



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

March 19, 2013

Via E-mail

Kenneth I. Moch
President and Chief Executive Officer
Chimerix, Inc.
2505 Meridian Parkway, Suite 340
Durham, NC 27713

**Re: Chimerix, Inc.
Registration Statement on Form S-1
Filed March 8, 2013
File No. 333-187145**

Dear Mr. Moch:

We have reviewed your registration statement filed March 8, 2013 and your response to our comments to your confidential draft registration statement submitted on January 30, 2013 and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

General

1. Please note that when you file a pre-effective amendment containing pricing related information, we may have additional comments. As you are likely aware, you must file this amendment prior to circulating the prospectus. Please note that when you file a pre-effective amendment that includes your price range, it must be bone fide. We interpret this to mean that your range may not exceed \$2 if you price up to \$10 and 20% if you price above \$10.

Prospectus Summary, page 1

2. We note your response to our prior comment 5 and your revised disclosure relating to CMX001's method of action. Please additionally revise the second paragraph on this page to explain in simpler language the meaning of the phrase "alternative substrate in a replicating virus."

Business, page 70

CMX001 as a Medical Countermeasure against Smallpox, page 92

3. We note your discussion about development of CMX001 as a countermeasure to smallpox. Please expand your disclosure to clarify what sort of regulatory approval, if any, you will require from the FDA in developing CMX001 for this indication. Specifically, please disclose whether you will have to seek an investigational new drug application, a new drug application, or a biologics license application for the potential smallpox treatment. Please also expand your disclosure to explain the FDA's Animal Efficacy Rule and how it relates to your clinical trials. In particular, please consider explaining how you plan to test your compound when smallpox is no longer a communicable disease in humans.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Act of 1933 and all applicable Securities Act rules 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging 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 refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as

Kenneth I. Moch
Chimerix, Inc.
March 19, 2013
Page 3

confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Dana Hartz, Staff Accountant, at (202) 551-3648 or Joel Parker, Accounting Branch Chief, at (202) 551-3651 if you have questions regarding comments on the financial statements and related matters. Please contact Austin Stephenson, Staff Attorney, at (202) 551-3192 or me at (202) 551-3715 with any other questions.

Sincerely,

/s/ Jeffrey P. Riedler

Jeffrey P. Riedler
Assistant Director

cc: Via E-mail
Jason L. Kent, Esq.
Cooley LLP