SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(D)
OF THE SECURITIES EXCHANGE ACT OF 1934

Date of Report: April 21, 2005

BioCryst Pharmaceuticals, Inc.

(Exact Name of Registrant as Specified in Charter)

Delaware	**000-23186**	**62-1413174**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(IRS Employer Identification #)**

2190 Parkway Lake Drive, Birmingham, Alabama 35244
(Address of Principal Executive Office)

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

Item 2.02. Results of Operations and Financial Condition:

On April 21, 2005, the Company issued a news release announcing its financial results for the quarter ended March 31, 2005, which also referenced a conference call to discuss these results and provide an update on the status of the Company's programs. A copy of the news release is furnished as exhibit 99.1 hereto and is incorporated by reference into Item 9.01 of Form 8-K.

Item 9.01. Financial Statements and Exhibits:

Exhibit No.	Description
99.1	Press release dated April 21, 2005 entitled "BioCryst Reports First Quarter 2005 Financial Results"

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: April 21, 2005

BIOCRYST PHARMACEUTICALS, INC.

By: /s/ MICHAEL A. DARWIN

Michael A. Darwin
Chief Financial Officer and Chief Accounting Officer

EXHIBIT INDEX

Item	Description
99.1	Press release dated April 21, 2005 entitled “BioCryst Reports First Quarter 2005 Financial Results”

Exhibit 99.1

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FOR IMMEDIATE RELEASE

BIOCRYST REPORTS FIRST QUARTER 2005 FINANCIAL RESULTS

Birmingham, Alabama – April 21, 2005 – BioCryst Pharmaceuticals, Inc. (Nasdaq NM: BCRX) today announced financial results for the first quarter ended March 31, 2005. The Company reported revenues of $41,000 in the first quarter of 2005, compared to $0 in the first quarter of 2004. The net loss for the quarter ended March 31, 2005 was $5,645,000, or $0.24 per share, compared to a net loss of $5,462,000, or $0.28 per share, for the same period last year. As of March 31, 2005, the Company had cash, cash equivalents and investments of $45.9 million.

First Quarter 2005 Financial Results

Collaborative and other research and development revenues increased in the first quarter of 2005 to $41,000 compared to $0 in the same period last year due to revenue from the National Institutes of Health related to an existing SBIR grant for support of our hepatitis C program. Our interest income was $185,000 in the first quarter of 2005 as compared to $181,000 in the first quarter of 2004.

Research and development expenses increased 3.9% to $5,175,000 in the three months ended March 31, 2005 from $4,983,000 in the three months ended March 31, 2004. The increase is primarily attributable to increased expenses related to the clinical trials for our lead drug candidates, forodesine hydrochloride (trade named Fodosine™) and BCX-4208. These increases were partially offset by a decrease in preclinical testing related to BCX-4208 incurred in 2004 prior to its clinical development. General and administrative expenses for the three months ended March 31, 2005 were $696,000 as compared to $660,000 for the same period in 2004.

Pipeline Highlights

Our two lead product candidates made good progress this quarter, and we could potentially have a pivotal phase II trial starting before year-end," said Charles E. Bugg, Chairman and Chief Executive Officer of BioCryst. "We had a constructive meeting with the FDA in late March to review current results from our ongoing Phase IIa clinical trial with Fodosine™ in T-cell leukemia patients, and to discuss our proposed design for the Phase IIb clinical trial, which we expect to initiate later this year. Based on our meeting, we are developing the protocol for a pivotal Phase IIb trial using both intravenous and oral formulations of Fodosine™ for treatment of relapsed and refractory T-cell leukemia patients, and we plan to conduct the trial under a Special Protocol Assessment from the FDA."

Dr. Bugg added, "During the first quarter we also completed a large Phase I trial with BCX-4208, our second-generation PNP inhibitor being developed for treatment of patients with T-cell mediated autoimmune diseases. Based on the positive results of the first trial, we next plan to complete a multi-dose Phase I trial in healthy volunteers during the second quarter. Assuming that trial is also successful, we expect to initiate a Phase II clinical trial in psoriasis patients during the second half of this year."

Conference Call

The Company will sponsor a conference call at 10:00 am ET on Thursday, April 21, 2005 to discuss the financial results and the status of each of our programs in more detail. This call is open to the public and can be accessed live either over the Internet from our investor relations website at www.biocryst.com or by dialing 1-888-208-1814, and providing the passcode number 6428936.

About BioCryst

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

BioCryst's lead product candidate, Fodosine™, an inhibitor of purine nucleoside phosphorylase (PNP), is currently in a Phase IIa trial for patients with T-cell malignancies and a Phase I trial with an oral formulation of Fodosine™ in CTCL. In addition, BioCryst plans to initiate a Phase I/II trial for B-cell acute lymphoblastic leukemia during the first half of 2005. Fodosine™ has been granted Orphan Drug status by the U.S. Food and Drug Administration for three indications: T-cell non-Hodgkin's lymphoma, including cutaneous T-cell lymphoma; chronic lymphocytic leukemia (CLL) and related leukemias including prolymphocytic leukemia, adult T-cell leukemia, and hairy cell leukemia; and for treatment of acute lymphoblastic leukemia (ALL). A Phase I study with BioCryst's second-generation PNP inhibitor, BCX-4208, was recently completed in healthy volunteers. A Phase I multi-dose study with BCX-4208 will follow, with the goal of initiating a Phase II study during 2005 in patients with psoriasis. In addition, BioCryst has other enzyme targets in drug discovery including hepatitis C polymerase and tissue factor/factor VIIa. For more information about BioCryst, please visit the company's web site at www.biocryst.com.

Forward-looking statements

These statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Some of the factors that could affect the forward-looking statements contained herein include that we may not be able to enroll the required number of subjects in clinical trials of Fodosine™ or BCX-4208, that each of the Phase IIa trial for patients with T-cell malignancies, Phase I trial of BCX-4208 and the Phase I trial of Fodosine™ for treatment of patients with cutaneous T-cell lymphoma may not be successfully completed, that BioCryst may not commence as expected additional trials with Fodosine™ and with BCX-4208, that Fodosine™, BCX-4208, or any of our other product candidates may not receive required regulatory clearances from the FDA, that Phase IIa clinical trials of Fodosine™ may not show the drug is effective over the 6-week period, that ongoing and future clinical trials will have positive results, that we may not be able to obtain a Special Protocol Assessment or otherwise be able to complete successfully the Phase IIb trial that is currently planned to be pivotal, that we may not be able to continue future development of Fodosine™, BCX-4208 or any of our other current development programs including tissue factor/factor VIIa and hepatitis C polymerase, that Fodosine™, BCX-4208 or our other development programs may never result in future product, license or royalty payments being received by BioCryst, that BioCryst may not have sufficient cash to continue funding the development, manufacturing, marketing or distribution of its products and that additional funding, if necessary, may not be available at all or on terms acceptable to BioCryst. Please refer to the documents BioCryst files periodically with the Securities and Exchange Commission, specifically BioCryst's most recent Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and current reports on Form 8-K, which identify important factors that could cause the actual results to differ materially from those contained in the projections or forward-looking statements.

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BIOCRYST PHARMACEUTICALS, INC.
FINANCIAL SUMMARY

Condensed Statements of Operations (unaudited)
(in thousands, except per share)

	Three Months Ended March 31,	
	2005	**2004**
Revenues:		
Collaborative and other research and development	$ 41	$ 0
Total revenues	41	0
Expenses:		
Research and development	5,175	4,983
General and administrative	696	660
Total expenses	5,871	5,643
Loss from operations	(5,830)	(5,643)
Interest and other income, net	185	181
Net loss	$ (5,645)	$ (5,462)
Amounts per common share:		
Net loss per share	$ (0.24)	$ (0.28)
Weighted average shares outstanding	23,620	19,587

Balance Sheet Data (in thousands)

	March 31, 2005	**December 31, 2004**
	(Unaudited)	**(Audited)**
Cash, cash equivalents and securities	$ 45,926	$ 28,704
Total assets	49,489	32,469
Accumulated deficit	(131,409)	(125,764)
Stockholders' equity	46,506	29,334