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April 30, 2015

VIA EDGAR AND OVERNIGHT COURIER

U.S. Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549

Attn: Anne Nguyen Parker, Assistant Director
Julie Griffith
Stephen Kim
Doug Jones

Re: **Arcadia Biosciences, Inc.**
Registration Statement on Form S-1
Filed on February 17, 2015
File No. 333-202124

Ladies and Gentlemen:

We are submitting this letter on behalf of our client, Arcadia Biosciences, Inc. (“we,” “us” or the “Company”), in response to the comments from the staff (the “Staff”) of the Securities and Exchange Commission (the “Commission”) received by letter dated April 10, 2015, relating to the Registration Statement on Form S-1 (the “Registration Statement”) filed on February 17, 2015 and first amended on April 6, 2015. Amendment No. 2 to the Registration Statement (“Amendment No. 2”) is being submitted concurrently herewith. The numbered paragraphs below correspond to the numbered comments in the Staff’s letter and the Staff’s comments are presented in bold italics. We have enclosed with the copy of this letter that is being transmitted via overnight delivery six (6) copies of Amendment No. 2 in paper format, which have been marked to show changes from the Registration Statement as last amended on April 6, 2015.

Liquidity and Capital Resources, page 52

1. ***We note that in this amendment you have deleted the sentence “We believe that our existing cash and cash equivalents will be sufficient to meet our anticipated cash requirements for at least the next 12 months.” Please disclose whether you believe that your existing cash and cash equivalents will be sufficient to meet your anticipated cash requirements for at least the next 12 months. Provide risk factor discussion as appropriate.***

The Company advises the Staff that it recently obtained additional debt financing in the form of a \$20.0 million senior secured term loan facility, which is described beginning on page 53 of Amendment No. 2. With this debt financing, the Company believes that its existing cash and cash equivalents will be sufficient to meet its anticipated cash requirements for at least the next 12 months. As a result, the Company has revised the disclosures in the Registration Statement with respect to its liquidity and has reinserted the statement noted by the Staff in Comment 1.

2. ***We note your disclosure on page F-17 that “As of December 31, 2014, the debt balance was \$13.5 million with a maturity date of January 15, 2015. The maturity date was extended to April 15, 2015 and an additional \$1.0 million was funded by VUSA, also due April 15, 2015.” Please tell us the status of this debt and the anticipated effect on your company at the April 15, 2015 maturity date. Provide risk factor discussion as appropriate.***

The Company advises the Staff that, as noted on page F-17, it expects that VUSA will continue to provide Limagrain Cereal Seeds, LLC (“LCS”) with additional debt financing as needed. In regards to the existing debt as of December 31, 2014, the Company expects that VUSA will continue to extend the maturity date for additional three months periods, as it has done every three months since October 2012. In the event that VUSA is unwilling to extend the maturity date of the note or provide additional debt financing as needed, and should additional capital in the form of equity be necessary to support the operations of LCS, the Company has the option to fund its pro rata share of such obligation or elect to have its ownership interest diluted. We advise the Staff that the third bullet under the risk factor on page 19 titled “***Our joint venture agreements could present a number of challenges...***” specifically addresses the risk of the Company being unable to pay its share of the joint venture’s obligations and notes that its ownership interest could be reduced.

Please direct your questions or comments regarding the Company's responses or Amendment No. 2 to the undersigned at (415) 773-4140 or by email at kdempsey@orrick.com or, in my absence, to Christopher Austin at (212) 506-5234 or by email at caustin@orrick.com.

Sincerely,

ORRICK, HERRINGTON & SUTCLIFFE, LLP

/s/ Karen A. Dempsey

Karen A. Dempsey

cc: Eric J. Rey, Arcadia Biosciences, Inc.
Wendy S. Neal, Arcadia Biosciences, Inc.
Christopher Austin, Orrick, Herrington & Sutcliffe, LLP
Drew Williamson, Cooley LLP