ph.D.	
/s/ Joseph H. Sherrill, Jr.	Director
Joseph H. Sherrill, Jr.	
/s/ William M. Spencer, III	Director
William M. Spencer, III	
/s/ Randolph C. Steer	Director
Randolph C. Steer, M.D., Ph.D.	

Table of Contents

EXHIBIT INDEX

Exhibit No.	Description
3.1	Third Restated Certificate of Incorporation of Registrant. Incorporated by reference to Exhibit 3.1 to the Company s Form 8-K filed December 22, 2006.
3.2	Certificate of Amendment to the Third Restated Certificate of Incorporation of Registrant. Incorporated by reference to Exhibit 3.1 to the Company s Form 8-K filed July 24, 2007.
3.3	Bylaws of Registrant as amended December 15, 2005. Incorporated by reference to Exhibit 3.1 to the Company s Form 8-K filed December 16, 2005.
4.1	Rights Agreement, dated as of June 17, 2002, by and between the Registrant 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 Registrant s Form 8-A dated June 17, 2002.
4.2	Amendment to Rights Agreement, dated as of August 5, 2007. Incorporated by reference to the Registrant s Form 10-Q filed August 9, 2007.
4.3	Stock and Warrant Purchase Agreement dated as of August 6, 2007, by and among BioCryst Pharmaceuticals, Inc. and each of the Investors identified on the signature pages thereto. Incorporated by reference to the Registrant s Form 8-K filed August 6, 2007.
4.4	Form of Warrant. Incorporated by reference to the Registrant s Form 8-K filed August 6, 2007.
4.5	Specimen Certificate for Registrant s Common Stock issued under the Stock and Warrant Purchase Agreement, and bearing the restrictive legends required pursuant to such agreement.
5.1	Opinion of Holme Roberts & Owen LLP.
23.1	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
23.2	Consent of Holme Roberts & Owen LLP (included in Exhibit 5.1).
24.1	Powers of Attorney (included on signature page).