Cooley

Brian F. Leaf
+1 703 456 8053
bleaf@cooley.com

VIA EDGAR

May 5, 2016

U.S. Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549
Mail Stop 4720

Attn: Ms. Suzanne Hayes
Mr. Daniel Greenspan
Ms. Alla Berenshteyn
Mr. James Peklenk
Mr. Joel Parker

Re: **Clearside Biomedical, Inc.**
Amendment No. 1 to Registration Statement on Form S-1
Filed March 18, 2016
File No. 333-208916

Ladies and Gentlemen:

On behalf of our client, Clearside Biomedical, Inc. (the "***Company***"), we are responding to comments from the staff (the "***Staff***") of the Securities and Exchange Commission (the "***Commission***"), discussed during a March 30, 2016 telephone conversation between Mark Ballantyne, of this office, and the Staff (the "***Conversation***"), relating to the above referenced Amendment No. 1 to Registration Statement on Form S-1 (the "***Registration Statement***").

As discussed during the Conversation, the Company has supplementally provided a letter to the Commission containing an updated analysis explaining the reasons for the differences between the most recent valuations of the Company's common stock used in its estimates of stock-based compensation and the estimated price per share in the Company's initial public offering.

Also, as discussed during the Conversation, the Company submits the following detailed analysis of the Company's accounting for the NovaMedica LLC and Spark Therapeutics, Inc. license agreements, including citations for the authoritative literature the Company used to reach its conclusions:

NovaMedica LLC License Agreement

In August 2014, the Company entered into a royalty-bearing license agreement (the "***NovaMedica Agreement***") with NovaMedica LLC ("***NovaMedica***"). Under the NovaMedica Agreement, the Company granted to NovaMedica the exclusive royalty-bearing license to develop and commercialize products in Russia and specified adjacent territories involving the use of triamcinolone acetonide as the sole active pharmaceutical ingredient for administration in the suprachoroidal space (the "***Covered Products***").

In conjunction with executing the NovaMedica Agreement, NovaMedica made an upfront non-refundable payment to the Company of $200,000. Additionally, the NovaMedica Agreement requires NovaMedica to make royalty payments equal to the amount of any royalties the Company would owe to Emory University ("***Emory***") or the Georgia Tech Research Corporation ("***GTRC***") pursuant to the Company's license agreement with Emory and GTRC as a result of NovaMedica's future sales of products covered by this license, up to a low single-digit percentage of net sales. NovaMedica also agreed to make various milestone payments, up to $12.7 million in the aggregate, primarily related to the achievement of future specified commercial product sales of the Covered Products. The NovaMedica Agreement also includes provisions whereby the Company and NovaMedica may enter into a future development and research collaboration agreement and a supply agreement for the Company to manufacture and supply the Covered Products. Terms and conditions of these agreements would be negotiated in good faith in the future.

The Covered Products in the NovaMedica Agreement specifically included the product candidates currently under development by the Company. As of the effective date of the NovaMedica Agreement, the Company was in early stage clinical development and has been conducting Phase 1 and Phase 2 clinical trials associated with the Covered Products. NovaMedica will wait until the Company completes or nears completion of the commercialization of the Covered Products in the United States before proceeding to obtain the required approvals in Russia and the adjacent territories in order to sell the Covered Products within those defined geographic regions. Because obtaining the required approvals in these territories might require changes to the Covered Products, the NovaMedica Agreement grants NovaMedica the right to make changes under the license agreement and also provides for the two parties to enter into a clinical development and collaboration agreement at a future date in order to make these changes. Currently, because commercialization of the Covered Products is not expected in the near term, NovaMedica is not performing any type of development for the Russian and adjacent area marketplaces.

In determining how to account for the upfront non-refundable payment of $200,000, the Company considered SAB Topic 13, section A.3(f) question 1, which outlines the Staff's views on nonrefundable fees payable at the initiation of a licensing agreement. In SAB Topic 13-A.3(f), the Staff provided specific guidance on the accounting for nonrefundable upfront fees, including license fees that are payable at the initiation of a license agreement. In some circumstances, the right, product, or service conveyed in conjunction with a nonrefundable fee has no utility to the purchaser separate and independent of the registrant's performance of the other elements of the arrangement. Therefore, in the absence

of the registrant's continuing involvement under the arrangement, the customer would not have paid the fee. Accordingly, a nonrefundable license fee should not be recognized immediately as revenue unless the license fee represents consideration for a separate deliverable (element) representing the culmination of a separate earnings process. If future obligations or performance requirements are essential to the upfront payment, the initial nonrefundable fee should be deferred.

The Company determined that it had not completed an earnings process when the license was delivered at the execution of the NovaMedica Agreement as the intellectual property at the time was in its early stages of development. NovaMedica entered into the NovaMedica Agreement to gain the exclusive right to sell the Covered Products in its defined territories and not to do current development or other research. The products that NovaMedica is interested in selling are the product candidates that the Company is currently developing through the Phase 1 and Phase 2 clinical trials as noted in the NovaMedica Agreement. Additionally, the substantial majority of the potential milestone and royalty payments under this arrangement are tied to commercialization and sales of the Covered Products.

Accordingly, the Company determined that the upfront payment has not been earned, and during 2014 and 2015, the Company deferred recognizing the $200,000 upfront payment because of the early stage of development of the intellectual property and high degree of uncertainty regarding commercial feasibility. In January 2016, the Company received positive results from the first Phase 2 clinical trial relating to its product candidate for the treatment of non-infectious uveitis. As this was the first significant indication of potential efficacy in a clinical trial within human patients, the Company made the determination at that time that the intellectual property could become commercially feasible. Therefore, beginning in the first quarter ended March 31, 2016, the Company began recognizing the $200,000 upfront payment as revenue ratably over the estimated period of time necessary to complete clinical development and commercialization activities for the Covered Products.

Spark Therapeutics, Inc. License and Collaboration Agreement

The Company and Spark Therapeutics, Inc. ("***Spark***") entered into a license and collaboration agreement (the "***Spark Agreement***") effective April 27, 2015. The purpose of the Spark Agreement was to define the terms and conditions surrounding the Company's future grant of a license to Spark of intellectual property rights related to the Company's microinjectors and access to the suprachoroidal space within the eye (the "***IP***"). Spark could then perform further development and ultimate commercialization of Spark's gene therapy treatments to be delivered via the microinjector. If Spark made the decision to license the IP, Spark would be responsible for the costs of the future development and commercialization. The Company would be responsible for providing the microinjector technology as well as other defined support to Spark as part of Spark's development efforts.

The Spark Agreement was structured to allow Spark certain periods of time (the "***Option Periods***") before actually entering into the IP license. In conjunction with executing the Spark Agreement, Spark made an upfront, non-refundable payment to the Company of $500,000. During the initial Option Period, the parties agreed to have a third-party research organization perform an initial preclinical study under the direction of the Company. At any time during this Option Period, Spark could exercise its option to license the IP by paying an additional $2.0 million, or could elect to initiate a second Option Period during which the Company and Spark would conduct further studies specified in the Spark Agreement. If Spark elected to initiate the second Option Period, Spark would be required to pay the Company $1.0 million. If Spark exercised its option to license the IP during the second Option Period, then Spark would be required to pay the Company an additional $3.0 million. If Spark did not exercise its option to license the IP or elect to initiate the second Option Period, then the Spark Agreement would terminate at the end of the first Option Period.

During 2015, the Company engaged the third-party research organization to perform the initial study contemplated by the Spark Agreement. Findings from the study were completed on February 23, 2016. The total experimental study cost was approximately $90,000, and in accordance with the research collaboration provisions in Article 2 of the Spark Agreement, Spark reimbursed the Company approximately $45,000, or one-half of the cost of the study. At this time, Spark did not proceed with the second Option Period, nor did it exercise its option to license the IP. Accordingly, the Spark Agreement was terminated in March 2016.

The Company considered the guidance in ASC 605-25 – Multiple-Element Arrangements (Revenue Recognition) and evaluated the elements in the arrangement and whether they represent separate units of accounting. The specific elements identified were:

- the research collaboration part of the Spark Agreement; and
- the Option Periods whereby Spark could evaluate whether to ultimately license the IP.

The Company determined that the research collaboration represented a separate unit of accounting because the delivered item had value on a standalone basis as this type of arrangement is common in the life sciences industry and collaboration activities could be entered into with various parties. The costs incurred by the Company of approximately $90,000 for the initial study were expensed as research and development costs in the period incurred, of which $45,000 was reimbursed by Spark. Given the quantitative immateriality of these amounts to the financial statements, the Company determined that disclosure of the amounts in the footnotes or on the face of the financial statements was not necessary for any periods presented.

In evaluating the Option Periods granted to Spark to determine whether Spark would license the IP, the Company determined that these Option Periods combined had stand-alone value apart from the IP license. Spark did enter into the Spark Agreement to ultimately obtain a license to the IP which would allow Spark to then develop products for commercialization using Spark's proprietary gene therapies. However, Spark was deriving value from its ability to evaluate the technology through defined preclinical studies conducted by the Company and Spark during these Option Periods. The Company also determined that the two Option Periods represented one unit of accounting providing Spark with an overall evaluation period in which to decide whether to license the IP. This determination was made based on the fact that the planned studies are not independent of each other, but instead are designed to build on the results of the prior studies in order to further the preclinical analysis to be in a position to ultimately file an investigational new drug application and begin the onset of clinical trials in human patients as contemplated in the Spark Agreement.

The Company also considered whether the $500,000 upfront payment should be considered as a reimbursement of the Company's costs for the initial study. Based on the limited nature and cost of the study and the separate funding arrangement for this work that is typical in funded research projects, the Company concluded that the $500,000 was not for reimbursement of this study.

In determining how to account for the upfront non-refundable payment of $500,000, the Company considered SAB Topic 13, section A.3(f) question 1, which outlines the Staff's views on nonrefundable fees payable at the initiation of a licensing agreement. In SAB Topic 13-A.3(f), the Staff provided specific guidance on the accounting for nonrefundable upfront fees, including license fees that are payable at the initiation of a license agreement. In some circumstances, the right, product, or service conveyed in conjunction with a nonrefundable fee has no utility to the purchaser separate and independent of the registrant's performance of the other elements of the arrangement. Therefore, in the absence of the registrant's continuing involvement under the arrangement, the customer would not have paid the fee. Accordingly, a nonrefundable license fee should not be recognized immediately as revenue unless the license fee represents consideration for a separate deliverable (element) representing the culmination of a separate earnings process. If future obligations or performance requirements are essential to the upfront payment, the initial nonrefundable fee should be deferred.

Accordingly, the initial upfront payment of $500,000 was deferred when received. The Company determined that this payment should be recognized as revenue over the expected period of time to perform and complete the planned studies during the two Option Periods contemplated at the date the Spark Agreement was executed. The Company estimated that this time period would be approximately 30 months from the start of the initial study to the end and evaluation of the planned studies to be performed in the second Option Period. The determination that the deferral period should be the time estimated to conduct the studies specified in both Option Periods was based on the

conclusion that the overall evaluation period represented one unit of accounting. The Company did not record the $133,000 portion of revenue from the $500,000 upfront payment earned during 2015, as the amounts were determined to be immaterial to its financial statements for that year.

The Company considered the SEC Staff Accounting Bulletins No. 99 ("***SAB 99***") and No. 108 ("***SAB 108***") in reaching this conclusion. Under SAB 99 and SAB 108, the omission or misstatement of an item in a financial report is material if, in the light of surrounding circumstances, the magnitude of the item is such that it is probable that the judgment of a reasonable person relying upon the report would have been changed or influenced by the inclusion or correction of the item. Materiality should be assessed on a total mix of information which includes both quantitative and qualitative factors.

The Company is a development stage entity in the biotechnology field whose primary focus is the funding and development of novel drug therapies for possible future commercialization. The users of the financial statements are primarily focused on the ongoing progress and results of the clinical trials as well as the ability of the Company to fund future development activities necessary for commercialization of its product candidates. The Company has incurred substantial losses since inception and does not expect to have earnings in the future without the successful commercialization of its product candidates. As such, users of the financial statements are focused on the amount of development expense incurred as an indication of ongoing clinical activities as well as amounts of cash available to fund future expenses.

From a quantitative standpoint, the $133,000 did not have a material impact to the measures important to the users of the financial statements, specifically cash and development expenses or disclosure of development results or activity. There is not an expectation of revenues being an important financial statement measure as the Company's primary revenue stream relates to product sales and future royalties when the product candidates become commercialized. Additionally, the quantitative impact to net loss recorded in 2015 was 0.8%, which the Company considered immaterial.

When evaluating the qualitative aspects, the Company concluded that the $133,000 did not mask a change in earnings or other trends or failure to meet expectations of investors. It did not change results from a loss to earnings or vice versa. It had no impact on compliance with regulatory or contractual requirements or loan covenants. It did not conceal any unlawful activities or have an effect on management compensation.

As described above, in March 2016, the Spark Agreement was terminated in accordance with its terms. As a result, during the quarter ended March 31, 2016, the Company recorded as revenue the $500,000 upfront payment, as the amount was non-refundable and the Company had no further performance requirements or obligations under this arrangement.

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As requested by the Staff, the Company acknowledges that:

- **should the Commission or the Staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;**
- **the action of the Commission or the Staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the Company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and**
- **the Company may not assert Staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.**

* * * *

Please fax any additional comment letters concerning the Registration Statement to (703) 456-8100 and direct any questions or comments concerning this response letter to either the undersigned at (703) 456-8053 or Brent B. Siler, of this office, at (202) 728-7040.

Very truly yours,

/s/ Brian F. Leaf

Brian F. Leaf

cc: Daniel H. White, Clearside Biomedical, Inc.
Charles A. Deignan, Clearside Biomedical, Inc.
Brent B. Siler, Cooley LLP
Darren K. DeStefano, Cooley LLP
Peter N. Handrinos, Latham & Watkins LLP