

BIOCRYST PHARMACEUTICALS INC

Form 10-K

March 15, 2011

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

- þ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2010**
- OR**
- o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.  
For the transition period from        to        .**

**Commission File Number 000-23186**

**BIOCRYST PHARMACEUTICALS, INC.**  
*(Exact name of registrant as specified in its charter)*

**DELAWARE**  
*(State of other jurisdiction of  
incorporation or organization)*

**62-1413174**  
*(I.R.S. employer  
identification no.)*

**4505 Emperor Blvd., Suite 200, Durham, North Carolina 27703**  
*(Address of principal executive offices)*

**(919) 859-1302**  
*(Registrant s telephone number, including area code)*

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

| <b>Title of Each Class</b>    | <b>Name of Each Exchange on Which Registered</b> |
|-------------------------------|--|
| Common Stock, \$.01 Par Value | The NASDAQ Global Select Market                  |

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

**Title of each class**  
**None**

Indicate by a check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No .

Indicate by a check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No .

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

Indicate by a check mark whether the registrant submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (Section 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No .

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (Section 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. .

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company   
(Do not check if a smaller reporting company)

Indicate by a check mark whether the registrant is a shell company (as defined in Exchange Act Rule 12b-2). Yes  No .

The Registrant estimates that the aggregate market value of the Common Stock on June 30, 2010 (based upon the closing price shown on the NASDAQ Global Market<sup>sm</sup> on June 30, 2010) held by non-affiliates was approximately \$194,013,450.

The number of shares of Common Stock, par value \$.01, of the Registrant outstanding as of March 7, 2011 was 45,043,987 shares.

### **DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the Registrant's definitive Proxy Statement to be filed in connection with the solicitation of proxies for its 2011 Annual Meeting of Stockholders are incorporated by reference into Items 10, 11, 12, 13 and 14 under Part III hereof.

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**PART I**

**ITEM 1. BUSINESS**

**Forward-Looking Statements**

This report includes forward-looking statements. In particular, statements about our expectations, beliefs, plans, objectives or assumptions of future events or performance are contained or incorporated by reference in this report. We have based these forward-looking statements on our current expectations about future events. While we believe these expectations are reasonable, forward-looking statements are inherently subject to risks and uncertainties, many of which are beyond our control. Our actual results may differ materially from those suggested by these forward-looking statements for various reasons; including those discussed in this report under the heading Risk Factors. Given these risks and uncertainties, you are cautioned not to place undue reliance on forward-looking statements. The forward-looking statements included in this report are made only as of the date hereof. We do not undertake and specifically decline any obligation to update any of these statements or to publicly announce the results of any revisions to any forward looking statements to reflect future events or developments. When used in the report, unless otherwise indicated, we, our, us, the Company and BioCryst refers to BioCryst Pharmaceuticals, Inc.

**Our Business**

We are a biotechnology company that designs, optimizes and develops novel drugs that block key enzymes involved in therapeutic areas of interest to us. Areas of interest are determined primarily by the scientific discoveries and the potential advantages that our experienced drug discovery group develops in the laboratory along with the potential commercial opportunity of these discoveries. We integrate the disciplines of biology, crystallography, medicinal chemistry and computer modeling to discover and develop small molecule pharmaceuticals through the process known as structure-based drug design.

Structure-based drug design is a drug discovery approach by which we design synthetic compounds from detailed structural knowledge of the active sites of enzyme targets associated with particular diseases. We use X-ray crystallography, computer modeling of molecular structures and advanced chemistry techniques to focus on the three-dimensional molecular structure and active site characteristics of the enzymes that control cellular biology. Enzymes are proteins that act as catalysts for many vital biological reactions. Our goal generally is to design a compound that will fit in the active site of an enzyme and thereby interfere with the progression of disease. We currently have three principal products:

Peramivir, a neuraminidase inhibitor for the potential treatment of influenza;

BCX4208, a next generation purine nucleoside phosphorylase ( PNP ) inhibitor for gout; and

Forodesine, a PNP inhibitor for cutaneous T-cell lymphoma ( CTCL ) and chronic lymphocytic leukemia ( CLL ).

In addition to our principal products, we invest in our drug discovery team and retain exclusive rights to other compounds in a number of therapeutic areas. These compounds are currently in pre-clinical development and include potent inhibitors of parainfluenza hemagglutinin, neuraminidase, influenza neuraminidase, hepatitis C RNA polymerase, JAK inhibitors, plasma kallikrein and additional PNP inhibitors. We will continue to evaluate and test these compounds to determine which should be taken forward into clinical testing.

We are a Delaware corporation originally founded in 1986. Our headquarters are in North Carolina at 4505 Emperor Blvd., Suite 200, Durham, North Carolina 27703 where the telephone number is (919) 859-1302. Our Alabama office

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is located at 2190 Parkway Lake Drive, Birmingham, Alabama 35244, where the telephone number is (205) 444-4600. For more information about us, please visit our website at [www.biocryst.com](http://www.biocryst.com). The information on our website is not incorporated into this Form 10-K.

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### **Recent Corporate Highlights**

#### ***Peramivir***

***Collaborative Agreements.*** In January 2007, the U.S. Department of Health and Human Services ( HHS ) awarded us a \$102.6 million, four-year contract for the advanced development of peramivir for the treatment of influenza. During 2009, peramivir clinical development shifted to focus on intravenous delivery and the treatment of hospitalized patients. To support this focus, a September 2009 contract modification was awarded to extend the intravenous ( i.v. ) peramivir program by 12 months and to increase funding by \$77.2 million. On February 24, 2011, we announced that HHS had awarded us an additional \$55.0 million contract modification, intended to fund completion of the Phase 3 development of i.v. peramivir for the treatment of patients hospitalized with influenza. This contract modification brings the total award from HHS to \$234.8 million and extends the contract term by 24 months through December 31, 2013, providing funding through completion of Phase 3 and the filing of a new drug application ( NDA ) to seek regulatory approval for i.v. peramivir in the U.S.

In February 2007, we established a collaborative relationship with Shionogi & Co., Ltd. ( Shionogi ) for the development and commercialization of peramivir in Japan. In January 2010, Shionogi received marketing and manufacturing approval for i.v. peramivir in Japan, and we received a third and final regulatory milestone payment of \$7.0 million in January 2010 as a result of this approval. We may receive future commercial event milestone payments of up to \$95.0 million from Shionogi. Shionogi has commercially launched peramivir under the commercial name RAPIACTA® in Japan. Shionogi has received the indications of single dose administration of 300 mg i.v. peramivir for adult uncomplicated seasonal influenza infection, as well as single and multiple dose administration of 600 mg i.v. peramivir for the patients at high-risk for complications associated with influenza. Shionogi is authorized to supply peramivir as either a 300 mg i.v. bag or a 150 mg vial for i.v. drip infusion.

On October 27, 2010, we announced that Shionogi had received approval of an additional indication for use of i.v. peramivir to treat children and infants with influenza in Japan. Shionogi has stated that it intends to secure an adequate supply of RAPIACTA® to treat approximately one million people during the upcoming influenza season, and that it is taking steps to ensure its manufacturing capability and a stable supply to meet urgent demands.

On March 9, 2011, we announced that we had completed a \$30.0 million financing transaction to monetize certain future royalty and milestone payments under our license agreement (the Shionogi Agreement ) with Shionogi, pursuant to which Shionogi licensed from us the rights to market peramivir in Japan and, if approved for commercial sale, Taiwan.

As part of the transaction, we transferred to JPR Royalty Sub LLC ( Royalty Sub ), our newly-formed wholly-owned subsidiary, certain rights under the Shionogi Agreement, including the right to receive future royalty and milestone payments under the Shionogi Agreement. As part of the transaction, we also transferred to Royalty Sub the right to receive payments under a new Japanese yen/US dollar foreign currency hedge arrangement that we put into place in connection with the transaction. Our collaboration with Shionogi remains unchanged as a result of the transaction.

As part of the transaction, Royalty Sub issued \$30.0 million in aggregate principal amount of its PhaRMA Senior Secured 14.0% Notes due 2020 (the PhaRMA Notes ) in a private placement exempt from registration under the Securities Act of 1933, as amended (the Securities Act ). The PhaRMA Notes bear an interest rate of 14.0%, with interest payable annually on September 1st of each year, beginning September 1, 2011, and on the final legal maturity date. The royalty and milestone payments, if any, that Royalty Sub will be entitled to receive under the license agreement with Shionogi, together with any payments made under the currency hedge arrangement and funds that may be available from certain accounts of Royalty Sub (including an interest reserve account), will be the principal source of payment of principal of, and interest and any premium on, the PhaRMA Notes. The PhaRMA Notes are

secured by a security interest granted by Royalty Sub in its rights to receive payments under the Shionogi Agreement and the currency hedge arrangement, all of its other assets and a pledge by us of our equity ownership interest in Royalty Sub. The PhaRMA Notes are non-



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callable prior to March 9, 2012. On or after March 9, 2012, the PhaRMA Notes may be redeemed at any time prior to maturity, in whole or in part, at the option of Royalty Sub at specified redemption premiums.

The PhaRMA Notes have a final legal maturity of December 1, 2020. Under the terms of the PhaRMA Notes, when Shionogi payments (together with any payments made under the currency hedge arrangement) received by Royalty Sub exceed Royalty Sub's ongoing expenses and the interest payments due annually on the PhaRMA Notes, the excess will be applied to the repayment of principal of the PhaRMA Notes until they have been paid in full. Accordingly, depending on payments from Shionogi, the PhaRMA Notes may fully amortize and be repaid prior to the final legal maturity date. We remain entitled to receive any royalties and milestone payments related to sales of peramivir by Shionogi following repayment of the PhaRMA Notes. The PhaRMA Notes constitute obligations of Royalty Sub, and are non-recourse to us except to the extent of our pledge of our equity interest in Royalty Sub as part of the collateral securing the PhaRMA Notes. The PhaRMA Notes are not convertible into our equity.

We received net proceeds of approximately \$23.0 million from the transaction after transaction costs and establishment of a \$3.0 million interest reserve account by Royalty Sub which will be available to help cover any interest shortfalls on the PhaRMA Notes through September 1, 2013.

In connection with the issuance by Royalty Sub of the PhaRMA Notes, we entered into a foreign currency hedge arrangement to hedge certain risks associated with changes in the value of the Japanese yen relative to the U.S. dollar. Under the currency hedge arrangement, we have the right to purchase dollars and sell yen at a rate of 100 yen per dollar for which we may be required to pay a premium in each year from 2014 through 2020, provided the currency hedge arrangement remains in effect. A payment of \$2.0 million will be required if, on May 18 of the relevant year, the US dollar is worth 100 yen or less as determined in accordance with the currency hedge arrangement. In conjunction with establishing the hedge currency arrangement, we will be required to post collateral to the counterparty, which may cause us to experience additional quarterly volatility in our earnings as a result. We will not be required at any time to post collateral exceeding the maximum premium payments remaining payable under the currency hedge arrangements. In establishing the hedge, we provided initial funds of approximately \$2.0 million to support our potential hedge obligations. Subject to certain obligations we have in connection with the PhaRMA Notes, we have the right to terminate the currency hedge arrangement with respect to the 2016 through 2020 period by giving notice to the counterparty prior to May 18, 2014 and payment of a \$2.0 million termination fee.

On August 16, 2010, we announced that our partner Green Cross Corporation ( Green Cross ) had received marketing and manufacturing approval from the Korean Food & Drug Administration for i.v. peramivir to treat patients with influenza A & B viruses, including pandemic H1N1 and avian influenza. Green Cross received the indication of single dose administration of 300 mg i.v. peramivir. Green Cross intends to launch peramivir under the commercial name PeramiFlu® in Korea.

*Clinical Trials.* On January 13, 2011, we announced top-line results from our completed Phase 3 safety and virology study of peramivir ( 303 ). This study was an open-label, randomized trial of the anti-viral activity, safety and tolerability of i.v. peramivir administered either as a once-daily infusion of 600 mg or a twice-daily infusion of 300 mg to 234 adult and adolescent subjects hospitalized with confirmed or suspected influenza infection. The primary endpoint of the study was the change in influenza virus titer in nasopharyngeal samples, measured by log<sub>10</sub> tissue culture infective dose<sub>50</sub> ( TCID<sub>50</sub> ). Forty-four patients who contributed to the primary efficacy analysis had a positive baseline culture, 20 for the 300 mg twice-daily group and 24 for the 600 mg once-daily group, and both dose regimens were generally safe and well-tolerated. The frequency and severity of adverse events was similar in the two groups, and was consistent with the profile of influenza patients hospitalized during the 2009-2010 pandemic. Serious adverse events ( SAEs ) were reported in 20 percent of patients. Overall mortality within 28 days of initial peramivir treatment was 8.7 percent; no deaths were attributed to study drug, and no safety signals were identified. The analysis of the combined Intent To Treat Infected ( ITTI ) population showed median time to resolution of fever was 25.3 hours;

time to clinical resolution, 92.0 hours; time to alleviation of symptoms, 145 hours; and time to resumption of usual activities, 26.8 days. Further analyses of the data are ongoing, and we will submit detailed analyses for presentation at an upcoming medical meeting.

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Our ongoing Phase 3 efficacy study of i.v. peramivir ( 301 ) is a multicenter, randomized, double-blind, controlled study to evaluate the efficacy and safety of 600 mg i.v. peramivir administered once-daily for five days in addition to standard of care ( SOC ), compared to SOC alone, in adults and adolescents who are hospitalized due to serious influenza.

### ***BCX4208***

In September 2009, we announced the initiation of a clinical study of BCX4208 for the treatment of gout. Our first gout clinical trial 201 was a Phase 2, randomized, double-blind, placebo-controlled study to evaluate the efficacy and safety of various doses of orally administered BCX4208 in subjects with gout. The trial contained two parts: part one, which was a parallel-group study of multiple doses of BCX4208 randomized against a placebo and part two, which was a sequential-group study of escalating doses of BCX4208, randomized against placebo.

On April 28, 2010, we announced positive top-line results from a planned interim analysis of part one of this clinical study. The study's primary endpoint was the change in serum uric acid ( sUA ) concentration after 21 days of treatment compared to baseline concentration prior to treatment. Part one of the study randomized 60 gout patients with sUA concentrations greater than or equal to 8 mg/dL to placebo or to one of three different doses of BCX4208 (40 mg, 80 mg, 120 mg) administered once-daily for 21 days. All three doses of BCX4208 demonstrated a statistically significant reduction in sUA levels compared to placebo at day 22. BCX4208 also demonstrated a statistically significant difference in the proportion of subjects with sUA levels less than 6 mg/dL, compared to subjects treated with placebo, on day 22. Among patients with a baseline sUA concentration below 10 mg/dL, up to 63% showed sUA levels below 6 mg/dL on day 22. BCX4208 was generally safe and well-tolerated at the doses evaluated in part one of this study. Reductions in peripheral blood lymphocytes were observed in patients treated with BCX4208. Overall, the frequency of adverse events in each of the BCX4208 treatment groups was comparable to that observed in the placebo group.

We announced on August 5, 2010 that we achieved positive top-line results in part two of this clinical study. Part two of the study was designed to sequentially evaluate the safety and efficacy of up to three higher doses (160 mg, 240 mg and 320 mg once-daily) of BCX4208, and included various stopping criteria related to both safety and efficacy. The primary endpoint of part two of this study was the change in sUA concentration at day 22, following 21 days of once-daily treatment, compared to baseline sUA concentration prior to treatment. Since all pre-specified efficacy criteria were met following administration of the 240 mg dose, the 320 mg dose group was not initiated and the study was stopped. Both doses of BCX4208 evaluated in part two met the primary endpoint of the study. BCX4208 also demonstrated a statistically significant difference in the proportion of subjects with sUA levels less than 6 mg/dL, compared to subjects treated with placebo, on day 22. Overall, the frequency of adverse events in each of the BCX4208 treatment groups was comparable to that observed in the placebo group. Additional studies designed to evaluate longer-term exposure are needed to further define the safety and tolerability profile of BCX4208.

Detailed results from this clinical study were presented at the American College of Rheumatology meeting in Atlanta, Georgia on November 8, 2010. The poster concluded that BCX4208 doses administered at 40, 80, 120, 160 and 240 mg once-daily monotherapy rapidly and significantly reduced sUA in patients with gout. BCX4208 was generally safe and well-tolerated at all doses evaluated in the study.

Additionally, on June 1, 2010, we announced that we were initiating a second Phase 2 study of BCX4208 in patients with gout. The study was designed to evaluate the urate-lowering activity and safety of several doses of BCX4208 alone and in combination with selected doses of allopurinol administered once-daily. On September 16, 2010, we announced positive top-line results from this study. A dose-response was demonstrated for both BCX4208 and allopurinol, and the combination of BCX4208 and allopurinol was shown to be superior to either drug alone in sUA reduction. In five of these nine combination groups, 80 percent or more of the patients achieved a sUA concentration

of less than 6 mg/dL. Combinations of lower doses of BCX4208 with allopurinol showed additive or synergistic effects in sUA reduction. The doses of BCX4208 alone and in combination with allopurinol evaluated in the study were generally safe and well-tolerated.

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On December 22, 2010, we announced the initiation of a Phase 2b study of BCX4208 as add-on therapy in gout patients who have not responded adequately to allopurinol therapy alone. This randomized, double-blind, dose-response 250-patient study is designed to evaluate the safety and efficacy of BCX4208 in combination with allopurinol in gout patients who have failed to reach the sUA objective of <6 mg/dL following treatment with allopurinol 300 mg alone. The primary endpoint of the study is the proportion of subjects with sUA <6 mg/dL at day 85. The study utilizes a parallel-group design, evaluating BCX4208 at doses of 5 mg, 10 mg, 20 mg, 40 mg and placebo administered once-daily for 12 weeks, in combination with allopurinol's standard dose of 300 mg.

We also plan to initiate a long-term safety study of BCX4208 in 2011.

### ***Forodesine***

On September 15, 2010, we announced preliminary top-line results from our pivotal multinational, open-label, single-arm trial evaluating 200 mg once-daily oral forodesine in the treatment of relapsed or refractory CTCL. The study's primary endpoint was objective response rate, defined as complete or partial cutaneous response that is sustained for at least 28 days, in patients with later stage disease who had previously received at least three systemic therapies for their disease. Eleven of 101 (11% (95% confidence interval: 6-19%)) later stage patients enrolled achieved a partial cutaneous response, while no patients achieved a complete response. Of the remaining later stage patients, 56 (55%) had stable disease as their best response, 30 (30%) had progressive disease, with a median time to progression of 353 days, and four (4%) were not evaluable. Oral forodesine was generally safe and well-tolerated in this study.

Also on September 15, 2010, we announced interim results from our exploratory Phase 2 study to investigate the efficacy and safety of forodesine as monotherapy for CLL. In this open-label, single-arm, multi-center study, forodesine was administered orally at 200 mg twice-daily for 28-day cycles in 25 previously treated CLL patients. The primary endpoint of the study was overall response rate. Consistent with results of previous clinical trials, forodesine was generally safe and well-tolerated in this study.

On December 4, 2010, we presented new data from this study that confirmed forodesine's clinical activity in the treatment of CLL at the 52nd Annual American Society of Hematology Meeting & Exposition held in Orlando, Florida. An analysis conducted after all patients were followed through 36 months showed that six of 23 response-evaluable patients demonstrated a partial response to forodesine, resulting in a response rate of 26 percent. Forodesine 200 mg orally-administered twice-daily was generally safe and well-tolerated in this study. The pattern, frequencies and severity distribution of adverse events were generally consistent with CLL-associated poor bone marrow function and immunodeficiency, prior therapies and co-morbidities.

We are exploring the interest level of potential partners as a possible path forward for the future development of forodesine in the U.S. Absent a U.S. partner, we do not plan to conduct additional studies of forodesine or file an NDA with the U.S. Food and Drug Administration (FDA).

In September 2010, we disclosed results from the forodesine pivotal study in CTCL, interim results from the Phase 2 exploratory study in CLL, and our intention to determine if there is interest by a partner in the U.S. to continue with further development, regulatory filing and commercialization. To date, we have not found an interested partner. We have shared this information with Mundipharma International Holdings Limited (Mundipharma), along with our decision not to continue further development of forodesine in the U.S. Mundipharma has expressed disappointment regarding the development of forodesine and this outcome. On February 21, 2011, we received a letter from Mundipharma's legal counsel notifying us that they intended to utilize the dispute resolution provisions of our agreement with them, which includes meetings of senior management and the later possibility of arbitration.

***License Agreement with Albert Einstein College of Medicine of Yeshiva University and Industrial Research, Ltd. ( AECOM and IRL respectively).***

In May 2010, we entered into an amendment to the License Agreement dated June 27, 2000, as subsequently amended (the License Agreement ), by and among us and AECOM and IRL (the Licensors ).

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The amendment further amended the License Agreement through which we obtained worldwide exclusive rights to develop and ultimately distribute any drug candidates that might arise from research on a series of PNP inhibitors, including forodesine and BCX4208. Under the terms of the amendment, the Licensors agreed to accept a reduction of one-half in the percentage of future payments received from third-party sublicensees of the licensed PNP inhibitors that must be paid to the Licensors. This reduction does not apply to (i) any milestone payments we may receive in the future under our license agreement dated February 1, 2006 with Mundipharma and (ii) royalties received from our sublicensees in connection with the sale of licensed products, for which the original payment rate will remain in effect. The rate of royalty payments to the Licensors based on net sales of any resulting product made by us remains unchanged.

In consideration for the modifications to the license agreement, we issued to the Licensors shares of our common stock with an aggregate value of approximately \$5.9 million and paid the Licensors approximately \$90,000 in cash. Additionally, at our sole option and subject to certain agreed upon conditions, any future non-royalty payments due to be paid by us to the Licensors under the License Agreement may be made either in cash, in shares of our common stock, or in a combination of cash and shares.

## **Our Business Strategy**

Our business strategy is to maximize sustainable value by moving our drug candidate portfolio from discovery through clinical development, registration and ultimately to the market. We believe that our strength is in early stage discovery and development of drug candidates. We may decide to market, distribute and sell our products. Alternatively, we may rely on partners, licensees and others to provide for the marketing, distribution and sales of our products. The principal elements of our strategy are:

*Focusing on High Value-Added Structure-Based Drug Design Technologies.* We utilize structure-based drug design, which incorporates multiple scientific disciplines including biology, crystallography, medicinal chemistry and computer modeling, in order to most efficiently develop new therapeutic candidates. Structure-based drug design is a process by which we design a drug candidate through detailed analysis of the enzyme target, which the drug candidate must inhibit in order to stop the progression of the disease or disorder. We believe that structure-based drug design is a powerful tool for efficient development of small-molecule drug candidates that have the potential to be safe, effective and relatively inexpensive to manufacture. Our structure-based drug design technologies typically allow us to design and synthesize multiple drug candidates that inhibit the same enzyme target. We believe this strategy can lead to broad patent protection and enhance the competitive advantages of our compounds.

*Selecting Inhibitors that are Promising Candidates for Commercialization.* We test multiple compounds to identify those that are most promising for clinical development. We base our selection of promising development candidates on desirable product characteristics, such as initial indications of safety and efficacy. We believe that this focused strategy allows us to eliminate unpromising candidates from consideration sooner without incurring substantial clinical costs. In addition, our preference is to select drug candidates on the basis of their potential for relatively efficient Phase 1 and Phase 2 clinical trials. We may augment our internal discovery programs through the selective in-licensing of potential drug development targets or early stage compounds for these specific targets. We may also use our technical expertise and network of academic and industry contacts to evaluate and select promising enzyme targets to license for the discovery of small-molecule pharmaceuticals.

*Entering into Contractual Relationships.* An important element of our business strategy is to control fixed costs and overhead through contracting and entering into license agreements with third parties. We maintain a streamlined corporate infrastructure that focuses our expertise. By contracting with other specialty

organizations, we believe that we can control costs, enable our drug candidates to reach the market more quickly and reduce our business risk. We generally plan to advance drug candidates through initial and early-stage drug development. We seek to retain full product rights to our drug candidates within specialty markets, while relying on collaborative arrangements with third parties for drug candidates within larger markets or outside our area of expertise. Potential third party alliances



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could include preclinical development, clinical development, regulatory approval, marketing, sales and distribution of our drug candidates. We believe partnerships are a good source of development payments, license fees, future event payments and royalties. They also reduce the costs and risks, and increase the effectiveness, of late-stage product development, regulatory approval, manufacturing and marketing. We are willing to license a drug candidate to a partner during any stage of the development process we determine to be beneficial to us and to the ultimate development and commercialization of that drug candidate.

**Our Principal Products**

The following table summarizes our drug candidates in clinical development as of March 7, 2011:

**Program and Candidate Disease**

| <b>Category/Indication</b>                 | <b>Delivery Form</b> | <b>Development Stage</b> | <b>Rights</b>                                       |
|--|----------------------|--------------------------|---|
| <b>Neuraminidase Inhibitor</b> (peramivir) |                      |                          |   |
| Viral (Acute Influenza)                    | i.v.                 | Pivotal                  | BioCryst (U.S.)                                     |
| Viral (Seasonal Influenza)                 | i.v.                 | Approved                 | Shionogi (Japan and Taiwan)/<br>Green Cross (Korea) |
| <b>PNP Inhibitor</b> (BCX4208)             |                      |                          |   |
| Gout                                       | Oral                 | Phase 2                  | BioCryst  |
| <b>PNP Inhibitor</b> (forodesine)*         |                      |                          |   |
| CTCL                                       | Oral                 | Pivotal                  | BioCryst (U.S.)/Mundipharma                         |
| CLL  | Oral                 | Phase 2                  | (EU, Australia, Asia)                               |

\* We are exploring the interest level of potential partners as a possible path forward for the future development of forodesine in the U.S. Absent a U.S. partner, we do not plan to conduct additional studies of forodesine or file an NDA with the FDA.

**Peramivir Neuraminidase Inhibitor*****Overview***

In 1987, scientists at The University of Alabama at Birmingham ( UAB ), in collaboration with our scientists, began determining the molecular structure of the influenza neuraminidase enzyme from several different strains of the influenza virus, using X-ray crystallography. Subsequently, our scientists and UAB s scientists separately initiated the design of inhibitors to these enzymes using structure-based drug design. In order to have exclusive rights to the UAB inhibitors, we licensed the influenza neuraminidase program from UAB in 1994. Our scientists proceeded to complete the studies of the neuraminidase enzyme s molecular structure needed to design potent and tight binding inhibitors to the enzyme. Our scientists subsequently discovered peramivir and several other potent inhibitors to target the active site of the neuraminidase enzyme.

Peramivir is an intravenously administered investigational anti-viral agent that rapidly delivers high plasma concentrations to the sites of infection. Peramivir inhibits the interactions of influenza neuraminidase, an enzyme that is critical to the spread of influenza within the host. Peramivir is an inhibitor of influenza A and B viruses, including strains of influenza viruses that may be resistant to available neuraminidase inhibitors. Because of the similarities of the neuraminidase active sites among the different strains of the influenza virus, peramivir is a potent broad-spectrum inhibitor and can be effective in the treatment and prevention of influenza irrespective of the strain of the virus. The

availability of an intravenous (i.v.) neuraminidase inhibitor may be important in treating patients hospitalized with severe and potentially life-threatening influenza by ensuring that the appropriate dose is administered, which may be a concern with currently available oral or inhaled anti-influenza agents.

The influenza virus causes an acute viral disease of the respiratory tract. Unlike the common cold and some other respiratory infections, seasonal flu can cause severe illness, resulting in life-threatening complications. According to the Centers for Disease Control and Prevention (the CDC), an estimated 5% to 20% of

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the American population suffers from influenza annually, and there are approximately 3,000 to 49,000 flu-related deaths per year in the U.S. Most at risk are young children, the elderly and people with seriously compromised immune systems. With the concern of avian influenza and the possible threat of a pandemic, many governments throughout the world have been stockpiling antiviral drugs, such as Roche's neuraminidase inhibitor, oseltamivir. There is interest in many of these governments, including the U.S. government to find additional vaccines and antivirals to address a potential pandemic situation.

### ***Collaborations***

***HHS.*** In January 2007, HHS awarded us a \$102.6 million, four-year contract for the advanced development of peramivir for the treatment of influenza. During 2009, peramivir clinical development shifted to focus on intravenous delivery and the treatment of hospitalized patients. To support this focus, a September 2009 contract modification was awarded to extend the i.v. peramivir program by 12 months and to increase funding by \$77.2 million. Through December 31, 2011, \$157.6 million has been recognized as revenue under the contract with HHS to support activities related to the i.v. peramivir development program.

On October 29, 2010, HHS contacted us informally regarding our proposal. During those informal communications, HHS indicated that we should explore certain changes to our currently ongoing Phase 3 i.v. peramivir study for the treatment of hospitalized patients with serious influenza, including potentially increasing the size of the study. The necessity for a second pivotal study in acute, uncomplicated outpatient populations was discussed by HHS and the FDA and was deemed unnecessary for a label indication for acute, complicated hospitalized patients. We previously disclosed that we had submitted a proposal for a second contract modification to HHS for additional funding toward completion of the modified Phase 3 development of i.v. peramivir. This proposal included an additional outpatient efficacy study. We also previously disclosed that HHS had approved start-up activities for the Phase 3 program under the existing contract. HHS indicated that it plans to reimburse authorized start-up costs as well as termination costs related to this outpatient efficacy study. In light of these communications by HHS, we did not move forward with the outpatient study.

On January 13, 2011, we announced that, based on those recent discussions between HHS and the FDA, we had submitted a revised contract proposal to HHS seeking additional funding to enable completion of the Phase 3 development plan for i.v. peramivir. In the revised contract proposal, we identified changes to the design of our ongoing 301 study that could increase the likelihood of a positive clinical outcome.

On February 24, 2011, we announced that HHS had awarded us a \$55.0 million contract modification, intended to fund completion of the Phase 3 development of i.v. peramivir for the treatment of patients hospitalized with influenza. This contract modification brings the total award from HHS to \$234.8 million and extends the contract term by 24 months through December 31, 2013, providing funding through completion of Phase 3 and the filing of an NDA to seek regulatory approval for i.v. peramivir in the U.S. This contract modification supports implementation of our proposed changes to study 301. The modifications to the study include:

Changing the primary efficacy analysis of the study to focus on a subset of approximately 160 patients not treated with neuraminidase inhibitors as SOC, in order to provide the greatest opportunity to demonstrate a statistically significant peramivir treatment effect.

Increasing the total study target enrollment to 600 subjects from the current target of 445 subjects.

Adding at least 45 more clinical site locations in additional countries.

These changes are expected to increase the amount of time required to complete enrollment in this ongoing study. The actual time to reach completion of enrollment will depend on the prevalence and severity of influenza, as well as the ability of the more than 265 investigator sites to successfully enroll patients.

Under the defined scope of work in the contract with HHS for the development of peramivir, a process was undertaken to validate a U.S.-based manufacturer and the related method for producing commercial batches of peramivir active pharmaceutical ingredient ( API ). As a required outcome of this validation process, large quantities of peramivir API were produced. In accordance with our accounting practices, we

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recorded all costs associated with this validation process as research and development expenses in our Statements of Operations. Simultaneously, revenue from the HHS contract was also recorded in our Statement of Operations. HHS subsequently reimbursed us for these costs and upon reimbursement from HHS, the associated peramivir API became property of the U.S. government.

Under the terms of the contract, if we determine the amount of peramivir API produced under the contract is in excess of what is necessary to complete the contract, we can acquire any excess peramivir API at cost to use for our own purposes. We believe that as a result of the manufacturing campaign described above, more peramivir API has been produced than is required to support U.S. regulatory approval. Therefore, we determined that there was an excess of up to \$5.0 million of peramivir API manufactured under this validation process. HHS is reviewing our estimate calculation, but has acknowledged that at least half of the amount in our estimate is indeed excess to the requirements of the HHS contract. We are evaluating whether any of the excess peramivir API will be needed by us to support other contracts, partners, or activities, and if so, the acquisition process to obtain the excess peramivir API from HHS. Acquisition of a portion or all of the excess peramivir API from HHS will impact our financial statements.

In January 2006, the Company received FDA Fast Track designation for peramivir. In September 2009, we received a Request for Proposal ( RFP ) from HHS for the supply of i.v. peramivir for the treatment of critically ill influenza patients. In October 2009, the FDA granted an Emergency Use Authorization ( EUA ) for i.v. peramivir, which expired in June 2010 with the expiration of the declared emergency. As a result, peramivir is now only available in the U.S. through clinical trials. On November 4, 2009 we received an initial order for 10,000 courses of i.v. peramivir (600 mg once-daily for five days) for an aggregate purchase price of \$22.5 million. We shipped the entire order from existing i.v. peramivir inventory to HHS on November 4, 2009.

Under the Indefinite Delivery Indefinite Quantity contract issued to us on November 3, 2009, the minimum and maximum quantities of i.v. peramivir that may be ordered by HHS are 1,000 and 40,000 treatment courses, at the same unit price as the first order. We are also required to maintain the ability to manufacture additional courses for treatment or prophylaxis, dependent on the volume and size of anti-viral orders received from HHS. Based on the RFP, we initiated manufacture of approximately 130,000 courses of i.v. peramivir at a cost of approximately \$10.0 million, so that we would have additional inventory available in advance of potential orders. In addition, we have sufficient quantities of API of i.v. peramivir available to produce up to 350,000 additional courses. Separate from the RFP process, we have donated and transferred to HHS an initial supply sufficient for 1,200 courses of i.v. peramivir 600 mg once-daily for five days.

*Shionogi.* Effective February 28, 2007, we entered into a License, Development and Commercialization Agreement, as amended, supplemented or otherwise modified (the Shionogi Agreement ), an exclusive license agreement with Shionogi to develop and commercialize peramivir in Japan for the treatment of seasonal and potentially life-threatening human influenza. Under the terms of the Shionogi Agreement, Shionogi obtained rights to injectable formulations of peramivir in Japan in exchange for a \$14.0 million upfront payment. The license provides for potential future milestone event payments (up to \$21.0 million) and commercial event milestone payments (up to \$95.0 million) in addition to double digit (between 10 and 20% range) royalty payments on product sales of peramivir. Generally, all payments under the Shionogi Agreement are nonrefundable and non-creditable, but they are subject to audit. Shionogi will be responsible for all development, regulatory, and marketing costs in Japan. The term of the agreement is from February 28, 2007 until terminated by either party in accordance with the Shionogi Agreement. Either party may terminate in the event of an uncured breach. Shionogi has the right of without cause termination. In the event of termination all license and rights granted to Shionogi shall terminate and shall revert back to us. We developed peramivir under a license from UAB and will owe sublicense payments to UAB on the upfront payment and any future event payments and/or royalties received by us from Shionogi. In October 2008, we and Shionogi amended the Shionogi Agreement to expand the territory covered by the agreement to include Taiwan and to provide rights for Shionogi to perform a Phase 3 clinical trial in Hong Kong.

In January 2010, Shionogi received marketing and manufacturing approval for i.v. peramivir in Japan, and we received a third and final regulatory milestone payment of \$7.0 million that month as a result of this

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approval. We may receive future commercial event milestone payments of up to \$95.0 million from Shionogi. Shionogi has commercially launched peramivir under the commercial name RAPIACTA® in Japan.

In October 2010, we announced that Shionogi had received approval of an additional indication for use of i.v. peramivir to treat children and infants with influenza in Japan.

On March 9, 2011, we announced that JPR Royalty Sub LLC, our newly created wholly-owned subsidiary (the Royalty Sub ), completed a private placement to institutional investors of \$30.0 million in aggregate principal amount of the PhaRMA Notes. The PhaRMA Notes, which are obligations of Royalty Sub, are secured by (i) Royalty Sub's rights to receive royalty payments from Shionogi in respect of commercial sales of RAPIACTA® in Japan and, if approved for commercial sale, Taiwan (the Territory ), as well as future milestone payments payable by Shionogi under the Shionogi Agreement (as defined below) and all of Royalty Sub's other assets, and (ii) a pledge by us of our equity interest in Royalty Sub.

In connection with the issuance of the PhaRMA Notes by Royalty Sub, we entered into a purchase and sale agreement (the Purchase and Sale Agreement ) dated as of March 9, 2011 between us and Royalty Sub. Under the terms of the Purchase and Sale Agreement, we transferred to Royalty Sub, among other things, (i) our rights to receive certain royalty and milestone payments from Shionogi arising under the Shionogi Agreement, and (ii) the right to receive payments under a Japanese yen/US dollar foreign currency hedge arrangement (as further described below, the Currency Hedge Agreement ), put into place by us in connection with the transaction. Of the \$30.0 million in gross proceeds from the sale of the PhaRMA Notes by Royalty Sub, \$3.0 million was used to fund an interest reserve account, and after fees and financing expenses in connection with the transactions the net proceeds to us were approximately \$23.0 million. We and Royalty Sub have agreed to certain covenants in the Purchase and Sale Agreement that are intended to preserve the value of the assets purchased from us by Royalty Sub. The Purchase and Sale Agreement includes customary representations, warranties and covenants by us and customary indemnification and other provisions typical for asset sale agreements in structured financing transactions for pharmaceutical royalty payments.

The PhaRMA Notes were issued by Royalty Sub under an Indenture, dated as of March 9, 2011 (the Indenture ), by and between Royalty Sub and U.S. Bank National Association, as Trustee (the Trustee ). Principal and interest on the PhaRMA Notes issued by Royalty Sub are payable from, and are secured by, the rights to royalty and milestone payments under the Shionogi Agreement transferred by us to Royalty Sub and payments, if any, made to Royalty Sub under the Currency Hedge Agreement. Payments may also be made from the interest reserve account and certain other accounts established in accordance with the Indenture. Principal on the PhaRMA Notes is required to be paid in full by the final legal maturity date of December 1, 2020, unless the PhaRMA Notes are repaid, redeemed or repurchased earlier. The PhaRMA Notes are redeemable by Royalty Sub beginning March 9, 2012 as described below. The PhaRMA Notes bear interest at the rate of 14% per annum, payable annually in arrears on September 1st of each year, beginning on September 1, 2011 (each, a Payment Date ).

Royalty Sub's obligations to pay principal and interest on the PhaRMA Notes are obligations solely of Royalty Sub and are without recourse to any other person, including us, except to the extent of our pledge of our equity interests in Royalty Sub in support of the PhaRMA Notes.

Various accounts have been established in accordance with the Indenture, including, among others, the interest reserve account as well as a collections account into which royalty and milestone payments under the Shionogi Agreement will be made. In addition, we may, but are not obligated to, make capital contributions to a capital account that may be used to redeem, or on up to one occasion pay any interest shortfall on, the PhaRMA Notes.

On each Payment Date in respect of the PhaRMA Notes, funds will be applied by the Trustee in the order of priority set forth below:

first, to Royalty Sub for the payment of all taxes owed by Royalty Sub, if any;

second, to the payment of certain expenses of Royalty Sub not previously paid or reimbursed;



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third, to the Trustee for distribution to the holders of the PhaRMA Notes, all interest due and payable on the PhaRMA Notes, including any accrued and unpaid interest due on prior Payment Dates, and any accrued and unpaid interest on such unpaid interest, compounded annually, taking into account any amounts paid from the interest reserve account and capital account on such Payment Date;

fourth, as long as no event of default under the PhaRMA Notes has occurred and is continuing, on the September 1, 2014 Payment Date, the September 1, 2015 Payment Date or the September 1, 2016 Payment Date, to the interest reserve account, the amount (if any) set forth in a written direction to the Trustee from Royalty Sub; provided, that such application of funds, together with any such prior application of funds, shall not exceed \$2,100,000 in the aggregate;

fifth, to the Trustee for distribution to the holders of the PhaRMA Notes, principal payments on the PhaRMA Notes (without premium or penalty), allocated pro rata among the holders of the PhaRMA Notes, until the outstanding principal balance of such PhaRMA Notes has been paid in full;

sixth, after the PhaRMA Notes have been paid in full, to the Trustee for the payment of principal of, and interest on, subordinated notes, if any, issued by Royalty Sub as permitted by the Indenture for the PhaRMA Notes in certain circumstances;

seventh, after the PhaRMA Notes have been paid in full, to the ratable payment of all other obligations under the Indenture for the PhaRMA Notes until all such amounts are paid in full; and

eighth, after the PhaRMA Notes and all amounts owing under the Indenture have been paid in full, to Royalty Sub, all remaining amounts.

If the amounts available for payment on any Payment Date are insufficient to pay all of the interest due on a Payment Date, unless sufficient capital is contributed to Royalty Sub by us as permitted under the Indenture or the interest reserve account is available to make such payment, the shortfall in interest will accrue interest at the interest rate applicable to the PhaRMA Notes compounded annually. If such shortfall (and interest thereon) is not paid in full on or prior to the next succeeding Payment Date, an Event of Default under the Indenture will occur. Events of Default under the Indenture include, but are not limited to, the following:

failure to pay interest on the PhaRMA Notes due on any Payment Date (other than the final legal maturity date or any redemption date) in full on or prior to the next succeeding Payment Date, together with any additional accrued and unpaid interest on any interest not paid on the Payment Date on which it was originally due;

failure to pay principal and premium, if any, and accrued and unpaid interest on the PhaRMA Notes on the final legal maturity date, or failure to pay the redemption price when required on any redemption date;

failure to pay any other amount due and payable under the Indenture and the continuance of such default for a period of 30 or more days after written notice thereof is given to Royalty Sub by the Trustee;

failure by Royalty Sub to comply with certain covenants set forth in the Indenture or the PhaRMA Notes, provided, that, if the consequences of the failure can be cured, such failure continues for a period of 30 days or more after written notice of the failure has been given to Royalty Sub by the Trustee at the direction of holders of a majority of the outstanding principal balance of PhaRMA Notes, and, except in respect of a covenant, obligation, condition or provision already qualified in respect of Material Adverse Change (as defined in the Indenture), such failure is a Material Adverse Change;

Royalty Sub becomes subject to a Voluntary Bankruptcy or an Involuntary Bankruptcy (each as defined in the Indenture);

any judgment or order for the payment of money in excess of \$1,000,000 (not paid or covered by insurance) shall be rendered against Royalty Sub and either (i) enforcement proceedings have been commenced by any creditor upon such judgment or order or (ii) there is any period of 30 consecutive

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days during which a stay of enforcement of such judgment or order, by reason of a pending appeal or otherwise, shall not be in effect;

Royalty Sub becomes an investment company required to be registered under the Investment Company Act of 1940, as amended;

Royalty Sub is classified as a corporation or publicly traded partnership taxable as a corporation for U.S. federal income tax purposes;

we shall have failed to perform any of our covenants under the Purchase and Sale Agreement and such failure is a Material Adverse Change; or

the Trustee shall fail to have a first-priority perfected security interest in any of the collateral securing the PhaRMA Notes or in any of the equity in Royalty Sub pledged by us.

The Indenture does not contain any financial covenants. The Indenture includes customary representations and warranties of Royalty Sub, affirmative and negative covenants of Royalty Sub, the above-described Events of Default and related remedies, and provisions regarding the duties of the Trustee, indemnification of the Trustee, and other matters typical for indentures used in structured financings of this type.

Prior to March 9, 2012, the PhaRMA Notes will not be redeemable by Royalty Sub. Thereafter, the PhaRMA Notes will be redeemable at the option of Royalty Sub at any time at a redemption price equal to the percentage of the outstanding principal balance of the PhaRMA Notes being redeemed specified below for the period in which the redemption occurs, plus accrued and unpaid interest through the redemption date on the PhaRMA Notes being redeemed:

| <b>Payment Dates (Between Indicated Dates)</b>                  | <b>Redemption Percentage</b> |
|---|------------------------------|
| From and including March 9, 2012 to and including March 8, 2013 | 107.00%                      |
| From and including March 9, 2013 to and including March 8, 2014 | 103.50%                      |
| From and including March 9, 2014 and thereafter                 | 100.00%                      |

In connection with the issuance by Royalty Sub of the PhaRMA Notes, we entered into the Currency Hedge Agreement to hedge certain risks associated with changes in the value of the Japanese yen relative to the U.S. dollar. Under the Currency Hedge Agreement, we have the right to purchase dollars and sell yen at a rate of 100 yen per dollar for which we may be required to pay a premium in each year from 2014 through 2020, provided the Currency Hedge Agreement remains in effect. A payment of \$2.0 million will be required if, on May 18 of the relevant year, the US dollar is worth 100 yen or less as determined in accordance with the Currency Hedge Agreement. In conjunction with establishing the Currency Hedge Agreement, we will be required to post collateral to the counterparty, which may cause us to experience additional quarterly volatility in our earnings as a result. We will not be required at any time to post collateral exceeding the maximum premium payments remaining payable under the Currency Hedge Agreement. In establishing the hedge, we provided initial funds of approximately \$2.0 million to support our potential hedge obligations. Subject to certain obligations we have in connection with the PhaRMA Notes, we have the right to terminate the Currency Hedge Agreement with respect to the 2016 through 2020 period by giving notice to the counterparty prior to May 18, 2014 and payment of a \$2.0 million termination fee.

Green Cross. In June 2006, we entered into an agreement with Green Cross to develop and commercialize peramivir in Korea. Under the terms of the agreement, Green Cross will be responsible for all development, regulatory, and commercialization costs in Korea. We received a one-time license fee of \$250,000. Total future milestone payments would be equally modest. The license also provides that we will share in profits resulting from the sale of peramivir in Korea, including the sale of peramivir to the Korean government for stockpiling purposes. Furthermore, Green Cross will pay us a premium over its cost to supply peramivir for development and any future marketing of peramivir products in Korea. Both parties have the right to terminate in the event of an uncured material breach. In the event of termination all rights, data, materials, products and other information would be transferred to us.

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In August 2010, we announced that Green Cross had received marketing and manufacturing approval from the Korean Food & Drug Administration for i.v. peramivir to treat patients with influenza A & B viruses, including pandemic H1N1 and avian influenza. Green Cross received the indication of single dose administration of 300 mg i.v. peramivir. Green Cross intends to launch peramivir under the commercial name PeramiFlu® in Korea.

*Other Collaborations.* In addition to Shionogi and Green Cross, we have arrangements with several companies outside the U.S. to represent us and peramivir primarily for stockpiling purposes.

### ***Clinical Trials***

In July 2007, we initiated a Phase 2 clinical trial of i.v. peramivir to compare the efficacy and safety of i.v. peramivir to orally administered oseltamivir in patients who require hospitalization due to acute influenza. The primary objective of the study was to evaluate time to clinical stability, which is a composite endpoint comprised of normalization of temperature, oxygen saturation, respiratory rate, systolic blood pressure and heart rate. This type of endpoint has previously been used in pneumonia studies, but not in influenza. Secondary objectives of the study included evaluation of viral shedding, mortality, clinical relapse and time to resumption of usual activities. We presented the results at the XI International Symposium on Respiratory Viral Infection held in Bangkok, Thailand in February 2009, with additional analyses (as noted above) presented at the 48th Annual IDSA meeting on October 22, 2010.

In September 2009, we announced that we were initiating two Phase 3 studies of i.v. peramivir for the treatment of hospitalized patients with serious influenza. The combined enrollment target for these studies was approximately 700 patients, and approximately 300 study locations are targeted to participate in these studies globally. These studies are intended to support U.S. regulatory approval of i.v. peramivir as a treatment for influenza.

On January 13, 2011, we announced top-line results from our completed 303 study. This study was an open-label, randomized trial of the anti-viral activity, safety and tolerability of i.v. peramivir administered either as a once-daily infusion of 600 mg or a twice-daily infusion of 300 mg to adult and adolescent subjects hospitalized with confirmed or suspected influenza infection. Treatment was planned for 5 days with an extension to 10 days in patients who needed additional treatment.

The study enrolled 234 patients aged 14 to 92 years during the 2009-2010 H1N1 pandemic of whom 200 patients (85%) had a duration of illness of more than 48 hours. Peramivir was administered to 230 patients; 170 patients (74%) had received prior treatment with oseltamivir. At study entry 158 patients (69%) needed supplemental oxygen and 39 patients (17%) were in intensive care. The median duration of peramivir treatment was five days (range, 1-11 days). The ITTI population consisted of 127 patients with influenza confirmed by RT-PCR, viral culture, or serology.

The primary endpoint of the study was the change in influenza virus titer in nasopharyngeal samples, measured by TCID50. Forty-four patients had a positive baseline culture, 20 for the 300 mg twice-daily group and 24 for the 600 mg once-daily group. Similar reductions in log<sub>10</sub> TCID50 viral titer were observed over the first 48 hours in the two treatment groups, -1.66 (95% CI -2.32, -0.61) for 300 mg peramivir twice-daily and -1.47 (95% CI -1.89, -0.75) for peramivir 600 mg once-daily.

Both dose regimens of i.v. peramivir were generally safe and well-tolerated. The frequency and severity of adverse events was similar in the two groups, and was consistent with the profile of influenza patients hospitalized during the 2009-2010 pandemic. SAEs were reported in 20 percent of patients. Of the total SAEs reported, one case of elevated liver enzymes was attributed to the study drug and all other SAEs were attributed to other factors. The most common SAEs reported were respiratory failure, acute respiratory distress syndrome, septic shock and acute renal failure.

Overall mortality within 28 days of initial peramivir treatment was 8.7 percent; no deaths were attributed to study drug. No safety signals were identified.

The analysis of the combined ITTI population showed median time to resolution of fever was 25.3 hours; time to clinical resolution, 92.0 hours; time to alleviation of symptoms, 145 hours; and time to resumption of

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usual activities, 26.8 days. Further analyses of the data are ongoing, and we will submit detailed analyses for presentation at an upcoming medical meeting.

Our 301 study is an ongoing, multicenter, randomized, double-blind, controlled study to evaluate the efficacy and safety of 600 mg i.v. peramivir administered once-daily for five days in addition to SOC, compared to SOC alone, in adults and adolescents who are hospitalized due to serious influenza. The modification to our contract with HHS announced on February 24, 2011 provides for the following changes to study 301:

Changing the primary efficacy analysis of the study to focus on a subset of approximately 160 patients not treated with neuraminidase inhibitors as SOC, in order to provide the greatest opportunity to demonstrate a statistically significant peramivir treatment effect.

Increasing the total study target enrollment to 600 subjects from the current target of 445 subjects.

Adding at least 45 more clinical site locations in geographical regions where neuraminidase inhibitors are not widely used, possibly including sites in India and China.

These changes are expected to increase the amount of time required to complete enrollment in this ongoing study. The actual time to reach completion of enrollment will depend on the prevalence and severity of influenza, as well as the ability of the more than 265 investigator sites to successfully enroll patients.

Data related to i.v. peramivir was presented at the 50th Annual Interscience Conference on Antimicrobial Agents and Chemotherapy ( ICAAC ) Meeting on September 15, 2010. The first poster presentation concluded that there is no evidence of a pharmacokinetic interaction between i.v. peramivir (600 mg) with oral oseltamivir (75 mg) or oral rimantadine (100 mg) when administered simultaneously in hospitalized patients with influenza. The second poster presentation concluded that i.v. peramivir administered at two single doses (600 mg and 1200 mg) was not associated with QTc prolongation or other repolarization abnormalities, and that peramivir was generally safe and well-tolerated.

Additional data related to i.v. peramivir was presented at the 48th Annual Infectious Diseases Society of America ( IDSA ) meeting on October 22, 2010. The first poster presentation concluded that peramivir and oseltamivir treatment resulted in similar clinical outcomes in patients hospitalized with influenza in the overall study population (N=137). However, in the sub-group of influenza B infected patients (N=32), peramivir treatment resulted in significantly faster reduction of viral replication and showed a trend to more rapid normalization of clinical outcomes compared to oral oseltamivir treatment. This presentation concluded that the resumption of normal activities four days earlier in the peramivir-treated subjects may be a clinically meaningful outcome, that these findings may reflect superior anti-viral activity of peramivir compared to oseltamivir against influenza B, and that the findings should be further investigated. The second poster presentation described the effects of influenza infection on lymphocyte and neutrophil populations, and concluded that in placebo- or oseltamivir-controlled trials, peramivir had no apparent effects on leukocyte counts or risk of neutropenia in patients with influenza. Results were drawn from an analysis of data from five randomized Phase 2 and Phase 3 clinical trials which included over 2,200 influenza patients treated with peramivir or a control.

In July 2009, Shionogi announced positive results in two Phase 3 clinical trials of i.v. peramivir. The studies were sponsored by Shionogi and conducted during the 2008-2009 influenza season. Shionogi and Green Cross co-conducted the portion of the studies in Korea. Doses of i.v. peramivir of 300 mg and 600 mg, administered in single and multiple doses, were found to be generally safe and well-tolerated in these trials. Shionogi presented the data at the 2009 ICAAC/IDSA annual meeting in San Francisco, California.

Shionogi previously completed a Phase 2 study of i.v. peramivir administered via a single dose infusion in the outpatient setting for treatment of seasonal influenza. Shionogi presented the data at the 2008 ICAAC/IDSA annual

meeting in Washington, D.C.



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### ***Current Development Strategy***

Our plan is to continue developing i.v. peramivir. In addition to the progress made clinically, we have also made significant progress in the manufacturing and toxicology work required to advance the program toward product approval.

### **Purine Nucleoside Phosphorylase ( PNP ) Inhibitors**

#### ***Overview***

PNP is a purine salvage pathway enzyme that is essential for the proliferation of T-cells and B-cells. Typically, T- and B-cells are an essential part of the body's immune system, but when they multiply uncontrollably they can cause various forms of cancer. Inhibiting PNP produces selective suppression of T- and B-cells, inducing apoptosis in both types of cells. Selective inhibition of PNP causes certain nucleosides, including deoxyguanosine, to accumulate. As the concentration of deoxyguanosine increases within T-cells, it is converted by specific enzymes to dGTP. A high concentration of dGTP in T-cells causes an imbalance in the intra-cellular trinucleotide pool and thus causes cell death.

#### ***Collaborations and In-License Relationships***

##### **AECOM and IRL**

In June 2000, we licensed a series of potent PNP inhibitors from AECOM and IRL (collectively, the Licensors). The license agreement was amended in July 2002, April 2005, December 2009 and May 2010. The lead drug candidates from this collaboration are forodesine and BCX4208. We have obtained worldwide exclusive rights to develop and ultimately distribute these, or any other, drug candidates that might arise from research on these PNP inhibitors. We have the option to expand the agreement to include other inventions in the field made by the investigators or employees of the Licensors. We have agreed to use commercially reasonable efforts to develop these drugs. This license agreement may be terminated by us at any time by giving 60 days advance notice or in the event of material uncured breach by the Licensors.

In addition, we agreed to pay certain milestone payments for each licensed product, which range in the aggregate from \$1.4 million to almost \$4.0 million per indication, for future development of these inhibitors, single digit royalties on net sales of any resulting product made by us, and to share approximately one quarter of future payments received from third-party sublicensees of the licensed PNP inhibitors, if any. We also agreed to pay annual license fees ranging from \$150,000 to \$500,000, creditable against actual royalties and other payments due to the Licensors.

In May 2010, we and the Licensors agreed to further amend the terms of the license agreement. Under the terms of the amendment, the Licensors agreed to accept a reduction of one-half in the percentage of future payments received from third-party sublicensees of the licensed PNP inhibitors that must be paid to the Licensors. This reduction does not apply to (i) any milestone payments we may receive in the future under our license agreement dated February 1, 2006 with Mundipharma and (ii) royalties received from our sublicensees in connection with the sale of licensed products, for which the original payment rate will remain in effect. The rate of royalty payments to the Licensors based on net sales of any resulting product made by us remains unchanged.

In consideration for the modifications to the license agreement, we issued to the Licensors shares of our common stock with an aggregate value of approximately \$5.9 million and paid the Licensors approximately \$90,000 in cash. The consideration issued to the Licensors related to the modification began to be amortized to expense in May 2010 and will end in September 2027, which is the expiration date for the last-to-expire patent covered by the agreement.

We also agreed to pay certain fees or commissions incurred by the Licensors in connection with subsequent sales of the shares issued pursuant to the amendment.

Additionally, at our sole option and subject to certain agreed upon conditions, any future non-royalty payments due to be paid by us to the Licensors under the license agreement may be made either in cash, in shares of our common stock, or in a combination of cash and shares.

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***Mundipharma.*** In February 2006, we entered into an exclusive, royalty bearing right and license agreement with Mundipharma for the development and commercialization of forodesine, a PNP inhibitor, for use in oncology. Under the terms of the agreement, Mundipharma obtained rights to forodesine in markets across Europe, Asia, and Australasia in exchange for a \$10.0 million up-front payment. In addition, Mundipharma contributed \$10.0 million of the documented out-of-pocket development costs incurred by us in respect of the current and planned trials as of the effective date of the agreement, and Mundipharma will conduct additional clinical trials at their own cost up to a maximum of \$15.0 million. The license provides for possibility of future event payments totaling \$155.0 million for achieving specified development, regulatory and commercial events (including certain sales level amounts following a product's launch) for certain indications. In addition, the agreement provides that we will receive royalties (ranging from single digits to mid teens) based on a percentage of net product sales, which varies depending upon when certain indications receive NDA approval in a major market country and can vary by country depending on the patent coverage or sales of generic compounds in a particular country. Generally, all payments under the agreement are nonrefundable and non-creditable, but they are subject to audit. We licensed forodesine and other PNP inhibitors from AECOM and IRL and will owe sublicense payments to these third parties on the upfront payment, event payments, and royalties received by us from Mundipharma.

For five years, Mundipharma will have a right of first negotiation on existing backup PNP inhibitors we develop through Phase 2b in oncology, but any new PNP inhibitors will be exempt from this agreement and we will retain all rights to such compounds. We retained the rights to forodesine in the U.S. and Mundipharma is obligated by the terms of the agreement to use commercially reasonable efforts to develop the licensed product in the territory specified by the agreement. The agreement will continue for the commercial life of the licensed products, but may be terminated by either party following an uncured material breach by the other party or in the event the pre-existing third party license with AECOM and IRL expires. It may be terminated by Mundipharma upon 60 days written notice without cause or under certain other conditions as specified in the agreement and all rights, data, materials, products and other information would be transferred back to us at no cost. In the event we terminate the agreement for material default or insolvency, we could have to pay Mundipharma 50% of the costs of any independent data owned by Mundipharma in accordance with the terms of the agreement.

We deferred the \$10.0 million up-front payment that was received from Mundipharma in February 2006. This deferred revenue began to be amortized to revenue in February 2006 and will end in October 2017, which is the date of expiration for the last-to-expire patent covered by the agreement. The costs reimbursed by Mundipharma for the current and planned trials of forodesine were recorded as revenue when the expense was incurred up to the \$10.0 million limit stipulated in the agreement.

## ***BCX4208***

### **Overview**

BCX4208 is a next generation PNP inhibitor with the potential for once-a-day dosing suitable for chronic administration. Studies have shown that BCX4208 may have utility in diseases dependent on T-cells, B-cells and uric acid reduction, with broad applications in inflammatory and autoimmune diseases. We believe that BCX4208 is a good candidate to control gout because data from a prior Phase 2 clinical trial of BCX4208 for psoriasis indicated a dose related reduction in uric acid that was sustained for the duration of drug exposure.

### **Clinical Trials**

In September 2009, we announced the initiation of a clinical study of BCX4208 for the treatment of gout, which is caused by elevated levels of uric acid in blood. We believe that BCX4208 is a good candidate to control gout because data from a prior Phase 2 clinical trial of BCX4208 for psoriasis indicated a dose related reduction in uric acid that

was sustained for the duration of drug exposure. Our gout clinical trial was a Phase 2, randomized, double-blind, placebo-controlled study to evaluate the efficacy and safety of orally administered BCX4208 in subjects with gout. The trial contained two parts: part one, which was a parallel-group study of

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multiple doses of BCX4208 randomized against a placebo and part two, which was a sequential-group study of escalating doses of BCX4208, randomized against placebo.

On April 28, 2010 we announced positive top-line results from a planned interim analysis of part one of this clinical study. The study's primary endpoint was the change in sUA concentration after 21 days of treatment compared to baseline concentration prior to treatment. Part one of the study randomized 60 gout patients with sUA concentrations greater than or equal to 8 mg/dL to placebo or to one of three different doses of BCX4208, a PNP inhibitor, administered once-daily for 21 days. All three doses of BCX4208 demonstrated a statistically significant reduction in sUA levels compared to placebo at day 22. BCX4208 doses of 40 mg, 80 mg and 120 mg per day showed median reductions in sUA levels of 2.7, 3.3 and 3.4 mg/dL, respectively.

The median reductions of sUA concentrations for these three doses ranged from 32.2% to 34.6% of baseline level. BCX4208 also demonstrated a statistically significant difference in the proportion of subjects with sUA levels less than 6 mg/dL, compared to subjects treated with placebo, on day 22. Among patients with a baseline sUA concentration below 10 mg/dL, up to 63% showed sUA levels below 6 mg/dL on day 22.

BCX4208 was generally safe and well-tolerated at the doses evaluated in part one of this study. Reductions in peripheral blood lymphocytes were observed in patients treated with BCX4208. The protocol included stopping rules for total lymphocyte counts and CD4+ cell counts below certain thresholds; no subjects were discontinued for these reasons, and all 60 subjects completed the first part of this study. Overall, the frequency of adverse events in each of the BCX4208 treatment groups was comparable to that observed in the placebo group. All patients received prophylactic medicine for gout flares; the incidence of gout flares observed was low.

We announced on August 5, 2010 that we achieved positive top-line results in part two of this clinical study, after completion of dose cohorts at 160 mg and 240 mg per day. The primary endpoint of part two of this study was the change in sUA concentration at day 22, following 21 days of once-daily treatment, compared to baseline sUA concentration prior to treatment. Data was evaluated using least square means (LSM) and an analysis of covariance (ANCOVA) model with factors for treatment and baseline sUA.

All doses of BCX4208 evaluated met the primary endpoint of the study, including both doses studied in part two. BCX4208 doses of 160 mg and 240 mg per day showed LSM reductions in sUA levels of 3.6 and 4.5 mg/dL at day 22 ( $p < 0.001$  for both doses), compared to placebo change of  $-0.02$  mg/dL. The LSM reduction of sUA concentration percent change from baseline level was 35.7% for the 160 mg dose and 46.0% for the 240 mg dose ( $p < 0.001$  for both doses). BCX4208 also demonstrated a statistically significant difference in the proportion of subjects with sUA levels less than 6 mg/dL, compared to subjects treated with placebo, on day 22. The proportion of subjects achieving sUA levels less than 6 mg/dL was 47% for the 160 mg dose and 77% for the 240 mg dose, compared to 0% in the placebo group.

Part two of the study was designed to sequentially evaluate the safety and efficacy of up to three higher doses (160 mg, 240 mg and 320 mg once-daily) of BCX4208, and included various stopping criteria related to both safety and efficacy. Enrollment in the study was closed after the 240 mg treatment group achieved two efficacy stopping criteria: greater than 4 mg/dL reduction in sUA from baseline, and greater than 60% of patients achieving sUA concentration below 6 mg/dL.

BCX4208 was generally safe and well-tolerated at all doses evaluated in this study. Reductions in peripheral blood lymphocytes were observed in patients treated with BCX4208. The protocol included individual subject stopping criteria for CD4+ cell counts below certain thresholds; no subjects were discontinued for this reason. Overall, the frequency of adverse events in each of the BCX4208 treatment groups was comparable to that observed in the placebo group. Additional studies designed to evaluate longer-term exposure are needed to further define the safety and

tolerability profile of BCX4208.

Detailed results from this clinical study were presented at the American College of Rheumatology meeting in Atlanta, Georgia on November 8, 2010. The poster concluded that BCX4208 doses administered at 40, 80, 120, 160 and 240 mg once-daily monotherapy rapidly and significantly reduced sUA in patients with gout. BCX4208 was generally safe and well-tolerated at all doses evaluated in the study.

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Additionally, on June 1, 2010, we announced that we were initiating a Phase 2 study of BCX4208 alone and in combination with allopurinol in patients with gout. On September 16, 2010, we announced positive top-line results from this randomized, double-blind, multi-center, placebo-controlled Phase 2 study. The study was designed to evaluate the urate-lowering activity and safety of several doses of BCX4208 alone and in combination with selected doses of allopurinol administered once-daily.

The study utilized a factorial design. The primary endpoint was change in sUA after 21 days of treatment compared to baseline concentration prior to treatment. Eighty-seven gout patients with sUA concentrations greater than or equal to 8 mg/dL were randomized to receive BCX4208 at daily doses of 20 mg, 40 mg and 80 mg administered orally as monotherapy or in combination with allopurinol at daily doses of 100 mg, 200 mg and 300 mg administered orally. A dose-response was demonstrated for both BCX4208 and allopurinol, and the combination of BCX4208 and allopurinol was shown to be superior to either drug alone in sUA reduction. In five of these nine combination groups, 80% or more of the patients achieved a sUA concentration of less than 6 mg/dL. Combinations of lower doses of BCX4208 with allopurinol showed additive or synergistic effects in sUA reduction. The doses of BCX4208 alone and in combination with allopurinol were generally safe and well-tolerated. Consistent with prior BCX4208 clinical studies, reductions in peripheral blood lymphocytes were observed in patients treated with BCX4208. The protocol included stopping rules for CD4+ cell counts below certain thresholds; no subjects were discontinued for this reason.

On December 22, 2010, we announced the initiation of a Phase 2b study of BCX4208 as add-on therapy in gout patients who have not responded to allopurinol therapy alone. This randomized, double-blind, dose-response 250-patient study is designed to evaluate the safety and efficacy of BCX4208 in combination with allopurinol in gout patients who have failed to reach the sUA objective of <6 mg/dL following treatment with allopurinol 300 mg alone. The primary endpoint of the study is the proportion of subjects with sUA <6 mg/dL at day 85. The study utilizes a parallel-group design, evaluating BCX4208 at doses of 5 mg, 10 mg, 20 mg, 40 mg and placebo administered once-daily for 12 weeks, in combination with allopurinol's standard dose of 300 mg.

We also plan to initiate a long-term safety study of BCX4208 in 2011.

### *Current Development Strategy*

Our plan is to continue developing BCX4208 to appropriately determine the safety and efficacy for use in gout patients.

### ***Forodesine***

#### **Overview**

Forodesine is an orally-available transition-state analog PNP inhibitor. Forodesine 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 for treatment of B-ALL. The FDA has also granted fast track status to the development of forodesine for the treatment of relapsed or refractory T-cell leukemia, and Special Protocol Assessment (SPA) from the FDA for forodesine to conduct a pivotal clinical trial in CTCL with an oral formulation.

#### **Clinical Trials**

On September 15, 2010, we announced preliminary top-line results from our pivotal multinational, open-label, single-arm trial evaluating 200 mg once-daily oral forodesine in the treatment of relapsed or refractory CTCL. The study's primary endpoint was objective response rate, defined as complete or partial cutaneous response that is

sustained for at least 28 days, in patients with later stage (stage IIB, III and IVA) disease who had previously received at least three systemic therapies for their disease. Eleven of 101 (11% (95% confidence interval: 6-19%)) later stage patients enrolled achieved a partial cutaneous response, while no patients achieved a complete response. Of the remaining later stage patients, 56 (55%) had stable disease as their best response, 30 (30%) had progressive disease, with a median time to progression of 353 days, and



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four (4%) were not evaluable. The median number of prior systemic therapies was four (range 3-15) among patients with later stage disease. Oral forodesine was generally safe and well-tolerated in this study, and was administered daily for up to 839 days.

Eligible patients were those with CTCL of stages IB through IVA whose disease was persistent, progressive or recurrent during or after treatment with at least three systemic therapies, one of which must have been oral bexarotene. A total of 144 patients with CTCL, with a median duration of illness of 52.5 months, were enrolled. The most common adverse events reported were peripheral edema, fatigue, insomnia, diarrhea, headache and nausea.

Also on September 15, 2010, we announced interim results from our exploratory Phase 2 study to investigate the efficacy and safety of forodesine as monotherapy for CLL. In this open-label, single-arm, multi-center study, forodesine was administered orally at 200 mg twice-daily for 28-day cycles in 25 previously treated CLL patients. The primary endpoint of the study was overall response rate. Consistent with results of previous clinical trials, forodesine was generally safe and well-tolerated in this study.

On December 4, 2010, we presented new data from this study that confirmed forodesine's clinical activity in the treatment of CLL at the 52nd Annual American Society of Hematology Meeting & Exposition held in Orlando, Florida. An analysis conducted after all patients were followed through 36 months showed that six of 23 response-evaluable patients demonstrated a partial response to forodesine, resulting in a response rate of 26 percent. Forodesine 200 mg orally-administered twice-daily was generally safe and well-tolerated in this study. The pattern, frequencies and severity distribution of adverse events were generally consistent with CLL-associated poor bone marrow function and immunodeficiency, prior therapies and co-morbidities.

### *Current Development Strategy*

We are exploring the interest level of potential partners as a possible path forward for the future development of forodesine in the U.S. The timing of future studies of forodesine will be dependent on the results of future partnering efforts. Absent a U.S. partner, we do not plan to conduct additional studies of forodesine or file an NDA with the FDA. Mundipharma holds the rights to forodesine in markets across Europe, Asia, and Australasia under an exclusive, royalty bearing right and license agreement dated February 2006.

### **Additional Products**

In addition to our principal products, we retain exclusive rights to other compounds in a number of therapeutic areas. These compounds are currently in pre-clinical development and include potent inhibitors of parainfluenza hemagglutinin, neuraminidase, influenza neuraminidase, hepatitis C RNA polymerase, JAK inhibitors, plasma kallikrein and additional PNP inhibitors. We will continue to evaluate and test these compounds to determine which should be taken forward into clinical testing.

### **Other Collaborations**

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

*UAB.* We have had a close relationship with UAB since our formation. Our former Chairman, Dr. Charles E. Bugg, was the previous Director of the UAB Center for Macromolecular Crystallography, and our former Chief Operating Officer, Dr. J. Claude Bennett, was the former President of UAB, the former Chairman of the Department of Medicine at UAB and a former Chairman of the Department of Microbiology at UAB. Several of our early programs originated at UAB.

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We currently have agreements with UAB for influenza neuraminidase and complement inhibitors. Under the terms of these agreements, UAB performed specific research for us in return for research payments and license fees. UAB has granted us certain rights to any discoveries in these areas resulting from research developed by UAB or jointly developed with us. We have agreed to pay single digit royalties on sales of any resulting product and to share in future payments received from other third-party partners. We have completed the research under both the complement and influenza agreements. These two agreements have initial 25-year terms, are automatically renewable for five-year terms throughout the life of the last patent and are terminable by us upon three months notice and by UAB under certain circumstances. Upon termination each party shall cease using the other party's proprietary and confidential information and materials, the parties shall jointly own joint inventions and UAB shall resume full ownership of all UAB licensed products. There is currently no activity between us and UAB on these agreements, but when we license this technology, such as in the case of the Shionogi and Green Cross agreements, or commercialize products related to these programs, we will owe sublicense fees or royalties on amounts we receive.

## **Government Contracts**

Our contract with HHS for the advanced development of peramivir is a milestone-driven, cost-plus-fixed-fee contract. HHS will make periodic assessments of our progress, and the continuation of the contract is based on our performance, the timeliness and quality of deliverables, and other factors. The government has rights under certain contract clauses to terminate this contract. The contract is terminable by the government at any time for breach or without cause.

HHS has indicated that antiviral drugs are an important element of their pandemic influenza preparedness efforts and that their strategy includes not only stockpiling of existing antiviral drugs but also seeking out new antiviral medications to further broaden their capabilities to treat and prevent all forms of influenza. Peramivir is in the same class of neuraminidase inhibitors as oseltamivir (Tamiflu) and zanamivir (Relenza). We are committed to working with HHS for the development of these parenteral formulations of peramivir which could be especially useful in hospital settings or pandemic situations due to the ability to achieve high levels of the drug rapidly throughout the body.

## **Patents and Proprietary Information**

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

The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. Our ability to maintain and solidify our proprietary position for our technology will depend on our success in obtaining effective patent claims and enforcing those claims once granted. We do not know whether any of our patent applications or those patent applications that we license will result in the issuance of any patents. Our issued patents and those that may issue in the future, or those licensed to us, may be challenged, invalidated, rendered unenforceable or circumvented, which could limit our ability to stop competitors from marketing related products or the length of term of patent protection that we may have for our products. In addition, the rights granted under any issued patents may not provide us with competitive advantages against competitors with similar compounds or technology. Furthermore, our competitors may independently develop similar technologies or duplicate any technology developed

by us in a manner that does not infringe our patents or other intellectual property. Because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that, before any of our drug candidates or those developed by our partners can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby reducing any advantage of the patent.

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As of March 1, 2011, we have been issued 19 U.S. patents that expire between 2015 and 2025 and that relate to our PNP, serine protease and neuraminidase inhibitor compounds. We have licensed six different class of compounds representing new composition of matter patents from AECOM and IRL for our PNP inhibitors, plus additional manufacturing patents related to these PNP inhibitors and one patent from Emory related to hepatitis C. Additionally, we have over 20 PCT or U.S. patent applications pending related to PNP, neuraminidase, RNA or DNA polymerase, Janus Kinase and serine protease inhibitors. Our pending applications may not result in issued patents, and our patents may not provide us with sufficient protection against competitive products or otherwise be commercially viable.

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

## **Competition**

The pharmaceutical and biotechnology industries are intensely competitive. Many companies, including biotechnology, chemical and pharmaceutical companies, are actively engaged in activities similar to ours, including research and development of drugs for the treatment of cancer, infectious, autoimmune, and inflammatory disorders. Many of these companies have substantially greater financial and other resources, larger research and development staffs, and more extensive marketing and manufacturing organizations than we do. In addition, some of them have considerable experience in preclinical testing, clinical trials and other regulatory approval procedures. There are also academic institutions, governmental agencies and other research organizations that are conducting research in areas in which we are working. They may also market commercial products, either on their own or through collaborative efforts. We expect to encounter significant competition for any of the pharmaceutical products we plan to develop. Companies that complete clinical trials, obtain required regulatory approvals and commence commercial sales of their products before their competitors may achieve a significant competitive advantage.

The pharmaceutical market for products that prevent or treat influenza is very competitive. Key competitive factors for i.v. peramivir include, among others, efficacy, ease of use, safety, price and cost-effectiveness, storage and handling requirements and reimbursement. A number of neuraminidase inhibitors are currently available in the U.S. and other countries, including Japan, for the prevention or treatment of influenza, including seasonal flu vaccines and Roche's Tamiflu, GlaxoSmithKline's (GSK's) Relenza and Daiichi Sankyo's Inavir. Roche's neuraminidase inhibitor is also approved for prophylaxis of influenza, and both Roche and GSK have i.v. formulations in clinical trial development. In addition, another potentially competitive product, Toyama Kagaku's T-705, is currently in late stage clinical development. In January 2011, GSK announced initiation of a multi-country Phase 3 study of intravenous zanamivir (the same active ingredient as in Relenza) in hospitalized patients with influenza. Various government entities throughout the world are offering incentives, grants and contracts to encourage additional investment into preventative and therapeutic agents against influenza, which may have the effect of further increasing the number of our competitors and/or providing advantages to certain competitors.

In addition to these companies with neuraminidase inhibitors, there are other companies working to develop additional antiviral drugs to be used against various strains of influenza. Another example is Eisai's Targretin for CTCL. In addition, several pharmaceutical and biotechnology firms, including major pharmaceutical companies, have announced efforts in the field of structure-based drug design and in the therapeutic areas of cancer, infectious disease, autoimmune, and inflammatory disorders, as well as other therapeutic areas where we are focusing our drug discovery efforts.

In order to compete successfully, we must develop proprietary positions in patented drugs for therapeutic markets that have not been satisfactorily addressed by conventional research strategies and, in the process,

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expand our expertise in structure-based drug design. Our products, even if successfully tested and developed, may not be adopted by physicians over other products and may not offer economically feasible alternatives to other therapies.

## **Research and Development**

We initiated our research and development program in 1986, with drug synthesis beginning in 1987. We have assembled a scientific research staff with expertise in a broad base of advanced research technologies including protein biochemistry, X-ray crystallography, chemistry and pharmacology. Our research facilities include protein biochemistry and organic synthesis laboratories, testing facilities, X-ray crystallography, computer and graphics equipment and facilities to make drug candidates on a small scale for early stage clinical trials. Beginning in June 2006, we began building an internal clinical development and regulatory team, based in North Carolina to manage the development strategy for our later stage products. During the years ended December 31, 2010, 2009, and 2008, our research and development expenses were \$82.4 million, \$72.3 million and \$73.3 million, respectively.

## **Government Regulation**

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

delays;

warning letters;

fines;

product recalls or seizures;

injunctions;

penalties;

refusal of the FDA to review pending market approval applications or supplements to approval applications;

total or partial suspension of production;

civil penalties;

withdrawals of previously approved marketing applications; and

criminal prosecutions.

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

and significant time may be devoted to clinical development.

Before testing potential candidates in humans, we carry out laboratory and animal studies to determine safety and biological activity. After completing preclinical trials, we must file an IND, including a proposal to begin clinical trials, with the FDA. We have filed 13 INDs to date and plan to file, or rely on future partners to file, additional INDs in the future as our potential drug candidates advance to that stage of development.



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Thirty days after filing an IND, a Phase 1 human clinical trial can start, unless the FDA places a hold on the study.

Our Phase 1 trials are designed to determine safety in a small group of patients or healthy volunteers. We also assess tolerances and the metabolic and pharmacologic actions of our drug candidates at different doses. After we complete the initial trials, we conduct Phase 2 trials to assess safety and efficacy and establish the optimal dose in patients. If Phase 2 trials are successful, we or our partners conduct Phase 3 trials to verify the results in a larger patient population. Phase 3 trials are required for FDA approval to market a drug. A Phase 3 trial may require hundreds or even thousands of patients and is the most expensive to conduct. The goal in Phase 3 is to collect enough safety and efficacy data to obtain FDA approval of a drug for treatment of a particular disease. For some clinical indications that are especially serious and for which there are no effective treatments, such as refractory cancers, conditional approval can be obtained following Phase 2 trials.

Initiation and completion of the clinical trial phases are dependent on several factors including things that are beyond our control. For example, the clinical trials cannot begin at a particular site until that site receives approval from its Institutional Review Board ( IRB ), which reviews the protocol and related documents. This process can take from several weeks to several months. In addition, clinical trials are dependent on patient enrollment, but the rate at which patients enroll in the study depends on:

- willingness of investigators to participate in a study;
- ability of clinical sites to obtain approval from their IRB;
- the availability of the required number of eligible subjects to be enrolled in a given trial;
- the availability of existing or other experimental drugs for the disease we intend to treat;
- the willingness of patients to participate; and
- the patients meeting the eligibility criteria.

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

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

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

## **Human Resources**

As of March 1, 2011, we had 76 employees, of whom 52 were engaged in research and development and 24 were in general and administrative functions. Our research and development staff, 26 of whom hold Ph.D. or M.D. degrees, have diversified experience in biochemistry, pharmacology, X-ray crystallography, synthetic organic chemistry, computational chemistry, and medicinal chemistry, clinical development and regulatory affairs. We consider our relations with our employees to be satisfactory.

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### **Available Information**

We have available a website on the Internet. Our address is [www.biocryst.com](http://www.biocryst.com). We make available, free of charge, at our website our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. We also make available at our website copies of our audit committee charter, compensation committee charter, corporate governance and nominating committee charter and our code of business conduct, which applies to all our employees as well as the members of our Board of Directors. Any amendment to, or waiver from, our code of business conduct will be posted on our website.

### **Financial Information**

For information related to our revenues, profits, net loss and total assets, in addition to other financial information, please refer to the Financial Statements and Notes to Financial Statements contained in this Annual Report. Financial information about revenues derived from foreign countries is included in Note 1 to the Financial Statements contained in this Annual Report.

### **ITEM 1A. RISK FACTORS**

*An investment in our stock involves risks. You should consider carefully the following uncertainties and risks, which may adversely affect our business, financial condition or results of operations, along with all of the other information included in our other filings with the Securities and Exchange Commission, before deciding to buy our common stock. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial may also adversely affect our business, financial condition or results of operations.*

#### **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. 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. 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. Clinical trials may not be adequately designed or executed, which could affect the potential outcome and analysis of study results. Any of our product candidates may produce undesirable side effects in humans. These side effects could cause us or regulatory authorities to interrupt,

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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, 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;
- clinical protocols or study procedures may not be adequately designed or followed by the investigators;
- manufacturing or quality control problems could affect the supply of drug product for our trials; and
- 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.

***Our clinical trials may not adequately show that our drugs are safe or effective.***

Progression of our drug products through the clinical development process is dependent upon our trials indicating our drugs have adequate safety profiles and show positive therapeutic effects in the patients being treated by achieving pre-determined endpoints according to the trial protocols. Failure to achieve either of these could result in delays in our trials or even require the performance of additional unplanned trials. This could result in delays in the development of our product candidates and could result in significant unexpected costs.

***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.***

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 product candidates will consume significant capital resources. 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 product 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 product candidates, the amount or profitability of any orders for peramivir by any government agency or other party, 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.

We expect that we will be required to raise additional capital to complete the development and commercialization of our current product candidates and we may seek to raise capital at any time we deem market conditions to be favorable. Additional funding, whether through additional sales of securities or collaborative or other arrangements with corporate partners or from other sources, including governmental

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agencies, in general and from any 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 or other actions taken under the contract, this would have a significant negative impact on our revenues, cash flows and the development of peramivir.***

Our projections of revenues and incoming cash flows 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. Further, HHS may challenge actions that we have taken or may take under our contract, which could negatively impact our operating results and cash flows.

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 extraordinary provisions which would not typically be found in commercial contracts. For instance, government contracts permit unilateral modification by the government, interpretation of relevant regulations (i.e., federal acquisition regulation clauses), and the ability to terminate without cause. As such, we may be at a disadvantage as compared to other commercial contracts. In addition, U.S. government contracts are subject to audit and modification by the government at its sole discretion. If the government terminates its contract with us for its convenience or if we default by failing to perform in accordance with the contract schedule and terms, significant negative impact on our cash flows and operations could result.

***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. We also have obligations with HHS under the Indefinite Delivery Indefinite Quantity contract issued in November 2009. 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 contracts 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 does 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,



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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 Mundipharma for the development and commercialization of forodesine and with each of Shionogi and Green Cross for the development and commercialization of peramivir. 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;

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 product candidates, obtain regulatory approvals and achieve market acceptance of products developed from our product 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.

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***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. We currently have no marketing capability and no direct or third-party sales or distribution capabilities and may be unable to establish these capabilities for products we plan to commercialize. In addition, 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 and their products could be more cost effective or have a better efficacy or tolerability profile than our product candidates;

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; and

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

***If our development collaborations with 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;

execution of additional toxicology studies that may be required to obtain approval for our product candidates; and

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.

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 or perform their services inconsistent with industry standards and not

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in accordance with the required regulations, this would delay or prevent the development of our product candidates.

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 applicable FDA current Good Laboratory Practices ( cGLP ), current Good Manufacturing Practices ( cGMP ) and current Good Clinical Practices ( cGCP ), and comparable foreign standards. 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, and our business, financial condition and results of operations could be materially adversely affected.

***Our development of peramivir for 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 peramivir i.v. currently in clinical development may not prove to be safe and sufficiently effective for market approval in the United States or other major markets;

necessary government or other third party funding and clinical testing for further development of peramivir may not be available timely, at all, or in sufficient amounts;

the flu prevention or pandemic treatment concerns may not materialize at all, or in the near future;

advances in flu vaccines or other antivirals, including competitive i.v. antivirals, could substantially replace potential demand for peramivir;

any substantial demand for pandemic or seasonal flu treatments may occur before peramivir can be adequately developed and tested in clinical trials;

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 flu drugs and vaccines;

the only major markets in which patents relating to peramivir have issued or been allowed are the United States, Canada, Japan, Australia and many contracting and extension states of the European Union, while no patent applications or issued patents for peramivir exist in other potentially significant markets;

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 from stockpiling orders from these entities.

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.

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***There are risks related to the potential emergency use or sale of peramivir.***

To the extent that peramivir is used as a treatment for H1N1 flu (or other strains of flu), there can be no assurance that it will prove to be generally safe, well tolerated and effective. Emergency use of peramivir may create certain liabilities for us. There is no assurance that we or our manufacturers will be able to fully meet the demand for peramivir in the event of additional orders. Further, we may not achieve a favorable price for additional orders of peramivir in the U.S. or in any other country. Our competitors may develop products that could compete with or replace peramivir. We may face competition in markets where we have no existing intellectual property protection or are unable to successfully enforce our intellectual property rights.

There is no assurance that the non-U.S. partnerships that we have entered into for peramivir will result in any order for peramivir in those countries. There is no assurance that peramivir will be approved for emergency use or will achieve market approval in additional countries. In the event that any emergency use is granted, there is no assurance that any order by any non-U.S. partnership will be substantial or will be profitable to us. The sale of peramivir, emergency use or other use of peramivir in any country may create certain liabilities for us.

***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;

product liability claims;

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, such as the recent earthquake in Japan, that could strike their facilities or have an effect on infrastructure;

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



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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.

***Royalties and milestone payments from Shionogi under the Shionogi Agreement will be required to be used by Royalty Sub to service its obligations under its PhaRMA Notes, and generally will not be available to us for other purposes until Royalty Sub has repaid in full its obligations under the PhaRMA Notes.***

In March 2011, our wholly-owned subsidiary Royalty Sub issued \$30.0 million in aggregate principal amount of PhaRMA Notes. The PhaRMA Notes are secured principally by (i) certain royalty and milestone payments under the Shionogi Agreement, pursuant to which Shionogi licensed from us the rights to market peramivir in Japan and, if approved for commercial sale, Taiwan, (ii) rights to certain payments under a Japanese yen/U.S. dollar foreign currency hedge arrangement put into place by us in connection with the issuance of the PhaRMA Notes and (iii) the pledge by us of our equity interest in Royalty Sub. Payments from Shionogi to us under the Shionogi Agreement will generally not be available to us for other purposes until Royalty Sub has repaid in full its obligations under the PhaRMA Notes. Accordingly, these funds will be required to be dedicated to Royalty Sub's debt service and not available to us for product development or other purposes.

***If royalties from Shionogi are insufficient for Royalty Sub to make payments under the PhaRMA Notes or if an event of default occurs under the PhaRMA Notes, investors may be able to foreclose on the collateral securing the PhaRMA Notes and our equity interest in Royalty Sub, in which case we may not realize the benefit of future royalty payments that might otherwise accrue to us following repayment of the PhaRMA Notes.***

Royalty Sub's ability to service its payment obligations in respect of the PhaRMA Notes, and our ability to benefit from our equity interest in Royalty Sub, is subject to numerous risks. Peramivir was first approved for marketing and manufacturing in Japan in October 2009 and has been offered for sale in Japan only since January 2010. As a result, there is very little sales history for peramivir in Japan, and there can be no assurance that peramivir will gain market acceptance in the Japanese market. In addition, Shionogi's sales of peramivir are expected to be highly seasonal and vary significantly from year to year, and the market for products to treat or prevent influenza is highly competitive. Under our license agreement with Shionogi, Shionogi has control over the commercial process for peramivir in Japan and Taiwan. Royalty Sub's ability to service the PhaRMA Notes may be adversely affected by, among other things, changes in or any termination of our relationship with Shionogi, reimbursement, regulatory, manufacturing and/or intellectual property issues, product recalls, product liability claims and allegations of safety issues, as well as other factors. In the event that for any reason Royalty Sub is unable to service its obligations under the PhaRMA Notes or an event of default were to occur under the PhaRMA Notes, the holders of the PhaRMA Notes may be able to foreclose on the collateral securing the PhaRMA Notes and our equity interest in Royalty Sub and exercise other remedies available to them under the indenture in respect of the PhaRMA Notes. In such event, we may not realize the benefit of future royalty payments that might otherwise accrue to us following repayment of the PhaRMA Notes and we might otherwise be adversely affected.



**Table of Contents*****Shionogi's failure to successfully market and commercialize peramivir in Japan would have a material adverse effect on Royalty Sub's ability to service its obligations on the PhaRMA Notes.***

The successful commercialization of peramivir in Japan depends on the efforts of Shionogi and is beyond the control of us or Royalty Sub. As discussed above, peramivir has only recently been introduced into the Japanese market, and there can be no assurance that peramivir will gain market acceptance in Japan. Future sales by Shionogi will depend on many factors, including the incidence and severity of seasonal influenza in Japan each year (both of which can vary very significantly from year to year), the perceived and actual efficacy and safety of peramivir, experience of physicians and patients with peramivir, continued market acceptance, continued availability of supply, competition, sales and marketing efforts, governmental regulation and pricing and reimbursement in Japan. Shionogi is responsible for the marketing and sale of peramivir in Japan, including with respect to the pricing of peramivir in that market. There are no minimum royalties, sales levels or other performance measures required of Shionogi under the Shionogi Agreement and Shionogi could in its sole discretion reduce or cease its sale efforts of peramivir in the Japan, subject to its covenant in the Shionogi Agreement to use diligent efforts to commercialize peramivir in Japan. If Shionogi is unable to or fails to successfully market and commercialize peramivir, it would have a material adverse effect on Royalty Sub's ability to service its obligations under the PhaRMA Notes and our ability to benefit from our equity interest in Royalty Sub.

***We may be required to pay significant premiums under the foreign currency hedge arrangement entered into by us in connection with the issuance by Royalty Sub of the PhaRMA Notes. In addition, because our potential obligations under the foreign currency hedge are marked to market, we may experience additional quarterly volatility in our earnings attributable to the foreign currency hedge arrangement.***

In connection with the issuance by Royalty Sub of the PhaRMA Notes, we entered into a foreign currency hedge arrangement to hedge certain risks associated with changes in the value of the Japanese yen relative to the U.S. dollar. Under the currency hedge arrangement, we may be required to pay a premium in the amount of \$2.0 million in each year beginning in May 2014 and, provided the currency hedge arrangement remains in effect, continuing through May 2020. Such payment will be required if, in May of the relevant year, the spot rate of exchange for Japanese yen-U.S. dollars (determined in accordance with the currency hedge arrangement) is such that the U.S. dollar is worth 100 yen or less. We will be required to mark-to-market our potential obligations under the currency hedge, which may cause us to experience additional quarterly volatility in our earnings as a result. Additionally, we may be required to post cash for mark to market risk, pay significant premiums or a termination fee under the foreign currency hedge agreement entered into by us in connection with the issuance by Royalty Sub of the PhaRMA Notes.

***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 process of preparing for and obtaining FDA approval may be lengthy and expensive, and approval is never certain. Products distributed abroad are also subject to foreign government regulation and export laws of the U.S. Neither the FDA nor foreign regulatory agencies have approved any of our drug product candidates. 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

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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 inspected us in June 1996. The focus was on the two 1995 Phase 2 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.

***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 and other autoimmune indications), gout, CTCL, CLL, influenza, and hepatitis C. We expect to encounter significant competition for any of the pharmaceutical products we plan to develop. Companies that complete clinical trials, obtain required regulatory approvals and commence commercial sales of their products before their competitors may achieve a significant competitive advantage. Such is the case with Eisai's Targretin for CTCL and the current neuraminidase inhibitors marketed by Glaxo Smith Kline and Roche for

influenza. With respect to the neuraminidase inhibitors, these companies may develop i.v. formulations that could compete with peramivir. Further, 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.

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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. Further, we do not have worldwide patent protection for our product candidates and our intellectual property rights may not be legally protected or enforceable in all countries throughout the world. 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 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 trade name, 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



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applications, as appropriate. We have also filed certain trademark and trade name 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.

***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 approximately \$11.0 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;

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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 facility incurs damage or power is lost for a significant length of time, our business will suffer.***

We currently 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.

In addition, we currently store most of our preclinical and clinical data at our facility. Duplicate copies of most critical data are stored off-site in a bank vault. Any significant degradation or failure of our computer systems could cause us to inaccurately calculate or lose our data. Loss of data could result in significant delays in our drug development process and any system failure could harm our business and operations.

***If 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 unexpected 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.

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

The market prices for securities of biotechnology companies in general have been highly volatile and may continue to be highly volatile in the future. Moreover, our stock price has fluctuated frequently, and these fluctuations are often not related to our financial results. For the twelve months ended December 31, 2010, the 52-week range of the market price of our stock was from \$4.43 to \$8.37 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;

announcements relating to the status of our programs;

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;

actual or anticipated fluctuations in our operating results;

changes in financial estimates or recommendations by securities analysts;

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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.

*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.

**Information Regarding Forward-Looking Statements**

This filing contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, which are subject to the safe harbor created in Section 21E. All statements other than statements of historical facts contained in this filing, are forward-looking statements. These forward-looking statements can generally be identified by the use of words such as may, will, intends, plans, believes, anticipates, expects, predicts, potential, the negative of these words or similar expressions. Statements that describe our future plans, strategies, intentions, expectations, objectives, goals or prospects are also forward-looking statements. Discussions containing these forward-looking statements are principally contained in Business, Risk Factors and Management s Discussion and Analysis of Financial Condition and Results of Operations , as well as any amendments we make to those sections in filings with the SEC. These forward-looking statements include, but are not limited to, statements about:

the initiation, timing, progress and results of our preclinical testing, clinical trials, and other research and development efforts;

the potential funding from our contract with HHS for the development of peramivir;

the potential for a stockpiling order or profit from any order for peramivir;

the potential use of peramivir as a treatment for H1N1 flu (or other strains of flu);

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

the implementation of our business model, strategic plans for our business, product candidates and technology;

our ability to establish and maintain collaborations;

plans, programs, progress and potential success of our collaborations, including Mundipharma for forodesine and Shionogi and Green Cross for peramivir;

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Royalty Sub's ability to service its payment obligations in respect of the PhaRMA Notes, and our ability to benefit from our equity interest in Royalty Sub;

the foreign currency hedge agreement entered into by us in connection with the issuance by Royalty Sub of the PhaRMA Notes;

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 important 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. Any forward-looking statement 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.

**ITEM 1B. UNRESOLVED STAFF COMMENTS**

None.

**ITEM 2. PROPERTIES**

We lease offices in both Durham, North Carolina and Birmingham, Alabama. Our headquarters, including our clinical and regulatory operations, are based in Durham, while our principal research facilities are located in Birmingham. We believe that our facilities are adequate for our current operations.

**ITEM 3. LEGAL PROCEEDINGS**

None.

**ITEM 4. (REMOVED AND RESERVED)**

**Table of Contents****PART II****ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES****Market Information**

As of January 3, 2011, our common stock trades on the NASDAQ Global Select Market under the symbol BCRX. Our common stock previously traded on the NASDAQ Global Market under the same symbol. The following table sets forth the low and high sales prices of our common stock as reported by NASDAQ Global Market for each quarter in 2010 and 2009:

|                | 2010 |      | 2009 |       |
|----------------|------|------|------|-------|
|                | Low  | High | Low  | High  |
| First quarter  | 6.21 | 8.34 | 1.15 | 2.37  |
| Second quarter | 5.79 | 8.37 | 1.65 | 4.99  |
| Third quarter  | 4.43 | 6.24 | 3.65 | 13.47 |
| Fourth quarter | 4.65 | 5.86 | 5.55 | 12.70 |

The last sale price of the common stock on March 7, 2011 as reported by NASDAQ Global Select Market was \$4.01 per share.

 **Holders**

As of March 7, 2011, there were approximately 225 holders of record of our common stock.

**Dividends**

We have never paid cash dividends and do not anticipate paying cash dividends in the foreseeable future.



**Table of Contents****Stock Performance Graph**

This performance graph is not soliciting material, is not deemed filed with the SEC and is not to be incorporated by reference in any filing by us under the Securities Act or the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing. The stock price performance shown on the graph is not necessarily indicative of future price performance.

**PERFORMANCE GRAPH FOR BIOCRYST  
Indexed Comparison Since 2005**

|                                | <b>Beginning<br/>Investment</b> | <b>Investment</b> | <b>Investment</b> | <b>Investment</b> | <b>Investment</b> | <b>Investment</b> |
|--------------------------------|---------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                                | <b>at</b>                       | <b>at</b>         | <b>at</b>         | <b>at</b>         | <b>at</b>         | <b>at</b>         |
|                                | <b>12/31/05</b>                 | <b>12/31/06</b>   | <b>12/31/07</b>   | <b>12/31/08</b>   | <b>12/31/09</b>   | <b>12/31/10</b>   |
| BioCryst Pharmaceuticals, Inc. | \$ 100.00                       | \$ 69.01          | \$ 36.90          | \$ 8.18           | \$ 38.57          | \$ 30.87          |
| The NASDAQ Stock Market        | 100.00                          | 109.87            | 119.14            | 57.42             | 82.53             | 97.97             |
| NASDAQ Pharmaceutical Stocks   | 100.00                          | 97.88             | 102.93            | 95.78             | 107.63            | 116.66            |

The above graph measures the change in a \$100 investment in our common stock based on its closing price of \$16.75 on December 31, 2005 and its year-end closing price thereafter. Our relative performance is then compared with the CRSP Total Return Indexes for the NASDAQ Stock Market (U.S.) and NASDAQ Pharmaceutical Stocks.

**Recent Sales of Unregistered Securities**

None.

**Table of Contents****Issuer Purchases of Equity Securities**

The following table contains information about repurchases of our common stock or shares surrendered to satisfy tax obligations during the fourth quarter of 2010:

| <b>Period</b> | <b>Total<br/>Number of<br/>Shares<br/>Purchased(1)</b> | <b>Average<br/>Price Paid<br/>per Share</b> | <b>Total Number<br/>of<br/>Shares<br/>Purchased<br/>as Part of<br/>Publicly<br/>Announced<br/>Plans<br/>or Programs</b> | <b>Approximate<br/>Dollar Value<br/>of Shares<br/>That May<br/>Yet Be<br/>Purchased<br/>Under<br/>the Plans or<br/>Programs</b> |
|---------------|--|---|---|---|
| October 2010  | 68   | \$ 5.00                                     |   |   |
| November 2010 | 68   | 4.88  |   |   |
| December 2010 | 68   | 4.91  |   |   |
| Total         | 204  | \$ 4.93                                     |   |   |

(1) Amounts represent shares of common stock delivered to us as payment of withholding taxes due on the vesting of restricted stock issued under our Stock Incentive Plan.

**ITEM 6. SELECTED FINANCIAL DATA**

|                                      | <b>2010</b>                                  | <b>Years Ended December 31,</b> |             |             | <b>2006</b> |
|--------------------------------------|--|---------------------------------|-------------|-------------|-------------|
|                                      |  | <b>2009</b>                     | <b>2008</b> | <b>2007</b> |             |
|                                      | <b>(In thousands, except per share data)</b> |                                 |             |             |             |
| <b>Statement of Operations Data:</b> |  |                                 |             |             |             |
| Total revenues                       | \$ 62,381                                    | \$ 74,589                       | \$ 56,561   | \$ 71,238   | \$ 6,212    |
| Research and development expenses    | 82,473                                       | 72,301                          | 73,327      | 94,052      | 47,083      |
| Net loss                             | (33,853)                                     | (13,452)                        | (24,732)    | (29,055)    | (43,618)    |
| Amounts per common share:            |  |                                 |             |             |             |
| Basic and diluted net loss per share | \$ (0.76)                                    | \$ (0.35)                       | \$ (0.65)   | \$ (0.89)   | \$ (1.50)   |
| Weighted average shares outstanding  | 44,564                                       | 38,926                          | 38,062      | 32,771      | 29,147      |

**As of December 31,**

|                                       | 2010           | 2009      | 2008      | 2007      | 2006      |
|---------------------------------------|----------------|-----------|-----------|-----------|-----------|
|                                       | (In thousands) |           |           |           |           |
| <b>Balance Sheet Data:</b>            |                |           |           |           |           |
| Cash, cash equivalents and securities | \$ 66,342      | \$ 94,259 | \$ 63,314 | \$ 85,009 | \$ 46,236 |
| Total assets                          | 109,447        | 142,190   | 84,692    | 142,717   | 68,485    |
| Long-term deferred revenue            | 15,944         | 18,441    | 20,937    | 49,694    | 36,596    |
| Accumulated deficit                   | (296,572)      | (262,719) | (249,268) | (224,536) | (195,481) |
| Total stockholders' equity            | 65,503         | 86,266    | 46,426    | 64,905    | 21,155    |

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

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

*The following Management's Discussion and Analysis ( MD&A ) is intended to help the reader understand our results of operations and financial condition. MD&A is provided as a supplement to, and should be read in conjunction with, our audited Financial Statements and the accompanying notes to the financial statements and other disclosures included in this Annual Report on Form 10-K (including the disclosures under Item 1A. Risk Factors ).*

#### **Overview**

#### **Recent Corporate Highlights**

##### ***Peramivir***

*Collaborative Agreements.* In January 2007, the U.S. Department of Health and Human Services ( HHS ) awarded us a \$102.6 million, four-year contract for the advanced development of peramivir for the treatment of influenza. During 2009, peramivir clinical development shifted to focus on intravenous delivery and the treatment of hospitalized patients. To support this focus, a September 2009 contract modification was awarded to extend the intravenous ( i.v. ) peramivir program by 12 months and to increase funding by \$77.2 million. On February 24, 2011, we announced that HHS had awarded us a \$55.0 million contract modification, intended to fund completion of the Phase 3 development of i.v. peramivir for the treatment of patients hospitalized with influenza. This contract modification brings the total award from HHS to \$234.8 million and extends the contract term by 24 months through December 31, 2013, providing funding through completion of Phase 3 and the filing of a new drug application ( NDA ) to seek regulatory approval for i.v. peramivir in the U.S.

In February 2007, we established a collaborative relationship with Shionogi & Co., Ltd. ( Shionogi ) for the development and commercialization of peramivir in Japan. In January 2010, Shionogi received marketing and manufacturing approval for i.v. peramivir in Japan, and we received a third and final regulatory milestone payment of \$7.0 million in January 2010 as a result of this approval. We may receive future commercial event milestone payments of up to \$95.0 million from Shionogi. Shionogi has commercially launched peramivir under the commercial name RAPIACTA® in Japan. Shionogi has received the indications of single dose administration of 300 mg i.v. peramivir for adult uncomplicated seasonal influenza infection, as well as single and multiple dose administration of 600 mg i.v. peramivir for the patients at high-risk for complications associated with influenza. Shionogi is authorized to supply peramivir as either a 300 mg i.v. bag or a 150 mg vial for i.v. drip infusion.

On October 27, 2010, we announced that Shionogi had received approval of an additional indication for use of i.v. peramivir to treat children and infants with influenza in Japan. Shionogi has stated that it intends to secure an adequate supply of RAPIACTA® to treat approximately one million people during the upcoming influenza season, and that it is taking steps to ensure its manufacturing capability and a stable supply to meet urgent demands.

In the first quarter of 2010, we recorded royalty revenue of approximately \$0.7 million related to sales of RAPIACTA® in Japan and the royalties were paid to us by Shionogi in the second quarter of 2010. RAPIACTA® received accelerated approval in Japan in January 2010 so it could be made available as a treatment option during the

H1N1 pandemic. At the time of this approval, RAPIACTA® stability testing was ongoing and as a result, the product sold during early 2010 had a short shelf life. During the fourth quarter of 2010, in response to requests from customers to return RAPIACTA® due to the shelf life reaching expiration, Shionogi chose to accept returns for substantially all of the \$0.7 million of product shipped early in 2010 and

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submitted the returns to us for credit. Accordingly, we reversed the \$0.7 million of royalty revenue recorded in the first quarter of 2010.

On March 9, 2011, we announced that we had completed a \$30.0 million financing transaction to monetize certain future royalty and milestone payments under our license agreement (the Shionogi Agreement) with Shionogi, pursuant to which Shionogi licensed from us the rights to market peramivir in Japan and, if approved for commercial sale, Taiwan

As part of the transaction, we transferred to JPR Royalty Sub LLC (Royalty Sub), our newly-formed wholly-owned subsidiary, certain rights under the Shionogi Agreement, including the right to receive future royalty and milestone payments under the Shionogi Agreement. As part of the transaction, we also transferred to Royalty Sub the right to receive payments under a new Japanese yen/US dollar foreign currency hedge arrangement that we put into place in connection with the transaction. Our collaboration with Shionogi remains unchanged as a result of the transaction.

As part of the transaction, Royalty Sub issued \$30.0 million in aggregate principal amount of its PhaRMA Senior Secured 14% Notes due 2020 (the PhaRMA Notes) in a private placement exempt from registration under the Securities Act of 1933, as amended (the Securities Act). The PhaRMA Notes bear an interest rate of 14.0%, with interest payable annually on September 1st of each year, beginning September 1, 2011, and on the final legal maturity date. The royalty and milestone payments, if any, that Royalty Sub will be entitled to receive under the license agreement with Shionogi, together with any payments made under the currency hedge arrangement and funds that may be available from certain accounts of Royalty Sub (including an interest reserve account), will be the principal source of payment of principal of, and interest and any premium on, the PhaRMA Notes. The PhaRMA Notes are secured by a security interest granted by Royalty Sub in its rights to receive payments under the Shionogi Agreement and the currency hedge arrangement, all of its other assets and a pledge by us of our equity ownership interest in Royalty Sub. The PhaRMA Notes are non-callable prior to March 9, 2012. On or after March 9, 2012, the PhaRMA Notes may be redeemed at any time prior to maturity, in whole or in part, at the option of Royalty Sub at specified redemption premiums.

The PhaRMA Notes have a final legal maturity of December 1, 2020. Under the terms of the PhaRMA Notes, when Shionogi payments (together with any payments made under the currency hedge arrangement) received by Royalty Sub exceed Royalty Sub's ongoing expenses and the interest payments due annually on the PhaRMA Notes, the excess will be applied to the repayment of principal of the PhaRMA Notes until they have been paid in full. Accordingly, depending on payments from Shionogi, the PhaRMA Notes may fully amortize and be repaid prior to the final legal maturity date. We remain entitled to receive any royalties and milestone payments related to sales of peramivir by Shionogi following repayment of the PhaRMA Notes. The PhaRMA Notes constitute obligations of Royalty Sub, and are non-recourse to us except to the extent of our pledge of our equity interest in Royalty Sub as part of the collateral securing the PhaRMA Notes. The PhaRMA Notes are not convertible into our equity.

We received net proceeds of approximately \$23.0 million from the transaction after transaction costs and establishment of a \$3.0 million interest reserve account by Royalty Sub which will be available to help cover any interest shortfalls on the PhaRMA Notes through September 1, 2013.

In connection with the issuance by Royalty Sub of the PhaRMA Notes, we entered into a foreign currency hedge arrangement to hedge certain risks associated with changes in the value of the Japanese yen relative to the U.S. dollar. Under the currency hedge arrangement, we have the right to purchase dollars and sell yen at a rate of 100 yen per dollar for which we may be required to pay a premium in each year from 2014 through 2020, provided the currency hedge arrangement remains in effect. A payment of \$2.0 million will be required if, on May 18 of the relevant year, the US dollar is worth 100 yen or less as determined in accordance with the currency hedge arrangement. In conjunction with establishing the hedge currency arrangement, we will be required to post collateral to the

counterparty, which may cause us to experience additional quarterly volatility in our earnings as a result. We will not be required at any time to post collateral exceeding the maximum premium payments remaining payable under the currency hedge arrangements. In establishing the hedge, we provided initial funds of approximately \$2.0 million to support our potential hedge obligations. Subject to certain obligations we have in connection with the PhaRMA Notes, we have the right

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to terminate the currency hedge arrangement with respect to the 2016 through 2020 period by giving notice to the counterparty prior to May 18, 2014 and payment of a \$2.0 million termination fee.

On August 16, 2010, we announced that our partner Green Cross Corporation ( Green Cross ) had received marketing and manufacturing approval from the Korean Food & Drug Administration for i.v. peramivir to treat patients with influenza A & B viruses, including pandemic H1N1 and avian influenza. Green Cross received the indication of single dose administration of 300 mg i.v. peramivir. Green Cross intends to launch peramivir under the commercial name PeramiFlu® in Korea.

*Clinical Trials.* On January 13, 2011, we announced top-line results from our completed Phase 3 safety and virology study of peramivir ( 303 ). This study was an open-label, randomized trial of the anti-viral activity, safety and tolerability of i.v. peramivir administered either as a once-daily infusion of 600 mg or a twice-daily infusion of 300 mg to 234 adult and adolescent subjects hospitalized with confirmed or suspected influenza infection. The primary endpoint of the study was the change in influenza virus titer in nasopharyngeal samples, measured by log<sub>10</sub> tissue culture infective dose<sub>50</sub> ( TCID<sub>50</sub> ). Forty-four patients who contributed to the primary efficacy analysis had a positive baseline culture, 20 for the 300 mg twice-daily group and 24 for the 600 mg once-daily group, and both dose regimens were generally safe and well-tolerated. The frequency and severity of adverse events was similar in the two groups, and was consistent with the profile of influenza patients hospitalized during the 2009-2010 pandemic. Serious adverse events ( SAEs ) were reported in 20 percent of patients. Overall mortality within 28 days of initial peramivir treatment was 8.7 percent; no deaths were attributed to study drug, and no safety signals were identified. The analysis of the combined Intent To Treat Infected ( ITTI ) population showed median time to resolution of fever was 25.3 hours; time to clinical resolution, 92.0 hours; time to alleviation of symptoms, 145 hours; and time to resumption of usual activities, 26.8 days. Further analyses of the data are ongoing, and we will submit detailed analyses for presentation at an upcoming medical meeting.

Our ongoing Phase 3 efficacy study of i.v. peramivir ( 301 ) is a multicenter, randomized, double-blind, controlled study to evaluate the efficacy and safety of 600 mg i.v. peramivir administered once-daily for five days in addition to standard of care ( SOC ), compared to SOC alone, in adults and adolescents who are hospitalized due to serious influenza.

**BCX4208**

In September 2009, we announced the initiation of a clinical study of BCX4208 for the treatment of gout. Our gout clinical trial 201 was a Phase 2, randomized, double-blind, placebo-controlled study to evaluate the efficacy and safety of orally administered BCX4208 in subjects with gout. The trial contained two parts: part one, which was a parallel-group study of multiple doses of BCX4208 randomized against a placebo and part two, which was a sequential-group study of escalating doses of BCX4208, randomized against placebo.

On April 28, 2010, we announced positive top-line results from a planned interim analysis of part one of this clinical study. The study's primary endpoint was the change in serum uric acid ( sUA ) concentration after 21 days of treatment compared to baseline concentration prior to treatment. Part one of the study randomized 60 gout patients with sUA concentrations greater than or equal to 8 mg/dL to placebo or to one of three different doses of BCX4208 (40 mg, 80 mg, 120 mg) administered once-daily for 21 days. All three doses of BCX4208 demonstrated a statistically significant reduction in sUA levels compared to placebo at day 22. BCX4208 also demonstrated a statistically significant difference in the proportion of subjects with sUA levels less than 6 mg/dL, compared to subjects treated with placebo, on day 22. Among patients with a baseline sUA concentration below 10 mg/dL, up to 63% showed sUA levels below 6 mg/dL on day 22. BCX4208 was generally safe and well-tolerated at the doses evaluated in part one of this study. Reductions in peripheral blood lymphocytes were observed in patients treated with BCX4208. Overall, the frequency of adverse events in each of the BCX4208 treatment groups was comparable to that observed in the placebo



group.

We announced on August 5, 2010 that we achieved positive top-line results in part two of this clinical study. Part two of the study was designed to sequentially evaluate the safety and efficacy of up to three higher doses (160 mg, 240 mg and 320 mg once-daily) of BCX4208, and included various stopping criteria related to

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both safety and efficacy. The primary endpoint of part two of this study was the change in sUA concentration at day 22, following 21 days of once-daily treatment, compared to baseline sUA concentration prior to treatment. Since all pre-specified efficacy criteria were met following administration of the 240 mg dose, the 320 mg dose group was not initiated and the study was stopped. Both doses of BCX4208 evaluated in part two met the primary endpoint of the study. BCX4208 also demonstrated a statistically significant difference in the proportion of subjects with sUA levels less than 6 mg/dL, compared to subjects treated with placebo, on day 22. Overall, the frequency of adverse events in each of the BCX4208 treatment groups was comparable to that observed in the placebo group. Additional studies designed to evaluate longer-term exposure are needed to further define the safety and tolerability profile of BCX4208.

Detailed results from this clinical study were presented at the American College of Rheumatology meeting in Atlanta, Georgia on November 8, 2010. The poster concluded that BCX4208 doses administered at 40, 80, 120, 160 and 240 mg once-daily monotherapy rapidly and significantly reduced sUA in patients with gout. BCX4208 was generally safe and well-tolerated at all doses evaluated in the study.

Additionally, on June 1, 2010, we announced that we were initiating a second Phase 2 study of BCX4208 in patients with gout. The study was designed to evaluate the urate-lowering activity and safety of several doses of BCX4208 alone and in combination with selected doses of allopurinol administered once-daily. On September 16, 2010, we announced positive top-line results from this study. A dose-response was demonstrated for both BCX4208 and allopurinol, and the combination of BCX4208 and allopurinol was shown to be superior to either drug alone in sUA reduction. In five of these nine combination groups, 80 percent or more of the patients achieved a sUA concentration of less than 6 mg/dL. Combinations of lower doses of BCX4208 with allopurinol showed additive or synergistic effects in sUA reduction. The doses of BCX4208 alone and in combination with allopurinol evaluated in the study were generally safe and well-tolerated.

On December 22, 2010, we announced the initiation of a Phase 2b study of BCX4208 as add-on therapy in gout patients who have not responded adequately to allopurinol therapy alone. This randomized, double-blind, dose-response 250-patient study is designed to evaluate the safety and efficacy of BCX4208 in combination with allopurinol in gout patients who have failed to reach the sUA objective of <6 mg/dL following treatment with allopurinol 300 mg alone. The primary endpoint of the study is the proportion of subjects with sUA <6 mg/dL at day 85. The study utilizes a parallel-group design, evaluating BCX4208 at doses of 5 mg, 10 mg, 20 mg, 40 mg and placebo administered once-daily for 12 weeks, in combination with allopurinol's standard dose of 300 mg.

We also plan to initiate a long-term safety study of BCX4208 in 2011.

## ***Forodesine***

On September 15, 2010, we announced preliminary top-line results from our pivotal multinational, open-label, single-arm trial evaluating 200 mg once-daily oral forodesine in the treatment of relapsed or refractory CTCL. The study's primary endpoint was objective response rate, defined as complete or partial cutaneous response that is sustained for at least 28 days, in patients with later stage disease who had previously received at least three systemic therapies for their disease. Eleven of 101 (11% (95% confidence interval: 6-19%)) later stage patients enrolled achieved a partial cutaneous response, while no patients achieved a complete response. Of the remaining later stage patients, 56 (55%) had stable disease as their best response, 30 (30%) had progressive disease, with a median time to progression of 353 days, and four (4%) were not evaluable. Oral forodesine was generally safe and well-tolerated in this study.

Long-term data from our Phase 2 study of forodesine in patients with CTCL was presented at the 45th Annual Meeting of the American Society of Clinical Oncology in May 2009. This poster presentation reviewed the safety and efficacy of forodesine for CTCL patients of stage Ib to stage IV who failed standard therapies and received forodesine

treatment for greater than 12 months.

Also on September 15, 2010, we announced interim results from our exploratory Phase 2 study to investigate the efficacy and safety of forodesine as monotherapy for CLL. In this open-label, single-arm, multi-center study, forodesine was administered orally at 200 mg twice-daily for 28-day cycles in 25

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previously treated CLL patients. The primary endpoint of the study was overall response rate. Consistent with results of previous clinical trials, forodesine was generally safe and well-tolerated in this study.

On December 4, 2010, we presented new data from this study that confirmed forodesine's clinical activity in the treatment of CLL at the 52nd Annual American Society of Hematology Meeting & Exposition held in Orlando, Florida. An analysis conducted after all patients were followed through 36 months showed that six of 23 response-evaluable patients demonstrated a partial response to forodesine, resulting in a response rate of 26 percent. Forodesine 200 mg orally-administered twice-daily was generally safe and well-tolerated in this study. The pattern, frequencies and severity distribution of adverse events were generally consistent with CLL-associated poor bone marrow function and immunodeficiency, prior therapies and co-morbidities.

We are exploring the interest level of potential partners as a possible path forward for the future development of forodesine in the U.S. Absent a U.S. partner, we do not plan to conduct additional studies of forodesine or file a new drug application ( NDA ) with the U.S. Food and Drug Administration ( FDA ). We have shared this information with Mundipharma, along with our decision not to continue further development of forodesine in the U.S. Mundipharma has expressed disappointment regarding the development of forodesine and this outcome. On February 21, 2011, we received a letter from Mundipharma's legal counsel notifying us that they intended to utilize the dispute resolution provisions of our agreement with them, which includes meetings of senior management and the later possibility of arbitration. No amounts have been accrued relating to this matter.

### ***License Agreement with Albert Einstein College of Medicine of Yeshiva University and Industrial Research, Ltd. ( AECOM and IRL respectively).***

In May 2010, we entered into an amendment to the License Agreement dated June 27, 2000, as subsequently amended (the License Agreement ), by and among us and AECOM and IRL (the Licensors ). The amendment further amended the License Agreement through which we obtained worldwide exclusive rights to develop and ultimately distribute any drug candidates that might arise from research on a series of PNP inhibitors, including forodesine and BCX4208. Under the terms of the amendment, the Licensors agreed to accept a reduction of one-half in the percentage of future payments received from third-party sublicensees of the licensed PNP inhibitors that must be paid to the Licensors. This reduction does not apply to (i) any milestone payments we may receive in the future under our license agreement dated February 1, 2006 with Mundipharma International Holdings Limited ( Mundipharma ) and (ii) royalties received from our sublicensees in connection with the sale of licensed products, for which the original payment rate will remain in effect. The rate of royalty payments to the Licensors based on net sales of any resulting product made by us remains unchanged.

In consideration for the modifications to the license agreement, we issued to the Licensors shares of our common stock with an aggregate value of approximately \$5.9 million and paid the Licensors approximately \$90,000 in cash. Additionally, at our sole option and subject to certain agreed upon conditions, any future non-royalty payments due to be paid by us to the Licensors under the License Agreement may be made either in cash, in shares of our common stock, or in a combination of cash and shares.

## **Results of Operations**

### ***Year Ended December 31, 2010 Compared with the Year Ended December 31, 2009***

Total revenues of \$62.4 million consisted primarily of reimbursement of collaboration expenses, including \$42.5 million from HHS for the continued development of i.v. peramivir and the sale of \$8.3 million of peramivir active pharmaceutical ingredient (API) and other starting materials to Shionogi and Green Cross, as well as a \$7.0 million milestone payment from Shionogi related to the marketing and manufacturing approval of RAPIACTA®

in Japan during the first quarter 2010. Full year 2009 total revenue of \$74.6 million was significantly impacted by the fourth quarter 2009, primarily due to a \$22.5 million sale to HHS for the supply of i.v. peramivir for the treatment of critically ill influenza patients under an Emergency Use Authorization ( EUA ), and includes \$37.9 million of peramivir development expense reimbursement from HHS. In addition, we recognized less revenue from our collaboration with Mundipharma during 2010 compared to 2009.

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Cost of products sold for the year ended December 31, 2010 was negligible due to the lower amount of product sale as compared to the prior year. Cost of products sold for the year ended December 31, 2009 was approximately \$4.5 million. Included in cost of products sold for the year ended December 31, 2009 is a \$4.0 million provision for peramivir finished goods inventory. We expense costs related to the production of inventories as research and development expenses in the period incurred until such time it is believed that future economic benefit is expected to be recognized, which generally is reliant upon receipt of regulatory approval. Upon regulatory approval, we capitalize subsequent costs related to the production of inventories. We determined that the FDA's granting of the EUA for peramivir in October 2009 was objective and persuasive evidence that supported capitalization of peramivir inventories manufactured after the issuance of the EUA. As a result, we recorded manufacturing costs of \$4.0 million for peramivir finished goods inventory. However, we evaluated whether the costs capitalized as inventory would be recoverable in a future period. Given the lack of objective, reliable evidence to support future demand for peramivir, we concluded that there was no certainty that future sales would materialize and revenues would exceed the costs incurred. Therefore, the capitalized inventory was fully reserved.

Research and development expenses increased to \$82.5 million for 2010 compared to \$72.3 million for the prior year. The \$10.2 million increase was primarily due to higher development costs associated with the peramivir and BCX4208 programs as well as the Company's pre-clinical programs. These increases in R&D expenses were partially offset by a decrease in development costs associated with the forodesine program.

General and administrative expenses increased to \$14.2 million for 2010 from \$11.5 million for 2009. This increase was primarily due to higher consulting fees related to supply chain and other commercial activities, as well as legal fees, operating and personnel related costs.

Interest income for 2010 was \$0.5 million as compared to \$0.3 million for the prior year, due to higher average cash and securities on hand during 2010 as compared to 2009. The increase in cash and securities primarily resulted from the sale of 5.0 million shares of common stock in November 2009 resulting in net proceeds of \$47.5 million.

The net loss for the year ended December 31, 2010 was \$33.9 million, or \$0.76 per share, compared to a net loss of \$13.5 million, or \$0.35 per share for the year ended December 31, 2009.

***Year Ended December 31, 2009 Compared with the Year Ended December 31, 2008***

Total revenues increased to \$74.6 million for the year ended December 31, 2009 as compared to \$56.6 million for the year ended December 31, 2008. This increase was driven by \$22.9 million in product sales in 2009, primarily the \$22.5 million order of 10,000 courses of i.v. peramivir from HHS, as well as a \$7.0 million milestone payment from our partner, Shionogi, related to its filing of an NDA to seek regulatory approval for i.v. peramivir in Japan. In addition, revenue from the contract with HHS for the development of peramivir increased by \$16.3 million during 2009 as two global Phase 3 studies were initiated. These increases were offset by lower amortization of deferred revenue from our collaborative arrangements. Specifically, \$27.8 million of previously deferred revenue was recognized during 2008 as Roche terminated its collaboration with us in 2008.

Cost of products sold for the year ended December 31, 2009 was approximately \$4.5 million. Included in cost of products sold is a \$4.0 million provision for peramivir finished goods inventory. We expense costs related to the production of inventories as research and development expenses in the period incurred until such time it is believed that future economic benefit is expected to be recognized, which generally is reliant upon receipt of regulatory approval. Upon regulatory approval, we capitalize subsequent costs related to the production of inventories. We determined that the FDA's granting of the EUA for peramivir in October 2009 was objective and persuasive evidence that supported capitalization of peramivir inventories manufactured after the issuance of the EUA. As a result, we recorded manufacturing costs of \$4.0 million for peramivir finished goods inventory. However, we evaluated whether

the costs capitalized as inventory would be recoverable in a future period. Given the lack of objective, reliable evidence to support future demand for peramivir, we concluded that there was no certainty that future sales would materialize and revenues would exceed the costs incurred. Therefore, the capitalized inventory was fully reserved.

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The remaining amounts included in cost of products sold for the year ended December 31, 2009 relate to components, secondary packaging, and royalties and commissions paid to third parties as a result of the peramivir product sales. No costs for the manufacturing of the peramivir finished goods were included in cost of products sold, as the manufacturing was completed prior to the issuance of the EUA.

Until we sell the inventory for which costs were previously expensed, our cost of products sold will reflect only incremental costs incurred subsequent to the issuance of the EUA in October 2009. As such, if we sell that portion of our existing inventory, there will be a period of time where revenue could be recognized with little or no corresponding cost. Therefore, we anticipate that the gross margin on future product sales, if any, will fluctuate and not be comparable from quarter to quarter.

Research and development expenses decreased to \$72.3 million for 2009 from \$73.3 million for 2008 due to reductions of \$1.3 million in clinical development costs, \$3.8 million in manufacturing costs, and \$0.4 million in toxicology costs for the forodesine program, as well as lower costs of \$2.0 million related to our pre-clinical compounds and \$1.4 million in general operating and personnel related costs. In addition, \$8.6 million of previously deferred expense was recognized during 2008 as Roche terminated its collaboration with us in 2008. These decreases were offset by higher clinical development costs of \$7.5 million for peramivir and \$1.5 million for BCX4208 in 2009, as well as an increase of \$6.3 million in manufacturing and \$1.5 million in consulting fees for the peramivir program.

General and administrative expenses increased to \$11.5 million for 2009 from \$10.4 million for 2008. This increase was primarily due to higher legal and consulting fees.

Interest income for 2009 was \$0.3 million as compared to \$2.4 million for the prior year, due to a lower average cash and securities balance as well as significantly lower yield earned on interest-bearing assets.

The net loss for the year ended December 31, 2009 was \$13.5 million, or \$0.35 per share, compared to a net loss of \$24.7 million, or \$0.65 per share for the year ended December 31, 2008.

## **Liquidity and Capital Resources**

Cash expenditures have exceeded revenues since our inception. Our operations have principally been funded through public offerings and private placements of equity securities and cash from collaborative and other research and development agreements, including government contracts. On February 24, 2011, we announced that HHS had awarded us a \$55.0 million contract modification intended to fund completion of the Phase 3 development of i.v. peramivir and on March 9, 2011, we completed a \$30.0 million financing transaction to monetize certain future royalty and milestone payments. See *Recent Corporate Highlights, Peramivir* above for further discussion and details regarding the implication of these transactions. Other sources of funding have included the following:

other collaborative and other research and development agreements;

government grants;

equipment lease financing;

facility leases;

research grants; and

interest income.



We have attempted to contain costs and reduce cash flow requirements by renting scientific equipment and facilities, contracting with other parties to conduct certain research and development and using consultants. We expect to incur additional expenses, potentially resulting in significant losses, as we continue to pursue our research and development activities in general and specifically related to our clinical trial activity. We also expect to incur substantial expenses related to the filing, prosecution, maintenance, defense and enforcement of patent and other intellectual property claims and additional regulatory costs as our clinical products advance through later stages of development.

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The objective of our investment policy is to ensure the safety and preservation of invested funds, as well as maintaining liquidity sufficient to meet cash flow requirements. We place our excess cash with high credit quality financial institutions, commercial companies, and government agencies in order to limit the amount of our credit exposure. We have not realized any significant losses from investments.

During 2010, 2009 and 2008, we incurred capital costs of approximately \$0.3 million, \$0.6 million and \$1.2 million, respectively.

At December 31, 2010, we had long-term operating lease obligations, which provide for aggregate minimum payments of approximately \$854,000 in 2011, \$871,000 in 2012 and \$873,000 in 2013. These obligations include the future rental of our operating facilities.

We plan to finance our needs principally from the following:

payments under our contract with HHS;

our existing capital resources and interest earned on that capital;

payments under collaborative and licensing agreements with corporate partners; and

lease or loan financing and future public or private financing.

For the year, our cash, cash equivalents, and marketable securities balance decreased from \$94.3 million as of December 31, 2009 to \$66.3 million as of December 31, 2010. Our net cash burn for 2010 was \$27.9 million, or \$2.3 million per month. For 2011, we expect that cash use will be approximately \$30.0 million. Our cash use will vary depending on clinical outcomes and could vary significantly from our expectations depending on the timing of Company expenses and the related reimbursement from our collaborators.

As our clinical programs continue to progress 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 the continuing 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 and timing 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.

With the funds available at December 31, 2010 and future amounts that are expected to be received from HHS, net proceeds from the March 9, 2011 financing transaction to monetize certain future royalty and milestone payments under our license agreement with Shionogi, and our other collaborators, we believe these resources will be sufficient to fund our operations for at least the next 24 months. However, this is a forward looking statement, and there may be changes that would consume available resources significantly before such time.

Our long-term capital requirements and the adequacy of our available funds will depend upon many factors, including:

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;

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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 a decision to build or expand internal development and commercial capabilities;

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 engage sites and enroll subjects 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 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 and we may seek to raise capital at any time we deem market conditions to be favorable. 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.

**Off-Balance Sheet Arrangements**

As of December 31, 2010, we have not participated in transactions that generate relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities ( SPEs ), which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. As of December 31, 2010, we were not involved in any material unconsolidated SPE or off-balance sheet arrangements. On March 9, 2011, we completed a \$30.0 million financing transaction to monetize certain future royalty and milestone payments under the Shionogi Agreement. As part of the transaction, we transferred to Royalty Sub certain rights, including the right to receive future royalty and milestone payments from Shionogi.

As part of the transaction, Royalty Sub issued \$30.0 million in aggregate principal amount of its PhaRMA Notes. The PhaRMA Notes bear an interest rate of 14.0%, with interest payable annually on September 1st of each year, beginning September 1, 2011, and on the final legal maturity date of December 1, 2020. The PhaRMA Notes constitute obligations of Royalty Sub, and are non-recourse to us except to the extent of our pledge of our equity interest in Royalty Sub as part of the collateral securing the PhaRMA Notes. The PhaRMA Notes are not convertible into our equity. See *Recent Corporate Highlights, Peramivir* above for further discussion and details regarding the implications of this transaction.

### **Contractual Obligations**

In the table below, we set forth our enforceable and legally binding obligations and future commitments and obligations related to all contracts that we are likely to continue regardless of the fact that they are cancelable as of December 31, 2010. The table below does not include obligations resulting from the royalty

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monetization transaction, discussed above, that closed on March 9, 2011. Some of the amounts we include in this table are based on management's estimates and assumptions about these obligations, including their duration, the possibility of renewal, anticipated actions by third parties, and other factors. Because these estimates and assumptions are necessarily subjective, the obligations we will actually pay in future periods may vary from those reflected in the table.

| <b>Contractual Obligations</b> | <b>Total</b>         | <b>Payments Due by Period</b> |                     |                     |                                  |
|--------------------------------|----------------------|-------------------------------|---------------------|---------------------|----------------------------------|
|                                |                      | <b>Less Than<br/>1 Year</b>   | <b>1-3 Years</b>    | <b>3-5 Years</b>    | <b>More<br/>Than<br/>5 Years</b> |
| Operating Lease Obligations    | \$ 3,784,506         | \$ 853,672                    | \$ 1,744,060        | \$ 1,186,774        | \$                               |
| Purchase Obligations(1)        | 21,327,350           | 21,327,350                    |                     |                     |                                  |
| <b>Total</b>                   | <b>\$ 25,111,856</b> | <b>\$ 22,181,022</b>          | <b>\$ 1,725,003</b> | <b>\$ 1,771,073</b> | <b>\$ 288,430</b>                |

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

In addition to the above, we have committed to make potential future sublicense payments to third-parties as part of in-licensing and development programs. Payments under these agreements generally become due and payable only upon achievement of certain developmental, regulatory and/or commercial milestones. Because the achievement of these milestones is neither probable nor reasonably estimable, such contingencies have not been recorded on our balance sheet.

**Critical Accounting Policies**

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

While our significant accounting policies are more fully described in Note 1 to our financial statements included in this Annual Report on Form 10-K for the year ended December 31, 2010, we believe that the following accounting policies are the most critical to aid you in fully understanding and evaluating our reported financial results and affect the more significant judgments and estimates that we use in the preparation of our financial statements.

**Accrued Expenses**

As part of the process of preparing financial statements, we are required to estimate accrued expenses. This process involves reviewing open contracts and purchase orders, communicating with our applicable personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost

incurred for the service when we have not yet been invoiced or otherwise notified of actual cost. The majority of our service providers invoice us monthly in arrears for services performed. We make estimates of our accrued expenses as of each balance sheet date in our financial statements based on facts and circumstances known to us. We periodically confirm the accuracy of our estimates with the service providers and make adjustments if necessary. To date, there have been no material changes to our estimates. Examples of estimated accrued expenses include:

fees paid to contract research organizations in connection with preclinical and toxicology studies and clinical trials;

fees paid to investigative sites in connection with clinical trials;

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fees paid to contract manufacturers in connection with the production of our raw materials, drug substance and drug products; and

professional service fees.

We base our expenses related to clinical trials on our estimates of the services received and efforts expended pursuant to contracts with multiple research institutions and clinical research organizations that conduct and manage clinical trials on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from our estimate, we will adjust the accrual accordingly. To date, there have been no material changes to our estimates. If we do not identify costs that we have begun to incur or if we underestimate or overestimate the level of services performed or the costs of these services, our actual expenses could differ from our estimates.

### ***Revenue Recognition***

The Company recognizes revenues from collaborative and other research and development arrangements and product sales.

#### ***Collaborative and Other Research and Development Arrangements***

Revenue from license fees, royalty payments, event payments, and research and development fees are recognized as revenue when the earnings process is complete and we have no further continuing performance obligations or we have completed the performance obligations under the terms of the agreement. Fees received under licensing agreements that are related to future performance are deferred and recognized over an estimated period determined by management based on the terms of the agreement and the products licensed. In the event a license agreement contains multiple deliverables, we evaluate whether the deliverables are separate or combined units of accounting. Revisions to revenue or profit estimates as a result of changes in the estimated revenue period are recognized prospectively.

Under certain of our license agreements, we receive royalty payments based upon our licensees' net sales of covered products. Generally, under these agreements, we receive royalty reports from our licensees approximately one quarter in arrears, that is, generally in the second month of the quarter after the licensee has sold the royalty-bearing product. We recognize royalty revenues when we can reliably estimate such amounts and collectability is reasonably assured.

Royalty revenue paid by Shionogi on their product sales is subject to returns. Peramivir is a newly introduced product and there is no historical experience that can be used to reasonably estimate product returns. Therefore, we defer recognition of royalty revenue from Shionogi until a right of return no longer exists or until it has developed sufficient historical experience to estimate product returns.

Reimbursements received for direct out-of-pocket expenses related to research and development costs are recorded as revenue in the income statement rather than as a reduction in expenses. Event payments are recognized as revenue upon the achievement of specified events if (1) the event is substantive in nature and the achievement of the event was not reasonably assured at the inception of the agreement and (2) the fees are non-refundable and non-creditable. Any event payments received prior to satisfying these criteria are recorded as deferred revenue. Under the Company's contract with HHS, revenue is recognized as reimbursable direct and indirect costs are incurred.



*Product Sales*

Sales are recognized when there is persuasive evidence that an arrangement exists, title has passed, the price was fixed and determinable, and collectability is reasonably assured. Product sales are recognized net of

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estimated allowances, discounts, sales returns, chargebacks and rebates. Product sales recognized during 2010 and 2009 were not subject to a contractual right of return.

***Research and Development Expenses***

Our research and development costs are charged to expense when incurred. Advance payments for goods or services that will be used or rendered for future research and development activities are deferred and capitalized. Such amounts are recognized as expense when the related goods are delivered or the related services are performed. Research and development expenses include, among other items, personnel costs, including salaries and benefits, manufacturing costs, clinical, regulatory, and toxicology services performed by contract research organizations ( CROs ), materials and supplies, and overhead allocations consisting of various administrative and facilities related costs. Most of our manufacturing and clinical and preclinical studies are performed by third-party CROs. Costs for studies performed by CROs are accrued by us over the service periods specified in the contracts and estimates are adjusted, if required, based upon our on-going review of the level of services actually performed.

Additionally, we have license agreements with third parties, such as AECOM, IRL, and UAB, which require fees related to sublicense agreements or maintenance fees. We expense sublicense payments as incurred unless they are related to revenues that have been deferred, in which case the expenses are deferred and recognized over the related revenue recognition period. We expense maintenance payments as incurred.

At December 31, 2010, we had deferred collaboration expenses of approximately \$9.0 million. These deferred expenses were sub-license payments, paid to our academic partners upon receipt of consideration from various commercial partners, and other consideration to our academic partners for modification to existing license agreements. These deferred expenses would not have been incurred without receipt of such payments or modifications from our commercial partners and are being expensed in proportion to the related revenue being recognized. We believe that this accounting treatment appropriately matches expenses with the associated revenue.

We group our R&D expenses into two major categories: direct external expenses and all other R&D expenses. Direct external expenses consist of costs of outside parties to conduct laboratory studies, to develop manufacturing processes and manufacture the product candidate, to conduct and manage clinical trials and similar costs related to our clinical and preclinical studies. These costs are accumulated and tracked by program. All other R&D expenses consist of costs to compensate personnel, to purchase lab supplies and services, to maintain our facility, equipment and overhead and similar costs of our research and development efforts. These costs apply to work on our clinical and preclinical candidates as well as our discovery research efforts. These costs have not been charged directly to each program historically because the number of product candidates and projects in research and development may vary from period to period and because we utilize internal resources across multiple projects at the same time.

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The following table summarizes our R&D expenses for the periods indicated (amounts in millions):

|   | <b>Year Ended December 31,</b> |                |                |
|---|--------------------------------|----------------|----------------|
|   | <b>2010</b>                    | <b>2009</b>    | <b>2008</b>    |
| <b>Direct external R&amp;D expenses by program:</b> |                                |                |                |
| PNP Inhibitor (forodesine)                          | \$ 5.5                         | \$ 10.3        | \$ 15.9        |
| Neuraminidase Inhibitor (peramivir)                 | 43.5                           | 36.8           | 21.5           |
| PNP Inhibitor (BCX-4208)                            | 9.1                            | 2.5            | 9.0            |
| Other   | 1.3                            |                | 2.1            |
| <b>All other R&amp;D expenses:</b>                  |                                |                |                |
| Compensation and fringe benefits                    | 12.8                           | 12.3           | 12.9           |
| Professional services                               | 0.7                            | 1.2            | 2.9            |
| Travel  | 0.3                            | 0.4            | 0.4            |
| Overhead allocation and other                       | 9.3                            | 8.8            | 8.6            |
| <b>Direct external R&amp;D expenses by program:</b> | <b>\$ 82.5</b>                 | <b>\$ 72.3</b> | <b>\$ 73.3</b> |

At this time, due to the risks inherent in the clinical trial process and given the stages of our various product development programs, we are unable to estimate with any certainty the costs we will incur in the continued development of our drug candidates for potential commercialization. While we are currently focused on advancing each of our development programs, our future R&D expenses will depend on the determinations we make as to the scientific and clinical success of each drug candidate, as well as ongoing assessments as to each drug candidate's commercial potential. As such, we are unable to predict how we will allocate available resources among our product development programs in the future. In addition, we cannot forecast with any degree of certainty the development progress of our existing partnerships for our drug candidates, which drug candidates will be subject to future collaborations, when such arrangements will be secured, if at all, and to what degree such arrangements would affect our development plans and capital requirements.

The successful development of our drug candidates is uncertain and subject to a number of risks. We cannot be certain that any of our drug candidates will prove to be safe and effective or will meet all of the applicable regulatory requirements needed to receive and maintain marketing approval. Data from preclinical studies and clinical trials are susceptible to varying interpretations that could delay, limit or prevent regulatory clearance. We, the FDA, or other regulatory authorities may suspend clinical trials at any time if we or they believe that the subjects participating in such trials are being exposed to unacceptable risks or if such regulatory agencies find deficiencies in the conduct of the trials or other problems with our products under development. Delays or rejections may be encountered based on additional governmental regulation, legislation, administrative action or changes in FDA or other regulatory policy during development or the review process. Other risks associated with our product development programs are described in Risk Factors in Part I, Item 1A of this Annual Report on Form 10-K, as updated from time to time in our subsequent periodic reports and current reports filed with the SEC. Due to these uncertainties, accurate and meaningful estimates of the ultimate cost to bring a product to market, the timing of completion of any of our product development programs and the period in which material net cash inflows from any of our product development programs will commence are unavailable.

***Stock-Based Compensation***

All share-based payments, including grants of stock option awards and restricted stock awards, are recognized in our income statement based on their fair values. Stock-based compensation cost is estimated at the grant date based on the fair value of the award and is recognized as expense on a straight-line basis over the requisite service period of the award. Determining the appropriate fair value model and the related assumptions for the model requires judgment, including estimating the life of an award, the stock price volatility, and the expected term.

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**Recent Accounting Pronouncements**

Note 12 to the Financial Statements included in Item 8 of this Annual Report on Form 10-K discusses accounting pronouncements recently issued or proposed but not yet required to be adopted.

***7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.***

The objective of our investment policy is to ensure the safety and preservation of invested funds, as well as maintaining liquidity sufficient to meet cash flow requirements. We place our excess cash with high credit quality financial institutions, commercial companies, and government agencies in order to limit the amount of credit exposure. Some of the securities we invest in may have market risk. This means that a change in prevailing interest rates may cause the principal amount of the investment to fluctuate. To minimize this risk, we schedule our investments to have maturities that coincide with our expected cash flow needs, thus avoiding the need to redeem an investment prior to its maturity date. Accordingly, we do not believe that we have material exposure to interest rate risk arising from our investments. Generally, our investments are not collateralized. We have not realized any significant losses from our investments.

**Table of Contents****ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA****BioCryst Pharmaceuticals, Inc.****BALANCE SHEETS**

|  | <b>December 31,</b> |                |
|--|---------------------|----------------|
|  | <b>2010</b>         | <b>2009</b>    |
| <b>ASSETS</b>  |                     |                |
| Cash and cash equivalents  | \$ 13,622,370       | \$ 41,124,937  |
| Restricted cash  | 625,000             | 625,000        |
| Marketable securities  | 40,323,169          | 27,838,812     |
| Receivables from collaborations  | 30,227,210          | 33,722,207     |
| Inventories  | 898,076             | 6,281,263      |
| Prepaid expenses and other current assets  | 1,004,430           | 1,055,712      |
| Deferred collaboration expense   | 718,719             | 374,221        |
| <br>   |                     |                |
| Total current assets   | 87,418,974          | 111,022,152    |
| Marketable securities  | 11,771,364          | 24,670,060     |
| Furniture and equipment, net   | 1,929,049           | 3,871,653      |
| Deferred collaboration expense   | 8,327,848           | 2,626,241      |
| <br>   |                     |                |
| Total assets   | \$ 109,447,235      | \$ 142,190,106 |
| <b>LIABILITIES AND STOCKHOLDERS EQUITY</b>   |                     |                |
| Accounts payable   | \$ 8,200,822        | \$ 18,069,767  |
| Accrued expenses   | 16,486,920          | 15,794,800     |
| Accrued vacation   | 585,211             | 839,362        |
| Deferred rent  | 52,537              | 52,537         |
| Deferred collaboration revenue   | 2,496,534           | 2,496,534      |
| <br>   |                     |                |
| Total current liabilities  | 27,822,024          | 37,253,000     |
| Deferred rent  | 177,612             | 230,145        |
| Deferred collaboration revenue   | 15,944,373          | 18,440,911     |
| Stockholders' equity:  |                     |                |
| Preferred stock: shares authorized 5,000,000 Series B Junior Participating Preferred stock, \$.001 par value; shares authorized 95,000; shares issued and outstanding none |                     |                |
| Common stock, \$.01 par value; shares authorized 95,000,000; shares issued and outstanding 44,958,988 in 2010 and 43,906,831 in 2009                                       | 449,590             | 439,068        |
| Additional paid-in capital   | 361,520,258         | 348,571,914    |
| Accumulated other comprehensive (loss) income  | 105,710             | (25,783)       |
| Accumulated deficit  | (296,572,332)       | (262,719,149)  |
| <br>   |                     |                |
| Total stockholders' equity   | 65,503,226          | 86,266,050     |
| <br>   |                     |                |
| Total liabilities and stockholders' equity   | \$ 109,447,235      | \$ 142,190,106 |

See accompanying notes to financial statements.

**Table of Contents****BioCryst Pharmaceuticals, Inc.****STATEMENTS OF OPERATIONS**

|  | <b>Years Ended December 31,</b> |                 |                 |
|--|---------------------------------|-----------------|-----------------|
|  | <b>2010</b>                     | <b>2009</b>     | <b>2008</b>     |
| <b>Revenues</b>                                  |                                 |                 |                 |
| Product sales                                    | \$ 325,000                      | \$ 22,922,508   | \$ 56,561,369   |
| Collaborative and other research and development | 62,056,336                      | 51,666,811      | 56,561,369      |
| Total revenues                                   | 62,381,336                      | 74,589,319      | 56,561,369      |
| <b>Expenses</b>                                  |                                 |                 |                 |
| Cost of products sold                            | 86,459                          | 4,543,914       |                 |
| Research and development                         | 82,473,014                      | 72,301,442      | 73,326,634      |
| General and administrative                       | 14,178,581                      | 11,481,187      | 10,399,227      |
| Total expenses                                   | 96,738,054                      | 88,326,543      | 83,725,861      |
| Loss from operations                             | (34,356,718)                    | (13,737,224)    | (27,164,492)    |
| Interest and other income                        | 503,535                         | 285,689         | 2,432,922       |
| Net loss   | \$ (33,853,183)                 | \$ (13,451,535) | \$ (24,731,570) |
| Basic and diluted net loss per common share      | \$ (0.76)                       | \$ (0.35)       | \$ (0.65)       |
| Weighted average shares outstanding              | 44,564,177                      | 38,925,525      | 38,062,131      |

See accompanying notes to financial statements.



Table of Contents**BioCryst Pharmaceuticals, Inc.****STATEMENTS OF STOCKHOLDERS EQUITY**

|   | <b>Common<br/>Stock</b> | <b>Additional<br/>Paid-In<br/>Capital</b> | <b>Accumulated<br/>Other<br/>Comprehensive<br/>(Loss)<br/>Income</b> | <b>Accumulated<br/>Deficit</b> | <b>Total<br/>Stockholders<br/>Equity</b> | <b>Comprehensive<br/>Loss</b> |
|---|-------------------------|---|--|--------------------------------|--|-------------------------------|
| <b>Balance at<br/>December 31, 2007</b>                           | <b>379,672</b>          | <b>288,683,369</b>                        | <b>378,057</b>   | <b>(224,536,044)</b>           | <b>64,905,054</b>                        |                               |
| Net loss  |                         |   |  | (24,731,570)                   | (24,731,570)                             | \$ (24,731,570)               |
| Unrealized loss on<br>marketable securities<br>available-for-sale |                         |   | (274,550)  |                                | (274,550)                                | (274,550)                     |
| Comprehensive loss  |                         |   |  |                                |  | \$ (25,006,120)               |
| Issue of restricted<br>common stock,<br>76,536 shares             | 765                     | (765)                                     |  |                                |  |                               |
| Exercise of stock<br>options,<br>146,470 shares, net              | 1,465                   | 397,634                                   |  |                                | 399,099                                  |                               |
| Employee stock<br>purchase plan sales,<br>84,907 shares           | 849                     | 266,691                                   |  |                                | 267,540                                  |                               |
| Stock-based<br>compensation<br>expense                            |                         | 5,860,654                                 |  |                                | 5,860,654                                |                               |
| <b>Balance at<br/>December 31, 2008</b>                           | <b>382,751</b>          | <b>295,207,583</b>                        | <b>103,507</b>   | <b>(249,267,614)</b>           | <b>46,426,227</b>                        |                               |
| Net loss  |                         |   |  | (13,451,535)                   | (13,451,535)                             | \$ (13,451,535)               |
| Unrealized loss on<br>marketable securities<br>available-for-sale |                         |   | (129,290)  |                                | (129,290)                                | (129,290)                     |
| Comprehensive loss  |                         |   |  |                                |  | \$ (13,580,825)               |
| Exercise of stock<br>options,<br>532,379 shares, net              | 5,324                   | 2,111,676                                 |  |                                | 2,117,000                                |                               |
| Sale of common<br>stock,<br>5,000,000 shares, net                 | 50,000                  | 45,690,190                                |  |                                | 45,740,190                               |                               |

|   |                   |                       |                    |                         |                              |
|---|-------------------|-----------------------|--------------------|-------------------------|------------------------------|
| Employee stock purchase plan sales, 123,357 shares          | 1,234             | 192,846               |                    |                         | 194,080                      |
| Purchases of treasury stock, 24,072 shares                  | (241)             | (155,264)             |                    |                         | (155,505)                    |
| Stock-based compensation expense                            |                   | 5,524,883             |                    |                         | 5,524,883                    |
| <b>Balance at December 31, 2009</b>                         | <b>\$ 439,068</b> | <b>\$ 348,571,914</b> | <b>\$ (25,783)</b> | <b>\$ (262,719,149)</b> | <b>\$ 86,266,050</b>         |
| Net loss  |                   |                       |                    | (33,853,183)            | (33,853,183) \$ (33,853,183) |
| Unrealized gain on marketable securities available-for-sale |                   |                       | 131,493            |                         | 131,493 131,493              |
| Comprehensive loss  |                   |                       |                    |                         | \$ (33,721,690)              |
| Exercise of stock options, 240,314 shares, net              | 2,403             | 550,741               |                    |                         | 553,144                      |
| Employee stock purchase plan sales, 51,329 shares           | 513               | 281,940               |                    |                         | 282,453                      |
| Issuance of common stock, 761,326 shares, net               | 7,614             | 5,818,810             |                    |                         | 5,826,424                    |
| Purchases of treasury stock, 812 shares                     | (8)               | (5,003)               |                    |                         | (5,011)                      |
| Stock-based compensation expense                            |                   | 6,301,856             |                    |                         | 6,301,856                    |
| <b>Balance at December 31, 2010</b>                         | <b>\$ 449,590</b> | <b>\$ 361,520,258</b> | <b>\$ 105,710</b>  | <b>\$ (296,572,332)</b> | <b>\$ 65,503,226</b>         |

See accompanying notes to financial statements.

**Table of Contents****BioCryst Pharmaceuticals, Inc.****STATEMENTS OF CASH FLOWS**

|   | <b>Years Ended December 31,</b> |                      |                      |
|---|---------------------------------|----------------------|----------------------|
|   | <b>2010</b>                     | <b>2009</b>          | <b>2008</b>          |
| <b>Operating activities</b>   |                                 |                      |                      |
| Net loss  | \$ (33,853,183)                 | \$ (13,451,535)      | \$ (24,731,570)      |
| Adjustments to reconcile net loss to net cash used in operating activities: |                                 |                      |                      |
| Depreciation, amortization, and impairment                                  | 2,267,369                       | 1,612,514            | 1,625,878            |
| Stock-based compensation expense  | 6,301,856                       | 5,524,883            | 5,860,654            |
| Changes in operating assets and liabilities:                                |                                 |                      |                      |
| Receivables from collaborations   | 3,494,997                       | (21,739,777)         | 27,145,246           |
| Inventories   | 5,383,187                       | (6,281,263)          |                      |
| Prepaid expenses and other current assets                                   | 51,282                          | 81,130               | (188,402)            |
| Deferred collaboration expense  | (219,681)                       | 376,972              | 8,960,709            |
| Accounts payable and accrued expenses                                       | (9,430,976)                     | 20,201,209           | (8,956,613)          |
| Deferred rent   | (52,537)                        | 22,682               | 260,000              |
| Deferred collaboration revenue  | (2,496,535)                     | (2,565,285)          | (30,849,722)         |
| <b>Net cash used in operating activities</b>                                | <b>(28,554,221)</b>             | <b>(16,218,470)</b>  | <b>(20,873,820)</b>  |
| <b>Investing activities</b>   |                                 |                      |                      |
| Acquisitions of furniture and equipment                                     | (324,764)                       | (603,692)            | (1,212,274)          |
| Change in restricted cash   |                                 | (625,000)            |                      |
| Purchases of marketable securities  | (55,908,779)                    | (54,103,222)         | (124,459,834)        |
| Sales and maturities of marketable securities                               | 56,454,611                      | 42,437,498           | 137,066,027          |
| <b>Net cash (used in) provided by investing activities</b>                  | <b>221,068</b>                  | <b>(12,894,416)</b>  | <b>11,393,919</b>    |
| <b>Financing activities</b>   |                                 |                      |                      |
| Sale of common stock, net of issuance costs                                 |                                 | 45,740,190           |                      |
| Exercise of stock options   | 553,144                         | 2,117,000            | 399,099              |
| Employee stock purchase plan sales  | 282,453                         | 194,080              | 267,540              |
| Purchases of treasury stock   | (5,011)                         | (155,505)            |                      |
| <b>Net cash provided by financing activities</b>                            | <b>830,586</b>                  | <b>47,895,765</b>    | <b>666,639</b>       |
| Increase (decrease) in cash and cash equivalents                            | (27,502,567)                    | 18,782,879           | (8,813,262)          |
| Cash and cash equivalents at beginning of year                              | 41,124,937                      | 22,342,058           | 31,155,320           |
| <b>Cash and cash equivalents at end of year</b>                             | <b>\$ 13,622,370</b>            | <b>\$ 41,124,937</b> | <b>\$ 22,342,058</b> |

See accompanying notes to financial statements.

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**BioCryst Pharmaceuticals, Inc.**

**NOTES TO FINANCIAL STATEMENTS**

**Note 1 Significant Accounting Policies**

***The Company***

BioCryst Pharmaceuticals, Inc. (the Company) is a biotechnology company that designs, optimizes and develops novel drugs that block key enzymes involved in therapeutic areas of interest to us. Areas of interest for the Company are determined primarily by the scientific discoveries and the potential advantages that its experienced drug discovery group develops in the laboratory along with the potential commercial opportunity of these discoveries. The Company integrates the disciplines of biology, crystallography, medicinal chemistry and computer modeling to discover and develop small molecule pharmaceuticals through the process known as structure-based drug design.

***Basis of Presentation***

The Company's financial statements have been prepared in accordance with accounting principles generally accepted in the United States. Such financial statements reflect all adjustments that are, in management's opinion, necessary to present fairly, in all material respects, the Company's financial position, results of operations, and cash flows. There were no adjustments other than normal recurring adjustments.

***Cash and Cash Equivalents***

The Company generally considers cash equivalents to be all cash held in commercial checking accounts, money market accounts or investments in debt instruments with maturities of three months or less at the time of purchase.

***Restricted Cash***

The Company is required to maintain \$625,000 in an interest bearing money market account to serve as collateral for a corporate card program.

***Marketable Securities***

The objective of the Company's investment policy is to ensure the safety and preservation of invested funds, as well as maintaining liquidity sufficient to meet cash flow requirements. The Company places its excess cash with high credit quality financial institutions, commercial companies, and government agencies in order to limit the amount of credit exposure. Some of the securities the Company invests in may have market risk. This means that a change in prevailing interest rates may cause the principal amount of the investment to fluctuate. To minimize this risk, the Company schedules its investments with maturities that coincide with expected cash flow needs, thus avoiding the need to redeem an investment prior to its maturity date. Accordingly, the Company does not believe that it has a material exposure to interest rate risk arising from its investments. Generally, the Company's investments are not collateralized. The Company has not realized any significant losses from its investments.

The Company classifies all of its marketable securities as available-for-sale. Unrealized gains and losses on securities available-for-sale are recognized in other comprehensive income, unless an unrealized loss is considered to be other than temporary, in which case the unrealized loss is charged to operations. The Company periodically reviews its securities available-for-sale for other than temporary declines in fair value below cost basis and whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. At December 31,

2010, the Company believes that the costs of its securities are recoverable in all material respects.

The following tables summarize the fair value of the Company's securities by type at December 31, 2010. The estimated fair value of the Company's securities was based on independent quoted market prices and

**Table of Contents****BioCryst Pharmaceuticals, Inc.****NOTES TO FINANCIAL STATEMENTS (Continued)**

represents the highest priority of Level 1 in the fair value hierarchy as defined in generally accepted accounting principles.

|   | <b>Amortized<br/>Cost</b> | <b>Accrued<br/>Interest</b> | <b>Gross<br/>Unrealized<br/>Gains</b> | <b>Gross<br/>Unrealized<br/>Losses</b> | <b>Estimated<br/>Fair Value</b> |
|---|---------------------------|-----------------------------|---------------------------------------|--|---------------------------------|
| U.S. Treasury securities                | \$ 7,504,759              | \$ 25,898                   | \$ 23,621                             | \$                                     | \$ 7,554,278                    |
| Obligations of U.S. government agencies | 12,064,419                | 91,741                      | 13,081                                | (121)                                  | 12,169,120                      |
| Corporate debt securities               | 10,743,448                | 75,132                      | 48,546                                |  | 10,867,126                      |
| Commercial paper                        | 14,572,370                | 1,953                       | 7,046                                 | (969)                                  | 14,580,400                      |
| Asset backed securities                 | 1,079,349                 | 244                         | 1,013                                 |  | 1,080,606                       |
| Certificate of deposit                  | 1,000,000                 | 3,689                       | 2,900                                 |  | 1,006,589                       |
| Municipal obligations                   | 4,817,390                 | 8,495                       | 16,117                                | (5,588)                                | 4,836,414                       |
| Total marketable securities             | \$ 51,781,735             | \$ 207,152                  | \$ 112,324                            | \$ (6,678)                             | \$ 52,094,533                   |

At December 31, 2009, the Company had \$52,508,872 of marketable securities, all of which were classified as available-for-sale. These securities consisted of U.S. Treasury bills and notes carried at estimated fair value. The estimated fair value of these securities was based on independent quoted market prices. At December 31, 2009, the amortized cost of securities available-for-sale, including accrued interest, was \$52,534,655. At December 31, 2009, gross unrealized gains on securities available-for-sale were \$37,995 and gross unrealized losses on securities available-for-sale were \$63,778.

The Company believes the individual unrealized losses represent temporary declines primarily resulting from interest rate changes. The Company does not intend to sell the securities before recovery of their amortized cost basis.

The following table summarizes the scheduled maturity for the Company's securities available-for-sale at December 31, 2010 and 2009.

|   | <b>2010</b>   | <b>2009</b>   |
|---|---------------|---------------|
| Maturing in one year or less              | \$ 40,323,169 | \$ 27,838,812 |
| Maturing after one year through two years | 9,996,084     | 19,819,148    |
| Maturing after two years                  | 1,775,280     | 4,850,912     |
| Total marketable securities               | \$ 52,094,533 | \$ 52,508,872 |

**Receivables from Collaborations**

Receivables are recorded for amounts due to the Company primarily related to reimbursable research and development costs. These receivables are evaluated to determine if any reserve or allowance should be established at each reporting date. At December 31, 2010, the Company had the following receivables from collaborations.

|  | <b>Billed</b> | <b>Unbilled</b> | <b>Total</b>  |
|--|---------------|-----------------|---------------|
| U.S. Department of Health and Human Services | \$ 6,404,197  | \$ 21,691,743   | \$ 28,095,940 |
| Shionogi & Co. Ltd.                          | 1,963,780     |                 | 1,963,780     |
| Mundipharma                                  | 95,066        | 72,424          | 167,490       |
| Total receivables from collaborations        | \$ 8,463,043  | \$ 21,764,167   | \$ 30,227,210 |

**Table of Contents****BioCryst Pharmaceuticals, Inc.****NOTES TO FINANCIAL STATEMENTS (Continued)**

Included in receivables from the U.S. Department of Health and Human Services ( HHS ) is \$8,095,964 related to indirect cost rate adjustments for 2007, 2008, 2009, and 2010. These adjustments are calculated as the difference between the actual indirect costs incurred against the contract during a calendar year and the indirect costs that are invoiced at a provisional billing rate during the calendar year. Because these adjustment amounts represent actual costs incurred in performance of the contract and the costs are allowable, reasonable, and allocable to the contract, the Company has recorded revenue accordingly. The Company's calculations of its indirect cost rates are subject to an audit by the federal government. The Company does not anticipate receiving payment for these indirect cost rate adjustments until those audits have been completed. The audits for the years 2007, 2008 and 2009 were conducted in 2010 and no material amounts in excess of what the Company had accrued at the balance sheet date were determined to be disallowed. As disclosed in Note 13, on February 24, 2011, HHS awarded the Company a \$55.0 million contract modification, intended to fund completion of the Phase 3 development of i.v. peramivir. In connection with negotiation of this contract modification, the Company made the business decision to settle on final indirect cost rates for years 2007, 2008 and 2009 and agreed to a reduction of approximately \$1.1 million in amounts previously billed to HHS related to indirect cost rates. The Company has accounted for this settlement as a recognized subsequent event and has reduced collaborative and other research and development revenues and receivables from collaborations by approximately \$1.1 million at December 31, 2010.

***Inventories***

Inventories are stated at the lower of cost, determined under the first-in, first-out ( FIFO ) method, or market. At December 31, 2010 and 2009, inventories consisted of the following:

|                            | <b>2010</b> | <b>2009</b>  |
|----------------------------|-------------|--------------|
| Supplies                   | \$ 898,076  | \$ 1,187,415 |
| Raw materials              |             | 5,093,848    |
| Finished goods             | 3,968,406   | 3,968,406    |
| Reserve for finished goods | (3,968,406) | (3,968,406)  |
| Total inventories          | \$ 898,076  | \$ 6,281,263 |

The supplies held on hand are related to peramivir manufacturing supplies (vials, stoppers, and seals) that are unused and have an alternative future use should sales of peramivir fail to materialize. The raw materials on hand as of December 31, 2009 are related to bulk peramivir active pharmaceutical ingredient ( API ) manufactured for Shionogi & Co., Ltd. ( Shionogi ) and shipped by the Company subsequent to year-end.

The Company expenses costs related to the production of inventories as research and development expenses in the period incurred until such time it is believed that future economic benefit is expected to be recognized, which generally is reliant upon receipt of regulatory approval. Upon regulatory approval, the Company capitalizes subsequent costs related to the production of inventories.

The Company determined that the U.S. Food and Drug Administration's ( FDA ) granting of the Emergency Use Authorization ( EUA ) for peramivir in October 2009 was objective and persuasive evidence that supported



capitalization of peramivir inventories manufactured after the issuance of the EUA. As a result, the Company recorded manufacturing costs of \$3,968,406 for peramivir finished goods inventory. Prior to the issuance of the EUA, all costs associated with the manufacturing of peramivir were expensed as research and development expenses.

The Company evaluated whether the costs capitalized as inventory would be recoverable in a future period. Given the lack of objective, reliable evidence to support future demand for peramivir, management concluded that there was no certainty that future sales will materialize and revenues will exceed the costs

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**BioCryst Pharmaceuticals, Inc.**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

incurred. Therefore, the capitalized inventory was fully reserved. This reserve was charged to cost of products sold within the Company's Statements of Operations during 2009.

***Furniture and Equipment***

Furniture and equipment are recorded at cost. Depreciation is computed using the straight-line method with estimated useful lives of five and seven years. Laboratory equipment, office equipment, and software are depreciated over a life of five years. Furniture and fixtures are depreciated over a life of seven years. Leasehold improvements are amortized over their estimated useful lives or the remaining lease term, whichever is less.

In accordance with generally accepted accounting principles, the Company periodically reviews its furniture and equipment for impairment when events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. In the event that such cash flows are not expected to be sufficient to recover the carrying amount of the assets, the assets are written down to their estimated fair values. Furniture and equipment to be disposed of are reported at the lower of carrying amount or fair value less cost to sell.

***Patents and Licenses***

The Company seeks patent protection on all internally developed processes and products. All patent related costs are expensed to general and administrative expenses as incurred, as recoverability of such expenditures is uncertain.

***Accrued Expenses***

The Company records all expenses in the period incurred. In addition to recording expenses for invoices received, the Company estimates the cost of services provided by third parties or materials purchased for which no invoices have been received as of the balance sheet dates. Accrued expenses as of December 31, 2010 and 2009 consisted primarily of development and clinical trial expenses payable to contract research organizations in connection with the Company's research and development programs.

***Income Taxes***

The liability method is used in the Company's accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on differences between financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse.

***Accumulated Other Comprehensive (Loss) Income***

Accumulated other comprehensive (loss) income is comprised of unrealized gains and losses on securities available-for-sale and is disclosed as a separate component of stockholders' equity.

***Revenue Recognition***

The Company recognizes revenues from collaborative and other research and development arrangements and product sales.



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**BioCryst Pharmaceuticals, Inc.**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

*Collaborative and Other Research and Development Arrangements*

Revenue from license fees, royalty payments, event payments, and research and development fees are recognized as revenue when the earnings process is complete and the Company has no further continuing performance obligations or the Company has completed the performance obligations under the terms of the agreement. Fees received under licensing agreements that are related to future performance are deferred and recognized over an estimated period determined by management based on the terms of the agreement and the products licensed. In the event a license agreement contains multiple deliverables, the Company evaluates whether the deliverables are separate or combined units of accounting. Revisions to revenue or profit estimates as a result of changes in the estimated revenue period are recognized prospectively.

Under certain of our license agreements, the Company receives royalty payments based upon our licensees' net sales of covered products. Generally, under these agreements, the Company receives royalty reports from our licensees approximately one quarter in arrears, that is, generally in the second month of the quarter after the licensee has sold the royalty-bearing product. The Company recognizes royalty revenues when it can reliably estimate such amounts and collectability is reasonably assured.

Royalty revenue paid by Shionogi on their product sales is subject to returns. Peramivir is a newly introduced product and there is no historical experience that can be used to reasonably estimate product returns. Therefore, the Company defers recognition of royalty revenue from Shionogi until the earlier of (1) a right of return no longer exists or (2) it has developed sufficient historical experience to estimate product returns.

Reimbursements received for direct out-of-pocket expenses related to research and development costs are recorded as revenue in the income statement rather than as a reduction in expenses. Event payments are recognized as revenue upon the achievement of specified events if (1) the event is substantive in nature and the achievement of the event was not reasonably assured at the inception of the agreement and (2) the fees are non-refundable and non-creditable. Any event payments received prior to satisfying these criteria are recorded as deferred revenue. Under the Company's contract with HHS, revenue is recognized as reimbursable direct and indirect costs are incurred.

*Product Sales*

Sales are recognized when there is persuasive evidence that an arrangement exists, title has passed, the price was fixed and determinable, and collectability is reasonably assured. Product sales are recognized net of estimated allowances, discounts, sales returns, chargebacks and rebates. Product sales recognized during 2010 and 2009 were not subject to a contractual right of return.

**Table of Contents****BioCryst Pharmaceuticals, Inc.****NOTES TO FINANCIAL STATEMENTS (Continued)**

The Company recorded the following revenues for the years ended December 31:

|   | 2010          | 2009          | 2008          |
|---|---------------|---------------|---------------|
| Product sales:  |               |               |               |
| U.S. Department of Health and Human Services                    | \$            | \$ 22,500,000 | \$            |
| Neopharm Group (Israel)   |               | 397,508       |               |
| NT Pharma Limited (Hong Kong)                                   | 250,000       |               |               |
| Other   | 75,000        | 25,000        |               |
| Total product sales   | 325,000       | 22,922,508    |               |
| Collaborative and other research and development revenues:      |               |               |               |
| U.S. Department of Health and Human Services                    | 42,530,436    | 37,866,792    | 21,779,745    |
| Shionogi (Japan)  | 15,932,683    | 10,415,490    | 2,007,924     |
| Mundipharma (United Kingdom)                                    | 1,860,281     | 3,142,818     | 4,615,448     |
| Roche (United States)   |               |               | 27,783,252    |
| Grants (United States)  | 977,918       |               |               |
| Other   | 755,018       | 241,711       | 375,000       |
| Total collaborative and other research and development revenues | 62,056,336    | 51,666,811    | 56,561,369    |
| Total revenues  | \$ 62,381,336 | \$ 74,589,319 | \$ 56,561,369 |

The Company has no foreign assets.

***Research and Development Expenses***

The Company's research and development costs are charged to expense when incurred. Advance payments for goods or services that will be used or rendered for future research and development activities are deferred and capitalized. Such amounts are recognized as expense when the related goods are delivered or the related services are performed. Research and development expenses include, among other items, personnel costs, including salaries and benefits, manufacturing costs, clinical, regulatory, and toxicology services performed by CROs, materials and supplies, and overhead allocations consisting of various administrative and facilities related costs. Most of the Company's manufacturing and clinical and preclinical studies are performed by third-party CROs. Costs for studies performed by CROs are accrued by the Company over the service periods specified in the contracts and estimates are adjusted, if required, based upon the Company's on-going review of the level of services actually performed.

Additionally, the Company has license agreements with third parties, such as Albert Einstein College of Medicine of Yeshiva University (AECOM), Industrial Research, Ltd. (IRL), and the University of Alabama at Birmingham (UAB), which require fees related to sublicense agreements or maintenance fees. The Company expenses sublicense payments as incurred unless they are related to revenues that have been deferred, in which case the expenses are deferred and recognized over the related revenue recognition period. The Company expenses maintenance payments

as incurred.

At December 31, 2010, the Company had deferred collaboration expenses of \$9,046,567. These deferred expenses were sub-license payments, paid to the Company's academic partners upon receipt of consideration from various commercial partners, and other consideration paid to our academic partners for modification to existing license agreements. These deferred expenses would not have been incurred without receipt of such payments or modifications from the Company's commercial partners and are being expensed in proportion to the related revenue being recognized. The Company believes that this accounting treatment appropriately matches expenses with the associated revenue.

**Table of Contents****BioCryst Pharmaceuticals, Inc.****NOTES TO FINANCIAL STATEMENTS (Continued)*****Stock-Based Compensation***

All share-based payments, including grants of stock option awards and restricted stock awards, are recognized in the Company's income statement based on their fair values. Stock-based compensation cost is estimated at the grant date based on the fair value of the award and is recognized as expense on a straight-line basis over the requisite service period of the award.

***Net Loss Per Share***

Net loss per share is based upon the weighted average number of common shares outstanding during the period. Diluted loss per share is equivalent to basic net loss per share for all periods presented herein because common equivalent shares from unexercised stock options, outstanding warrants, and common shares expected to be issued under the Company's employee stock purchase plan were anti-dilutive.

***Restructuring Activities***

During the fourth quarter of 2010, the Company announced a restructuring plan to consolidate core facilities and outsource non-core activities. In connection with this plan, the Company estimates that it will recognize approximately \$302,000 in one-time termination benefits, of which approximately \$158,000 was expensed in 2010. The Company also recognized approximately \$866,000 in accelerated depreciation during the fourth quarter of 2010 for fixed assets that will no longer be used by the Company.

***Use of Estimates***

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

**Note 2 Furniture and Equipment**

Furniture and equipment consisted of the following at December 31:

|  | <b>2010</b>  | <b>2009</b>  |
|--|--------------|--------------|
| Furniture and fixtures                         | \$ 587,259   | \$ 588,407   |
| Office equipment                               | 1,469,516    | 1,383,829    |
| Software                                       | 1,409,178    | 1,318,409    |
| Laboratory equipment                           | 6,032,940    | 6,989,960    |
| Leased equipment                               | 62,712       | 62,712       |
| Leasehold improvements                         | 5,251,547    | 6,175,698    |
|  | 14,813,152   | 16,519,015   |
| Less accumulated depreciation and amortization | (12,884,103) | (12,647,362) |

|                              |              |              |
|------------------------------|--------------|--------------|
| Furniture and equipment, net | \$ 1,929,049 | \$ 3,871,653 |
|------------------------------|--------------|--------------|

**Note 3 Concentration of Market Risk**

The Company's 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 the Company's supply of drugs for further preclinical testing and clinical trials.



**Table of Contents****BioCryst Pharmaceuticals, Inc.****NOTES TO FINANCIAL STATEMENTS (Continued)****Note 4 Accrued Expenses**

Accrued expenses were comprised of the following at December 31:

|   | <b>2010</b>   | <b>2009</b>   |
|---|---------------|---------------|
| Accrued research and development expenses   | \$ 13,827,053 | \$ 12,471,204 |
| Accrued general and administrative expenses | 250,136       | 470,703       |
| Stock purchase plan withholdings            | 183,783       | 162,265       |
| Accrued bonus                               | 1,311,148     | 2,111,073     |
| Other                                       | 914,800       | 579,555       |
| Total accrued expenses                      | \$ 16,486,920 | \$ 15,794,800 |

**Note 5 Lease Obligations and Other Contingencies**

The Company has the following minimum payments under operating lease obligations that existed at December 31, 2010:

|                        |              |
|------------------------|--------------|
| 2011                   | \$ 853,672   |
| 2012                   | 871,331      |
| 2013                   | 872,729      |
| 2014                   | 898,344      |
| 2015                   | 288,430      |
| Thereafter             |              |
| Total minimum payments | \$ 3,784,506 |

The obligations in the preceding table are primarily related to the Company's leases for buildings in Birmingham, Alabama and Durham, North Carolina. The lease for the building in Alabama expires June 30, 2015 and currently requires monthly rents of \$42,711 in December 2010 and escalates annually to a minimum of \$48,072 per month in the final year. The Company has an option to renew the Alabama lease for an additional five years at the current market rate on the date of termination. The lease for the building in Durham, North Carolina expires December 31, 2014. This lease requires monthly rents of \$24,788 beginning in January of 2011 and escalates annually to a minimum of \$27,894 per month in the final year.

Rent expense for operating leases was \$770,621, \$763,353, and \$636,819 in 2010, 2009, and 2008, respectively.

**Note 6 Income Taxes**

The Company has incurred net losses since inception and, consequently, has not recorded any U.S. federal and state income taxes. The differences between the Company's effective tax rate and the statutory tax rate in 2010, 2009, and 2008 are primarily due to non-deductible expenses, research and development tax credits, and increases in the valuation allowance.

**Table of Contents****BioCryst Pharmaceuticals, Inc.****NOTES TO FINANCIAL STATEMENTS (Continued)**

Significant components of the Company's deferred tax assets and liabilities are as follows:

|  | <b>2010</b>   | <b>2009</b>   |
|--|---------------|---------------|
| Deferred tax assets:                   |               |               |
| Net federal and state operating losses | \$ 77,628,392 | \$ 76,907,534 |
| General business credits               | 34,126,176    | 32,115,994    |
| Fixed assets                           | 1,201,526     | 1,224,636     |
| Reserve for inventories                | 1,540,127     | 1,606,813     |
| Accrued expenses                       | 1,034,497     | 997,073       |
| Deferred revenue                       | 6,120,095     | 7,262,703     |
| Stock-based compensation               | 5,018,257     | 3,953,281     |
| <br>                                   |               |               |
| Total deferred tax assets              | 126,669,070   | 124,068,034   |
| Valuation allowance                    | (126,669,070) | (124,068,034) |
| <br>                                   |               |               |
| Total deferred tax liabilities         |               |               |
| <br>                                   |               |               |
| Net deferred tax assets                | \$            | \$            |

The majority of the Company's deferred tax assets relate to net operating loss and research and development carryforwards that can only be realized if the Company is profitable in future periods. It is uncertain whether the Company will realize any tax benefit related to these carryforwards. Accordingly, the Company has provided a full valuation allowance against the net deferred tax assets due to uncertainties as to their ultimate realization. The valuation allowance will remain at the full amount of the deferred tax assets until it is more likely than not that the related tax benefits will be realized. The Company's valuation allowance increased by \$2,601,036 in 2010, \$9,139,633 in 2009, and \$8,476,111 in 2008.

As of December 31, 2010, the Company had net federal operating loss carryforwards of \$201,240,495, net state operating loss carryforwards of \$243,405,246, and research and development credit carryforwards of \$34,126,176, all of which expire at various dates from 2011 through 2029.

The Company's net federal and state operating loss carryforwards include \$4,674,683 of excess tax benefits related to a deduction from the exercise of stock options. The tax benefit of these deductions has not been recognized in deferred tax assets. If utilized, the benefits from these deductions will be recorded as adjustments to income tax expense and additional paid-in capital.

The Company recognizes the impact of a tax position in its financial statements if it is more likely than not that the position will be sustained on audit based on the technical merits of the position. The Company has concluded that it has one uncertain tax position pertaining to its research and development credit carryforwards. The Company has not yet conducted an in-depth study of its research and development credits. This study could result in an increase or decrease to the Company's research and development credits. Until studies are conducted of the Company's research and development credits, no amounts are being recorded as an unrecognized tax benefits, separate from the valuation

allowance against deferred tax assets. Any future changes to the Company's unrecognized tax benefits would be offset by an adjustment to the valuation allowance and there would be no impact on the Company's financial statements.

Additionally, utilization of the Company's net operating loss carryforwards could be subject to a substantial annual limitation due to ownership change limitations described in Section 382 of the Internal Revenue Code and similar state provisions. The Company has performed a Section 382 change in control study and has determined there have been no changes in control that would limit the use of the Company's net operating losses through December 31, 2010.

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**BioCryst Pharmaceuticals, Inc.**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

Tax years 2006-2009 remain open to examination by the major taxing jurisdictions to which the Company is subject. Additionally, years prior to 2006 are also open to examination to the extent of loss and credit carryforwards from those years. The Company recognizes interest and penalties accrued related to unrecognized tax benefits as components of its income tax provision. However, there were no provisions or accruals for interest and penalties in 2010, 2009, and 2008.

**Note 7 Stockholders Equity**

In May 2010, the Company entered into an amendment to the License Agreement dated June 27, 2000, as subsequently amended (the License Agreement ), by and among the Company and AECOM and IRL (the Licensors ). The amendment further amended the License Agreement through which the Company obtained worldwide exclusive rights to develop and ultimately distribute any drug candidates that might arise from research on a series of PNP inhibitors, including forodesine and BCX4208. Under the terms of the amendment, the Licensors agreed to accept a reduction of one-half in the percentage of future payments received from third-party sublicensees of the licensed PNP inhibitors that must be paid to the Licensors. This reduction does not apply to (i) any milestone payments the Company may receive in the future under its license agreement dated February 1, 2006 with Mundipharma International Holdings Limited ( Mundipharma ) and (ii) royalties received from the Company s sublicensees in connection with the sale of licensed products, for which the original payment rate will remain in effect. The rate of royalty payments to the Licensors based on net sales of any resulting product made by the Company remains unchanged.

In consideration for the modifications to the license agreement, the Company issued to the Licensors shares of its common stock with an aggregate value of approximately \$5.9 million and paid the Licensors approximately \$90,000 in cash. The Company deferred the value of this consideration and is amortizing to research and development costs through September 2027, which is the date of expiration of the last-to-expire patent related to this agreement. Additionally, at the Company s sole option and subject to certain agreed upon conditions, any future non-royalty payments due to be paid by the Company to the Licensors under the License Agreement may be made either in cash, in shares of its common stock, or in a combination of cash and shares.

In November 2009, the Company entered into an Underwriting Agreement with Morgan Stanley in connection with a registered offering of 5,000,000 shares of its common stock at a public offering price of \$9.75 per share, resulting in proceeds net of offering costs of \$45,740,190. The common stock was issued pursuant to a prospectus supplement filed with the Securities and Exchange Commission pursuant to Rule 424(b)(2) of the Securities Act of 1933, as amended ( the Securities Act ).

In August 2007, the Company entered into a Stock and Warrant Purchase Agreement with a group of existing stockholders for the private placement of 8,315,513 shares of the Company s common stock at a purchase price of \$7.80 per share and warrants to purchase 3,159,895 shares of the Company s common stock at a purchase price of \$0.125 per warrant. The proceeds from the sale, net of offering costs, were \$65,118,092. The exercise price of the warrants is \$10.25 per share. All of the warrants remain outstanding as of December 31, 2010 and will expire in August 2012. The participants in the transaction 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 were shareholders of the Company at the time of the offering. Subsequent to the offering, the Company registered the shares and warrants under the Securities Act for resale.

In May 2007, the stockholders approved an amendment to the Company's third restated certificate of incorporation to increase the number of shares of common stock authorized to issue from 45,000,000 to 95,000,000. All shares of the Company's common stock, including the additional shares authorized by the amendment, are equal in rank and have the same voting, dividend, and liquidation rights.

**Table of Contents****BioCryst Pharmaceuticals, Inc.****NOTES TO FINANCIAL STATEMENTS (Continued)**

In June 2002, the Company's Board of Directors adopted a stockholder rights plan and, pursuant thereto, issued preferred stock purchase rights ( Rights ) to the holders of the Company's 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 more than 15% at the time the Rights were put in place) of the Company's common stock on terms not approved by the Board of Directors. 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. The rights are not exercisable until the distribution date, as defined in the Rights Agreement by and between the Company and American Stock Transfer & Trust Company, as Rights Agent. The Rights will expire at the close of business on June 24, 2012, unless that final expiration date is extended or unless the rights are earlier redeemed or exchanged by the Company.

Each Right entitles the registered holder to purchase from the Company one one-thousandth of a share of Series B Junior Participating Preferred Stock ( Series B ), par value \$0.001 per share, at a purchase price of \$26.00, subject to adjustment. Shares of Series B purchasable upon exercise of the Rights will not be redeemable. Each share of Series B will be entitled to a dividend of 1,000 times the dividend declared per share of common stock. In the event of liquidation, each share of Series B will be entitled to a payment of 1,000 times the payment made per share of common stock. Each share of Series B will have 1,000 votes, voting together with the common stock. Finally, in the event of any merger, consolidation, or other transaction in which shares of common stock are exchanged, each share of Series B will be entitled to receive 1,000 times the amount received per share of common stock. Effective in November 2008, the Company increased the authorized shares available under these rights to 95,000 to match the authorized common shares of 95,000,000 at that time. In addition, the Board of Directors has the authority to issue up to 4,905,000 shares of undesignated preferred stock and to determine the rights, preferences, privileges and restrictions of those shares without further vote or action by the Company's stockholders.

**Note 8 Stock-Based Compensation*****Stock Incentive Plan***

As of December 31, 2010, the Company had two stock-based employee compensation plans, the Stock Incentive Plan ( Incentive Plan ), which was amended and restated in March 2010 and approved by the Company's stockholders in May 2010, and the Employee Stock Purchase Plan ( ESPP ), which was amended and restated in March 2010 and approved by the Company's stockholders in May 2010. In addition, during 2007, the Company made an inducement grant outside of the Incentive Plan and ESPP to recruit a new employee to a key position within the Company. Stock-based compensation expense of \$6,301,856 (\$5,959,789 of expense related to the Incentive Plan, \$192,363 of expense related to the ESPP, and \$149,704 of expense related to the inducement grant) was recognized during 2010, while \$5,524,883 (\$5,140,487 of expense related to the Incentive Plan, \$234,692 of expense related to the ESPP, and \$149,704 of expense related to the inducement grant) was recognized during 2009 and \$5,860,654 (\$5,545,458 of expense related to the Incentive Plan, \$165,492 of expense related to the ESPP, and \$149,704 of expense related to the inducement grant) was recognized during 2008.

Under the Incentive Plan, the Company grants stock option awards and restricted stock awards to its employees, directors, and consultants. Stock option awards are granted with an exercise price equal to the market price of the Company's stock at the date of grant. Stock option awards granted to employees generally vest 25% after one year and monthly thereafter on a pro rata basis over the next three years until fully vested after four years. Stock option awards granted to non-employee directors of the Company generally vest over one year. All stock option awards have

contractual terms of 10 years. The vesting exercise provisions of all awards granted under the Incentive Plan are subject to acceleration in the event of certain stockholder-approved transactions, or upon the occurrence of a change in control as defined in the Incentive Plan.



**Table of Contents****BioCryst Pharmaceuticals, Inc.****NOTES TO FINANCIAL STATEMENTS (Continued)**

Related activity under the Incentive Plan is as follows:

|                                 | <b>Awards<br/>Available</b> | <b>Options<br/>Outstanding</b> | <b>Weighted<br/>Average<br/>Exercise<br/>Price</b> |
|---------------------------------|-----------------------------|--------------------------------|--|
| Balance December 31, 2007       | 592,027                     | 5,023,258                      | 9.20   |
| Plan amendment                  | 1,200,000                   |                                |  |
| Stock option awards granted     | (1,060,005)                 | 1,060,005                      | 3.38   |
| Restricted stock awards granted | (76,536)                    |                                |  |
| Stock option awards exercised   |                             | (146,470)                      | 2.72   |
| Stock option awards canceled    | 459,144                     | (459,144)                      | 8.53   |
| Balance December 31, 2008       | 1,114,630                   | 5,477,649                      | 8.30   |
| Plan amendment                  | 1,540,000                   |                                |  |
| Stock option awards granted     | (1,559,233)                 | 1,559,233                      | 2.02   |
| Stock option awards exercised   |                             | (532,379)                      | 3.98   |
| Stock option awards canceled    | 677,975                     | (677,975)                      | 12.04  |
| Balance December 31, 2009       | 1,773,372                   | 5,826,528                      | 6.58   |
| Plan amendment                  | 1,300,000                   |                                |  |
| Stock option awards granted     | (1,550,320)                 | 1,550,320                      | 6.68   |
| Stock option awards exercised   |                             | (240,314)                      | 2.30   |
| Stock option awards canceled    | 334,992                     | (334,992)                      | 8.42   |
| Balance December 31, 2010       | 1,858,044                   | 6,801,542                      | 6.66   |

For stock option awards granted under the Incentive Plan during 2010, 2009, and 2008, the fair value was estimated on the date of grant using a Black-Scholes option pricing model and the assumptions noted in the table below. The weighted average grant date fair value of these awards granted during 2010, 2009, and 2008 was \$4.65, \$1.52 and \$2.16, respectively. The fair value of the stock option awards is amortized to expense over the vesting periods using a straight-line expense attribution method. The following explanations describe the assumptions used by the Company to value the stock option awards granted during 2010, 2009, and 2008. The expected life is based on the average of the assumption that all outstanding stock option awards will be exercised at full vesting and the assumption that all outstanding stock option awards will be exercised at the midpoint of the current date (if already vested) or at full vesting (if not yet vested) and the full contractual term. The expected volatility represents an average of the implied volatility on the Company's publicly traded options, the volatility over the most recent period corresponding with the expected life, and the Company's long-term reversion volatility. The Company has assumed no expected dividend yield, as dividends have never been paid to stock or option holders and will not be for the foreseeable future. The weighted average risk-free interest rate is the implied yield currently available on zero-coupon government issues with a remaining term equal to the expected term.



Table of Contents**BioCryst Pharmaceuticals, Inc.****NOTES TO FINANCIAL STATEMENTS (Continued)****Weighted Average Assumptions for Stock Option Awards Granted under the Incentive Plan**

|                         | <b>2010</b> | <b>2009</b> | <b>2008</b> |
|-------------------------|-------------|-------------|-------------|
| Expected Life           | 5.5         | 5.6         | 5.5         |
| Expected Volatility     | 89.3%       | 104.2%      | 78.4%       |
| Expected Dividend Yield | 0.0%        | 0.0%        | 0.0%        |
| Risk-Free Interest Rate | 2.4%        | 2.1%        | 2.8%        |

The total intrinsic value of stock option awards exercised under the Incentive Plan was \$1,169,435 during 2010, \$2,786,900 during 2009, and \$223,369 during 2008. The intrinsic value represents the total proceeds (fair market value at the date of exercise, less the exercise price, times the number of stock option awards exercised) received by all individuals who exercised stock option awards during the period.

The following table summarizes, at December 31, 2010, by price range: (1) for stock option awards outstanding under the Incentive Plan, the number of stock option awards outstanding, their weighted average remaining life and their weighted average exercise price; and (2) for stock option awards exercisable under the Plan, the number of stock option awards exercisable and their weighted average exercise price:

| <b>Range</b>     | <b>Number</b> | <b>Outstanding<br/>Weighted<br/>Average<br/>Remaining<br/>Life</b> | <b>Weighted<br/>Average<br/>Exercise<br/>Price</b> | <b>Exercisable<br/>Number</b> | <b>Weighted<br/>Average<br/>Exercise<br/>Price</b> |
|------------------|---------------|--|--|-------------------------------|--|
| <b>\$0 to 3</b>  | 1,471,637     | 7.3  | \$ 1.37  | 556,347                       | \$ 1.35  |
| <b>3 to 6</b>    | 1,031,740     | 6.2  | 3.78   | 810,756                       | 3.75   |
| <b>6 to 9</b>    | 2,582,300     | 7.4  | 7.30   | 1,131,509                     | 7.99   |
| <b>9 to 12</b>   | 852,450       | 6.1  | 11.36  | 801,633                       | 11.37  |
| <b>12 to 15</b>  | 856,248       | 5.6  | 12.53  | 809,581                       | 12.53  |
| <b>15 to 18</b>  | 5,167         | 4.0  | 15.58  | 5,167                         | 15.58  |
| <b>18 to 21</b>  | 2,000         | 5.1  | 18.99  | 2,000                         | 18.99  |
| <b>\$0 to 21</b> | 6,801,542     | 6.8  | 6.66   | 4,116,993                     | 7.82   |

The weighted average remaining contractual life of stock option awards exercisable under the Incentive Plan at December 31, 2010 was 5.6 years.

The aggregate intrinsic value of stock option awards outstanding and exercisable under the Incentive Plan at December 31, 2010 was \$3,280,352. The aggregate intrinsic value represents the value (the period's closing market price, less the exercise price, times the number of in-the-money stock option awards) that would have been received

by all stock option award holders under the Incentive Plan had they exercised their stock option awards at the end of the year.

The total fair value of the stock option awards vested under the Incentive Plan was \$4,440,746 during 2010, \$5,261,384 during 2009, and \$6,928,011 during 2008.

As of December 31, 2010, the number of stock option awards vested and expected to vest under the Incentive Plan is 6,226,649. The weighted average exercise price of these stock option awards is \$6.85 and their weighted average remaining contractual life is 6.8 years.

During 2007, the Company granted 50,000 restricted stock awards under the Incentive Plan with a grant date fair value of \$11.81. During the first quarter of 2009, 25,000 of these restricted stock awards vested. The remainder of these restricted stock awards will vest during the first quarter of 2011.

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**BioCryst Pharmaceuticals, Inc.**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

During the second quarter of 2008, the Company also granted 76,536 restricted stock awards under the Incentive Plan with a grant date fair value of \$3.12. All of these restricted stock awards vested on December 31, 2009.

***Employee Stock Purchase Plan***

The Company has reserved a total of 825,000 shares of common stock to be purchased under the ESPP, of which 230,165 shares remain available for purchase at December 31, 2010. Eligible employees may authorize up to 15% of their salary to purchase common stock at the lower of 85% of the beginning or 85% of the ending price during six-month purchase intervals. No more than 3,000 shares may be purchased by any one employee at the six-month purchase dates and no employee may purchase stock having a fair market value at the commencement date of \$25,000 or more in any one calendar year.

There were 51,329, 123,357, and 84,907 shares of common stock purchased under the ESPP in 2010, 2009, and 2008, respectively, at a weighted average price per share of \$5.50, \$1.57, and \$3.15, respectively. Expense of \$192,363, \$234,692, and \$165,492 related to the ESPP was recognized during 2010, 2009, and 2008, respectively. Compensation expense for shares purchased under the ESPP related to the purchase discount and the look-back option were determined using a Black-Scholes option pricing model. The weighted average grant date fair values of shares granted under the ESPP during 2010, 2009, and 2008 were \$2.76, \$1.70, and \$1.34, respectively.

***Stock Inducement Grant***

In March 2007, the Company's Board of Directors approved a stock inducement grant of 110,000 stock option awards and 10,000 restricted stock awards to recruit a new employee to a key position within the Company. The stock option awards were granted in April 2007 with an exercise price equal to the market price of the Company's stock at the date of grant. The awards vest 25% after one year and monthly thereafter on a pro rata basis over the next three years until fully vested after four years. The stock option awards have contractual terms of 10 years. The vesting exercise provisions of both the stock option awards and the restricted stock awards granted under the inducement grant are subject to acceleration in the event of certain stockholder-approved transactions, or upon the occurrence of a change in control as defined in the respective agreements. The weighted average grant date fair value of these stock option awards was \$5.25. The exercise price of the stock option awards and the grant date fair value of the restricted stock awards granted under the inducement grant was \$8.20. As of December 31, 2010, 9,166 of these restricted stock awards have vested.

As of December 31, 2010, there was approximately \$6,481,386 of total unrecognized compensation cost related to non-vested employee stock option awards and restricted stock awards granted by the Company. That cost is expected to be recognized as follows: \$2,838,462 in 2011, \$1,844,162 in 2012, \$1,539,475 in 2013, and \$259,287 in 2014.

**Note 9 Employee Benefit Plans**

In January 1991, the Company adopted an employee retirement plan ( 401(k) Plan ) under Section 401(k) of the Internal Revenue Code covering all employees. Employee contributions may be made to the 401(k) Plan up to limits established by the Internal Revenue Service. Company matching contributions may be made at the discretion of the Board of Directors. The Company made matching contributions of \$433,951, \$378,350, and \$418,215 in 2010, 2009, and 2008, respectively.

**Note 10 Collaborative and Other Research and Development Contracts**

*U.S. Department of Health and Human Services ( HHS )*. In January 2007, the U.S. Department of Health and Human Services ( HHS ) awarded the Company a \$102.6 million, four-year contract for the

**Table of Contents****BioCryst Pharmaceuticals, Inc.****NOTES TO FINANCIAL STATEMENTS (Continued)**

advanced development of peramivir for the treatment of influenza. During 2009, peramivir clinical development shifted to focus on intravenous delivery and the treatment of hospitalized patients. To support this focus, a September 2009 contract modification was awarded to extend the intravenous ( i.v. ) peramivir program by 12 months and to increase funding by \$77.2 million. On February 24, 2011, the Company announced that HHS had awarded it a \$55.0 million contract modification, intended to fund completion of the Phase 3 development of i.v. peramivir for the treatment of patients hospitalized with influenza. This contract modification brings the total award from HHS to \$234.8 million and extends the contract term by 24 months through December 31, 2013, providing funding through completion of Phase 3 and the filing of a new drug application ( NDA ) to seek regulatory approval for i.v. peramivir in the U.S.

The contract with HHS is defined as a cost- plus-fixed-fee contract. That is, the Company is entitled to receive reimbursement for all costs incurred in accordance with the contract provisions that are related to the development of peramivir plus a fixed fee, or profit. HHS will make periodic assessments of progress and the continuation of the contract is based on the Company's performance, the timeliness and quality of deliverables, and other factors. The government has rights under certain contract clauses to terminate this contract. The contract is terminable by the government at any time for breach or without cause.

*Shionogi & Co., Ltd.* ( *Shionogi* ). In March 2007, the Company entered into an exclusive license agreement with Shionogi to develop and commercialize peramivir in Japan for the treatment of seasonal and potentially life-threatening human influenza. Under the terms of the agreement, Shionogi obtained rights to injectable formulations of peramivir in Japan in exchange for a \$14.0 million up-front payment. The license provides for potential future milestone event payments (up to \$21.0 million) and commercial event milestone payments (up to \$95.0 million) in addition to double digit (between 10 and 20% range) royalty payments on product sales of peramivir. Generally, all payments under the agreement are nonrefundable and non-creditable, but they are subject to audit. Shionogi will be responsible for all development, regulatory, and marketing costs in Japan. The term of the agreement is from February 28, 2007 until terminated by either party in accordance with the license agreement. Either party may terminate in the event of an uncured breach. Shionogi has the right of without cause termination. In the event of termination all license and rights granted to Shionogi shall terminate and shall revert back to the Company. The Company developed peramivir under a license from UAB and will owe sublicense payments to them on the upfront payment and any future event payments and/or royalties received by the Company from Shionogi.

In October 2008, the Company and Shionogi amended the license agreement to expand the territory covered by the agreement to include Taiwan and to provide rights for Shionogi to perform a Phase III clinical trial in Hong Kong.

The Company deferred the \$14.0 million up-front payment that was initially received from Shionogi. This deferred revenue began to be amortized to revenue in April 2007 and will continue through December 2018. In December 2007, the Company received a \$7.0 million milestone payment from Shionogi for their initiation of a Phase II clinical trial with i.v. peramivir. In November 2009, the Company received another \$7.0 million milestone payment from Shionogi for their filing of a NDA in Japan to seek regulatory approval for i.v. peramivir.

In January 2010, Shionogi received marketing and manufacturing approval for i.v. peramivir in Japan, and the Company received a third and final regulatory milestone payment of \$7.0 million in January 2010 as a result of this approval. Shionogi has commercially launched peramivir under the commercial name RAPIACTA® in Japan.

In the first quarter of 2010, the Company recorded royalty revenue of approximately \$0.7 million related to sales of RAPIACTA® in Japan and the royalties were paid to the Company by Shionogi in the second quarter of 2010. RAPIACTA® received accelerated approval in Japan in January 2010 so it could be made available as a treatment option during the H1N1 pandemic. At the time of approval, RAPIACTA® stability



**Table of Contents****BioCryst Pharmaceuticals, Inc.****NOTES TO FINANCIAL STATEMENTS (Continued)**

testing was ongoing and as a result, the product sold during early 2010 had a short shelf life. During the fourth quarter of 2010, in response to requests from customers to return RAPIACTA® due to the shelf life reaching expiration, Shionogi chose to accept returns for substantially all of the \$0.7 million of product shipped early in 2010 and submitted the returns to the Company for credit. Accordingly, the Company reversed the \$0.7 million of royalty revenue recorded in the first quarter of 2010.

*Green Cross Corporation ( Green Cross ).* In June 2006, the Company entered into an agreement with Green Cross to develop and commercialize peramivir in Korea. Under the terms of the agreement, Green Cross will be responsible for all development, regulatory, and commercialization costs in Korea. The Company received a one-time license fee of \$250,000. The agreement also provides for relatively insignificant future milestone payments. The license also provides that the Company will share in profits resulting from the sale of peramivir in Korea, including the sale of peramivir to the Korean government for stockpiling purposes. Furthermore, Green Cross will pay the Company a premium over its cost to supply peramivir for development and any future marketing of peramivir products in Korea. Both parties have the right to terminate in the event of an uncured material breach. In the event of termination all rights, data, materials, products and other information would be transferred to the Company. The Company deferred the up-front payment that was received from Green Cross. This deferred revenue began to be amortized to revenue August 2006 and will continue through November 2009.

*Mundipharma International Holdings Limited ( Mundipharma ).* In February 2006, the Company entered into an exclusive, royalty bearing right and license agreement with Mundipharma for the development and commercialization of the Company's lead PNP inhibitor, forodesine, for use in oncology. Under the terms of the agreement, Mundipharma obtained rights to forodesine in markets across Europe, Asia, and Australasia in exchange for a \$10.0 million up-front payment. In addition, Mundipharma contributed \$10.0 million of the documented out of pocket development costs incurred by the Company in respect of the current and planned trials as of the effective date of the agreement and Mundipharma will conduct additional clinical trials at their own cost up to a maximum of \$15.0 million. The license provides for possibility of future event payments totaling \$155.0 million for achieving specified development, regulatory and commercial events (including certain sales level amounts following a product's launch) for certain indications. In addition, the agreement provides that the Company will receive royalties (ranging from single digits to mid teens) based on a percentage of net product sales, which varies depending upon when certain indications receive NDA approval in a major market country and can vary by country depending on the patent coverage or sales of generic compounds in a particular country. Generally, all payments under the agreement are nonrefundable and non-creditable, but they are subject to audit. The Company licensed forodesine and other PNP inhibitors from AECOM and IRL and will owe sublicense payments to these third parties on the upfront payment, event payments, and royalties received by the Company from Mundipharma.

For five years, Mundipharma will have a right of first negotiation on existing backup PNP inhibitors the Company develops through Phase IIb in oncology, but any new PNP inhibitors will be exempt from this agreement and the Company will retain all rights to such compounds. The Company retained the rights to forodesine in the U.S. and Mundipharma is obligated by the terms of the agreement to use commercially reasonable efforts to develop the licensed product in the territory specified by the agreement. The agreement will continue for the commercial life of the licensed products, but may be terminated by either party following an uncured material breach by the other party or in the event the pre-existing third party license with AECOM and IRL expires. It may be terminated by Mundipharma upon 60 days written notice without cause or under certain other conditions as specified in the agreement and all rights, data, materials, products and other information would be transferred back to the Company at no cost. In the event the Company terminates the agreement for material default or insolvency, the Company could

have to pay Mundipharma 50% of the costs of any independent data owned by Mundipharma in accordance with the terms of the agreement.

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**BioCryst Pharmaceuticals, Inc.**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

The Company deferred the \$10.0 million up-front payment that was received from Mundipharma in February 2006. This deferred revenue began to be amortized to revenue February 2006 and will end in October 2017, which is the date of expiration for the last-to-expire patent covered by the agreement. The costs reimbursed by Mundipharma for the current and planned trials of forodesine were recorded as revenue when the expense was incurred up to the \$10.0 million limit stipulated in the agreement.

The Company is currently in dispute with Mundipharma regarding the contractual obligations of the parties with respect to certain costs related to the manufacturing and development of forodesine. The Company does not believe that it is responsible for any of the disputed amounts. The Company is engaged in ongoing discussion to resolve this dispute. The maximum potential exposure to the Company with respect to this dispute is estimated to be approximately 1,665,110 (or approximately \$2.2 million based on the exchange rate on December 31, 2010). No amounts have been accrued as of December 31, 2010.

The Company is exploring the interest level of potential partners as a possible path forward for the future development of forodesine in the U.S. Absent a U.S. partner, the Company does not plan to conduct additional studies of forodesine or file a NDA with the FDA. The Company shared this information with Mundipharma, along with its decision not to continue further development of forodesine in the U.S. Mundipharma has expressed disappointment regarding the development of forodesine and this outcome. On February 21, 2011, the Company received a letter from Mundipharma's legal counsel notifying it that they intended to utilize the dispute resolution provisions of the Company's agreement with them, which includes meetings of senior management and the later possibility of arbitration. No amounts have been accrued regarding this matter.

*Albert Einstein College of Medicine of Yeshiva University and Industrial Research, Ltd. (AECOM and IRL respectively).* In June 2000, the Company licensed a series of potent inhibitors of PNP from AECOM and IRL. The lead drug candidates from this collaboration are forodesine and BCX-4208. The Company has obtained worldwide exclusive rights to develop and ultimately distribute these, or any other, drug candidates that might arise from research on these inhibitors. The Company has the option to expand the Agreement to include other inventions in the field made by the investigators or employees of AECOM and IRL. The Company has agreed to use commercially reasonable efforts to develop these drugs. In addition, the Company has agreed to pay certain milestone payments for each licensed product (which range in the aggregate from \$1.4 million to almost \$4 million per indication) for future development of these inhibitors, single digit royalties on net sales of any resulting product made by the Company, and to share approximately one quarter of future payments received from other third-party partners, if any. In addition, the Company has agreed to pay annual license fees, which can range from \$150,000 to \$500,000, that are creditable against actual royalties and other payments due to AECOM and IRL. This agreement may be terminated by the Company at any time by giving 60 days advance notice or in the event of material uncured breach by AECOM and IRL.

In May 2010, the Company entered into an amendment to the License Agreement dated June 27, 2000, as subsequently amended (the License Agreement), by and among the Company and AECOM and IRL (the Licensors). The amendment further amended the License Agreement through which the Company obtained worldwide exclusive rights to develop and ultimately distribute any drug candidates that might arise from research on a series of PNP inhibitors, including forodesine and BCX4208. Under the terms of the amendment, the Licensors agreed to accept a reduction of one-half in the percentage of future payments received from third-party sublicensees of the licensed PNP inhibitors that must be paid to the Licensors. This reduction does not apply to (i) any milestone payments the Company may receive in the future under its license agreement dated February 1, 2006 with Mundipharma and

(ii) royalties received from its sublicensees in connection with the sale of licensed products, for which the original payment rate will remain in effect. The rate of royalty payments to the Licensors based on net sales of any resulting product made by the Company remains unchanged.

In consideration for the modifications to the license agreement, the Company issued to the Licensors shares of its common stock with an aggregate value of approximately \$5.9 million and paid the Licensors

**Table of Contents****BioCryst Pharmaceuticals, Inc.****NOTES TO FINANCIAL STATEMENTS (Continued)**

approximately \$90,000 in cash. Additionally, at the Company's sole option and subject to certain agreed upon conditions, any future non-royalty payments due to be paid by it to the Licensors under the License Agreement may be made either in cash, in shares of its common stock, or in a combination of cash and shares.

*The University of Alabama at Birmingham ( UAB ).* The Company currently has agreements with UAB for influenza neuraminidase and complement inhibitors. Under the terms of these agreements, UAB performed specific research for the Company in return for research payments and license fees. UAB has granted the Company certain rights to any discoveries in these areas resulting from research developed by UAB or jointly developed with the Company. The Company has agreed to pay single digit royalties on sales of any resulting product and to share in future payments received from other third-party partners. The Company has completed the research under the UAB agreements. These two agreements have initial 25-year terms, are automatically renewable for five-year terms throughout the life of the last patent and are terminable by the Company upon three months notice and by UAB under certain circumstances. Upon termination both parties shall cease using the other parties proprietary and confidential information and materials, the parties shall jointly own joint inventions and UAB shall resume full ownership of all UAB licensed products. There is currently no activity between the Company and UAB on these agreements, but when the Company licenses this technology, such as in the case of the Shionogi and Green Cross agreements, or commercialize products related to these programs, we will owe sublicense fees or royalties on amounts we receive.

*Emory University ( Emory ).* In June 2000, the Company licensed intellectual property from Emory related to the hepatitis C polymerase target associated with hepatitis C viral infections. Under the original terms of the agreement, the research investigators from Emory provided the Company with materials and technical insight into the target. The Company has agreed to pay Emory single digit royalties on sales of any resulting product and to share in future payments received from other third party partners, if any. The Company can terminate this agreement at any time by giving 90 days advance notice. Upon termination, the Company would cease using the licensed technology.

**Note 11 Quarterly Financial Information (Unaudited) (In thousands, except per share)**

|                                     | <b>First</b> | <b>Second</b> | <b>Third</b> | <b>Fourth</b> |
|-------------------------------------|--------------|---------------|--------------|---------------|
| <b>2010 Quarters</b>                |              |               |              |               |
| Revenues                            | \$ 26,071    | \$ 7,616      | \$ 12,000    | \$ 16,694     |
| Net Loss                            | (2,595)      | (10,193)      | (10,864)     | (10,201)      |
| Diluted net loss/share              | (.06)        | (.23)         | (.24)        | (.23)         |
| <b>2009 Quarters</b>                |              |               |              |               |
| Revenues                            | \$ 4,359     | \$ 4,787      | \$ 10,548    | \$ 54,895     |
| Net (loss) income                   | (9,292)      | (8,684)       | (10,627)     | 15,151        |
| Diluted net (loss) income per share | (.24)        | (.23)         | (.28)        | .37           |

In the fourth quarter of 2010, approximately \$0.7 million of royalty revenue related to Shionogi's sales of RAPIACTA® in Japan, which was originally recorded during the first quarter of 2010, was reversed. RAPIACTA® received an accelerated Japanese approval in January 2010 so it could be made available as a treatment option during the H1N1 pandemic. At the time of approval, RAPIACTA® stability testing was ongoing and as a result, the product sold during early 2010 had a short shelf life. During the fourth quarter of 2010, Shionogi chose to accept returns of the product shipped early in 2010. The adjustment had no impact on the second or third quarters of 2010 and had no

impact on full year 2010 operating results.

**Note 12 Recent Accounting Pronouncements**

The Accounting Standards Codification ( ASC ) includes guidance in ASC 605-25 related to the allocation of arrangement consideration to these multiple elements for purposes of revenue recognition when

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**BioCryst Pharmaceuticals, Inc.**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

delivery of separate units of account occurs in different reporting periods. This guidance recently was modified by the final consensus reached on EITF 08-1 that was codified by ASU 2009-13. This change increases the likelihood that deliverables within an arrangement will be treated as separate units of accounting, ultimately leading to less revenue deferral for many arrangements. The change also modifies the manner in which transaction consideration is allocated to separately identified deliverables. This guidance is effective prospectively for fiscal years beginning on or after June 15, 2010. Early adoption is permitted. The Company does not believe ASU 2009-13 will have a material impact on its financial statements.

At the March 2010 meeting, the FASB ratified Emerging Issues Task Force, or EITF, Issue No. 08-9, Milestone Method of Revenue Recognition (Issue 08-9). The Accounting Standards Update resulting from Issue 08-9 amends ASC 605-28. The Task Force concluded that the milestone method is a valid application of the proportional performance model when applied to research or development arrangements. Accordingly, the consensus states that an entity can make an accounting policy election to recognize a payment that is contingent upon the achievement of a substantive milestone in its entirety in the period in which the milestone is achieved. The milestone method is not required and is not the only acceptable method of revenue recognition for milestone payments. This guidance is effective prospectively for fiscal years beginning on or after June 15, 2010. Early adoption is permitted. The Company is currently assessing the impact of this guidance on its financial statements.

**Note 13 Subsequent Events**

On February 24, 2011, HHS awarded the Company a \$55.0 million contract modification, intended to fund completion of the Phase 3 development of i.v. peramivir for the treatment of patients hospitalized with influenza. This contract modification brings the total award from HHS to \$234.8 million and extends the contract term by 24 months through December 31, 2013, providing funding through completion of Phase 3 and the filing of a new drug application to seek regulatory approval for i.v. peramivir in the U.S. In connection with negotiation of this contract modification, the Company made the business decision to settle on final indirect cost rates for years 2007, 2008 and 2009 and agreed to a reduction of approximately \$1.1 million in amounts previously billed to HHS related to indirect cost rates. The Company has accounted for this settlement as a recognized subsequent event and has reduced collaborative and other research and development revenues and receivables from collaborations by approximately \$1.1 million at December 31, 2010.

On March 9, 2011, the Company completed a \$30.0 million financing transaction to monetize certain future royalty and milestone payments under its license agreement (the Shionogi Agreement) with Shionogi, pursuant to which Shionogi licensed from the Company the rights to market peramivir in Japan and, if approved for commercial sale, Taiwan

As part of the transaction, the Company transferred to JPR Royalty Sub LLC (Royalty Sub), its newly-formed wholly-owned subsidiary, certain rights under the Shionogi Agreement, including the right to receive future royalty and milestone payments under the Shionogi Agreement. As part of the transaction, the Company also transferred to Royalty Sub the right to receive payments under a new Japanese yen/US dollar foreign currency hedge arrangement that the Company put into place in connection with the transaction. The Company's collaboration with Shionogi remains unchanged as a result of the transaction.

As part of the transaction, Royalty Sub issued \$30.0 million in aggregate principal amount of its PhaRMA Senior Secured 14% Notes due 2020 (the PhaRMA Notes) in a private placement exempt from registration under the

Securities Act of 1933, as amended (the Securities Act ). The PhaRMA Notes bear an interest rate of 14.0%, with interest payable annually on September 1st of each year, beginning September 1, 2011, and on the final legal maturity date. The royalty and milestone payments, if any, that Royalty Sub will be entitled to receive under the license agreement with Shionogi, together with any payments made under the currency hedge arrangement and funds that may be available from certain accounts of Royalty Sub (including an interest reserve account), will be the principal source of payment of principal of, and interest and any premium



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**BioCryst Pharmaceuticals, Inc.**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

on, the PhaRMA Notes. The PhaRMA Notes are secured by a security interest granted by Royalty Sub in its rights to receive payments under the Shionogi Agreement and the currency hedge arrangement, all of its other assets and a pledge by the Company of its equity ownership interest in Royalty Sub. The PhaRMA Notes are non-callable prior to March 9, 2012. On or after March 9, 2012, the PhaRMA Notes may be redeemed at any time prior to maturity, in whole or in part, at the option of Royalty Sub at specified redemption premiums.

The PhaRMA Notes have a final legal maturity of December 1, 2020. Under the terms of the PhaRMA Notes, when Shionogi payments (together with any payments made under the currency hedge arrangement) received by Royalty Sub exceed Royalty Sub's ongoing expenses and the interest payments due annually on the PhaRMA Notes, the excess will be applied to the repayment of principal of the PhaRMA Notes until they have been paid in full. Accordingly, depending on payments from Shionogi, the PhaRMA Notes may fully amortize and be repaid prior to the final legal maturity date. The Company remains entitled to receive any royalties and milestone payments related to sales of peramivir by Shionogi following repayment of the PhaRMA Notes. The PhaRMA Notes constitute obligations of Royalty Sub, and are non-recourse to us except to the extent of our pledge of our equity interest in Royalty Sub as part of the collateral securing the PhaRMA Notes. The PhaRMA Notes are not convertible into our equity.

The Company received net proceeds of approximately \$23.0 million from the transaction after transaction costs and the establishment of a \$3.0 million interest reserve account by Royalty Sub. Such reserve will be available to help cover any interest shortfalls on the PhaRMA Notes through September 1, 2013. Royalty Sub is a wholly-owned subsidiary and will be included in the consolidated financial statements of the Company. The foreign currency hedge will not qualify for hedge accounting treatment and therefore mark to market adjustments will be recognized in the consolidated statement of operations.

In connection with the issuance by Royalty Sub of the PhaRMA Notes, the Company entered into a foreign currency hedge arrangement to hedge certain risks associated with changes in the value of the Japanese yen relative to the U.S. dollar. Under the currency hedge arrangement, the Company has the right to purchase dollars and sell yen at a rate of 100 yen per dollar for which it may be required to pay a premium in each year from 2014 through 2020, provided the currency hedge arrangement remains in effect. A payment of \$2.0 million will be required if, on May 18 of the relevant year, the US dollar is worth 100 yen or less as determined in accordance with the currency hedge arrangement. In conjunction with establishing the hedge currency arrangement, the Company will be required to post collateral to the counterparty, which may cause it to experience additional quarterly volatility in its earnings as a result. The Company will not be required at any time to post collateral exceeding the maximum premium payments remaining payable under the currency hedge arrangements. In establishing the hedge, the Company provided initial funds of approximately \$2.0 million to support its potential hedge obligations. Subject to certain obligations the Company has in connection with the PhaRMA Notes, it has the right to terminate the currency hedge arrangement with respect to the 2016 through 2020 period by giving notice to the counterparty prior to May 18, 2014 and payment of a \$2.0 million termination fee.

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**Report of Independent Registered Public Accounting Firm on Financial Statements**

The Board of Directors and Stockholders  
BioCryst Pharmaceuticals, Inc.

We have audited the accompanying balance sheets of BioCryst Pharmaceuticals, Inc. as of December 31, 2010 and 2009, and the related statements of operations, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2010. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of BioCryst Pharmaceuticals, Inc. at December 31, 2010 and 2009, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2010, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), BioCryst Pharmaceuticals, Inc.'s internal control over financial reporting as of December 31, 2010, based on criteria established in *Internal Control-Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 15, 2011 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Birmingham, Alabama  
March 15, 2011

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**Report of Independent Registered Public Accounting Firm on Internal Control**

The Board of Directors and Stockholders  
BioCryst Pharmaceuticals, Inc.

We have audited BioCryst Pharmaceuticals, Inc.'s internal control over financial reporting as of December 31, 2010, based on criteria established in *Internal Control-Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). BioCryst Pharmaceuticals, Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

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

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

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

In our opinion, BioCryst Pharmaceuticals, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2010, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the balance sheets of BioCryst Pharmaceuticals, Inc. as of December 31, 2010 and 2009, and the related statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2010 of BioCryst Pharmaceuticals, Inc. and our report dated March 15, 2011 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Birmingham, Alabama  
March 15, 2011

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

None.

**ITEM 9A. *CONTROLS AND PROCEDURES***

**Evaluation of Disclosure Controls and Procedures**

We maintain a set of disclosure controls and procedures that are designed to ensure that information relating to BioCryst Pharmaceuticals, Inc. required to be disclosed in our periodic filings under the Securities Exchange Act of 1934, as amended (the Exchange Act), is recorded, processed, summarized and reported in a timely manner under the Exchange Act of 1934. We carried out an evaluation as required by paragraph (b) of Rule 13a-15 or Rule 15d-15 under the Exchange Act, under the supervision and with the participation of management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) or Rule 15d-15 under the Exchange Act). Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of December 31, 2010, our disclosure controls and procedures are effective. We believe that our disclosure controls and procedures will ensure that information required to be disclosed in the reports filed or submitted by us under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission, and include controls and procedures designed to ensure that information required to be disclosed by us in such reports is accumulated and communicated to our management, including our Chairman and Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

**Management's Report on Internal Control Over Financial Reporting**

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

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

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

In connection with the preparation of our annual financial statements, management has undertaken an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2010, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO Framework). Management’s assessment included an evaluation of the design of our internal control over financial reporting and testing of the operational effectiveness of those controls.

Based on this assessment, management has concluded that as of December 31, 2010, our internal control over financial reporting was effective. Management believes our internal control over financial reporting will

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provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles.

Ernst & Young LLP, the independent registered public accounting firm that audited our financial statements included in this report, has issued an attestation report on the Company's internal control over financial reporting, a copy of which appears on page 83 of this annual report.

**Changes in Internal Control over Financial Reporting**

There have been no changes in our internal control over financial reporting that occurred during the quarter ended December 31, 2010 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**ITEM 9B. OTHER INFORMATION**

See *Item 1. Business Recent Corporate Highlights Peramivir* and *Item 1 Business Our Principal Products Peramivir Collaborations* in Part I of this Form 10-K for information regarding the Company's \$30.0 million financing transaction completed on March 9, 2011 and the agreements entered into in connection therewith, which disclosures are incorporated in this Item 9B by reference.

**PART III**

**ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

The information required by this item is set forth under the captions *Items to be Voted on 1. Election of Directors, Executive Officers, Section 16(a) Beneficial Ownership Reporting Compliance* and *Corporate Governance* in our definitive Proxy Statement for the 2011 Annual Meeting of Stockholders and incorporated herein by reference.

**ITEM 11. EXECUTIVE COMPENSATION**

The information required by this item is set forth under the captions *Compensation Discussion and Analysis, Summary Compensation Table, Grants of Plan-Based Awards in 2010, Outstanding Equity Awards at December 31, 2010, 2010 Option Exercises and Stock Vested, Potential Payments Upon Termination or Change in Control, Director Compensation, Compensation Committee Interlocks and Insider Participation* and *Compensation Committee Report* in our definitive Proxy Statement for the 2011 Annual Meeting of Stockholders and incorporated herein by reference.

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

The information required by this item is set forth under the captions *Equity Compensation Plan Information* and *Security Ownership of Certain Beneficial Owners and Management* in our definitive Proxy Statement for the 2011 Annual Meeting of Stockholders and incorporated herein by reference.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

The information required by this item is set forth under the captions *Certain Relationships and Related Transactions* and *Corporate Governance* in our definitive Proxy Statement for the 2011 Annual Meeting of Stockholders and incorporated herein by reference.

**ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES**

The information required by this item is set forth under the caption *Items to be Voted on Ratification of Appointment of Independent Registered Public Accountants* in our definitive Proxy Statement for the 2011 Annual Meeting of Stockholders and incorporated herein by reference.



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**PART IV**

**ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES**

(a) *Financial Statements*

The following financial statements appear in Item 8 of this Form 10-K:

|  | <b>Page in<br/>Form 10-K</b> |
|--|------------------------------|
| <u>Balance Sheets at December 31, 2010 and 2009</u>  | 58                           |
| <u>Statements of Operations for the years ended December 31, 2010, 2009 and 2008</u>           | 59                           |
| <u>Statements of Stockholders' Equity for the years ended December 31, 2010, 2009 and 2008</u> | 60                           |
| <u>Statements of Cash Flows for the years ended December 31, 2010, 2009 and 2008</u>           | 61                           |
| <u>Notes to Financial Statements</u>   | 62                           |
| <u>Report of Independent Registered Public Accounting Firm on Financial Statements</u>         | 82                           |
| <u>Report of Independent Registered Public Accounting Firm on Internal Control</u>             | 83                           |

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

(b) *Exhibits.* See Index of Exhibits.

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**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on March 15, 2011.

BIOCRYST PHARMACEUTICALS, INC.

By: /s/ Jon P. Stonehouse

Jon P. Stonehouse  
*Chief Executive Officer*

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on March 15, 2011:

| <b>Signature</b>   | <b>Title(s)</b>  |
|--|--|
| /s/ Jon P. Stonehouse<br>(Jon P. Stonehouse)               | President, Chief Executive Officer and Director<br>(Principal Executive Officer) |
| /s/ Stuart Grant<br>(Stuart Grant)                         | Senior Vice President, Chief Financial Officer and Treasurer                     |
| /s/ Robert S. Lowrey<br>(Robert S. Lowrey)                 | Controller and Principal Accounting Officer                                      |
| /s/ Stephen R. Biggar<br>(Stephen R. Biggar, M.D., Ph.D.)  | Director   |
| /s/ Stanley C. Erck<br>(Stanley C. Erck)                   | Director   |
| /s/ William W. Featheringill<br>(William W. Featheringill) | Director   |
| /s/ John L. Higgins<br>(John L. Higgins)                   | Director   |
| /s/ Zola P. Horovitz<br>(Zola P. Horovitz, Ph.D.)          | Director   |

/s/ Charles A. Sanders

Director

(Charles A. Sanders, M.D.)

/s/ Beth C. Seidenberg

Director

(Beth C. Seidenberg, M.D.)

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| <b>Number</b> | <b>Description</b>  |
|---------------|---|
| 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           | Certificate of Increase of Authorized Number of Shares of Series B Junior Participating Preferred Stock. Incorporated by reference to Exhibit 3.1 to the Company's Form 8-K filed November 4, 2008.   |
| 3.4           | Amended and Restated Bylaws of Registrant effective October 29, 2008. Incorporated by reference to Exhibit 3.2 to the Company's Form 8-K filed November 4, 2008.  |
| 4.1           | Rights Agreement, dated as of June 17, 2002, by and between the Company and American Stock Transfer & Trust Company, as Rights Agent, which includes the Certificate of Designation for the Series B Junior Participating Preferred Stock as Exhibit A and the form of Rights Certificate as Exhibit B. Incorporated by reference to Exhibit 4.1 to the Company's Form 8-A filed June 17, 2002. |
| 4.2           | Amendment to Rights Agreement, dated as of August 5, 2007. Incorporated by reference to Exhibit 4.2 of the Company's Form 10-Q filed August 9, 2007.  |
| 10.1&         | Stock Incentive Plan, as amended and restated effective March 31, 2010. Incorporated by reference to Appendix A to the Company's Definitive Proxy Statement, filed April 6, 2010.   |
| 10.2&         | Employee Stock Purchase Plan, as amended and restated effective March 31, 2010. Incorporated by reference to Appendix B to the Company's Definitive Proxy Statement, filed April 6, 2010.   |
| 10.3&         | Form of Notice of Grant of Non-Employee Director Automatic Stock Option and Stock Option Agreement. Incorporated by reference to Exhibit 10.4 of the Company's Form 10-K filed March 4, 2008.   |
| 10.4&         | Form of Notice of Grant of Stock Option and Stock Option Agreement. Incorporated by reference to Exhibit 10.5 of the Company's Form 10-K filed March 4, 2008.   |
| 10.5&         | Annual Incentive Plan. Incorporated by reference to Exhibit 10.1 of the Company's Form 10-K filed March 4, 2008.  |
| 10.6&         | Executive Relocation Policy. Incorporated by reference to Exhibit 10.2 of the Company's Form 10-K filed March 4, 2008.  |
| 10.7&         | Amended and Restated Employment Letter Agreement dated February 14, 2007, by and between the Company and Jon P. Stonehouse. Incorporated by reference to Exhibit 10.12 to the Company's Form 10-K for the year ended December 31, 2006, filed March 14, 2007.   |
| 10.8&         | Employment letter agreement between BioCryst Pharmaceuticals, Inc. and Stuart Grant dated July 23, 2007. Incorporated by reference to Exhibit 10.1 of the Company's Form 8-K filed July 26, 2007.   |
| 10.9&         | Amendment to Employment Letter Agreement for Stuart Grant Dated July 23, 2007. Incorporated by reference to Exhibit 10.3 of the Company's Form 10-K filed March 4, 2008.  |
| 10.10&        | Retention Bonus Agreement between BioCryst Pharmaceuticals, Inc. and Stuart Grant dated May 21, 2008. Incorporated by reference to Exhibit 10.25 of the Company's Form 10-Q filed August 8, 2008.   |
| 10.11&        | Employment Letter Agreement between BioCryst Pharmaceuticals, Inc. and William P. Sheridan dated June 12, 2008. Incorporated by reference to Exhibit 10.27 of the Company's Form 10-Q filed August 8, 2008.   |
| (10.12)&      | Employment Letter Agreement between BioCryst Pharmaceuticals, Inc. and Peter L. McCullough dated December 11, 2009.   |
| 10.13&        |   |

Employment Letter Agreement dated April 2, 2007, by and between the Company and David McCullough. Incorporated by reference to Exhibit 10.5 to the Company's Form 10-Q filed May 10, 2007.

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| <b>Number</b> | <b>Description</b>   |
|---------------|--|
| 10.14&        | Retention Bonus Agreement between BioCryst Pharmaceuticals, Inc. and David McCullough dated May 21, 2008. Incorporated by reference to Exhibit 10.26 of the Company's Form 10-Q filed August 8, 2008.  |
| 10.15&        | Consulting Agreement between BioCryst Pharmaceuticals, Inc. and J. Claude Bennett, M.D. dated June 13, 2008. Incorporated by reference to Exhibit 10.28 of the Company's Form 10-Q filed August 8, 2008.   |
| 10.16#        | Agreement dated January 3, 2007, between BioCryst Pharmaceuticals, Inc. and the Department of Health and Human Services, as amended by Amendment number 1 dated January 3, 2007 and Amendment number 2 dated May 11, 2007. (Portions omitted pursuant to request for confidential treatment.) Incorporated by reference to Exhibit 10.3 to the Company's Form 10-Q filed August 9, 2007. |
| 10.17         | Amendment #3 to the Agreement between BioCryst Pharmaceuticals, Inc. and the Department of Health and Human Services, dated October 2, 2007. Incorporated by reference to Exhibit 10.6 of the Company's Form 10-K filed March 4, 2008.   |
| 10.18         | Amendment #4 to the Agreement between BioCryst Pharmaceuticals, Inc. and the Department of Health and Human Services dated April 3, 2008. Incorporated by reference to Exhibit 10.29 of the Company's Form 10-Q filed August 8, 2008.  |
| 10.19         | Amendment #5 to the Agreement between BioCryst Pharmaceuticals, Inc. and the Department of Health and Human Services dated July 2, 2008. Incorporated by reference to Exhibit 10.30 of the Company's Form 10-Q filed August 8, 2008.   |
| 10.20         | Amendment #6 to the Agreement between BioCryst Pharmaceuticals, Inc. and the Department of Health and Human Services dated August 18, 2008. Incorporated by reference to Exhibit 10.1 of the Company's Form 8-K filed November 7, 2008.  |
| 10.21         | Amendment #7 to the Agreement between BioCryst Pharmaceuticals, Inc. and the Department of Health and Human Services dated November 17, 2008. Incorporated by reference to Exhibit 10.12 of the Company's Form 10-K filed March 6, 2009.   |
| 10.22         | Amendment #8 to the Agreement between BioCryst Pharmaceuticals, Inc. and the Department of Health and Human Services dated March 13, 2009. Incorporated by reference to Exhibit 10.13 of the Company's Form 10-K filed March 9, 2010.  |
| 10.23         | Amendment #9 to the Agreement between BioCryst Pharmaceuticals, Inc. and the Department of Health and Human Services dated September 18, 2009. Incorporated by reference to Exhibit 10.1 of the Company's Form 10-Q filed November 6, 2009.  |
| 10.24         | Amendment #10 to the Agreement between the Company and the U.S. Department of Health & Human Services, dated October 15, 2009. Incorporated by reference to Exhibit 10.2 of the Company's Form 10-Q filed November 6, 2009.  |
| (10.25)       | Amendment #11 to the Agreement between the Company and the U.S. Department of Health & Human Services, effective February 23, 2011.  |
| 10.26         | Order for Supplies or Services from the U.S. Department of Health & Human Services, dated November 4, 2009. Incorporated by reference to Exhibit 10.16 of the Company's Form 10-K filed March 9, 2010.   |
| 10.27#        | License, Development and Commercialization Agreement dated as of February 28, 2007, by and between the Company and Shionogi & Co., Ltd. Incorporated by reference to Exhibit 10.4 to the Company's Form 10-Q filed May 10, 2007. (Portions omitted pursuant to request for confidential treatment.)  |
| 10.28#        | First Amendment to License, Development and Commercialization Agreement, effective as of September 30, 2008, between the Company and Shionogi & Co., Ltd. Incorporated by reference to   |

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Exhibit 10.19 to the Company's Form 10-K filed March 6, 2009. (Portions omitted pursuant to request for confidential treatment.)

- 10.29 Warehouse Lease dated July 12, 2000 between RBP, LLC an Alabama Limited Liability Company and the Registrant for office/warehouse space. Incorporated by reference to Exhibit 10.8 to the Company's Form 10-Q for the second quarter ending June 30, 2000 filed August 8, 2000.

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| <b>Number</b> | <b>Description</b>   |
|---------------|--|
| 10.30         | Third Amendment to Lease Agreement dated August 7, 2007, by and between Riverchase Capital LLC, a Florida limited liability company, Stow Riverchase, LLC, a Florida limited liability company, as successor landlord to RBP, LLC and the Company. Incorporated by reference to Exhibit 10.4 of the Company's Form 10-Q filed August 9, 2007.  |
| 10.31         | 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 Exhibit 4.1 of the Company's Form 8-K filed August 7, 2007.   |
| 10.32         | Stock Purchase Agreement, dated as of February 17, 2005, by and among BioCryst Pharmaceuticals, Inc., Baker Bros. Investments, L.P., Baker Biotech Fund II, L.P., Baker Bros. Investments II, L.P., Baker Biotech Fund II (Z), L.P., Baker/Tisch Investments, L.P., Baker Biotech Fund III, L.P., Baker Biotech Fund I, L.P., Baker Biotech Fund III (Z), L.P. and 14159, L.P. Incorporated by reference to Exhibit 4.1 to the Company's Form 8-K filed February 17, 2005. |
| 10.33#        | Development and License Agreement dated as of February 1, 2006, by and between BioCryst Pharmaceuticals, Inc. and Mundipharma International Holdings Limited. Incorporated by reference to Exhibit 10.2 to the Company's Form 8-K/A filed May 2, 2006. (Portions omitted pursuant to request for confidential treatment.)  |
| 10.34#        | License Agreement dated as of June 27, 2000, by and among Albert Einstein College of Medicine, Industrial Research, Ltd. and BioCryst Pharmaceuticals, Inc., as amended by the First Amendment Agreement dated as of July 26, 2002 and the Second Amendment Agreement dated as of April 15, 2005. Incorporated by reference to Exhibit 10.1 to the Company's Form 8-K filed November 30, 2005. (Portions omitted pursuant to request for confidential treatment.)          |
| 10.35#        | Third Amendment Agreement by and among Albert Einstein College of Medicine, Industrial Research, Ltd. and BioCryst Pharmaceuticals, Inc., dated as of December 11, 2009. Incorporated by reference to Exhibit 10.33 to the Company's Form 10-K filed March 9, 2010. (Portions omitted pursuant to request for confidential treatment.)   |
| 10.36#        | Fourth Amendment Agreement by and among Albert Einstein College of Medicine, Industrial Research, Ltd. and BioCryst Pharmaceuticals, Inc., dated as of May 5, 2010. Incorporated by reference to Exhibit 10.1 to the Company's Form 10-Q filed August 6, 2010. (Portions omitted pursuant to request for confidential treatment.)  |
| 10.37         | Stock Purchase Agreement, dated as of December 14, 2005, by and among BioCryst Pharmaceuticals, Inc., Kleiner Perkins Caufield & Byers, Texas Pacific Group Ventures and KPTV, LLC. Incorporated by reference to Exhibit 4.1 to the Company's Form 8-K filed December 16, 2005.  |
| 10.38         | Nomination and Observer Agreement, dated as of December 16, 2005, by and between BioCryst Pharmaceuticals, Inc. and Kleiner Perkins Caufield & Byers. Incorporated by reference to Exhibit 4.2 to the Company's Form 8-K filed December 16, 2005.  |
| (23)          | Consent of Ernst & Young, LLP, Independent Registered Public Accounting Firm.  |
| (31.1)        | Certification of the Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.  |
| (31.2)        | Certification of the Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.  |
| (32.1)        | Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.  |
| (32.2)        | Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.  |



\* Confidential treatment requested.

# Confidential treatment granted.

& Management contracts.

( ) Filed herewith.