

Mail Stop 4720

November 24, 2009

Via Facsimile and U.S. Mail

Paul Goddard, Ph.D.
Chairman of the Board and Chief Executive Officer
ARYx Therapeutics, Inc.
6300 Dumbarton Circle
Fremont, CA 94555

**Re: ARYx Therapeutics, Inc.
Registration Statement on Form S-1
Filed November 20, 2009
File No. 333-163238**

Dear Dr. Goddard:

This is to advise you that we have limited our review of the above information statement to the issue identified below. We will make no further review of this filing.

Where indicated, we think you should revise your document in response to this comment. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. After reviewing this information, we may or may not raise additional comments.

Information Incorporated by Reference, page 40

1. We note that your registration statement attempts to incorporate by reference all reports and other documents subsequently filed by you after the date of your prospectus and before the termination of your offering and any documents filed after the date of your registration statement and before the date of its effectiveness. Please be advised that Form S-1 does not provide for the incorporation by reference of any periodic reports filed subsequent to the filing of the registration statement. We refer you to Item 12 of Form S-1. Please remove this language from your registration statement.

* * *

As appropriate, please revise your information statement in response to these comments. You may wish to provide us with marked copies of the revised document to expedite our review. Please furnish a response letter that keys your responses to our comments. Detailed cover letters

greatly facilitate our review. Please file your cover letter on EDGAR under the form type label CORRESP. Please understand that we may have additional comments after reviewing your amendment and response to our comment.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they have provided all information investors require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that

- the company is responsible for the adequacy and accuracy of the disclosure in the filings;
- staff comments or changes to disclosure in response to staff comments in the filings reviewed by the staff 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

Please contact Scot Foley at (202) 551-3383 or me at (202) 551-3715 with any questions.

Sincerely,

Jeffrey Riedler
Assistant Director

cc: James F. Fulton, Jr.
Cooley Godward Kronish LLP
Five Palo Alto Square
3000 El Camino Road
Palo Alto, CA 94306-2155