Confidential Treatment Requested by BioCryst Pharmaceuticals, Inc.

FOIA Confidential Treatment Request

September 9, 2010

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Client: C 12412-00001

VIA EDGAR

Mr. Jim Rosenberg Division of Corporation Finance United States Securities and Exchange Commission 100 F Street, NE Washington, D.C. 20549

Re: BioCryst Pharmaceuticals, Inc.

Form 10-K for the year ended December 31, 2009

Filed March 9, 2010

Definitive Proxy Statement on Schedule 14A

Filed April 6, 2010 File No. 000-23186

Dear Jim:

On behalf of BioCryst Pharmaceuticals, Inc. (the "Company") this responds to your letter of August 25, 2010 with respect to the above-referenced filings. For ease of reference, the numbered paragraphs below correspond to the numbered comments in your letter, with your comments presented in bold followed by the related response.

Pursuant to 17 C.F.R. § 200.83, the Company is requesting confidential treatment for portions of the response to comment 4. The Company requests that these portions, as indicated by [***], be maintained in confidence, not be made part of any public record and not be disclosed to any person as they contain confidential information, disclosure of which would cause the Company competitive harm. In the event that the Staff receives a request for access to the confidential portions herein, whether pursuant to the Freedom of Information Act ("FOIA") or otherwise, the Company respectfully requests that it be notified immediately so that it may further substantiate this request for confidential treatment. Please address any notification of a request for access to such documents to the office of the General Counsel at the Company.

Form 10-K for the year ended December 31, 2009

Management's Discussion and Analysis of Financial Condition and Results of Operations 2009 Corporate Highlights Peramivir, page 40

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1. Refer to your disclosure that "We have determined that there is an excess of up to \$5.0 million of peramivir active pharmaceutical ingredient ("API") manufactured under the contract with HHS. This excess API is beyond the amount necessary to support U.S. regulatory approval...We are evaluating whether additional quantities of peramivir API are needed by the Company, and if so, the acquisition process to obtain the API from HHS." Please provide us proposed disclosure to include in your September 30, 2010 Form 10-Q that provides a chronology and description of events leading up to and subsequent to your determination of the excess. Also include in the proposed disclosure the effects and expected effects of the excess on your results of operations and financial position, and clarify why you are evaluating whether additional quantities are needed if there is an excess. Finally, include in the proposed disclosure how you have accounted for the excess in your financial statements.

In its Annual Report on Form 10-K for the year ended December 31, 2009, the Company described its contract with the Department of Health and Human Services ("HHS") as follows: In January 2007, the Company was awarded a contract from HHS for the advanced development of its influenza neuraminidase inhibitor, peramivir, for the treatment of seasonal and life-threatening influenza. The contract was awarded at an amount of \$102.6 million to support manufacturing, process validation, clinical studies, and other development activities for peramivir. In September 2009, the contract was modified to award the Company an additional \$77.2 million in order to perform Phase 3 studies and other development activities for intravenous peramivir. The Company's advanced development contract with HHS is 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.

To address the Staff's question regarding the issue of excess API manufactured under the contract with HHS, the Company plans to provide the following disclosure in its Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2010:

"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 its accounting practices, the Company recorded all costs associated with this validation process as R&D expenses in its Statements of Operations. Simultaneously, revenue from the HHS contract was also recorded in the Company's Statement of Operations. HHS subsequently reimbursed the Company for these costs and upon reimbursement from HHS, the associated peramivir API became property of the U.S. government.

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Under the terms of the contract, if the Company determines the amount of API produced under the contract is in excess of what is necessary to complete the contract, the Company can acquire any excess peramivir API at cost to use for its own purposes. The Company believes 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, the Company determined that there was an excess of up to \$5.0 million of peramivir API manufactured under this validation process. HHS is reviewing the Company's estimate calculation, but has acknowledged that at least half of the amount in the Company's estimate is indeed excess to the requirements of the HHS contract. The Company is evaluating whether any of the excess peramivir API will be needed by the Company to support other contracts, partners, or activities, and if so, the acquisition process to obtain the excess API from HHS. Acquisition of a portion or all of the excess peramivir API from HHS will impact the Company's financial statements."

Schedule 14A filed April 6, 2010

2. We note that you have not included any disclosure in response to Item 402(s) of Regulation S-K. Please advise us of the basis for your conclusion that disclosure is not necessary and describe the process you undertook to reach that conclusion.

During the Company's proxy preparation process in the first quarter of 2010, management of the Company, together with the Company's compensation consultant and outside counsel and Compensation Committee, examined the Company's compensation program and discussed whether any elements of the program created risks that were reasonably likely to have a material adverse effect on the Company. Following this analysis, management concluded that the elements of the Company's compensation program did not create risks that are reasonably likely to have a material adverse effect on the Company, and therefore that disclosure under Item 402(s) was not required.

In its analysis, management considered a number of factors, including primarily: (1) the total value of the payments made under the Company's compensation program for the prior year and (2) that any corporate actions that would potentially lead to achievement of individual or corporate performance objectives would require approval by the Company's Board of Directors, which provides a check on the ability of any individual to take risks that could have a material adverse effect on the Company in an effort to achieve a certain performance objective.

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Corporate Governance

Board Leadership Structure, page 18

3. We note that the company has chosen to separate the principal executive officer and board chairman positions. Please confirm that in future filings, you will expand your disclosure to discuss why the company believes that this board leadership structure is the most appropriate structure for the company at the time of filing. Please refer to Item 407(h) of Regulation S-K.

The Company confirms that in applicable future filings it will explicitly state why the Company has determined that the leadership structure of the Board is the most appropriate in light of the circumstances that exist at that time.

Compensation Discussion and Analysis

Annual Incentive Compensation, page 24

4. You disclose on page 24 that overall funding for annual incentive compensation is based on your performance against the current year corporate objectives. On page 25, you state that the Committee approved an AIP pool equal to 93% of the target incentive amount. Please provide us proposed disclosure to be included in an amendment to your Form 10-K for the year ended December 31, 2009 to identify the corporate objectives used by the Committee to determine the potential size of the pool allocated for annual incentive compensation. In addition, please discuss how the level of achievement of each corporate objective corresponded to the Committee's determination that the AIP pool would be equal to 93% of the target incentive amount.

The Company omitted disclosure of the corporate objectives used by the Compensation Committee to determine the potential size of the pool allocated for annual incentive compensation because it believes that, based on established case law standards, such objectives constitute confidential commercial information, the disclosure of which would cause competitive harm, and that therefore such objectives would be entitled to confidential treatment. Instruction 4 to Item 402(b) of Regulation S-K provides that registrants are not required to disclose any factors or criteria involving confidential commercial information, the disclosure of which would result in competitive harm for the registrant.

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[*** Redacted***]

The Company will provide additional disclosure in its applicable future filings with respect to the overall nature of the corporate objectives, including more specific examples that would increase the understanding of the objectives without providing competitively sensitive information. The Company will also provide additional disclosure in applicable future filings about the process used by the Compensation Committee to determine the size of the pool for annual incentive compensation.

As an illustration, the Company would propose to disclose the following with respect to the corporate objectives in its 2011 Proxy Statement:

"The corporate objectives established for 2010 were primarily related to the continued progression of both our clinical and non-clinical programs. The corporate objectives fell into three primary categories: (1) clinical development objectives, which constituted a substantial majority of the 2010 corporate objectives and consisted of specific, detailed goals with respect to the advancement of the Company's clinical programs; (2) licensing and financing objectives, which related to potential partnering, licensing and other alliance relationships related to the Company's current product candidates and the development of new product candidates, as well as management of the Company's cash position and expenses; and (3) early stage project objectives, which related to the development of various specific early-stage product candidates."

- 5. We note that the NEOs achieved 2009 bonus payments based on the achievement of corporate objectives and individual objectives. Your Compensation Discussion and Analysis does not disclose the corporate nor individual objectives used to determine these executive officers' annual performance-based bonus. Please provide us proposed disclosure to be included in an amendment to your Form 10-K for the year ended December 31, 2009 to provide the following:
 - The corporate and individual performance objectives;
 - The portion of the bonus attributable to the achievement of corporate objectives and individual objectives; and
 - A discussion of how the level of achievement of each objective affected the actual bonuses to be paid.

To the extent that the objectives are quantitative, the discussion should also be quantitative. Please also disclose the level of achievement of these objectives.

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As discussed in the response to comment 4 with respect to corporate objectives, the Company omitted disclosure of the corporate objectives used by the Committee because it believes that, based on established case law standards, such objectives constitute confidential commercial information, the disclosure of which would cause competitive harm, and that therefore such objectives would be entitled to confidential treatment. The Company disclosed in the Proxy Statement that the individual objectives were prepared in conjunction with the corporate objectives and were designed to promote the execution of the corporate objectives. Because the individual objectives are of a similar nature as the corporate objectives, the Company believes that the individual objectives constitute confidential commercial information and that disclosure of the individual objectives would cause the Company competitive harm, for the same reasons detailed in the response to comment 4. It therefore believes that disclosure of the individual objectives would result in substantial competitive harm to the Company and that they are therefore not required to be disclosed.

The Company will provide additional disclosure in its applicable future filings with respect to the overall nature of the corporate and individual objectives, including more specific examples that would increase the understanding of the objectives without providing competitively sensitive information.

With respect to the portion of the bonus attributable to the achievement of corporate and individual objectives for 2009, the Company disclosed in the Proxy Statement that the corporate objectives are used to determine the overall funding for the AIP pool, and that the allocation of the pool is determined based on the achievement of the individual objectives. The Company will clarify in applicable future filings the way the corporate objectives and individual objectives work together to result in a final bonus determination. For 2009, the corporate objectives essentially acted as a multiplier applied to the achievement of the individual objectives (as an example, if an executive achieved 95% of individual objectives, and the corporate objectives were achieved at 50%, the executive would receive 45% of the target incentive amount). The disclosure of both the amounts awarded under the AIP in 2009 in the Proxy Statement, and the AIP pool equal to 93% of target provided all of the information needed to determine the achievement of each individual's objectives.

As an illustration, the Company would propose to disclose the following with respect to the individual objectives (assuming the named executive officers for 2010 will be the same as those for 2009) and the interaction between the individual objectives and the corporate objectives in its 2011 Proxy Statement:

"The individual objectives established for the named executive officers for 2010 were prepared in conjunction with the corporate objectives and were designed to promote the execution of the corporate objectives. Jon Stonehouse, Chief Executive Officer, is responsible for ensuring that the corporate objectives are fully supported in order to progress

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the Company and his performance rating is that of the Company as a whole. William Sheridan, the Company's Chief Medical Officer, had objectives that consisted of detailed goals related to the advancement of the clinical programs as well as objectives supporting partnering and corporate alliance objectives. Stuart Grant, Chief Financial Officer, had objectives primarily related to support of licensing and other alliance relationships for revenue generating potential as well as objectives related to management of expense budgets for development of clinical and pre-clinical candidates. David McCullough, VP of Strategy, Planning, Commercial and Business Development, had objectives primarily related to licensing and other alliance relationships as well as specific commercial strategy objectives related to early-stage product candidates. Dr. Y.S. Babu, VP of Drug Discovery, had objectives related to the support of partnering and alliance relationships and advancing the early stage product objectives related to various specific early-stage product candidates.

For the 2010 AIP, company performance and individual performance objectives were weighted depending on the individual's level in the organization. For the CEO, the corporate objectives constituted 100% of the bonus opportunity. For all other Section 16 officers VP level and above, corporate objectives constituted 75% of the bonus opportunity and individual objectives constituted 25% of the bonus opportunity. For 2010, once company and individual performance are assessed against the relevant objectives, the overall annual incentive award is determined for each participant by adding together the achievement of the individual and corporate performance components."

Long-Term Equity Incentive Awards, page 26

6. We note that Messrs. Stonehouse, Grant, and McCullough, as well as Dr. Babu, achieved long-term equity incentive awards in 2009. According to page 26, these awards were based, in part, on a review of the performance of each NEO. Please provide us proposed disclosure to be included in an amendment to your Form 10-K for the year ended December 31, 2009 to identify the material factors that the Compensation Committee considered in awarding these long-term equity incentive awards.

The Company undertakes a single performance evaluation for each named executive officer each year. The results of this performance evaluation are used both to determine (in conjunction with the achievement of the corporate objectives) the payout under the AIP for the prior year performance, and are also used (in conjunction with the consideration of the competitive stock option grant data discussed in the Proxy Statement) to determine the amount of long-term equity incentive awards to be granted to the individual. When the Company referred to "a review of the performance of each NEO" in the Proxy Statement, it was referring to this single performance evaluation, which was detailed in the Company's proxy statement for the prior year. In applicable future filings, the Company will provide

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additional detail to make clear that the grant of awards in the year covered by the proxy statement was made based on the assessment of the individual's performance for the prior year as described in detail in the proxy statement for the prior year, using the same objectives and performance assessments used with respect to annual incentive compensation for that year.

I have conferred with the Company and am authorized to represent and acknowledge on its behalf that:

- the Company is responsible for the adequacy and accuracy of the disclosure in the filing;
- Staff comments or changes to disclosure in response to Staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the Company may not assert Staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

If you have any questions please do not hesitate to contact me at (202) 887-3646.

Sincerely,

/s/ Brian J. Lane

Brian J. Lane

BJL/rez

cc: Alane Barnes, General Counsel, BioCryst Pharmaceuticals, Inc.