

November 29, 2017

United States Securities and Exchange Commission
Division of Corporate Finance
100 F Street, N.E.
Washington, D.C. 20549
Attn: Chris Edwards
Suzanne Hayes

**Re: Chimerix, Inc.
Registration Statement on Form S-3
Filed November 8, 2017
File No. 333-221412**

Ladies and Gentlemen:

On behalf of Chimerix, Inc. (the "**Company**"), we are submitting this letter in response to comments received from the staff (the "**Staff**") of the Securities and Exchange Commission (the "**SEC**"), by letter dated November 21, 2017, regarding the Company's Registration Statement on Form S-3, filed on November 8, 2017 (the "**Registration Statement**"). We are also electronically submitting Amendment No. 1 to the Registration Statement (the "**Amended Registration Statement**"), which has been amended in response to the Staff's comments.

Set forth below are the Company's responses to the Staff's comments. For the Staff's convenience, we have incorporated your comments into this response letter in italics.

Registration Statement on Form S-3

Exhibits

1. *We note that your sales agreement prospectus relates to the sale of up to \$75,000,000 shares of common stock. Please file a revised opinion that does not limit the opinion to the issuance of 14,792,899 sales agreement shares, or explain why such a limitation is appropriate.*

Response: The Company acknowledges the Staff's comment and has filed a revised legal opinion as exhibit 5.1 to the Amended Registration Statement (the "**Updated Opinion**"). The Updated Opinion continues to assume that a maximum of 14,792,899 shares of the Company's common stock will be sold pursuant to the Sales Agreement, dated November 8, 2017, between the Company and Cowen and Company, LLC (the "**Sales Agreement**"), however the Updated Opinion has been revised to remove the assumption that shares of the Company's common stock sold pursuant to Sales Agreement will be sold at a price of not less than \$5.07 per share. As revised, the Updated Opinion is intended to serve as an appropriately unqualified opinion for purposes of SEC Staff Legal Bulletin No. 19 with respect to 14,792,899 shares of the Company's common stock to be sold pursuant to the Sales Agreement.

The Company acknowledges that, in the event more than 14,792,899 shares of the Company's common stock are sold pursuant to the Sales Agreement, a subsequent legal opinion would have to be filed to cover the issuance of shares in excess of such previously assumed maximum amount.

General

2. *Reference is made in footnote 2 to the Calculation of Registration Fee table that the securities registered may be sold separately or as units with other securities. Please revise the prospectus cover page to include the units, and include a description of the units in the prospectus and revise the legal opinion to opine on the units. Alternatively, please remove the reference to units.*

Response: The Company acknowledges the Staff's comment and has revised footnote 2 to the Calculation of Registration Fee table in the Amended Registration Statement to remove the reference to the units.

3. *We note your disclosure on page S-3 that sales may be made in negotiated transactions. Please tell us whether this sales methods satisfies the "at the market offering" definition under Rule 415. If this method does not constitute a sales method that is deemed to be an "at the market offering" as defined in Rule 415 or if any material information with respect to a particular offering has been omitted, please confirm that you will file an additional prospectus supplement at the time of such sales or tell us why such additional filing would not be necessary.*

Response: The Company acknowledges the Staff's comment and has revised the disclosure on page S-3 of the Amended Registration Statement to remove the reference to negotiated transactions. The Company hereby confirms that sales may be made only in an "at the market offering" as defined in Rule 415 of the Securities Act of 1933, as amended (the "**Securities Act**"), and that if any sales method is deemed not to be an "at the market offering" as defined in Rule 415 of the Securities Act, or if any material information with respect to a particular offering has been omitted, it will file an additional prospectus supplement at the time of such sales.

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The Company respectfully requests the Staff's assistance in completing the review of the Amended Registration Statement as soon as possible. Please contact me at (858) 550-6044 with any questions or further comments regarding the responses to the Staff's comments.

Sincerely,

Cooley LLP

/s/ Jason L. Kent, Esq.

Jason L. Kent Esq.

cc: M. Michelle Berrey, M.D., M.P.H., Chimerix, Inc.
Timothy Trost, Chimerix, Inc.
Michael Alritz, Chimerix, Inc.

4401 EASTGATE MALL, SAN DIEGO, CA 92121 T: (858) 550-6000 F: (858) 550-6420 WWW.COOLEY.COM