UNITED STATES
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 (Date of earliest event reported): September 18, 2009

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 No.)*

2190 Parkway Lake Drive, Birmingham, Alabama	**35244**
(Address of Principal Executive Offices)	*(Zip Code)*

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

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2 below):

- o Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- o Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- o Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 210.14d-2(b))
- o Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 1.01 Entry into a Material Definitive Agreement

On September 18, 2009, BioCryst Pharmaceuticals, Inc. (the "Company") entered into a contract modification with the U.S. Department of Health & Human Services (HHS) to advance the development of intravenous (i.v.) peramivir. The modification increases the award under the original contract by $77.2 million for a total of $179.9 million and extends the term of the contract by 12 months for a total term of five years.

Item 7.01 Regulation FD Disclosure

On September 21, 2009, the Company issued a news release with respect to the modification. The news release is furnished as Exhibit 99.1 hereto and is incorporated by reference.

The information furnished is not deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, is not subject to the liabilities of that section and is not deemed incorporated by reference in any filing under the Securities Act of 1933, as amended.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
99.1	Press release dated September 21, 2009 entitled "BioCryst Awarded Additional $77.2 million by the U.S. Department of Health & Human Services to Develop Peramivir for Influenza."

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: September 23, 2009

BioCryst Pharmaceuticals, Inc.

By: /s/ Alane Barnes
Alane Barnes
General Counsel, Corporate Secretary

EXHIBIT INDEX

Exhibit No.	Description
99.1	Press release dated September 21, 2009 entitled "BioCryst Awarded Additional $77.2 million by the U.S. Department of Health & Human Services to Develop Peramivir for Influenza."

Exhibit 99.1

BIOCRYST AWARDED ADDITIONAL $77.2 MILLION BY THE U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES TO DEVELOP PERAMIVIR FOR INFLUENZA

• Contract modification extends term by one year and increases total U.S. government award to develop peramivir to $180 million

Birmingham, Alabama — September 21, 2009 — BioCryst Pharmaceuticals, Inc. (NASDAQ: BCRX) today announced that it has been awarded a $77.2 million contract modification by the U.S. Department of Health & Human Services (HHS) to complete Phase 3 development of its influenza neuraminidase inhibitor, intravenous (i.v.) peramivir, for the treatment of complicated influenza.

“We are very excited to continue working with the U.S. government to advance the development of peramivir,” said Jon P. Stonehouse, President and Chief Executive Officer, BioCryst Pharmaceuticals. “Peramivir is being developed with HHS to treat seriously ill and hospitalized patients, with the goal of saving lives. This contract modification supports peramivir’s Phase 3 clinical development with the aim of gaining U.S. regulatory approval.”

“There are currently no anti-viral drugs approved to treat seriously ill patients with influenza who need hospital care,” said Dr. William P. Sheridan, Chief Medical Officer at BioCryst. “BioCryst is committed to working with the U.S. government to advance the development of peramivir to address unmet medical needs for an intravenous treatment for influenza. We intend to initiate our Phase 3 studies as soon as possible.”

This contract modification brings the total award from HHS for the development of peramivir to $179.9 million and extends the contract term by 12 months to five years. BioCryst was originally awarded a $102.6 million, four-year contract from the HHS to develop peramivir for the treatment of influenza in January 2007. Under the original contract, peramivir was advanced through Phase 2 and the initial steps of Phase 3 development.

Phase 3 Development of peramivir

BioCryst has finalized its plans for Phase 3 studies intended to support U.S. regulatory approval of peramivir for influenza. Expenses for the Phase 3 studies are covered under the modified HHS contract announced today. BioCryst is currently in the process of obtaining the appropriate Health Authority and IRB/Ethics Committee approvals and is recruiting investigators for these studies in the U.S. and abroad. BioCryst plans to initiate enrollment of these trials in the upcoming flu season.

Further details regarding these Phase 3 studies are available on the internet at:
http://www.clinicaltrials.gov/ct2/results?term=Peramivir+HHS+Phase+3&recr=Open

About peramivir

Peramivir is an anti-viral agent that was discovered by BioCryst which inhibits the interactions of influenza neuraminidase, an enzyme which is critical to the spread of influenza within a host. In laboratory tests, peramivir has shown activity against pandemic H1N1 swine flu origin viral strains. Peramivir has been studied in patients with complicated and uncomplicated influenza. BioCryst's partner, Shionogi & Co., Ltd. is currently preparing to file for regulatory approval in Japan this year.

About Influenza

Influenza (the flu) is a contagious respiratory illness caused by influenza viruses. It can cause mild to severe illness, and at times can lead to death. According to the U.S. Centers for Disease Control & Prevention, on average 5 to 20 percent of the population gets the flu in the U.S.; more than 200,000 people are hospitalized from flu complications and about 36,000 people die from flu-related causes.

More information is available at:
http://www.cdc.gov/flu/
http://www.hhs.gov/pandemicflu/plan/pdf/HHSPandemicInfluenzaPlan.pdf

About BioCryst

BioCryst Pharmaceuticals designs, optimizes and develops novel small-molecule pharmaceuticals that block key enzymes involved in infectious diseases, cancer, and inflammatory diseases. BioCryst has discovered and progressed two novel compounds into late-stage pivotal clinical trials; peramivir, an anti-viral for influenza, and forodesine, a purine nucleoside phosphorylase (PNP) inhibitor for cutaneous T-cell lymphoma (CTCL). Utilizing crystallography and structure-based drug design, BioCryst continues to discover additional compounds and to progress others through pre-clinical and early development to address the unmet medical needs of patients and physicians. The Company's strategic alliances with the U.S. Department of Health and Human Services, Shionogi & Co., Ltd., Green Cross Corporation and Mundipharma International Holdings Limited validate its scientific foundation and the utility of its product candidates. For more information, please visit the Company's Web site at www.biocryst.com.

Forward-Looking Statements

This press release contains forward-looking statements, including statements regarding future results, performance or achievements. 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 peramivir may not receive emergency use authorization; that the U.S. government and ex-U.S. governments may choose not to issue a request for peramivir to treat influenza or such requests, if any, may not result in an order or such order, if any, may not be profitable for BioCryst; that to the extent peramivir is used as a treatment for H1N1 flu (or other strains of flu), there can be no assurance that it will prove effective; that HHS may further condition, reduce or eliminate future funding of the peramivir program; that ongoing peramivir clinical trials or our peramivir program in general may not be successful; that BioCryst or its licensees may not commence as expected additional human clinical trials with our product candidates; that our product candidates may not receive required regulatory clearances from the FDA; that ongoing and future pre-clinical and clinical development may not have positive results; that we or our licensees may not be able to continue future development of our current and future development programs; that our development programs and partnerships may never result in future product, license or royalty payments being received by BioCryst; that BioCryst may not be able to retain its current pharmaceutical and biotechnology partners for further development of its product candidates or it may not reach favorable agreements with potential pharmaceutical and biotechnology partners for further development of its product candidates; that our actual cash burn rate may not be consistent with our expectations; 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, most recent Registration Statement on Form S-3 (filed November 28, 2008), Quarterly Reports on Form 10-Q, and current reports on Form 8-K, all of which identify important factors that could cause the actual results to differ materially from those contained in our projections and forward-looking statements.

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