

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM S-8

**REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

CHIMERIX, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware

(State or Other Jurisdiction of Incorporation or Organization)

33-0903395

(I.R.S. Employer Identification No.)

**2505 Meridian Parkway, Suite 100
Durham, NC 27713**

(Address of Principal Executive Offices)

**2013 Equity Incentive Plan
2013 Employee Stock Purchase Plan**
(Full Title of the Plan)

M. Michelle Berrey, M.D., M.P.H.
President and Chief Executive Officer
Chimerix, Inc.
2505 Meridian Parkway, Suite 100
Durham, NC 27713

(Name and Address of Agent for Service)

(919) 806-1074

(Telephone Number, Including Area Code, of Agent for Service)

Copies to:

Timothy W. Trost
Senior Vice President, Chief Financial Officer
and Corporate Secretary
Chimerix, Inc.
2505 Meridian Parkway, Suite 100
Durham, NC 27713
(919) 806-1074

Jason L. Kent, Esq.
Nathan J. Nouskajian, Esq.
Cooley LLP
4401 Eastgate Mall
San Diego, CA 92121
(858) 550-6000

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price per Share (2)	Proposed Maximum Aggregate Offering Price (2)	Amount of Registration Fee
2013 Equity Incentive Plan Common Stock, \$0.001 par value per share	1,860,899 shares (3)	\$5.34	\$9,937,200.66	\$1,151.72
2013 Employee Stock Purchase Plan Common Stock, \$0.001 par value per share	422,535 shares (4)	\$5.34	\$2,256,336.90	\$261.51
Total	2,283,434 shares	N/A	\$12,193,537.56	\$1,413.23

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the “*Securities Act*”), this Registration Statement shall also cover any additional shares of Registrant’s common stock (the “*Common Stock*”) that become issuable under the plans by reason of any stock dividend, stock split, recapitalization or other similar transaction.
- (2) This estimate is made pursuant to Rule 457(c) and Rule 457(h)(1) of the Securities Act solely for purposes of calculating the registration fee. The price per share and aggregate offering price are based upon the average of the high and low prices of the Common Stock on February 24, 2017, as reported on the Nasdaq Global Market.
- (3) Represents shares of Common Stock that were automatically added to the shares authorized for issuance under the Registrant’s 2013 Equity Incentive Plan (the “*EIP*”) on January 1, 2017 pursuant to an “evergreen” provision contained in the EIP. Pursuant to such provision, on January 1st of each year commencing in 2014 and ending on (and including) January 1, 2023, the number of shares authorized for issuance under the EIP is automatically increased by a number equal to: (a) 4% of the total number of shares of capital stock outstanding on December 31 of the preceding calendar year; or (b) such lesser number of shares of Common Stock as is determined by the Registrant’s board of directors (the “*Board*”) for the applicable year.
- (4) Represents shares of Common Stock that were automatically added to the shares authorized for issuance under the Registrant’s 2013 Employee Stock Purchase Plan (the “*ESPP*”) on January 1, 2017 pursuant to an “evergreen” provision contained in the ESPP. Pursuant to such provision, on January 1st of each year commencing in 2014 and ending on (and including) January 1, 2023, the number of shares authorized for issuance under the ESPP is automatically increased by a number equal to the least of: (a) 1% of the total number of shares of Common Stock outstanding on December 31 of the preceding calendar year; (b) 422,535 shares; or (c) a number determined by the Board that is less than (a) and (b).

**INCORPORATION BY REFERENCE OF CONTENTS OF REGISTRATION
STATEMENTS ON FORM S-8**

This Registration Statement on Form S-8 is being filed for the purpose of increasing the number of securities of the same class as other securities for which Registration Statements on Form S-8 relating to the same benefit plans are effective. The Registrant previously registered shares of its Common Stock for issuance under the EIP and the ESPP under Registration Statements on Form S-8 filed with the Securities and Exchange Commission on April 11, 2013 (File No. 333-187860), March 7, 2014 (File No. 333-194408), March 6, 2015 (File No. 333-202582) and February 29, 2016 (File No. 333-209802). Pursuant to General Instruction E to Form S-8, this Registration Statement hereby incorporates by reference the contents of the Registration Statements referenced above.

Item 8. Exhibits.

<u>Exhibits:</u>	<u>Description</u>
4.1	Amended and Restated Certificate of Incorporation of the Registrant. (1)
4.2	Amended and Restated Bylaws of the Registrant. (1)
4.3	Form of Common Stock Certificate of the Registrant. (2)
4.4	Form of Warrant to Purchase Stock issued to participants in the Registrant's Series F Preferred Stock financing dated February 7, 2011. (2)
4.5	Amended and Restated Investor Rights Agreement dated February 7, 2011 by and among the Registrant and certain of its stockholders. (2)
4.6	Amendment to Amended and Restated Investor Rights Agreement dated October 29, 2014 by and among the Registrant and certain of its stockholders. (3)
5.1	Opinion of Cooley LLP.
23.1	Consent of Ernst & Young LLP, an Independent Registered Public Accounting Firm.
23.2	Consent of Cooley LLP. Reference is made to Exhibit 5.1.
24.1	Power of Attorney. Reference is made to the signature page hereto.
99.1	Chimerix, Inc. 2013 Equity Incentive Plan, as amended. (4)
99.2	Form of Stock Option Agreement, Notice of Exercise and Form of Stock Option Grant Notice and Form of Restricted Stock Unit Award Agreement and Form of Restricted Stock Unit Award Grant Notice under Chimerix, Inc. 2013 Equity Incentive Plan. (5)
99.3	Chimerix, Inc. 2013 Employee Stock Purchase Plan. (2)

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- (1) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed on April 16, 2013.
 - (2) Incorporated by reference to the Registrant's Registration Statement on Form S-1 (No. 333-187145), filed on March 8, 2013, as amended.
 - (3) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed on October 29, 2014.
 - (4) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed on June 23, 2014.
 - (5) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q, filed on November 7, 2016.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Durham, State of North Carolina, on March 2, 2017.

Chimerix, Inc.

By: /s/ M. Michelle Berrey

M. Michelle Berrey, M.D., M.P.H.

President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints M. Michelle Berrey, M.D., M.P.H. and Timothy W. Trost, and each of them, as his true and lawful attorneys-in-fact and agents, each with the full power of substitution, for him and in his name, place or stead, in any and all capacities, to sign any and all amendments to this Registration Statement (including post-effective amendments), and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ M. Michelle Berrey</u> M. Michelle Berrey, M.D.	President, Chief Executive Officer and Member of the Board of Directors <i>(Principal Executive Officer)</i>	March 2, 2017
<u>/s/ Timothy W. Trost</u> Timothy W. Trost	Senior Vice President, Chief Financial Officer and Corporate Secretary <i>(Principal Financial and Accounting Officer)</i>	March 2, 2017
<u>/s/ Ernest Mario</u> Ernest Mario, Ph.D.	Chairman of the Board of Directors	March 2, 2017
<u>/s/ James M. Daly</u> James M. Daly	Member of the Board of Directors	March 2, 2017
<u>/s/ Martha J. Demski</u> Martha J. Demski	Member of the Board of Directors	March 2, 2017
<u>/s/ Catherine L. Gilliss</u> Catherine L. Gilliss, Ph.D., RN, FAAN	Member of the Board of Directors	March 2, 2017
<u>/s/ John M. Leonard</u> John M. Leonard, M.D.	Member of the Board of Directors	March 2, 2017
<u>/s/ Patrick Machado</u> Patrick Machado	Member of the Board of Directors	March 2, 2017
<u>/s/ James Niedel</u> James Niedel, M.D., Ph.D.	Member of the Board of Directors	March 2, 2017
<u>/s/ Ronald C Renaud, Jr.</u> Ronald C Renaud, Jr.	Member of the Board of Directors	March 2, 2017
<u>/s/ Lisa Ricciardi</u> Lisa Ricciardi	Member of the Board of Directors	March 2, 2017

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[LETTERHEAD OF COOLEY LLP]

Jason L. Kent
T: +1 858 550 6044
jkent@cooley.com

March 2, 2017

Chimerix, Inc.
2505 Meridian Parkway, Suite 100
Durham, NC 27713

Ladies and Gentlemen:

You have requested our opinion, as counsel to Chimerix, Inc., a Delaware corporation (the "Company"), with respect to certain matters in connection with the filing by the Company of a Registration Statement on Form S-8 (the "Registration Statement") with the Securities and Exchange Commission, covering the offering of an aggregate of up to 2,283,434 shares of the Company's Common Stock, \$0.001 par value (the "Shares"), including 1,860,899 shares issuable pursuant to the Company's 2013 Equity Incentive Plan (the "Incentive Plan") and 422,535 shares issuable pursuant to the Company's 2013 Employee Stock Purchase Plan (the "Stock Plan").

In connection with this opinion, we have examined and relied upon the Registration Statement and related prospectuses, the Incentive Plan and the Stock Plan, the Company's Amended and Restated Certificate of Incorporation and Bylaws, and the originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness and authenticity of all documents submitted to us as originals and the conformity to originals of all documents submitted to us as copies thereof. Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when issued and sold in accordance with the Incentive Plan or the Stock Plan, as applicable, the Registration Statement and related prospectus, will be validly issued, fully paid and nonassessable (except as to shares issued pursuant to certain deferred payment arrangements, which will be fully paid and nonassessable when such deferred payments are made in full).

We consent to the filing of this opinion as an exhibit to the Registration Statement.

Sincerely,

Cooley LLP

By: /s/ Jason L. Kent
Jason L. Kent

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement on Form S-8 of Chimerix, Inc. pertaining to the 2013 Equity Incentive Plan and 2013 Employee Stock Purchase Plan of Chimerix, Inc. of our reports dated March 2, 2017, with respect to the consolidated financial statements of Chimerix, Inc. and the effectiveness of internal control over financial reporting of Chimerix, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2016, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Raleigh, North Carolina

March 2, 2017