



DIVISION OF
CORPORATION FINANCE

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

February 26, 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.
Confidential Draft Registration Statement on Form S-1
Submitted January 30, 2013
CIK No. 0001117480**

Dear Mr. Moch:

We have reviewed your confidential draft registration statement 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 providing the requested information and either submitting an amended confidential draft registration statement or publicly filing your registration statement on EDGAR. 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 the information you provide in response to these comments and your amended confidential draft registration statement or filed registration statement, we may have additional comments.

General

1. Please submit all outstanding exhibits as soon as practicable. We may have further comments upon examination of these exhibits.
2. Please provide us proofs of all graphic, visual or photographic information you will provide in the printed prospectus prior to its use, for example in a preliminary prospectus. Please note that we may have comments regarding this material.

3. Please supplementally provide us with copies of all written communications, as defined in Rule 405 under the Securities Act, that you, or anyone authorized to do so on your behalf, present to potential investors in reliance on Section 5(d) of the Securities Act, whether or not they retain copies of the communications. Similarly, please supplementally provide us with any research reports about you that are published or distributed in reliance upon Section 2(a)(3) of the Securities Act of 1933 added by Section 105(a) of the Jumpstart Our Business Startups Act by any broker or dealer that is participating or will participate in your offering.
4. We will deliver comments to your confidential treatment request under separate cover.

Prospectus Summary, page 1

5. Please define the term “oral nucleotide analog lipid-conjugate” as used in the second paragraph of the overview. Please further revise the description of CMX001 in this paragraph to explain in plain English the compound’s method of action. For guidance on the use of plain English in your prospectus summary, please reference Rule 421(d) of Regulation C.

Risk Factors, page 9

“If we are unable to establish sales and marketing capabilities...” page 22

6. Given your lack of experience in commercializing products, please expand your discussion of the risk factor on this page to include more details about the specific challenges you will face in developing an internal sales force for marketing CMX001 domestically.

Use of Proceeds, page 40

7. If you plan to use a material portion of proceeds to discharge debt under your loan agreements with Silicon Valley and MidCap Financial, please disclose that fact here along with the interest rate and maturity of the indebtedness. Please also describe any use of the proceeds from these loans other than use for regular working capital.

Research and Development Expenses, page 51

8. Please revise your disclosure of your CMX001 research and development expenses to include costs incurred to date on this project.

Valuation of Stock-Based Compensation, page 54

9. Please update the table and related disclosure on pages 55-56 and 56-58 to include the 2012 option grants you disclose in number 7 to Item 15 on page II-3. To the extent you grant additional options prior to the completion of this offering, please update the table for those future grants.

Common Stock Fair Value, page 56

10. We may have additional comments on your accounting for stock compensation and related disclosure once you have disclosed an estimated offering price. Please provide quantitative and qualitative disclosures explaining the difference between the estimated offering price and the fair value of each equity issuance.

Business, page 70

11. Please disclose whether you or a third party has filed investigational new drug applications (INDs) for the following: CMX001 for treatment of CMV infection in HSCT patients; CMX001 for treatment of AdV infection; and CMX157 for treatment of HIV infection. If INDs for these compounds and for the corresponding treatments indicated have been filed, please disclose the identity of the filers and the dates the applications were filed. Alternately, if no INDs have been filed for these formulations, please explain why.

Development Strategy for CMX001, page 75

12. We note your discussion of a Safety Monitoring and Management Plan on pages 70-71 developed to address the adverse effect of diarrhea experienced by patients in Phase 2 clinical trials of CMX001. Please expand on your discussion of the development strategy to include the provisions of this plan and how it will impact the upcoming Phase 3 SUPPRESS trials.

Clinical Development Program for CMX001, page 85

13. Please clarify in this section whether you intend to obtain a Special Protocol Assessment (SPA) from the FDA prior to engaging in the Phase 3 SUPPRESS trials. If so, please discuss the current status of that process.

Commercial Agreements, page 92
BARDA, pages 92-93

14. We note that you are eligible to receive a total of \$81.1 million in expense reimbursement and fees under the BARDA contract. Please separately disclose the amount that is attributable to reimbursement for work under the contract and the amount attributable to fixed fees earned for performance.
15. We note that the base performance period under the contract has ended and that BARDA must notify you of its decision to exercise the first option segment. Please update your disclosure to reflect whether BARDA has opted to extend the agreement.
16. On page 93, you disclose that “the U.S. government retains a nonexclusive, nontransferable, irrevocable, paid up license to any invention made in the performance of our work under the contract.” Please explain whether the registrant or any party other than the U.S. government retains licensure rights to inventions arising from the BARDA contract and describe those rights. If not, please clarify the meaning of “nonexclusive” as used to describe the U.S. government’s licensure rights.

Technology Licenses
The Regents of the University of California, page 98

17. Please disclose the aggregate potential milestone payments you could pay to The Regents of the University of California in this section.

Executive and Director Compensation, page 121

18. We note that your CEO was granted stock options awards in 2010 that would vest upon achievement of “certain corporate performance goals that never occurred.” Please discuss the specific unmet performance goals tied to the cancelled stock option awards in the 2010 agreement with your CEO.

Shares Eligible for Future Sale, page 147

19. Once available, please file the form of lock-up agreement as an exhibit to your registration statement.

Index to Financial Statements, page F-1

20. Please provide updated financial statements and financial information throughout the filing pursuant to Rule 8-08 of Regulation S-X.

Note 2. Significant Accounting Policies
Accrued Liabilities, page F-12

21. Please tell us why you have no accrued development expenses as of September 30, 2012.

Revenue Recognition, page F-12

22. You disclose that you recognize contract and grant revenue as qualifying research activities are conducted based on invoices received from the Company's vendors. Please revise your disclosure to clarify whether you have any continuing performance obligations related to the receipt of the grants and whether there are any refund obligations. If so, please disclose those obligations and their impact on your accounting.

Note 11. Significant Agreements, page F-27
The Regents of the University of California, page F-27

23. Please revise your filing to disclose the aggregate amount of future milestone payments you could pay to The Regents of the University of California under your license agreement. In addition please reflect such amount in your note related to this agreement under Contractual Obligations and Commitments on page 67.

Exhibits, page II-4

24. Please file material agreements with your suppliers and manufacturers as exhibits in accordance with Item 601(b)(10) of Regulation S-K. You should also identify these agreements and their material terms in your prospectus in accordance with Item 101(c) of Regulation S-K. Alternately, if you do not believe you are substantially dependent on any these agreements, please advise us as to the basis of your conclusions.

General

If you intend to respond to these comments with an amended draft registration statement, please submit it and any associated correspondence in accordance with the guidance we provide in the Division's October 11, 2012 announcement on the SEC website at <http://www.sec.gov/divisions/corpfin/cfannouncements/drsfilingprocedures101512.htm>.

Please keep in mind that we may publicly post filing review correspondence in accordance with our December 1, 2011 policy (<http://www.sec.gov/divisions/corpfin/cfannouncements/edgarcorrespondence.htm>). If you intend to use Rule 83 (17 CFR 200.83) to request confidential treatment of information in the correspondence you submit on EDGAR, please properly mark that information in each of your

Kenneth I. Moch
Chimerix, Inc.
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confidential submissions to us so we do not repeat or refer to that information in our comment letters to you.

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