

December 15, 2010

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VIA EDGAR

Client: C 12412-00001

Ms. Rose Zukin
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 Ms. Zukin:

On behalf of BioCryst Pharmaceuticals, Inc. (the "Company") this responds to your letter of November 16, 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.

Schedule 14A

- 1. Please refer to your responses to comments 4, 5, and 6 in your response letter. Please note that when we ask you to revise your disclosure, we request that you amend your Form 10-K for the Fiscal Year Ended December 31, 2009 to include the requested disclosure. Accordingly, we will not be able to clear your filing of comments until you have filed an amended Form 10-K with the requested disclosure.**

The Company will file an amendment to its Form 10-K for the Fiscal Year Ended December 31, 2009 (the "Amendment") to include the requested disclosure.

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

Compensation Discussion and Analysis
Annual Incentive Compensation, page 24

2. We note your responses to Comments 4 and 5 and reissue the comments in part. Please expand the proposed disclosure to be included in an amendment to your Form 10-K for the fiscal year ended December 31, 2009 to disclose:

- **Specific examples of corporate and individual objectives that would increase the understanding of the corporate and individual objectives, respectively, as you propose to do in the future;**
- **The evaluation by the Compensation Committee of the level of achievement by the company of corporate goals and by each named executive officer of the individual performance objectives applicable to them.**

Please note that it is not sufficient to disclose only the amounts awarded under the AIP in 2009 and the achievement of corporate objectives, instead of describing the Compensation Committee's assessment of the level of achievement of each individual performance objective. To the extent that you are concerned about the release of our correspondence, you may request confidential treatment pursuant to Rule 83. In order to do this, please file on EDGAR your supplemental response requesting confidential treatment under Rule 83, redacting the information you request to remain confidential. Please note that only those words, numbers and phrases for which confidentiality is necessary should be redacted. Further, an unredacted copy of your supplemental response requesting Rule 83 treatment must be mailed directly to the Staff.

Please note that in order to keep your performance metrics confidential pursuant to Instruction 4 to Item 402(b) of Regulation S-K you must submit an analysis supporting your conclusion that you are likely to suffer competitive harm if the information is disclosed. We are generally only willing to grant confidential treatment for performance goals if you can demonstrate how the disclosure of these goals will allow your competitors to discover information about break even points, cost structures relating to specific products or similarly sensitive information. In these instances, you must submit a detailed analysis, identifying the competitively harmful information and demonstrating how the information could be harmful to your company.

For the reasons detailed in the response letter sent on behalf of the Company dated September 9, 2010, the Company believes that disclosure of the specific corporate and individual objectives would result in substantial competitive harm to the Company and that they are therefore not required to be disclosed. However, the Company proposes to disclose in the Amendment the following additional detail about the corporate and individual objectives in order to increase the understanding of the objectives without providing competitively sensitive information:

“The corporate objectives established for 2009 were primarily related to the continued progression of both our clinical and non-clinical programs. The corporate objectives fell into four primary categories: clinical development objectives, licensing and financing objectives, early stage project objectives, and functional support objectives. Clinical development objectives were collectively weighted at 85% of the 2009 corporate objectives (of which 65% related to peramivir and 20% related to forodesine and BCX4208, collectively). These objectives consisted of specific, detailed goals with respect to the advancement of the Company’s clinical programs with respect to peramivir, forodesine and BCX4208, and focused on study initiation, progress and completion, related support activities, and, in the case of peramivir, responding to the emergency use authorization that was issued during the year. Licensing and financing objectives were collectively weighted at 30% of the 2009 corporate objectives and related to potential partnering, licensing or other alliance relationships with respect to the Company’s products, maintenance of existing partnerships, and the completion of a financing transaction. Early stage project objectives were collectively weighted at 5% of the 2009 corporate objectives and related to the development of various specific early-stage product candidates toward an investigational new drug application or licensure and a review and prioritized plan and gap analysis with respect to the Company’s early-stage projects. Functional support objectives were collectively weighted at 5% of the 2009 corporate objectives and related to increasing the Company’s infrastructure development through a web-based compliance training program and an integrated internal communications program. Under the weighting system described above, achievement of all of the corporate objectives would have led to a corporate performance percentage of 125% of target.

Jon Stonehouse, the Company’s Chief Executive Officer, is responsible for ensuring that the corporate objectives are fully supported in order to progress the Company toward its achievement of the corporate objectives, and his performance rating is that of the Company as a whole. Accordingly, Mr. Stonehouse did not have his own individual objectives for 2009.

The individual objectives established for the other named executive officers for 2009 were prepared in conjunction with the corporate objectives and were designed to promote the execution of the corporate objectives. Achievement of all of the individual objectives would have led to an individual performance percentage of 125% of target.

Stuart Grant, Chief Financial Officer, had objectives that consisted of managing the Company’s cash burn (weighted at 25%) and driving funding opportunities (weighted at 30%), integrating supply chain activities (weighted at 30%), implementing an integrated external and internal communications program (weighted at 10%), creating and maintaining an effective control environment (weighted at 10%), strengthening finance processes

(weighted at 10%), and providing support from the finance organization to the Company's function heads (weighted at 10%).

Dr. William Sheridan, the Company's Chief Medical Officer, had individual objectives that consisted of goals related to the advancement of the Company's clinical programs with respect to i.v. and i.m. peramivir (weighted at 35% and 20%, respectively), forodesine and BCX4208 (weighted at 20%, collectively), and early stage pipeline candidates (weighted at 5%), supporting the Company's partnering, corporate alliance and business development objectives (weighted at 35%) and building the Company's clinical and regulatory capabilities (weighted at 10%).

David McCullough, VP of Strategy, Planning, Commercial and Business Development, had objectives related to completing new licensing and other alliance relationships (weighted at 75%), supporting the advancement of the Company's clinical programs with respect to peramivir (weighted at 20%), maintaining existing partnerships (weighted at 15%), leading and completing the Company's portfolio review process (weighted at 10%), and expanding his leadership role in the Company (weighted at 5%).

Dr. Y.S. Babu, VP of Drug Discovery, had objectives related to advancing and supporting the Company's clinical programs with respect to i.v. and i.m. peramivir (weighted at 30% and 25%, respectively), forodesine and BCX4208 (weighted at 10%) and early stage pipeline candidates (weighted at 30%), supporting the Company's partnering efforts (weighted at 25%) and expanding his leadership role in the Company (weighted at 5%)."

The Company proposes to disclose the following in the Amendment with respect to the evaluation by the Compensation Committee of the level of achievement by the Company of the corporate objectives and by the named executive officers of the individual performance objectives:

"The Compensation Committee assessed the achievement of the corporate objectives for 2009 and determined that the objectives were achieved at 93% of target. The Committee considered the Company's performance under each of the four categories of corporate objectives and assessed a rating for each category. The sum of the ratings constituted the corporate performance percentage. In assessing performance under each category and assigning its performance rating, the Committee considered the totality of the Company's performance with respect to the various objectives contained within the category and used its discretion to assign the rating to the category. Accordingly, specific performance objectives within each category were not weighted by the Committee.

With respect to the clinical development objectives, the Committee rated the Company's achievement at 65% out of 85% (55% out of 65% for peramivir and 10% out of 20% for forodesine and BCX4208, collectively). With respect to peramivir, the Committee

considered the Company's progress with respect to the clinical development of i.v. peramivir and related support activities, and the receipt and delivery of the peramivir stockpiling order. The Committee also considered the discontinuation of the i.m. peramivir program. With respect to forodesine and BCX4208, the Committee considered the progress of the clinical development of those products, and specifically the institution of a study of BCX4208 for the treatment of gout and the fact that certain other studies were completed later than targeted, were not completed or were cancelled. With respect to licensing and financing objectives, the Committee rated the Company's achievement at 20% out of 30%. The Committee considered the Company's strengthening and maintenance of its existing partnerships, the execution of partnerships for peramivir stockpiling outside of the United States, and the completion of a successful equity financing. The Committee also considered the fact that other partnering transactions were not completed. With respect to early stage products, the Committee rated the Company's achievement at 3% out of 5%. The Committee considered the rapid advancement of the development program with respect to certain products, the filing of related patent applications, and the completion of a portfolio review with respect to early stage products, leading to a prioritized plan and gap analysis. The Committee also considered the postponement or delay of the development programs with respect to certain other products. With respect to the functional support objectives, the Committee rated the Company's achievement at 5% out of 5% because both the web-based compliance training program and the integrated internal communications program were completed during the year.

For Mr. Stonehouse, as discussed above, the corporate objectives constituted 100% of his bonus opportunity, and therefore he received an AIP payment of 93% of target, or \$208,506.

With respect to each of the other named executive officers, the Committee assessed the performance of the officer against his individual objectives. The Committee also evaluated the executive's performance against the Company's six core competencies: accountability for results, business judgment, focus, teamwork, technical skills, and leadership. In determining the final individual achievement percentage, the Committee considered the individual's performance against his objectives; the significance of the objectives that were met or exceeded versus those that were partially met or not met; in the case of exceptional performance, how substantially the objectives were exceeded; and the results of its core competency assessment, and then used its discretion to set an individual achievement percentage. The individual performance percentage was then multiplied against the corporate performance percentage to result in the AIP payment as a percentage of the individual's target.

With respect to Mr. Grant, the Committee determined that he substantially exceeded the significant objectives of managing the Company's cash burn and integrating supply chain

activities; met the objectives with respect to driving funding opportunities, implementing an integrated external and internal communications program, creating and maintaining an effective control environment, and strengthening finance processes; and partially met the objective of providing support from the finance organization to the Company's function heads. Mr. Grant also met or exceeded all of the Company's core competencies. In light of this evaluation, and in consideration of the significance of the objectives that Mr. Grant exceeded and the number of objectives that he met, the Committee determined that his individual objectives were met at a level of 108%, which, when multiplied against the corporate performance percentage of 93%, led to an AIP payment of 100% of his target, or \$122,250.

With respect to Dr. Sheridan, the Committee determined that he exceeded the objectives of supporting the Company's partnering and alliance objectives and advancing the Company's clinical program objectives with respect to i.v. peramivir; met the objectives of advancing the Company's clinical program objectives with respect to BCX4208 and supporting the Company's business development objectives; partially met the objectives of advancing the Company's clinical program objectives with respect to i.m. peramivir and forodesine and building the Company's clinical and regulatory capabilities; and did not meet the objective of advancing the Company's clinical programs with respect to early stage pipeline candidates. Dr. Sheridan also met or exceeded all of the Company's core competencies. In light of this evaluation, and in consideration of the number and significance of the objectives that Dr. Sheridan exceeded, the Committee determined that his individual objectives were met at a level of 103%, which, when multiplied against the corporate performance percentage of 93%, led to an AIP payment of 96% of his target, or \$92,894.

With respect to Mr. McCullough, the Committee determined that he exceeded the objectives of supporting the advancement of the Company's clinical programs with respect to peramivir and leading and completing the Company's portfolio review process; met the objectives of maintaining existing partnerships and expanding his leadership role in the Company; and partially met the significant objective of completing new licensing and other alliance relationships. Mr. McCullough also met or exceeded all of the Company's core competencies. In light of this evaluation, the Committee determined that his individual objectives were met at a level of 93%, which, when multiplied against the corporate performance percentage of 93%, led to an AIP payment of 87% of his target, or \$68,900.

With respect to Dr. Babu, the Committee determined that he exceeded the significant objectives of supporting the advancement of the Company's clinical programs with respect to i.v. peramivir and early stage pipeline candidates; met the objective of expanding his leadership role; and partially met the objectives of supporting the advancement of the Company's clinical programs with respect to i.m. peramivir, forodesine and BCX4208 and

supporting the Company's partnering efforts. Dr. Babu also exceeded, met or was making progress with respect to the Company's core competencies. In light of this evaluation, the Committee determined that his individual objectives were met at a level of 103%, which, when multiplied against the corporate performance percentage of 93%, led to an AIP payment of 96% of his target, or \$75,734."

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.