The information contained in this preliminary prospectus supplement is not complete and may be changed. A registration statement relating to these securities has become effective by rule of the Securities and Exchange Commission. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities, and we are not soliciting offers to buy these securities, in any state or other jurisdiction where the offer or sale is not permitted.

Filed Pursuant to Rule 424(b)(5)
Registration No. 333-195626

PROSPECTUS SUPPLEMENT (Subject to Completion)
Issued May 19, 2014
(To Prospectus dated May 16, 2014)

6,200,000 Shares

COMMON STOCK

Chimerix, Inc. is offering 6,200,000 shares of its common stock. Our common stock is listed on the Nasdaq Global Market under the symbol CMRX. On May 16, 2014, the last reported sale price of our common stock on the Nasdaq Global Market was $16.38 per share.

We are an emerging growth company as that term is used in the Jumpstart Our Business Startups Act of 2012 and, as such, have elected to comply with certain reduced public company reporting requirements for this prospectus and future filings.

Investing in our common stock involves risks. See "Risk Factors" beginning on page S-6, and in the documents which are incorporated by reference in this prospectus supplement and the accompanying prospectus.

PRICE $ A SHARE

	Price to Public	*Underwriting Discounts and Commissions(1)*	*Proceeds to Company*
Per Share	*$*		*$*
Total	*$*		*$*

(1) We have agreed to reimburse the underwriters for certain FINRA-related expenses. See "Underwriters."

To the extent that the underwriters sell more than 6,200,000 shares of common stock, the underwriters have the option for a period of 30 days from the date of this prospectus to purchase up to an additional 930,000 shares from Chimerix, Inc. at the public offering price less the underwriting discount.

The Securities and Exchange Commission and state securities regulators have not approved or disapproved these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares of common stock to purchasers on , 2014.

MORGAN STANLEY ***J.P. MORGAN***

COWEN AND COMPANY

, 2014

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Neither we, nor any underwriter, has authorized anyone to provide you with information different from, or in addition to, that contained in or incorporated by reference in this prospectus supplement, the accompanying prospectus or in any free writing prospectus prepared by or on behalf of us or to which we may have referred you in connection with this offering. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are not, and the underwriters are not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying

prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering, is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and any free writing prospectus that we have authorized for use in connection with this offering, in their entirety before making an investment decision. You should also read and consider the information in the documents to which we have referred you in the sections of this prospectus supplement entitled "Where You Can Find More Information" and "Incorporation of Certain Information by Reference."

ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering of common stock and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement, and the accompanying prospectus. The second part, the accompanying prospectus dated May 16, 2014, including the documents incorporated by reference therein, provides more general information. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or in any document incorporated by reference that was filed with the Securities and Exchange Commission, or SEC, before the date of this prospectus supplement, on the other hand, you should rely on the information in this prospectus supplement. If any statement in one of these documents is inconsistent with a statement in another document having a later date — for example, a document incorporated by reference in the accompanying prospectus — the statement in the document having the later date modifies or supersedes the earlier statement. You should assume that the information contained in this prospectus supplement is accurate as of the date on the front cover of this prospectus supplement only and that any information we have incorporated by reference or included in the accompanying prospectus is accurate only as of the date given in the document incorporated by reference or as of the date of the prospectus, as applicable, regardless of the time of delivery of this prospectus supplement or the accompanying prospectus or any sale of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

All references in this prospectus supplement and the accompanying prospectus to “Chimerix,” the “Company,” “we,” “us,” “our,” or similar references refer to Chimerix, Inc.

We have obtained a registered trademark for Chimerix® in the United States. This prospectus supplement, the accompanying prospectus, and the information incorporated herein and therein by reference contain references to our trademarks and to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus supplement, the accompanying prospectus, and the information incorporated herein and therein by reference, including logos, artwork and other visual displays, may appear without the® or ^{TM} symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other companies’ trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

MARKET, INDUSTRY AND OTHER DATA

This prospectus supplement contains, and the documents incorporated by reference contain, estimates, projections and other information concerning our industry, our business and relevant antiviral markets, including data regarding the estimated size of relevant antiviral markets, patient populations, projected diagnosis rates and the perceptions and preferences of patients and physicians regarding certain therapies, as well as data regarding market research and estimates. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. Unless otherwise expressly stated, we obtained this industry, business, market and other data from reports, research surveys, studies and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources that we believe to be reliable. In some cases, we do not expressly refer to the sources from which this data is derived. In that regard, when we refer to one or more sources of this type of data in any paragraph, you should assume that other data of this type appearing in the same paragraph is derived from the same sources, unless otherwise expressly stated or the context otherwise requires.

PROSPECTUS SUPPLEMENT SUMMARY

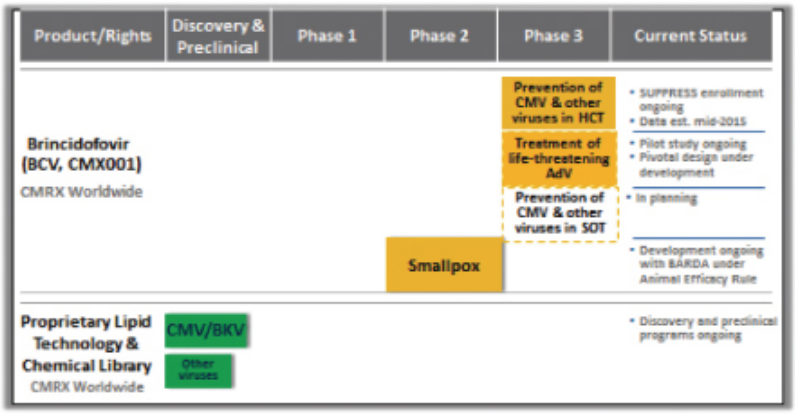
This summary highlights certain information about us, this offering and selected information contained elsewhere in or incorporated by reference into this prospectus supplement. This summary is not complete and does not contain all of the information that you should consider before deciding whether to invest in our common stock. For a more complete understanding of our company and this offering, we encourage you to read and consider carefully the more detailed information in this prospectus supplement and the accompanying prospectus, including the information incorporated by reference in this prospectus supplement and the accompanying prospectus, and the information included in any free writing prospectus that we have authorized for use in connection with this offering, including the information referred to under the heading "Risk Factors" in this prospectus supplement beginning on page S-6 and in the documents incorporated by reference to this prospectus supplement and the accompanying prospectus.

Company Overview

Chimerix is a biopharmaceutical company dedicated to discovering, developing and commercializing novel, oral antivirals to address unmet medical needs. We were founded in 2000 based on the promise of our proprietary lipid technology to unlock the antiviral potential of some of the most broad-spectrum antivirals by enhancing their antiviral activity and safety profiles in convenient, orally administered dosing regimens. Our lead compound, brincidofovir (CMX001), is currently enrolling a Phase 3 clinical trial for the prevention of CMV and other viruses in HCT recipients, and in the pilot portion of a Phase 3 trial for the treatment of life threatening adenovirus infections. We anticipate completing enrollment in our Phase 3 CMV study in HCT by the end of 2014 and reporting data from this trial in mid-2015. We anticipate finalizing the Phase 3 protocol for the treatment of disseminated adenovirus (AdV) infections in the second half of 2014 and initiating enrollment. In addition, we have an active discovery program leveraging our lipid technology and the Chimerix Chemical Library, both focusing on viral targets in areas of high unmet medical need.

Product Pipeline

The following chart depicts our product pipeline, including our product candidate, brincidofovir, its indications, and its current stage of development:



Recent Developments

2014 Research and Development Expenses

As previously announced, we plan to increase our research and development expenses for the foreseeable future as we continue development of brincidofovir for the prevention of CMV infection in HCT recipients and for the treatment of AdV infections, among other research and development activities. In particular, we expect our research and development expenses for 2014 to significantly exceed prior year levels beginning in the second quarter of 2014, as a result of:

- the timing of costs previously expected to occur in 2013 that will instead be incurred in 2014;
- the impact of SUPPRESS trial activities in 2014;

- the initiation of our pilot open-label study of brincidofovir for the treatment of AdV infections in March 2014; and
- the potential initiation of a planned pivotal Phase 3 study in the treatment of AdV infections later this year.

Assuming patient enrollment continues as we currently anticipate for SUPPRESS and our pilot open-label study of brincidofovir for AdV infections, and we initiate a pivotal Phase 3 study in AdV later this year as currently planned, our research and development expenses for the year ending December 31, 2014, may be as high as $65.0 million. We are providing this forward-looking guidance with respect to 2014 research and development expenses solely in connection with the potential public offering of our common stock contemplated by this prospectus supplement, and we do not expect to provide similar forward-looking guidance on a regular basis in the future.

Merck License Agreement

On May 14, 2014, we received notice from Merck of its intention to terminate the Collaboration and Exclusive License Agreement by and between us and Merck, dated July 23, 2012 (the "License Agreement"). The termination of the License Agreement will be effective 90 days after the date we received the notice.

Pursuant to the License Agreement, we granted Merck an exclusive worldwide license to develop and commercialize CMX157, our novel lipid acyclic nucleoside phosphonate, for HIV and other indications, and Merck was responsible for all development and marketing activities for CMX157 on a worldwide basis. Upon execution of the License Agreement, we received a $17.5 million upfront payment. Upon the effectiveness of the termination of the License Agreement, we will reacquire all worldwide rights to CMX157.

Merck made the decision to terminate the License Agreement following a portfolio reassessment and its decision to no longer pursue the development of CMX157. The compound is currently being evaluated for future development opportunities, however we have no present plans for allocation of current or future resources to the development of CMX157.

Corporate Information

We were incorporated in Delaware in April 2000. Our principal executive offices are located at 2505 Meridian Parkway, Suite 340, Durham, North Carolina 27713, and our telephone number is (919) 806-1074. Our corporate headquarters are located in a facility we lease encompassing approximately 14,500 square feet of office space. The leases for this facility expire in June 2015 and February 2018. We separately lease an additional 4,600 square feet of laboratory space in Durham, North Carolina. The lease for this facility expires in June 2014. In March 2014, we entered into a lease for an additional 7,925 square feet of laboratory space in Durham, North Carolina. We do not yet occupy this space. The lease for this facility will expire 48 months following the date that the landlord completes build out work on the premises.

Our corporate website address is *www.chimerix.com*. Information contained on, or accessible through, our website is not a part of this prospectus supplement or the accompanying prospectus, and the inclusion of our website address in this prospectus supplement is an inactive textual reference only.

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012. We will remain an emerging growth company until the earlier of (a) December 31, 2018, (b) the last day of the fiscal year in which we have total annual gross revenue of at least $1.0 billion, (c) the last day of the fiscal year in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700.0 million as of the prior June 30th, and (d) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period. We refer to the Jumpstart Our Business Startups Act of 2012 in this prospectus supplement as the "JOBS Act," and references in this prospectus supplement to "emerging growth company" shall have the meaning associated with it in the JOBS Act.

THE OFFERING

Issuer	Chimerix, Inc., a Delaware corporation
Common stock offered by us	6,200,000 shares
Common stock to be outstanding immediately after this offering	33,132,607 shares
Option to purchase additional shares	We have granted the underwriters an option to purchase up to 930,000 additional shares of our common stock. This option is exercisable, in whole or in part, for a period of 30 days from the date of this prospectus supplement.
Use of proceeds	We estimate that we will receive net proceeds of approximately $ million (or approximately $ million if the underwriters' option to purchase additional shares is exercised in full) from the sale of the shares of common stock offered by us in this offering, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use approximately $60.0 million of the net proceeds of the offering to fund our recently initiated brincidofovir clinical study for the treatment of AdV infection, our planned brincidofovir clinical trial in kidney transplant patients, and other potential clinical studies in additional patient populations. We intend to use the remainder of the net proceeds of this offering for other working capital purposes, including our general operating expenses, commercial pre-launch readiness and progression of our research and development pipeline.
Risk factors	You should read the "Risk Factors" section of this prospectus supplement and in our Annual Report on Form 10-K for the year ended December 31, 2013 and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2014, which are incorporated by reference in this prospectus supplement and the accompanying prospectus, for a discussion of certain of the factors to consider carefully before deciding to purchase any shares of our common stock.
Nasdaq Global Market symbol	CMRX

Outstanding Shares

The number of shares of our common stock to be outstanding immediately after this offering is based on 26,932,607 shares outstanding as of March 31, 2014, and excludes:

- 2,446,246 shares of common stock issuable upon the exercise of outstanding stock options as of March 31, 2014, at a weighted-average exercise price of $8.29 per share;
- 1,337,845 shares of common stock issuable upon the exercise of outstanding warrants as of March 31, 2014, at a weighted-average exercise price of $7.26 per share;
- 956,690 shares of common stock reserved for future issuance under our 2013 employee stock purchase plan; and
- 1,595,682 shares of common stock reserved for future issuance under our 2013 equity incentive plan.

Unless otherwise indicated, all information contained in this prospectus supplement assumes no exercise by the underwriters of their option to purchase up to an additional 930,000 shares of our common stock.

SUMMARY FINANCIAL DATA

The following summary financial data should be read together with our financial statements and related notes, and with "Management's Discussion and Analysis of Financial Condition and Results of Operations," included in our Annual Report on Form 10-K for the year ended December 31, 2013 and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2014, which are incorporated by reference in this prospectus supplement and the accompanying prospectus. Our historical results are not necessarily indicative of the results that may be expected in the future and results of interim periods are not necessarily indicative of the results for the entire year.

We derived the following summary statement of operations data for the years ended December 31, 2011, 2012 and 2013 and balance sheet data as of December 31, 2012 and 2013 from our audited financial statements and related notes incorporated by reference in this prospectus supplement and the accompanying prospectus. We derived the summary statement of operations data for the three months ended March 31, 2013 and 2014 and balance sheet data as of March 31, 2014 from our unaudited financial statements included in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2014 incorporated by reference in this prospectus supplement and the accompanying prospectus, which have been prepared on the same basis as our audited financial statements and include all adjustments, consisting of normal recurring adjustments necessary for the fair presentation of the financial position and results of operations for these periods.

	Year Ended December 31,			Three Months Ended March 31,	
Statement of Operations Data:	**2011**	**2012**	**2013**	**2013**	**2014**
	(in thousands, except share and per share data)				
				(unaudited)	
Revenues:					
Collaboration and licensing	$ 55	$ 17,445	$ —	$ —	$ —
Contract and grant	12,046	16,275	4,370	1,771	780
Total revenue	12,101	33,720	4,370	1,771	780
Operating expenses:					
Research and development	30,108	30,106	24,662	6,783	8,292
General and administrative	6,985	6,397	8,327	1,536	2,672
Total operating expenses	37,093	36,503	32,989	8,319	10,964
Loss from operations	(24,992)	(2,783)	(28,619)	(6,548)	(10,184)
Interest expense, net	(212)	(776)	(1,232)	(356)	(196)
Fair value adjustment to warrant liability	(385)	(847)	(6,590)	(2,203)	—
Loss on disposal of asset	—	—	(4)	—	—
Net loss	$ (25,589)	$ (4,406)	$ (36,445)	$ (9,107)	$ (10,380)
Accretion of redeemable convertible preferred stock	(9,565)	(4,357)	(34,108)	(25,525)	—
Net loss attributable to common stockholders	$ (35,154)	$ (8,763)	$ (70,553)	$ (34,632)	$ (10,380)
Basic and diluted net loss per common share[(1)]	$ (23.49)	$ (5.75)	$ (3.65)	$ (22.58)	$ (0.39)
Shares used to calculate net loss per common share[(1)]	1,496,262	1,524,628	19,307,422	1,534,016	26,762,264

(1) See Note 1 to our financial statements incorporated by reference in this prospectus supplement for an explanation of the method used to calculate the basic and diluted net loss per common share and the number of shares used in the computation of the per share amounts.

	As of		
	December 31, 2012	December 31, 2013	March 31, 2014
		(in thousands)	(unaudited)
Balance Sheet Data:			
Cash and cash equivalents	$ 19,906	$ 109,976	$ 37,421
Short-term investments, available-for-sale	9,849	—	62,500
Working capital	23,931	102,802	92,431
Total assets	32,031	113,387	102,153
Loan payable[(2)]	14,620	9,867	8,479
Redeemable convertible preferred stock warrant liability	7,512	—	—
Redeemable convertible preferred stock	107,723	—	—
Total stockholders' equity (deficit)	(101,031)	98,539	89,624

(2) Loan payable includes the current and long-term portion of our debt, net of debt discount.

RISK FACTORS

An investment in our common stock involves a high degree of risk. Before deciding whether to invest in our common stock, you should consider carefully the risks described below and discussed under the section captioned "Risk Factors" contained in our Annual Report on Form 10-K for the year ended December 31, 2013 and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2014, which are incorporated by reference in this prospectus supplement and the accompanying prospectus in their entirety, together with other information in this prospectus supplement, the accompanying prospectus, the information and documents incorporated herein and therein by reference, and in any free writing prospectus that we have authorized for use in connection with this offering. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment.

Risks Related to This Offering

We have broad discretion in the use of the net proceeds we receive from this offering and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds we receive in this offering, including for any of the purposes described in the section entitled "Use of Proceeds," and you will not have the opportunity as part of your investment decision to assess whether our management are using the net proceeds appropriately. Because of the number and variability of factors that will determine our use of our net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. The failure by our management to apply these funds effectively could result in financial losses that could have a material adverse effect on our business, cause the price of our common stock to decline and delay the development of our product candidates, including the development of brincidofovir. Pending their use, we plan to invest the net proceeds from this offering in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government. These investments may not yield a favorable return to our stockholders.

If you purchase our common stock in this offering, you will experience immediate and substantial dilution in the net tangible book value per share of the common stock you purchase.

Since the price per share of our common stock being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer immediate and substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on the public offering price of $ per share and our net tangible book value as of March 31, 2014 of $3.33 per share, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of $ per share with respect to the net tangible book value of the common stock. See the section entitled "Dilution" below for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering. As a result of the dilution to investors purchasing shares in this offering, if you purchase our common stock in this offering, you may receive significantly less than the purchase price paid in this offering, if anything, in the event of our liquidation.

You may experience future dilution as a result of future equity offerings and other issuances of our common stock or other securities. In addition, this offering and future equity offerings and other issuances of our common stock or other securities may adversely affect our common stock price.

In order to raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock at prices that may not be the same as the price per share in this offering. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock or securities convertible into common stock in future transactions may be higher or lower than the price per share in this offering. You will incur dilution upon any such sale of additional shares if the price at which such shares are sold is higher than the net tangible book value per share of our common stock at the time of such sale.

As of March 31, 2014, 2,446,246 shares of common stock were reserved for issuance upon the exercise of options at a weighted-average exercise price of $8.29 per share were outstanding, warrants to purchase 1,337,845 shares of common stock at a weighted-average exercise price of $7.26 were outstanding, and 2,552,372 shares of common stock were reserved for future issuance under our stock incentive plans. You will incur dilution upon exercise of any outstanding stock options, upon the exercise of outstanding warrants or upon the issuance of shares of common stock under our stock incentive plans.

In addition, the sale of shares in this offering and any future sales of a substantial number of shares of our common stock in the public market, or the perception that such sales may occur, could adversely affect the price of our common stock. We cannot predict the effect, if any, that market sales of those shares of common stock or the availability of those shares of common stock for sale will have on the market price of our common stock.

FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus, the documents we have filed with the SEC that are incorporated by reference in this prospectus supplement and the accompanying prospectus, and any free writing prospectus that we have authorized for use in connection with this offering contain "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended (the Securities Act), and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act). These statements relate to future events or to our future operating or financial performance and involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Forward-looking statements may include, but are not limited to, statements about:

- the success, cost and timing of our product development activities and clinical trials;
- our ability to obtain and maintain regulatory approval of our product candidates, and any related restrictions, limitations, and/or warnings in the label of an approved product candidate;
- our ability to obtain funding for our operations, including funding necessary to complete the Phase 3 clinical trials required to file our new drug application for brincidofovir;
- our plans to research, develop and commercialize our product candidates;
- our ability to attract collaborators with development, regulatory and commercialization expertise;
- the size and growth potential of the markets for our product candidates, and our ability to serve those markets;
- our ability to successfully commercialize our product candidates;
- the rate and degree of market acceptance of our product candidates;
- our ability to develop sales and marketing capabilities, whether alone or with potential future collaborators;
- regulatory developments in the United States and foreign countries;
- the performance of our third-party suppliers and manufacturers;
- the success of competing therapies that are or may become available;
- the loss of key scientific or management personnel;
- our expectations regarding the period during which we qualify as an emerging growth company under the JOBS Act;
- our use of the proceeds from this offering;
- the accuracy of our estimates regarding expenses, future revenues, capital requirements and needs for additional financing; and
- our expectations regarding our ability to obtain and maintain intellectual property protection for our product candidates.

In some cases, you can identify forward-looking statements by terms such as "may", "will", "should", "could", "would", "expects", "plans", "anticipates", "believes", "estimates", "projects", "predicts", "potential" and similar expressions intended to identify forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. We discuss many of these risks in greater detail under the heading "Risk Factors" beginning on page S-6 of this prospectus supplement and in our Annual Report on Form 10-K for the year ended December 31, 2013 and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2014, which are

incorporated by reference in this prospectus supplement and the accompanying prospectus. Also, these forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement.

You should read this prospectus supplement, the accompanying prospectus, the documents we have filed with the SEC that are incorporated by reference and any free writing prospectus that we have authorized for use in connection with this offering completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in the foregoing documents by these cautionary statements.

Neither we, nor any underwriter, has authorized anyone to provide you with information different from, or in addition to, that contained in or incorporated by reference in this prospectus supplement, the accompanying prospectus or in any free writing prospectus prepared by or on behalf of us or to which we may have referred you in connection with this offering. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you.

We are not, and the underwriters are not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering, is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. Unless required by law, we undertake no obligation to update or revise any forward-looking statements to reflect new information or future events or developments. Thus, you should not assume that our silence over time means that actual events are bearing out as expressed or implied in such forward-looking statements.

USE OF PROCEEDS

We estimate that the net proceeds from the sale of the 6,200,000 shares of common stock that we are offering will be approximately $ million (or approximately $ million if the underwriters exercise in full their option to purchase additional shares of common stock), after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

The principal purpose of this offering is to obtain additional capital to support our operations. We anticipate that we will use the net proceeds of this offering as follows:

- approximately $60.0 million to fund our recently initiated brincidofovir clinical study for the treatment of adenovirus infection, our planned brincidofovir clinical trial in kidney transplant patients, and other potential clinical studies in additional patient populations; and
- the remainder to fund other working capital purposes, including our general operating expenses, commercial pre-launch readiness and progression of our research and development pipeline.

We may also use a portion of the remaining net proceeds to in-license, acquire or invest in complementary businesses, technologies, products or assets. However, we have no current commitments or obligations to do so.

The amount and timing of our actual expenditures will depend upon numerous factors, including the ongoing status and results of our Phase 3 clinical trials for brincidofovir. Furthermore, we anticipate that we will need to secure additional funding for the further development of brincidofovir for other indications, and for the development of any of our other product candidates.

Our expected use of net proceeds from this offering represents our current intentions based upon our present plans and business condition. As of the date of this prospectus supplement, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering, or the amounts that we will actually spend on the uses set forth above. The amounts and timing of our actual use of the net proceeds will vary depending on numerous factors, including our ability to obtain additional financing, the relative success and cost of our research, preclinical and clinical development programs, whether we are able to enter into future licensing arrangements, and whether we are able to extend our agreement with the Biomedical Advanced Research and Development Authority. As a result, our management will have broad discretion in the application of the net proceeds, and investors will be relying on our judgment regarding the application of the net proceeds of this offering. In addition, we might decide to postpone or not pursue clinical trials or preclinical activities (including our Phase 3 clinical trials for brincidofovir) if the net proceeds from this offering and the other sources of cash are less than expected.

Pending their use, we plan to invest the net proceeds from this offering in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

PRICE RANGE OF OUR COMMON STOCK

Our common stock has been listed on the Nasdaq Global Market since April 11, 2013 under the symbol CMRX. Prior to that date, there was no public market for our common stock. Shares sold in our IPO on April 11, 2013 were priced at $14.00 per share.

On May 16, 2014, the closing price for our common stock as reported on the Nasdaq Global Market was $16.38 per share. The following table sets forth the ranges of high and low sales prices per share of our common stock as reported on the Nasdaq Global Market for the periods indicated. Such quotations represent inter-dealer prices without retail markup, markdown or commission and may not necessarily represent actual transactions.

	High	Low
Year Ended December 31, 2013		
Second Quarter (beginning April 11, 2013)	$ 25.10	$ 15.11
Third Quarter	$ 27.00	$ 15.31
Fourth Quarter	$ 22.50	$ 12.96
Year Ending December 31, 2014		
First Quarter	$ 27.69	$ 14.65
Second Quarter (though May 16, 2014)	$ 23.65	$ 15.03

As of March 31, 2014, there were 53 stockholders of record of our common stock, which excludes stockholders whose shares were held in nominee or street name by brokers. The actual number of common stockholders is greater than the number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings to support our operations and finance the growth and development of our business. We do not intend to pay cash dividends on our common stock for the foreseeable future. Any future determination related to our dividend policy will be made at the discretion of our board of directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements, contractual restrictions, business prospects and other factors our board of directors may deem relevant.

CAPITALIZATION

The following table sets forth our cash and cash equivalents, and our capitalization as of March 31, 2014:

- on an actual basis;
- on an as adjusted basis, giving effect to the sale by us of 6,200,000 shares of our common stock at the public offering price, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this table together with our financial statements and related notes, and with "Management's Discussion and Analysis of Financial Condition and Results of Operations," included in our Annual Report on Form 10-K for the year ended December 31, 2013 and our Quarterly Report on Form 10-Q for the quarter ended March 31, 2014, which are incorporated by reference in this prospectus supplement and the accompanying prospectus.

	As of March 31, 2014	
	Actual	As Adjusted
	(unaudited) (in thousands, except share amounts)	
Cash, cash equivalents and short-term investments	$ 99,921	$
Stockholders' equity:		
Preferred stock, $0.001 par value; 10,000,000 shares authorized, no shares issued and outstanding	—	—
Common stock, $0.001 par value; 200,000,000 shares authorized, 26,932,607 shares issued and outstanding, actual; 200,000,000 shares authorized, shares issued and outstanding, as adjusted	27	
Additional paid-in capital	262,739	
Accumulated other comprehensive loss	(32)	(32)
Accumulated deficit	(173,110)	(173,110)
Total stockholders' equity	89,624	
Total capitalization	$ 89,624	$

The table above is based on 26,932,607 shares outstanding as of March 31, 2014, and excludes:

- 2,446,246 shares of common stock issuable upon the exercise of outstanding stock options as of March 31, 2014, at a weighted-average exercise price of $8.29 per share;
- 1,337,845 shares of common stock issuable upon the exercise of outstanding warrants as of March 31, 2014, at a weighted-average exercise price of $7.26 per share;
- 956,690 shares of common stock reserved for future issuance under our 2013 employee stock purchase plan; and
- 1,595,682 shares of common stock reserved for future issuance under our 2013 equity incentive plan.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the public offering price per share of our common stock listed on the cover page of this prospectus supplement and the net tangible book value per share of our common stock after this offering.

Our net tangible book value as of March 31, 2014 was approximately $89.6 million, or $3.33 per share. Net tangible book value per share is determined by dividing our total tangible assets, less total liabilities, by the number of shares of our common stock outstanding as of March 31, 2014. Dilution in net tangible book value per share represents the difference between (i) the amount per share paid by purchasers of shares of common stock in this offering and (ii) the net tangible book value per share of our common stock immediately after this offering.

After giving effect to the sale of 6,200,000 shares of our common stock in this offering at the public offering price of $ per share and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of March 31, 2014 would have been approximately $ million, or $ per share. This represents an immediate increase in net tangible book value of $ per share to existing stockholders and immediate dilution in net tangible book value of $ per share to investors purchasing our common stock in this offering at the public offering price. The following table illustrates this dilution on a per share basis:

Public offering price per share		$
Net tangible book value per share as of March 31, 2014	$ 3.33	
Increase per share attributable to investors purchasing our common stock in this offering	$	
As adjusted net tangible book value per share as of March 31, 2014 after giving effect to this offering		$
Dilution per share to new investors purchasing our common stock in this offering		$

If the underwriters exercise in full their option to purchase 930,000 additional shares of common stock at the public offering price of $ per share, the as adjusted net tangible book value as of March 31, 2014 would have been approximately $ per share, representing an increase in net tangible book value of approximately $ per share to existing stockholders and immediate dilution in net tangible book value of $ per share to investors purchasing our common stock in this offering at the public offering price.

The above discussion and table are based on 26,932,607 shares outstanding as of March 31, 2014, and exclude:

- 2,446,246 shares of common stock issuable upon the exercise of outstanding stock options as of March 31, 2014, at a weighted-average exercise price of $8.29 per share;
- 1,337,845 shares of common stock issuable upon the exercise of outstanding warrants as of March 31, 2014, at a weighted-average exercise price of $7.26 per share;
- 956,690 shares of common stock reserved for future issuance under our 2013 employee stock purchase plan; and
- 1,595,682 shares of common stock reserved for future issuance under our 2013 equity incentive plan.

To the extent that outstanding options or warrants are exercised, investors purchasing our common stock in this offering will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

BUSINESS

Chimerix Overview

Chimerix is a biopharmaceutical company dedicated to discovering, developing and commercializing novel, oral antivirals to address unmet medical needs. We were founded in 2000 based on the promise of our proprietary lipid technology to unlock the potential of some of the most broad-spectrum antivirals by enhancing their antiviral activity and safety profiles in convenient, orally administered dosing regimens. Our lead compound, brincidofovir (CMX001), is currently enrolling a Phase 3 clinical trial for the prevention of CMV and other viruses in HCT recipients, and in the pilot portion of a Phase 3 trial for the treatment of life threatening adenovirus infections. We anticipate completing enrollment in our Phase 3 CMV study in HCT by the end of 2014 and reporting data from this trial in mid-2015. We anticipate finalizing the Phase 3 protocol for the treatment of disseminated AdV infections in the second half of 2014 and initiating enrollment. In addition, we have an active discovery program leveraging our lipid technology and the Chimerix Chemical Library, both focusing on viral targets in areas of high unmet medical need.

Brincidofovir

CMV in HCT

More than 65% of hematopoietic cell transplant (HCT) recipients are at increased risk of cytomegalovirus (CMV) reactivation due to prior exposure to CMV defined by evidence of antibodies to CMV in the blood (i.e., CMV seropositive). CMV, a human herpesvirus, is the most common infectious threat in HCT, with 80% of CMV-seropositive (R+) allogeneic transplant recipients developing detectable CMV in the blood, which is known to correlate with progression to disease and death, if untreated. Common manifestations of active CMV infection in immunosuppressed patients are pneumonia, gastrointestinal (GI) disease, hepatitis, and retinitis. In addition, because CMV itself is immunosuppressive, reactivation of the virus can predispose a patient to other opportunistic infections.

Rather than waiting for evidence of CMV disease, the most commonly accepted approach to avoid CMV is frequent monitoring for CMV in the blood and, if CMV replication is detected, initiation of anti-CMV preemptive therapy with intravenous ganciclovir or oral valganciclovir, available antivirals with the side-effect of suppression of neutrophils and an associated increased risk for bacterial and fungal infections.

The initial indication for which we are seeking regulatory approval for brincidofovir is prevention of CMV infection in recipients of allogeneic HCT who are seropositive for CMV. To the extent that the risk-benefit ratio for brincidofovir is established in SUPPRESS, particularly in prevention of clinical manifestations of other dsDNA viral infections, indications in patient populations with more moderate CMV risk estimates may be pursued. Based on a survey of recent literature, we believe that the following table reflects the risk of CMV reactivation in HCT patients:

Risk Assessment for CMV Reactivation in HCT

Type	CMV Serostatus	Risk of CMV Infection[1]	Non-Relapse Mortality[2]
Allogeneic	R+	80%	21%
	D-/R-	3%	17%
	D+/R-	30%	18%
Autologous	R+	40%	27%

(1) "R+" refers to recipient seropositive for CMV, "R-" refers to recipient seronegative for CMV, "D+" refers to donor seropositive for CMV, and "D-" refers to donor seronegative for CMV.
(2) "Risk of CMV Infection" is defined as the likelihood of detectable CMV in blood.
(3) "Non-Relapse Mortality" is defined as death in the first year following HCT that is not due to relapse of the underlying disease.

According to the Center for International Blood and Marrow Transplant Research and the Organ Procurement and Transplantation Network, more than 20,000 HCTs and 28,000 SOTs are performed annually in the United States, with similar numbers of transplants performed annually in Europe according to the

European Group for Blood and Marrow Transplantation and the World Health Organization. More than 65% of HCT recipients are at increased risk of CMV infection due to prior exposure to CMV defined by evidence of antibodies to CMV in the blood (i.e., CMV seropositivity).

HCT remains underutilized, with many patients referred for a transplant only when they reach an advanced stage of disease. In order to increase the number of patients who could potentially benefit from HCT, there has been significant focus on alternative stem cells sources such as unrelated donors and umbilical cord blood stem cells. However, use of unrelated donors for stem cell results in higher risk of reactivation of dsDNA viruses such as CMV.

Overall, the number of stem cell transplants being performed in the United States has grown at approximately 4% annually since 2000. Of the allogeneic transplants, the unrelated donor subset has been growing at a higher rate than other subsets within HCT.

Phase 3 SUPPRESS Trial

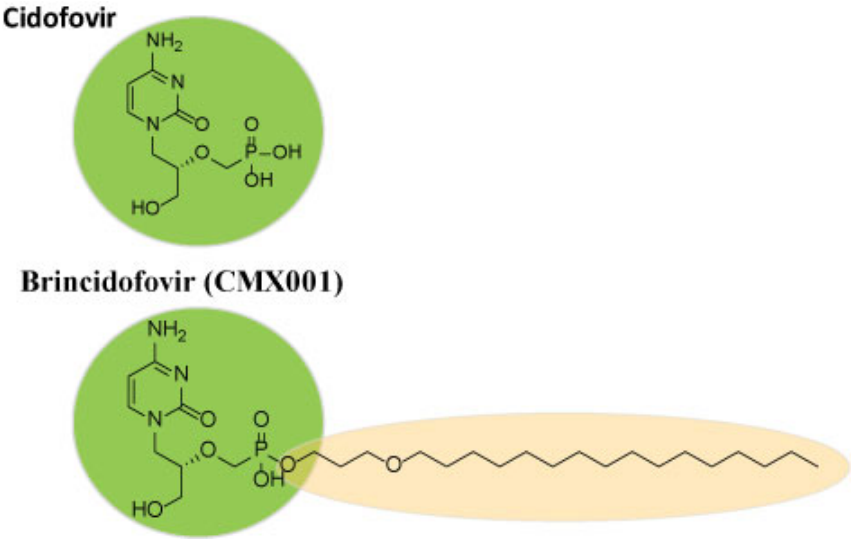
Brincidofovir is an investigational oral nucleotide analog that has shown broad-spectrum antiviral activity against all five families of DNA viruses that affect humans. We initiated the Phase 3 SUPPRESS trial of brincidofovir in the third quarter of 2013. The trial is designed to demonstrate the safety and efficacy of brincidofovir in the prevention of CMV infection through the first 24 weeks following a HCT and, if successful, will serve as the basis for Accelerated Approval for brincidofovir.

SUPPRESS is enrolling 450 allogeneic (non-self) HCT recipients who are at high risk of CMV infection in the post-transplant period based on antibody evidence of a prior infection with CMV, referred to as “CMV seropositive” or “recipient (R+) seropositive.” Because there is no approved CMV prevention available for these patients, the control or “placebo” arm of the study is the currently accepted standard of intensive monitoring for evidence of CMV reactivation in the blood and, if CMV replication is detected, initiation of early or “preemptive” antiviral therapy. Subjects are randomized 2-to-1 to the active brincidofovir arm (n=300) or the standard-of-care/placebo arm (n=150). Dosing of brincidofovir or placebo begins as soon after the transplant as the patient can swallow a tablet, generally within the first two weeks, and continues through Week 14, the period of greatest risk for viral infections. Subjects will be followed in the trial for an additional 10 weeks after the last dose of study drug, for a total of 24 weeks after transplant. The Roche TAQMAN® real-time PCR assay, which was recently approved by the FDA, will be used to monitor levels of CMV in the blood. The trial is powered (greater than 85%) to detect a relative 50% decrease in clinically significant CMV infection in subjects receiving brincidofovir versus those receiving placebo. Secondary endpoints include evidence of other dsDNA viruses, including AdV, VZV, BKV, and other herpesviruses such as HHV-6, which contribute to morbidity and mortality in the first year following HCT.

We anticipate completing enrollment for the SUPPRESS trial in late 2014 and reporting data in mid-2015.

Background on Brincidofovir

Brincidofovir is a broad-spectrum antiviral currently in Phase 3 clinical development for CMV prevention in adult HCT recipients. Utilizing our proprietary lipid technology, this nucleotide compound is dosed orally in tablet or liquid form. Brincidofovir's safety and tolerability profile supports its continued investigation as a potential antiviral prevention for multiple dsDNA viruses. The structures of cidofovir and brincidofovir are graphically depicted below.

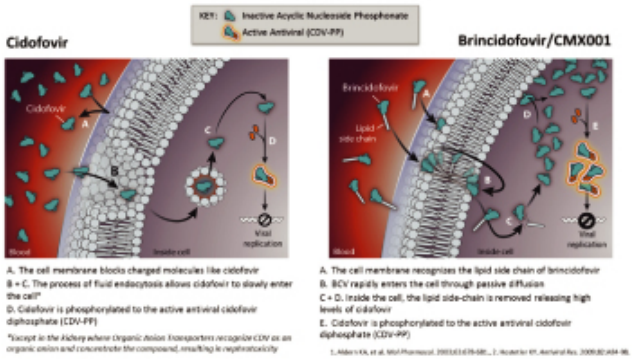


Our proprietary technology results in higher intracellular levels of the active antiviral CDV-PP, while avoiding bone marrow toxicities and cidofovir-related kidney and toxicity. As a result of its phospholipid structure, brincidofovir remains intact in the plasma, is cleaved to cidofovir only after entering cells, and is then converted to CDV-PP, the active antiviral. By more efficiently delivering drug inside cells, our technology allows for more cidofovir to be delivered to the site of viral replication while minimizing the amount of free cidofovir in the plasma, which in turn decreases the risk of nephrotoxicity.

Additionally, dosing with brincidofovir results in levels of CDV-PP detectable in the cells for a long period of time. This allows for less frequent dosing and a low pill burden, potentially important benefits for patients.

Brincidofovir's broad-spectrum potency against dsDNA viruses has been characterized *in vitro* in cell culture systems and *in vivo* in multiple animal models. In cell culture assays, brincidofovir is typically 50- to 100-fold more potent than cidofovir against dsDNA viruses, including herpesviruses, adenoviruses, polyomaviruses, papillomaviruses, and orthopoxviruses.

The graphic below demonstrates the relative plasma and the intracellular concentrations for each compound, as well as the intracellular activation and site of action of brincidofovir versus cidofovir.



The following table shows the concentrations of brincidofovir and each of the approved and investigational antivirals required to reduce viral replication by 50% *in vitro*. Smaller numbers depict a more potent molecule than larger numbers, and results depicted by ">" in general are above a threshold that would indicate antiviral activity (i.e., adequate *in vitro* data do not exist to support pursuing a clinical indication). Data are compiled from multiple sources and include multiple materials and methodologies; comparisons should be limited to general trends in orders of magnitude differences in *in vitro* potency.

Broad Spectrum Activity of Brincidofovir versus Approved and Investigational Antivirals (EC_{50} in μM)

Viral Family	Virus	Brincidofovir (CMX001) EC_{50} (μM)	Cidofovir EC_{50} (μM)	Ganciclovir(1) EC_{50} (μM)	Foscarnet EC_{50} (μM)	Acyclovir EC_{50} (μM)	Maribavir EC_{50} (μM)	Letermovir EC_{50} (μM)
Herpes	Cytomegalovirus (CMV)	0.001	0.4	3.8	50-800	> 200	0.31	0.005
	Epstein-Barr Virus (EBV)	0.03	65.6	0.9	< 500	6.2	0.63	>10
	Human Herpesvirus 6A (HHV-6A)	0.003	2.7	5.8	16	10	Inactive	> 10
	Human Herpesvirus 8 (HHV-8)	0.02	2.6	8.9	177	> 100	Inactive	No data
	Herpes Simplex Virus 1 (HSV-1)	0.01	3.0	0.7	92-95	3.8	Inactive	> 10
	Herpes Simplex Virus 2 (HSV-2)	0.02	6.5	2.5	91-96	4.4	Inactive	> 10
	Varicella Zoster Virus (VZV)	0.0004	0.5	1.3	39.8	3.6	Inactive	> 10
Adenovirus	Adenovirus 7 (AdV7)	0.02	1.3	4.5-33	Inactive (AdV2)	> 100	No data	> 10 (AdV2)
Polyoma	BK Virus (BKV)	0.13	115	> 200	Inactive	> 200	No data	No data
	JC Virus (JCV)	0.045	> 0.1	No data	Inactive	No data	No data	No data
Papilloma	Human Papillomavirus 11 (HPV-11)	17	716	Inactive	No data	Inactive	No data	No data
Pox	Variola	0.1	27	No data	No data	No data	No data	No data
	Vaccinia	0.8	46	> 392	Inactive	> 144	No data	No data

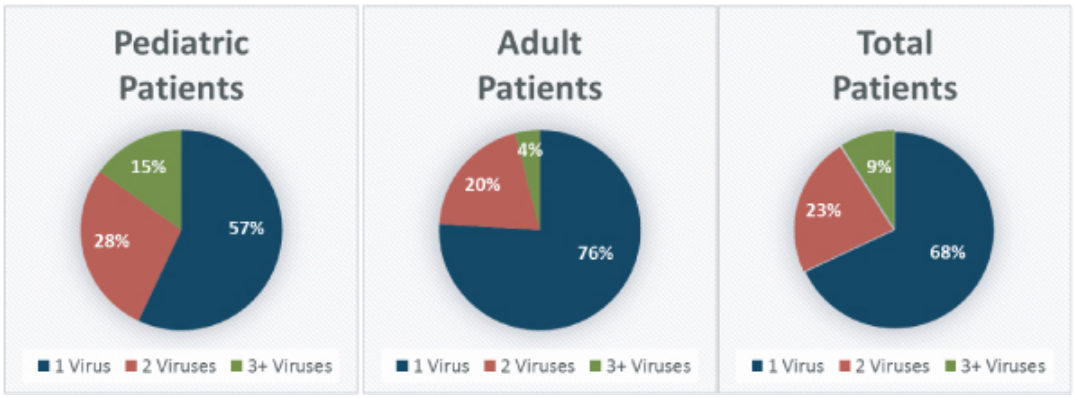
(1) Valganciclovir is rapidly converted to ganciclovir *in vivo*. Accordingly, ganciclovir is the relevant compound for cell activity studies.

Although brincidofovir delivers the same active antiviral, CDV-PP, as intravenous cidofovir, the ability of brincidofovir to deliver CDV intracellularly through the lipid-conjugate technology results in brincidofovir demonstrating approximately 800-fold improvement *in vitro* in activity against BKV, more than 400-fold more activity against CMV, 65-fold more activity against AdV and 250-fold more activity against variola major, the causative agent of smallpox.

Brincidofovir has a high barrier to CMV resistance, and no mutations shown to have phenotypic resistance to any anti-CMV antiviral were detected in Study 201. *In vitro* brincidofovir-resistant CMV is slow to emerge, involves a unique mutation, and has reduced fitness compared to wild-type CMV. We have completed a 39-week chronic toxicology study in monkeys and 26-additional studies in mice, rabbits, rats, dogs, and monkeys. Based on results from these studies, we do not currently plan to conduct additional toxicology studies. We have also completed 41 Absorption, Distribution, Metabolism and Excretion (ADME) studies which demonstrate that brincidofovir is readily absorbed and widely distributed after oral administration in animals. *In vitro* cytochrome P450 and drug transporter inhibition studies indicated low-to-moderate potential for drug-drug interactions. In the development of Vistide®, Gilead identified mammary rat tumors that led to the inclusion of potential carcinogenicity in a black box warning. We observed similar findings with brincidofovir and may have a black box warning for brincidofovir with regard to carcinogenic risk.

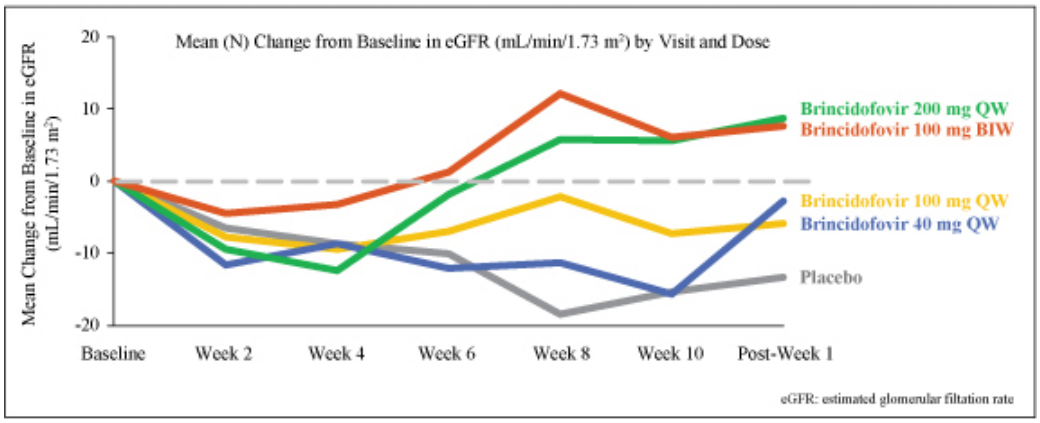
Because HCT recipients are also at increased risk for other DNA viral infections including HHV-6, Epstein-Barr Virus (EBV), AdV and BK virus (BKV), key secondary endpoints in SUPPRESS include clinical events associated with these viruses such as encephalitis, respiratory infections, graft failure and measures of kidney function. Data collected in our previous studies with brincidofovir indicate that immunosuppressed patients are at risk of additional, non-CMV viral infections as per the below.

Immunosuppressed Patients are at Risk for Multiple Viral Infections



In Study 201, CMV (R+) patients assessed for BKV at enrollment: 41% in the placebo arm (n=59) and 45% of brincidofovir patients (n=171) were BKV+ in urine. See "— Successful Identification of Brincidofovir Dose in Study 201" below. Data from Study 201 suggests that BCV may mitigate the effect of BKV infection on renal function and hematuria post-HCT, as measured by changes in estimated glomerular filtration rate (eGFR) as seen in the graph below.

Study 201: Brincidofovir Demonstrated Statistically Significant Dose-Related Improvment in Renal Function (e.g., eGFR)



Baseline GFR	Week 2	Week 4	Week 6	Week 8	Week 10	Post-Week 1
Placebo	-7 (56)	-9 (46)	-10 (35)	-19 (36)	-15 (21)	-13 (57)
Brincidofovir 100 mg BIW	-5 (49)	-3 (44)	1 (33)	12 (31)	6 (21)	8 (49)
				p=0.0013	p=0.0103	p=0.0025

During the first year following allogeneic HCT, the rate of non-relapse mortality (mortality not related to recurrence of the underlying malignancy) is approximately 20%, with perhaps one-third of these deaths attributable to the direct and indirect effects of CMV and other DNA viruses. We hope to show that by preventing the significant morbidity related to DNA viruses, we can positively impact the overall success of allogeneic transplantation in the patients who are undergoing this potentially life-saving procedure.

Through decreasing the proportion of subjects with CMV reactivation, brincidofovir may impact both direct effects of CMV such as CMV pneumonitis or hepatitis, and may also reduce the indirect effects of CMV reactivation including inflammation and immune suppression which lead to bacterial, fungal, protozoal and other viral opportunistic infections. It may also be possible to decrease the use of currently available anti-CMV drugs known to have specific toxicities such as neutropenia that increase the risk of bacterial and fungal infections. Another key set of data being collected in SUPPRESS are healthcare utilization costs, including the costs of the toxicities associated with the currently available antivirals, which we believe will be instrumental in future formulary and pricing discussions.

Successful Identification of Brincidofovir Dose in Study 201

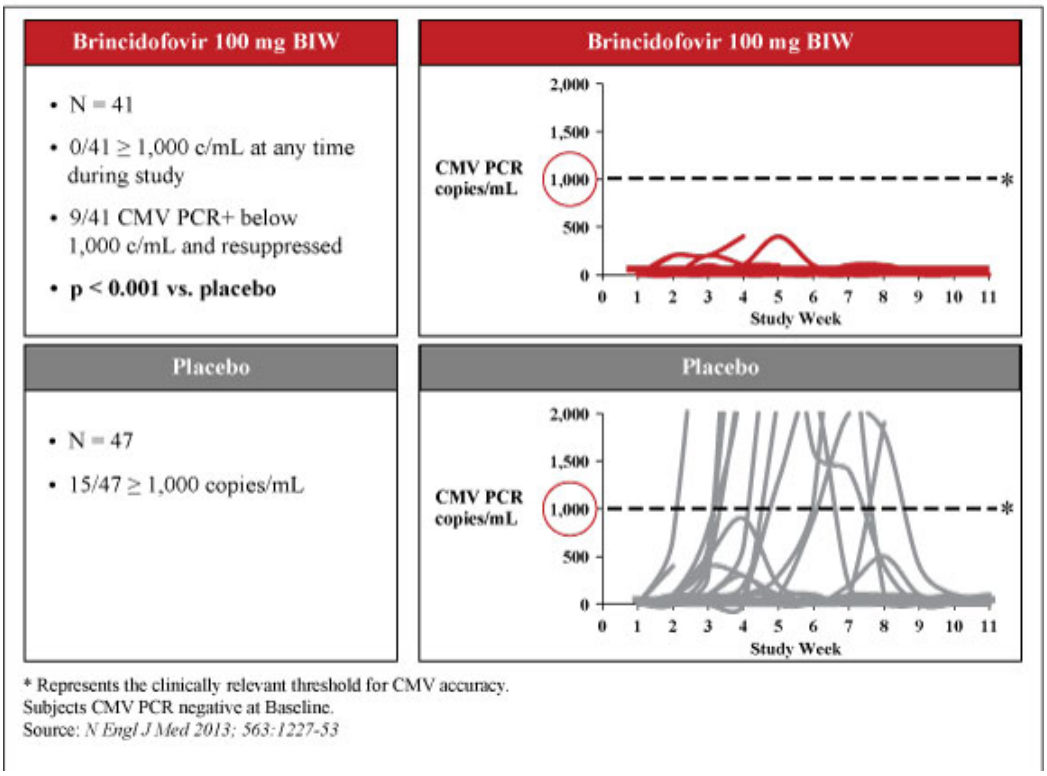
The SUPPRESS study design and patient population substantially mirrors that of our Phase 2 dose-escalation study, Study 201, the results of which were published in September 2013 in the New England Journal of Medicine (N Engl J Med 2013;369:1227-36). In Study 201, a statistically significant decrease in CMV reactivation (CMV PCR > 200 c/mL at the time of the last dose of study drug) was demonstrated for brincidofovir 100 mg BIW versus placebo ($p = 0.002$).

Study 201 was a randomized, placebo-controlled, dose-escalation study in CMV seropositive (R+) allogeneic HCT recipients, including higher risk patients who received HLA mismatched and cord blood source HCT, as well as those who have undergone ex vivo T-cell depletion, evaluating the ability of brincidofovir to prevent CMV infection. Subjects in five dosing groups received either placebo or oral brincidofovir, in doses ranging from 40 mg once weekly to 200 mg BIW. The primary endpoint was defined as (i) the incidence of CMV disease at any time during therapy, or (ii) a CMV polymerase chain reaction (PCR) assay result of greater than 200 copies/mL at the time of the last dose of study drug. All subjects who received at least one dose of drug or placebo and had at least one efficacy evaluation post baseline were included in the primary analysis, regardless of their CMV PCR status (negative or positive) at baseline (modified intent to treat, or mITT, population).

All brincidofovir doses and dose regimens in Study 201 demonstrated antiviral activity when compared to placebo, with the exception of the lowest dose, 40 mg QW. The proportion of subjects who developed CMV disease or a CMV PCR positive result at the end of 100 mg BIW dosing period was 10% (five of 50 subjects) versus 37% (22 of 59 subjects) for placebo-treated subjects ($p=0.002$, mITT population).

In a pre-specified subgroup analysis of subjects who were CMV negative at baseline, zero of 41 subjects (0%) in the brincidofovir 100 mg BIW group developed CMV PCR of 1,000 copies/mL or more during the brincidofovir dosing period, compared to 15 of 47 (32%) of subjects in the placebo cohort ($p<0.001$) (see figures below).

Brincidofovir Demonstrated Dose-Associated CMV Suppression in Phase 2



* Represents the clinically relevant threshold for CMV accuracy.
Subjects CMV PCR negative at Baseline.
Source: *N Engl J Med 2013; 563:1227-53*

There was no indication of myelotoxicity or nephrotoxicity associated with brincidofovir at any dose in the Phase 2 Study, nor discontinuations from the study related to these events. Based on the decreased CMV events in both BIW dosing cohorts, and the superior tolerability of the 100 mg BIW dose in Study 201, brincidofovir 100 mg BIW was felt to demonstrate the most favorable risk benefit ratio and was selected for further evaluation.

Because of the severity of their underlying illnesses and the multiple drugs administered to HCT patients both pre- and post-transplant, there is a high background level of adverse events (AEs) in this patient population. Of the AEs reported in Study 201 in 20% or more of subjects, GI-associated events (including diarrhea, nausea, vomiting and abdominal pain) and elevated ALT levels generally increased in frequency with increasing doses of brincidofovir.

In the cohort of subjects receiving the highest dose of brincidofovir explored in Study 201, brincidofovir 200 mg BIW, an increased rate of GI AEs was reported, particularly diarrhea. Diarrhea in the transplant setting has the potential to originate from a variety of sources, including conditioning regimens, concomitant medications, and infections. At this time, the FDA requested that doses of brincidofovir be limited to a total weekly dose of 200 mg or less. As part of the FDA's request, we implemented a program-wide Safety Monitoring and Management Plan (SMMP) that included interruption of study drug for subjects who experienced Grade 3 or higher GI AEs. In the final cohort of subjects in our Phase 2 study, 10% of the subjects administered brincidofovir 100 mg BIW discontinued brincidofovir due to GI AEs, compared to 3% in the placebo group. A decrease in serum albumin from baseline was found to provide an additional marker for discriminating drug-related diarrhea from diarrhea of other etiologies. We believe that monitoring of serum albumin concentrations coupled with dose interruption is an appropriate strategy to decrease the severity of GI AEs without loss of antiviral activity and could allow for completion of the intended therapy duration. Following the introduction of the SMMP in Study 202 for AdV, less than 10% of subjects discontinued from brincidofovir BIW or QW due to GI AEs. The SMMP is included in the ongoing Phase 3 SUPPRESS study.

A dose-related, transient increase in ALT was associated with brincidofovir therapy. At a dose of 100 mg BIW, approximately 30% of subjects experienced ALT increases greater than three times the upper limit of normal, compared to 16% in the placebo group. When present, the ALT increases follow a predictable pattern and return to baseline levels following completion of therapy. The brincidofovir-related increases in ALT were not associated with increases in aspartate aminotransferase (AST) or bilirubin. Few clinical hepatobiliary AEs were reported in association with brincidofovir therapy and most were mild or moderate in intensity. The ALT increases observed in Study 201 were consistent with ALT elevations observed across all preclinical species exposed to brincidofovir, a finding considered non-adverse as there was no histopathologic evidence of liver injury or hepatic necrosis. In Study 202, there were no Grade 3/4 elevations of ALT in either brincidofovir dosing cohort, and no temporary or permanent discontinuations for ALT elevations.

There has been no evidence of nephrotoxicity with brincidofovir preclinically. The mechanism of nephrotoxicity for intravenous cidofovir is directly related to its status as a dianion at physiologic pH, and the high plasma concentrations of intravenous cidofovir needed to reach therapeutic intracellular levels of CDV-PP. Cidofovir is rapidly taken up by cells in the kidney by a receptor called the human organic anion transporter one (hOAT-1), which leads to high concentrations of cidofovir in the proximal renal tubules in the kidneys and subsequent renal toxicity. Brincidofovir is a dianion and thus not a substrate for hOAT-1.

The lack of nephrotoxicity observed with brincidofovir in preclinical in vitro and animal studies is supported by clinical data. Based on the pharmacokinetic and safety data generated in our Compassionate Use Program, the FDA granted a waiver for the conduct of a renal insufficiency clinical pharmacology study. A further indication of brincidofovir's lack of nephrotoxicity was observed in Study 201, where there was a dose-related improvement in estimated GFR in the subjects receiving therapeutic doses (100 mg BIW or 200 mg QW), and a more significant difference for those subjects found to be shedding BKV in the urine and receiving brincidofovir as compared with subjects on placebo. These data provide a clinical correlate to the in vitro activity of brincidofovir against BKV.

Comparison of SUPPRESS to Study 201

Although SUPPRESS is similar in the population targeted for enrollment (CMV seropositive allogeneic HCT recipients) and the duration of therapy (through to approximately day 100 after transplant), one significant change in design from Study 201 to SUPPRESS is the initiation of dosing prior to engraftment (evidence of a functioning bone marrow), a change that could positively impact the probability of success of SUPPRESS. In Study 201, as in similar studies in CMV prevention using other antiviral agents, dosing began only after evidence of engraftment in order to avoid known or potential hematologic toxicities. Review of the hematologic safety data from brincidofovir's safety database of over 900 individuals exposed to date provided evidence of a the lack of hematologic toxicity or myelotoxicity, and resulted in the ability to begin dosing of brincidofovir in SUPPRESS in the first days following HCT, prior to engraftment. The ability to dose in the very early post-transplant period may further decrease rates of CMV infection based on recently published data regarding the reactivation of latent CMV in the early post-transplant period. In addition, dosing in the early post-transplant period may increase the likelihood that brincidofovir may prevent reactivation of other DNA viruses such as BKV and HHV-6 which can reactivate in the first weeks after transplant.

Additional differences in design between Study 201 and SUPPRESS are summarized in the table below.

	Phase 2 Study (CMX001-201)	Phase 3 Study (SUPPRESS) (CMX001-301)
Population	N-=230; CMV Ab+ (R+)	N=450; CMV Ab+ (R+)
Inclusion Criteria	Adult, high risk allogeneic HCT; CMV PCR + allowed	Adult, high risk allogeneic HCT; CMV PCR - only
Dosing Regimen	Dose Ranging	100 mg BIW
Dosing Initiation	After engraftment	As early as patient can swallow tablet
Efficacy Primary Endpoint	CMV Viremia at time of last study drug dose	CMV viremia per protocol requiring preemptive therapy through Wk 24
Safety	BCV dosed fasted; dose interruption SMMP for GI AEs in final cohort	BCV dosed with food; SMMP allows dose interruption, modification, or reduction for GI AEs

The risk benefit ratio for medications intended for prevention of infection requires a higher standard of safety and tolerability than medications intended for the treatment of established infection, based on the expectation that a larger number of individuals will receive the medication for prevention in order to avoid clinically significant disease (e.g., the number needed to treat to avoid a single infection). With respect to brincidofovir, the safety and tolerability that has been established to date support its continued development as an effective prevention of CMV and other DNA viruses. With regards to the safety and tolerability concerns specific to the HCT population, the lack of observed hematological or bone marrow toxicity is a critical determinant of brincidofovir's use in this population. By contrast, ganciclovir/valganciclovir's negative effects on survival of the graft, the primary objective of transplant hematologists, represents the primary limitation of the use of those drugs. Furthermore, we believe brincidofovir may have the potential to improve graft survival due to brincidofovir's activity against dsDNA viruses that are known to result in graft failure. As shown on the table below, a combined analysis of data from previous studies with placebo-controlled brincidofovir are consistent with this hypothesis.

	Studies 201/202		Study 350	
Clinical Graft Failure	BCV	Placebo	BCV	BCV + (v)GCV
Baseline ANC <1500	0 / 25	1 / 16 **(6.3%)**	2 / 33 **(6.1%)**	2 / 8 **(25.0%)**
All Subjects	2 / 112 **(1.8%)**	3 / 69 **(4.3%)**	2 / 119 **(1.7%)**	2 / 28 **(7.1%)**

Brincidofovir has demonstrated a lack of toxicity for the kidney. In Study 201, monitoring for potential renal toxicity included regular serum creatinine levels, calculation of glomerular filtration rate (GFR), and monitoring for the presence of blood in the urine. Subjects receiving one of the effective doses of brincidofovir had a dose-related improvement in kidney function which was consistent and statistically significant across all three measures, while patients who received placebo had a decline through the duration of dosing and the first week of follow-up. In preclinical assessments, brincidofovir has been shown to be an

inefficient substrate for hOAT-1, the transporter associated with renal dysfunction and renal failure following the intravenous administration of cidofovir (Vistide®).

In Study 201, the most significant baseline predictor that correlated with improvements in renal function was evidence of infection with BK virus, a DNA virus which is a member of the polyomavirus family. This is the first evidence of a potential clinical effect of brincidofovir on manifestations of BKV in HCT recipients. While this potential positive effect may be significant for HCT recipients, it could be even more important in kidney transplant recipients, where BKV has been associated with loss of function and loss of the kidney graft. The evaluation of brincidofovir in kidney transplant recipients is currently being considered in our clinical development plans.

In Study 201, gastrointestinal adverse events and diarrhea in particular were confirmed as the dose-limiting toxicity of brincidofovir. An SMMP was implemented to identify potentially drug-related diarrhea and other gastrointestinal events and to allow a temporary dose interruption. Earlier identification of potentially drug-related GI symptoms and temporary dose interruptions has allowed study subjects to restart brincidofovir successfully in a majority of cases. The SMMP was included in the Phase 2 study in patients with AdV infection (Study 202), with one of 30 patients in the brincidofovir cohorts permanently discontinuing brincidofovir due to diarrhea. The SMMP has been included in the ongoing Phase 3 study of brincidofovir for the prevention of CMV in HCT recipients, SUPPRESS. The SMMP also includes early identification and dose-interruption for potentially drug-related elevations in the liver enzyme ALT, which are reversible upon dosing cessation and typically not accompanied by increases in bilirubin. In our preclinical and early clinical studies, a proportion of individuals had evidence of low-grade ALT increases. In preclinical studies these ALT elevations were not accompanied by any evidence of histopathology and were considered non-adverse.

Regulatory Strategy for Brincidofovir and the Prevention of CMV

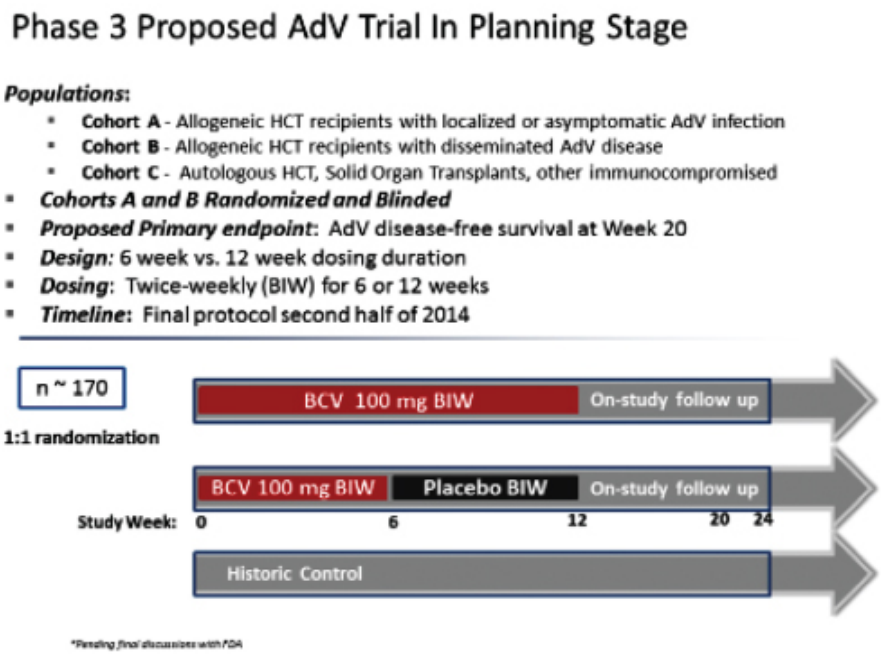
If brincidofovir obtains regulatory approval, we believe the most likely first approved indication for use for brincidofovir will be for the prevention of CMV in high risk (e.g., CMV seropositive) allogeneic HCT recipients. We intend to seek approval of such an indication in the United States by means of an accelerated approval based on the use of a "surrogate endpoint," namely, CMV detected in the plasma at a level which results in the initiation of preemptive therapy for CMV infection. If we are successful in obtaining accelerated approval for use of brincidofovir for such indication, we believe the following are the three primary means by which we might obtain a traditional approval for that indication:

- agreement with the FDA, supported by a public meeting, that CMV viremia be accepted as a validated "surrogate endpoint" for CMV pivotal studies;
- conduct of a second, confirmatory clinical trial which correlates CMV viremia with clinical endpoints (for example, a CMV prevention trial in recipients of solid-organs); or
- if SUPPRESS were to reach statistical significance on mortality or graft survival.

Adenovirus Study 304

In March 2014, we initiated a pilot study of brincidofovir for the treatment of AdV infections in immunocompromised pediatric and adult patients. The study is currently enrolling the "pilot" portion, data from which will inform the final study design for Study 304. There is no minimum or maximum patient number requirement for this pilot portion. We have reached a general agreement with the FDA regarding the design of a Phase 3 study that would include patients similar to those participating in this pilot study, and which could provide data to support the marketing application of brincidofovir for treatment of disseminated adenovirus infections. We believe an indication for the treatment of AdV has the potential to support traditional approval in the U.S. based on clinical endpoints.

Below is a possible design of a Phase 3 AdV trial. Design of the Phase 3 AdV trial remains subject to discussion with the FDA. There can be no assurance that we will reach agreement with the FDA on a final trial design on a timely basis or at all, or that any final trial design we do reach agreement on with the FDA will not vary from the possible design shown below.



Phase 3 Solid Organ Transplant Trial

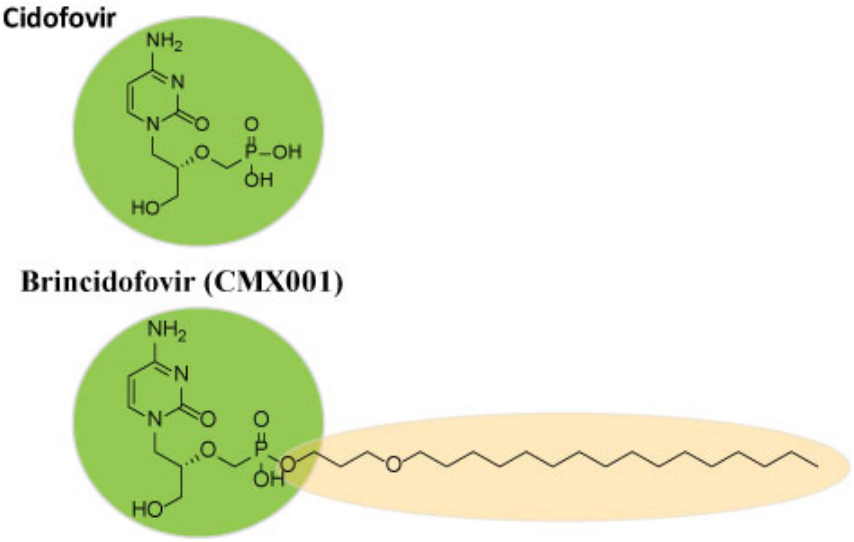
We are actively exploring the conduct of a potential Phase 3 clinical trial studying the effectiveness of brincidofovir in high risk kidney transplant recipients (CMV seropositive donor, seronegative recipient (D+/R-)). The final study design remains in active discussions with the FDA and European regulators.

Pediatric Indication for Brincidofovir

We plan to submit an application for a pediatric indication for the use of brincidofovir in addition to our adult HCT indication application. In connection with any such application, we will need to conduct a study to provide confirmatory pharmacokinetic and safety data for a new pediatric commercial formulation. Depending on the final design and timing of Study 304, we may be able to obtain such data through Study 304.

Potential Exploration of Brincidofovir in other viral indications

In light of the broad spectrum activity observed *in vitro*, brincidofovir could potentially be explored for benefit in the following diseases related to DNA viruses:



Potential collaborative Study: Glioblastoma and CMV

We are examining the potential use of brincidofovir for the treatment of glioblastoma, a tumor of the brain or spinal cord. Published reports have posited a relationship between tumor formation and CMV infection, including one exploratory study investigating the use of valganciclovir in patients with Grade 4 glioblastoma that demonstrated a potential survival benefit.

Our Chemical Library and Lipid Technology

Lipid-Antiviral-Conjugate Technology

Our proprietary technology, which we refer to as lipid-antiviral-conjugate technology, is used to covalently modify a drug molecule with a lipid side chain that mimics the phospholipid component of cellular membranes. The lipid mimetic can then utilize natural uptake pathways to achieve oral bioavailability, enhance uptake into cells, avoid many toxicities, and yield higher intracellular concentrations of active antivirals.

We believe that our lipid-antiviral-conjugate technology can be used to develop new drugs from parent molecules having a known mechanism of action but with an improved safety and efficacy profile relative to the parent. Preclinical studies and in vitro experiments on a number of drugs have shown specific improvements in biological activity compared with the parent drug.

The primary example of our proprietary lipid technology is brincidofovir, which was developed to deliver a potent but relatively toxic drug, cidofovir, into cells. Use of cidofovir has been limited by significant toxicities, particularly kidney toxicity. The lipid-bearing brincidofovir molecule allows delivery of a potent but less toxic molecule than the unmodified cidofovir parent molecule. Thus brincidofovir has a higher benefit risk ratio that allows its use in the setting of prevention of CMV disease and potentially other DNA viruses.

Chimerix Chemical Library

The Chimerix Chemical Library contains over 10,000 heterocyclic ring systems and nucleosides, the majority of which were originally synthesized in the laboratory of Dr. Leroy Townsend at the University of Michigan. This library includes approximately 3,500 nucleoside analog compounds that are candidates for lipid conjugation. We have an active discovery program focusing on viral diseases where there is significant unmet medical need. We are currently screening the library for activity against more than thirty viruses

including flaviviruses, influenza, herpesviruses and polyomaviruses. Lead chemical series have been identified for CMV and BK viruses and novel compounds with promising activity are being evaluated in various pre-clinical testing models. We believe that several compounds active against key pathogens are amenable to enhancement using our proprietary lipid technology.

Our Strategy

Our strategy is to discover, develop and commercialize novel oral antiviral therapeutics in areas of significant unmet medical need. Our primary initial focus is leveraging the broad-spectrum profile of brincidofovir to address the multiple DNA viral infections common in transplant recipients. We are also weighing the potential of developing brincidofovir for use in non-transplant settings, in light of the broad-spectrum anti-viral activity against numerous DNA viruses.

The key components of our strategy are:

- ***Pursue multiple indications for which brincidofovir could receive approval.***
  - *Prevention of CMV in High Risk HCT Recipients.* During 2013, we began enrollment of SUPPRESS, our Phase 3 clinical trial of brincidofovir for the prevention of CMV in HCT recipients. The SUPPRESS study design and population largely resembles our Phase 2 dose-ranging CMV prevention study (Study 201).
    - If successful, the data from SUPPRESS will be used to support our application for accelerated approval of brincidofovir for the prevention of CMV in HCT recipients. We anticipate completing enrollment for the SUPPRESS trial in late 2014 and reporting data in mid-2015. If approved, we believe that we are well positioned to maximize the commercial potential of brincidofovir as there are currently no approved therapies for prevention of CMV reactivation in HCT. We are in discussions with the FDA regarding the study design for our confirmatory Phase 3 study for traditional approval of brincidofovir for the prevention of CMV. The confirmatory study could be conducted in kidney transplant recipients.
    - During 2014, we plan to expand our activities to Europe. We anticipate adding several sites to the SUPPRESS trial. We are also in the process of obtaining scientific advice from the European Medicines Authority on our brincidofovir development plan.
  - *Treatment of Life-Threatening AdV Infections in Immunocompromised Patients.* In March 2014, we initiated a pilot open-label study of brincidofovir for the treatment of AdV infections in immunocompromised pediatric and adult patients. The study is currently enrolling the “pilot” portion, data from which will inform the final study design for Study 304. We are in general agreement with the FDA regarding the design of a Phase 3 study that would include patients similar to those participating in this pilot trial and which could provide data to support the marketing application of brincidofovir for treatment of disseminated adenovirus infections. However, design of the Phase 3 study remains subject to discussions with the FDA.
  - *Prevention of CMV in SOT Recipients.* We intend to conduct a Phase 3 clinical trial studying the effectiveness of brincidofovir in high risk recipients of kidney transplant (CMV seropositive donor, seronegative recipient (D+/R-)). In SOT recipients, CMV infection generally occurs after discontinuation of the currently available antivirals.
- ***Evaluate Additional Patient Populations and Applications for Use of Brincidofovir.*** In addition to our initial development program focusing on CMV in transplant recipients, we are evaluating other patient populations and applications for potential future treatment opportunities with brincidofovir.
  - *Additional patient populations.* We intend to evaluate brincidofovir in other immunocompromised patient populations. Beyond the transplant population, patients are susceptible to multiple DNA viral diseases due to congenital or induced immune deficiencies secondary to biologics therapy for autoimmune and other disorders. Through our Expanded Access Program, hundreds of patients have received brincidofovir for the treatment of a variety of viral diseases.

- *Additional viral indications.* Brincidofovir has shown activity in vitro against the five families of DNA viruses that cause disease in humans. In addition to the development progression for the prevention of CMV, we have also evaluated brincidofovir for use in patients with AdV infection. In an exploratory Phase 2 study in patients with AdV infection, brincidofovir consistently suppressed AdV viremia and showed a favorable numeric difference for progression to AdV disease and non-relapse mortality.

- We also continue to work with BARDA to develop brincidofovir as a medical countermeasure for the treatment of variola virus, the DNA virus responsible for smallpox. In March 2014, we presented data demonstrating that rabbits receiving three doses of brincidofovir experienced a statistically significant survival benefit over placebo when infected with rabbitpox. We intend to evaluate brincidofovir for the treatment of patients with various other DNA virus induced diseases. This process has begun with the collection of secondary endpoint data in our SUPPRESS trial and may continue with more virus-specific clinical trials in the future.

- ***Discover and Develop Additional Product Candidates to Strengthen our Antiviral Product Portfolio.*** We have an active discovery and preclinical development program focused on identifying and developing new compounds that can be used to treat viral diseases for which no current therapeutic option exists or in areas of high unmet medical need. Current examples include influenza and norovirus. We intend to leverage our knowledge and experience of nucleosides to advance compounds in the Chimerix Chemical Library through Investigational New Drug (IND)-enabling studies and potential clinical development and/or partnerships. In addition, we are exploring other potential product opportunities based on the ability of our proprietary lipid technology to significantly improve the drug profile of molecules with limitations in safety or delivery.

Commercial Agreements

BARDA

In February 2011, we entered into a contract with BARDA for the advanced development of CMX001 as a medical countermeasure in the event of a smallpox release (Contract Number HHSO100201100013C). BARDA is a division of the U.S. Department of Health and Human Services (HHS) in the Office of the Assistant Secretary for Preparedness and Response that supports the advanced research and development, manufacturing, acquisition and stockpiling of medical countermeasures. The scope of work for the contract includes preclinical, clinical and manufacturing development activities that fall into the following areas: non-clinical animal efficacy studies; clinical activities; manufacturing activities; and all associated regulatory, quality assurance, management, and administrative activities.

Under the contract, BARDA will reimburse our costs, plus pay us a fixed fee, for the research and development of CMX001 as a treatment of smallpox infections. The contract consists of an initial performance period, referred to as the base performance segment which ended on May 31, 2013, plus up to four extension periods of around one year each, referred to as option segments, each of which may be exercised at BARDA's sole discretion. We must complete agreed upon milestones and deliverables in each discrete work segment before the next option segment is eligible to be exercised. Under the contract as currently in effect, if each follow-on option segment is exercised by BARDA, we may receive up to $75.8 million in expense reimbursement and $5.3 million in fees.

We completed the base performance segment of the contract on May 31, 2013 and are currently working under the first option segment of the contract which has been extended and is currently scheduled to end August 31, 2014. BARDA must notify us at least 30 days before the end of the first option segment if it intends to exercise the second option segment of the contract. If all option segments are exercised by BARDA, the term of the contract would be extended to February 15, 2016. As of March 31, 2014, we had recognized revenue in aggregate of $33.5 million with respect to the base performance segment and the first extension period.

Pursuant to the contract, Chimerix and the U.S. government share the rights to any inventions made in the performance of our work under the contract. Specifically, 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; provided, however, that the U.S. government may, under certain circumstances, including circumstances involving public health and safety, license such inventions to third parties without our consent. There have been no inventions made to date under the BARDA contract.

The contract may be terminated by BARDA ten days after giving us notice of a material default which remains uncured for ten days. In addition, BARDA is also permitted under applicable law to terminate the contract if it is in the U.S. government's best interest.

We anticipate renegotiating certain aspects of the smallpox animal plan to take into account recent guidance from the FDA for development of CMX001 under the Animal Efficacy Rule. The results of this negotiation are uncertain and we do not anticipate continuing this program without ongoing support from BARDA.

The Regents of the University of California

In May 2002, we entered into a license agreement with The Regents of the University of California (UC) under which we obtained an exclusive, worldwide license to UC's patent rights in certain inventions (the UC Patent Rights) related to lipid-conjugated antiviral compounds and their use, including certain patents relating to brincidofovir. Under the license agreement, we are permitted to research, develop, manufacture and commercialize products utilizing the UC Patent Rights for all human and veterinary uses, and to sublicense such rights subject to certain sublicensing fees and royalty payments.

In consideration for the rights granted to us under the license agreement, we issued UC an aggregate of 64,788 shares of our common stock. In connection to the development and commercialization of brincidofovir, we could be required to pay UC up to an aggregate of $3.4 million in milestone payments, assuming the achievement of all applicable milestone events under the license agreement. In addition, upon commercialization of any product utilizing the UC Patent Rights, which would include brincidofovir, we will be required to pay low single digit royalties on net sales of such product.

The license agreement requires that we diligently develop, manufacture and commercialize compounds that are covered by the UC Patent Rights, and we have agreed to meet certain development and commercialization milestones. UC may, at its option, either terminate the license agreement or change the license granted from an exclusive license to a non-exclusive license if we fail to meet such development and commercialization milestones. We are currently in compliance with these milestone requirements. Specifically, the license agreement contains a due diligence requirement stating that we must commence a Phase III clinical trial for the first Licensed Product within 9 years of the Effective Date (as those terms are defined within the license agreement). On January 31, 2011 we received a letter from UC stating that we had satisfied these requirements, thereby waiving compliance with further due diligence obligations.

Merck

In July 2012, we entered into a collaboration and license agreement granting Merck exclusive worldwide rights to CMX157, our novel nucleoside phosphonate being developed for the treatment of HIV infection. Under the terms of the agreement, Merck received an exclusive worldwide license for any human use of CMX157 and agreed to use commercially reasonable efforts to develop and commercialize CMX157 in the United States and at least three major European markets. Following execution of the agreement, we received a $17.5 million upfront payment from Merck.

On May 14, 2014, we received notice from Merck of their intent to terminate the collaboration and exclusive license agreement with Chimerix. Pursuant to the agreement, the termination will be effective 90 days after receipt of the notification. As a consequence of the termination, all license rights previously granted to Merck under the collaboration and exclusive license agreement will revert to Chimerix. The compound is currently being evaluated for future development opportunities, however, Chimerix has no present plans for allocation of current or future resources to the development of CMX157.

Commercial Operations

In anticipation of potential regulatory approval and commercial launch of brincidofovir, we are building out select commercial functions in the U.S. tied to key milestones, such as availability of topline data from the SUPPRESS trial in mid-2015, and the potential filing of the NDA for brincidofovir.

Patients who receive HCT and solid organ transplants (SOTs) are likely to be treated at a small number of major medical centers by specialized teams of physicians. There are approximately 200 U.S. transplant centers, which overlap in performing HCT and SOT. The management of therapies for transplant patients is largely the responsibility of transplant physicians and infectious disease specialists who oversee post-transplant therapies. Overall, transplant and transplant infectious disease treatment is a small clinical discipline with a clearly identified group of key opinion leaders (KOLs). While the standard of care for post-transplant therapies may vary by institution and country, it is often driven by research activities or publications of these KOLs from academic transplant research centers. Many of these key opinion leaders have participated in our clinical trials and/or have experience using brincidofovir through our Compassionate Use Program. We believe we can access these KOLs to help inform future commercialization plans for brincidofovir, including the prioritization and probability of success in evaluating additional study populations involving DNA viruses.

If approved for the prevention of CMV in patients who have received a HCT, we believe it is possible for us to commercialize brincidofovir for this indication in the United States and Canada with a relatively small commercial infrastructure, which may include a contract sales force, partner sales force, or internal team. While our commercialization efforts would initially be focused on physicians who are responsible for HCT recipients, this commercial infrastructure would serve as the foundation for an expanded focus on physicians who are responsible for SOT recipients, subject to market approval in this patient population.

Outside of the United States and Canada, subject to obtaining necessary marketing approvals, we likely will seek to commercialize brincidofovir through distribution or other collaboration arrangements. If we elect to develop brincidofovir for other DNA viral indications, we would plan to do so selectively either on our own or by establishing alliances with one or more collaborators, depending on, among other things, the applicable indications, the related development costs, and our available resources.

Competition

Our industry is highly competitive and subject to rapid and significant technological change. While we believe that our experience and scientific and commercial knowledge provide us with competitive advantages, we may face competition from large and small pharmaceutical and biotechnology companies, including specialty pharmaceutical and generic drug companies, academic institutions, government agencies, research institutions and others.

We believe that the key competitive factors that will affect the commercial success of brincidofovir and our other product candidates are the efficacy, safety and tolerability profile and the risk-benefit trade-off compared to alternative therapies or procedures. Securing market access and reimbursement will be an important element of product uptake and market penetration. Our commercial opportunity could be reduced or eliminated if our competitors develop or market products or other novel technologies that are more effective, safer or have greater market access than brincidofovir, or obtain regulatory approval for their products more rapidly than we do. In addition, our ability to compete may be affected by the availability of generic products.

We expect that, if approved, brincidofovir would compete with a number of existing products and other product candidates that target serious viral infections, including drugs and vaccines which demonstrate efficacy against viruses that affect our target patient populations. We believe brincidofovir has potential benefits over the competitive products, including the potential to be the first antiviral indicated for the prevention of CMV in allogeneic stem cell transplant patients. Potentially competing products that are currently marketed include:

- oral and intravenous ganciclovir, a drug that is sold by generic manufacturers;
- Valcyte® (valganciclovir), a prodrug of ganciclovir that is marketed by Hoffmann-La Roche Inc.;
- Cytogam®, a pooled CMV hyperimmuneglobulin, marketed by CSL Limited;
- Vistide® (cidofovir for injection), marketed by Gilead Sciences, Inc.; and

- Foscavir® (foscarnet sodium for injection), marketed by Clinigen Group plc and generic manufacturers.

We are aware of several product candidates currently in development that may compete against brincidofovir for the prevention or mitigation of CMV infection in a variety of settings, including:

- letermovir, an anti-CMV drug being developed pursuant to an exclusive worldwide license agreement between AiCuris GmbH & Co. KG and Merck; and
- ASP0113 (TransVax), a CMV prevention vaccine, licensed to Astellas Pharma Inc. from Vical Incorporated and in development by Astellas and Vical.

Additional vaccine products are being developed by GlaxoSmithKline plc (GlaxoSmithKline), Novartis International AG, sanofi-aventis U.S. (Sanofi), and a variety of university and governmental organizations. Other products used against the same viruses targeted by brincidofovir include valacyclovir, an antiviral drug marketed by GlaxoSmithKline and a number of generic manufacturers; leflunomide, a drug approved for rheumatoid arthritis and sold in the United States by Sanofi under the brand name Arava®; and quinolone antibiotics, which are manufactured by a variety of branded pharmaceutical companies and generic manufacturers. Furthermore, we anticipate that we will face intense and increasing competition as new products enter the market, as advanced technologies become available and as generic forms of currently branded products become available.

Finally, the development of new treatment methods for the diseases we are targeting could render our product candidates non-competitive or obsolete. Changes in the health care system may limit our ability to price brincidofovir or our other product candidates at a level that would allow recovery of our research and development costs and may impede our ability to generate or maintain a profit.

We believe that brincidofovir has potential benefits over existing and potential competitive products as described in more detail under “Business — Brincidofovir.” As a result, we believe that brincidofovir should be well placed to establish market share if we obtain the required regulatory approvals for brincidofovir. However, even with those benefits, we may not be able to make promotional claims that brincidofovir is superior to these competing products, and brincidofovir may be unable to compete successfully against these products. See “Part II Item 1A. Risk Factors — Risks Related to Commercialization of Our Product Candidates” in our Quarterly Report on Form 10-Q for the period ended March 31, 2014.

Our Intellectual Property

We strive to protect and enhance the proprietary technologies that we believe are important to our business, and seek to obtain and maintain patents intended to cover our products and compositions, their methods of use and any other inventions that are important to the development of our business. We are not currently aware of any third-party patents (other than patents we have licensed) encompassing our proprietary compounds brincidofovir.

Our success will depend significantly on our ability to obtain and maintain patent and other proprietary protection for commercially important technology, inventions and know-how related to our business, defend and enforce our patents, maintain our licenses to use intellectual property owned by third parties, preserve the confidentiality of our trade secrets and operate without infringing the valid and enforceable patents and other proprietary rights of third parties. We also rely on know-how, continuing technological innovation and in-licensing opportunities to develop, strengthen, and maintain our proprietary position in the field of nucleoside phosphonates.

We believe that we have a strong intellectual property position and substantial know-how relating to the development and commercialization of our lipid-antiviral conjugates, including brincidofovir and derivatives of brincidofovir consisting of patents or patent applications that we own or have in-licensed from third parties. We cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents that may be granted to us in the future will be commercially useful in protecting our technology.

Our objective is to continue to expand our intellectual property estate by filing patent applications directed to dosage forms, methods of treatment, and identification of additional nucleoside phosphonate compounds and their derivatives, in order to protect our lipid-antiviral conjugate therapeutics and to maintain our position in the antiviral field. Specifically, we seek patent protection in the United States and in certain other jurisdictions for novel compositions of matter covering brincidofovir, and chemistries which facilitate the synthesis of nucleoside phosphonate compounds, including brincidofovir, as well as uses of these compounds in a variety of anti-viral therapies, where available and when appropriate. Our policy is to pursue, maintain, and defend patent rights, whether developed internally or licensed from third parties, and to protect the technology, inventions, and improvements that are commercially important to the development of our business. We are also expanding our intellectual property estate into the area of novel antifungal nucleoside phosphonates.

Brincidofovir

The patent portfolio for brincidofovir is directed to cover compositions of matter (including polymorphs), formulation, manufacturing methods of polymorphic forms, and methods of use. This patent portfolio includes issued U.S. patents, pending U.S. patent applications, and corresponding foreign national and regional counterpart patents and patent applications. The patents and patent applications relating to brincidofovir include patents and patent applications owned by us, as well as patents and patent applications in-licensed (exclusive license) patent from The Regents of the University of California. The issued composition of matter patents in-licensed from the Regents of the University of California (U.S. Patent Nos. 6,716,825; 7,034,014; 7,094,772; and 7,790,703), if the appropriate maintenance, renewal, annuity, and other government fees are paid, are expected to expire in 2020. The issued composition of matter (polymorphic form) owned by Chimerix, Inc. (U.S. Patent No. 8,569,321), if the appropriate maintenance, renewal, annuity, and other government fees are paid, is expected to expire in 2031. The issued methods of use patents in-licensed from the Regents of the University of California (U.S. Patent Nos. 6,716,825; 7,452,898; and 7,790,703), if the appropriate maintenance, renewal, annuity, and other government fees are paid, are expected to expire in 2020. The issued methods of use patents owned by Chimerix, Inc. (U.S. Patent Nos. 8,642,577 and 8,614,200), if the appropriate maintenance, renewal, annuity, and other government fees are paid, are expected to expire in 2029 and 2030; respectively. Based on our current development plan, we believe that an additional term of up to five years for one of the brincidofovir U.S. patents may result from the patent term extension provision of the Hatch-Waxman Amendments of 1984 (the Hatch-Waxman Act). We expect that the remaining patent applications in this portfolio, if issued, and if appropriate maintenance, renewal, annuity, and other governmental fees are paid, would expire between 2020 and 2033, excluding any additional term from patent term adjustment or patent term extension. Assuming one of the U.S. composition of matter or method of use patents covering brincidofovir were awarded the maximum patent term extension, the term of that patent could extend to December 2025. The patent term calculation method and the provisions under the Hatch-Waxman Act are described under “— Patent Term” below.

The term of issued brincidofovir composition of matter patents in other jurisdictions (Australia, Canada, Europe, Hong Kong, India, Japan, Mexico, Russia, and South Africa) and methods of use patents and patent applications (if applicable) relating to brincidofovir (in Australia, Canada, China, Europe, Hong Kong, India, Japan, Mexico, Russia, and South Africa), if the appropriate maintenance, renewal, annuity, and other government fees are paid, are expected to expire between 2020 and 2031. These patents and patent applications (if applicable), depending on the national laws, may benefit from extension of patent term in individual countries. In the European Union member countries, for example, a supplementary protection certificate (SPC), if obtained, provides a maximum five years of market exclusivity. The duration of the SPC can be extended to five and a half years when the SPC relates to a human medicinal product for which data from clinical trials conducted in accordance with an agreed Pediatric Investigation Plan (PIP) have been submitted. Likewise, in Japan, the term of a patent may be extended by a maximum of five years in certain circumstances.

CMX157

The patent portfolio for CMX157 is directed to cover compositions of matter, formulation, and methods of use. This patent portfolio includes issued U.S. patents, pending U.S. patent applications, and corresponding foreign national and regional counterpart patents and patent applications. The patents and patent applications

relating to CMX157 include patent applications owned by us, as well as patents and patent applications in-licensed (exclusive license) from The Regents of the University of California. The issued composition of matter patents (U.S. Patent Nos. 6,716,825; 7,034,014; 7,094,772; 7,790,703; 7,687,480 and 8,710,030), if the appropriate maintenance, renewal, annuity, and other government fees are paid, are expected to expire in 2020. The issued methods of use patents (U.S. Patent Nos. 6,716,825; 7,790,703; and 7,687,480), if the appropriate maintenance, renewal, annuity, and other government fees are paid, are expected to expire in 2020. We believe that an additional term of up to five years for one of the CMX157 U.S. patents may result from the patent term extension provision of the Hatch-Waxman Act. We expect that the patent applications in this portfolio, if issued, and if appropriate maintenance, renewal, annuity, and other governmental fees are paid, would expire between 2020 and 2033, excluding any additional term from patent term adjustment or patent term extension. The patent term calculation method and the provisions under the Hatch-Waxman Act are described under "— Patent Term" below.

The term of issued CMX157 composition of matter patents in other jurisdictions (Australia, Canada, Europe, Hong Kong, India, Japan, Mexico, Russia, and South Africa) and methods of use patents and patent applications (if applicable) relating to CMX157 (in Australia, Canada, China, Europe, Hong Kong, India, Japan, Mexico, Russia, and South Africa), if the appropriate maintenance, renewal, annuity, and other government fees are paid, are expected to expire between 2020 and 2031. Like the patents relating to brincidofovir, the patents and patent applications (if applicable), covering CMX157, depending on the national laws, may also benefit from extension of patent term in individual countries.

Other Product Candidates

In addition to brincidofovir, we have a chemical library of more than 10,000 heterocyclic compounds purchased from the University of Michigan which includes approximately 3,500 nucleoside analog candidates for lipid conjugation. We also license certain intellectual property rights relating to these compounds from the University of Michigan, in exchange for which we agree, among other things, to use commercially reasonable efforts to develop and commercialize products utilizing the licensed intellectual property, and to pay certain royalties and other fees to the University of Michigan. Focused screening of the library has identified viable hits against multiple pathogens including compounds with activity against influenza and compounds with activity against both CMV and BKV. Lead selection is in progress for a dual active CMV/BKV programs. We believe additional nucleoside phosphonate antiviral compounds, unrelated to brincidofovir, are protected under U.S. Patents 7,994,143; 7,749,983; 8,008,308; and 8,309,565, which are expected to expire between 2020 and 2028, if the appropriate maintenance, renewal, annuity, and other government fees are paid.

Patent Term

Patents generally have a term of twenty years from the date they are filed. As our patent portfolio has been built over time, the remaining terms of the individual patents across our patent portfolio vary. We believe that our patents and patent applications are important for maintaining the competitive differentiation of our antiviral platform and Chemical Library, enhancing our freedom of action to sell our antivirals, upon appropriate regulatory approvals, in markets in which we choose to participate, and maximizing our return on research and development investments. No single patent is in itself essential to Chimerix as a whole.

The term of individual patents and patent applications listed in previous sections will depend upon the legal term of the patents in the countries in which they are obtained. In most countries, the patent term is 20 years from the date of filing of the patent application (or parent application, if applicable). For example, if an international (PCT) application is filed, any patent issuing from the PCT application in a specific country expires 20 years from the filing date of the PCT application. In the United States, however, if a patent was in force on June 8, 1995, or issued on an application that was filed before June 8, 1995, that patent will have a term that is the greater of twenty years from the filing date or seventeen years from the date of issue.

Under the Hatch-Waxman Act, the term of a patent that covers an FDA-approved drug may also be eligible for patent term extension (PTE). PTE permits patent term restoration of a U.S. patent as compensation for the patent term lost during the FDA regulatory review process. The Hatch-Waxman Act permits a patent term extension of up to five years beyond the expiration of the patent. The length of the patent term extension is related to the length of time the drug is under regulatory review. A patent term extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only one patent

applicable to an approved drug may be extended. Further, certain new drug applications may obtain an additional six months of marketing exclusivity if the drug manufacturer submits certain FDA-requested information relating to the use of the active moiety in a pediatric population (pediatric exclusivity). Similar patent term extension provisions may be available in Europe and certain other foreign jurisdictions to extend the term of a patent that covers an approved drug. When possible, depending upon the length of clinical trials and other factors involved in the filing of a new drug application (NDA) we expect to apply for patent term extensions for patents covering nucleoside phosphonates and their derivatives, and their use in treating various diseases. As a specific example, if we are awarded the maximum length of PTE, our U.S. granted composition of matter patents relating to brincidofovir would have an expected expiration date of December 20, 2025. However, depending on any changes in our clinical path, the PTE may not be granted, or may be less than the maximum.

For additional information on patent term extension and the BPCA, see "— Government Regulation and Product Approval" below.

Manufacturing

We do not own or operate and we do not expect to own or operate, facilities for product manufacturing, storage and distribution, or testing. In the past, we have relied on third-party manufacturers for supply of our lead product candidate, brincidofovir, as well as our other product candidates. We expect that in the future we will rely on such manufacturers for supply of drug substance and product that will be used in clinical trials of brincidofovir. When produced on a commercial scale, we expect that cost-of-goods-sold relating to brincidofovir will generally be in-line with that of other small-molecule pharmaceutical compounds.

The manufacturing process for brincidofovir is relatively straight-forward and generally in-line with other small molecule pharmaceutical compounds in terms of cost and complexity. The process is robust and reproducible, does not require dedicated reactors or specialized equipment, uses common synthetic chemistry and readily available materials, including off-the-shelf and made-to-order starting materials, and is readily transferable.

Our current drug substance supply chain for brincidofovir involves various contractors that supply the raw materials for the drug substance process and a contract manufacturer for the drug substance. We have validated the drug substance production process for brincidofovir at a scale of up to 100 kilograms, which is an amount that safely exceeds our currently projected commercial requirements. We have completed transferring the drug substance manufacturing process to our selected contractor that will produce the commercial supply of drug substance and drug product. Manufacturers of drug components must meet certain FDA qualifications with respect to manufacturing standards. At present, we have qualified only one firm as a supplier of drug substance and a separate firm as the supplier of drug product. We continually assess our manufacturing needs and may seek to engage additional qualified vendors as circumstances dictate. Changes in our requirements may require revalidation of the manufacturing process at a different scale and potentially at a different contractor depending on the necessary scale, infrastructure and technical capabilities. To ensure continuity in our supply chain, we plan to establish supply arrangements with alternative suppliers for certain portions of our supply chain, as appropriate.

Our drug products (tablets and suspension) are also manufactured under contract. We have validated manufacturing of brincidofovir tablets at a 165 kg commercial scale. In addition, stability data are available to support sufficient commercial shelf life. We have also developed a suspension formulation for brincidofovir and have manufactured that formulation at pilot scale. We are currently evaluating manufacturers to optimize tablet and suspension formulation production to meet forecasted commercial demand.

Manufacturing is subject to extensive regulations that impose various procedural and documentation requirements, which govern record keeping, manufacturing processes and controls, personnel, quality control and quality assurance, among others. Our systems and contractors are required to be in compliance with these regulations, and this is assessed regularly through monitoring of performance and a formal audit program. We have personnel with extensive technical, manufacturing, analytical and quality experience and strong project management discipline to oversee contract manufacturing and testing activities, and to compile manufacturing and quality information for our regulatory submissions.

Government Regulation and Product Approval

Government authorities in the United States, at the federal, state and local level, and other countries extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of products such as those we are developing. Any product candidate that we develop must be approved by the FDA before it may be legally marketed in the United States and by the appropriate foreign regulatory agency before it may be legally marketed in foreign countries.

U.S. Drug Development Process

In the United States, the FDA regulates drugs under the Federal Food, Drug and Cosmetic Act (FDCA), and implementing regulations. Drugs are also subject to other federal, state and local statutes and regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval, may subject an applicant to administrative or judicial civil or criminal sanctions. FDA sanctions could include refusal to approve pending applications, withdrawal of an approval, clinical hold, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, debarment, restitution, disgorgement or civil or criminal penalties.

Any agency or judicial enforcement action could have a material adverse effect on us. The process required by the FDA before a drug may be marketed in the United States generally involves the following:

- completion of nonclinical laboratory tests, animal studies and formulation studies according to good laboratory practices (GLP), or other applicable regulations;
- submission to the FDA of an application for an IND, which must become effective before human clinical trials may begin;
- performance of adequate and well-controlled human clinical trials according to the FDA's regulations commonly referred to as current good clinical practices (GCPs), to establish the safety and efficacy of the proposed drug for its intended use;
- submission to the FDA of an NDA for a new drug;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities where the drug is produced to assess compliance with the FDA's current good manufacturing practice standards (cGMP), to assure that the facilities, methods and controls are adequate to preserve the drug's identity, strength, quality and purity;
- potential FDA audit of the nonclinical and clinical trial sites that generated the data in support of the NDA; and FDA review of the NDA.

The lengthy process of seeking required approvals and the continuing need for compliance with applicable statutes and regulations require the expenditure of substantial resources and approvals are inherently uncertain.

Before testing any compounds with potential therapeutic value in humans, the drug candidate enters the preclinical testing stage. Preclinical tests, also referred to as nonclinical studies, include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies to assess the potential safety and activity of the drug candidate. The conduct of the preclinical tests must comply with federal regulations and requirements including GLP. The sponsor must submit the results of the preclinical tests, together with manufacturing information, analytical data, any available clinical data or literature and a proposed clinical protocol, to the FDA as part of the IND. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA places the clinical trial on a clinical hold within that 30-day time period. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. The FDA may also impose clinical holds on a drug candidate at any time before or during clinical trials due

to safety concerns or non-compliance. Accordingly, we cannot be sure that submission of an IND will result in the FDA allowing clinical trials to begin, or that, once begun, issues will not arise that suspend or terminate such trial.

Clinical trials involve the administration of the drug candidate to healthy volunteers or patients under the supervision of qualified investigators, generally physicians not employed by or under the trial sponsor's control. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria, and the parameters to be used to monitor subject safety. Each protocol must be submitted to the FDA as part of the IND. Clinical trials must be conducted in accordance with the FDA's regulations comprising the good clinical practices requirements. Further, each clinical trial must be reviewed and approved by an independent institutional review board (IRB), at or servicing each institution at which the clinical trial will be conducted. An IRB is charged with protecting the welfare and rights of trial participants and considers such items as whether the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the form and content of the informed consent that must be signed by each clinical trial subject or his or her legal representative and must monitor the clinical trial until completed.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- Phase 1. The drug is initially introduced into healthy human subjects and tested for safety, dosage tolerance, absorption, metabolism, distribution and excretion. In the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients.
- Phase 2. The drug is evaluated in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance, optimal dosage and dosing schedule.
- Phase 3. Clinical trials are undertaken to further evaluate dosage, clinical efficacy and safety in an expanded patient population at geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the product and provide an adequate basis for product labeling. Generally, two adequate and well-controlled Phase 3 clinical trials are required by the FDA for approval of an NDA.

Post-approval clinical trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. These clinical trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication.

Annual progress reports detailing the results of the clinical trials must be submitted to the FDA and written IND safety reports must be promptly submitted to the FDA and the investigators for serious and unexpected adverse events or any finding from tests in laboratory animals that suggests a significant risk for human subjects. Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, if at all. The FDA or the sponsor or its data safety monitoring board may suspend a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug has been associated with unexpected serious harm to patients.

Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the drug as well as finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the drug candidate and, among other things, must develop methods for testing the identity, strength, quality and purity of the final drug. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the drug candidate does not undergo unacceptable deterioration over its shelf life.

U.S. Review and Approval Processes

The results of product development, nonclinical studies and clinical trials, along with descriptions of the manufacturing process, analytical tests conducted on the chemistry of the drug, proposed labeling and other relevant information are submitted to the FDA as part of an NDA requesting approval to market the product. The submission of an NDA is subject to the payment of substantial user fees; a waiver of such fees may be obtained under certain limited circumstances.

In addition, under the Pediatric Research Equity Act (PREA), an NDA or supplement to an NDA must contain data to assess the safety and effectiveness of the drug for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may grant deferrals for submission of data or full or partial waivers. Unless otherwise required by regulation, PREA does not apply to any drug for an indication for which orphan designation has been granted (discussed below).

The FDA reviews all NDAs submitted to determine if they are substantially complete before it accepts them for filing. Once the submission is accepted for filing, the FDA begins an in-depth review of the NDA. Under the goals and policies agreed to by the FDA under the Prescription Drug User Fee Act (PDUFA), the FDA has 10 months in which to complete its initial review of a standard NDA and respond to the applicant, and six months for a priority NDA. The FDA does not always meet its PDUFA goal dates for standard and priority NDAs. The review process and the PDUFA goal date may be extended by three months if the FDA requests or the NDA sponsor otherwise provides additional information or clarification regarding information already provided in the submission within the last three months before the PDUFA goal date.

After the NDA submission is accepted for filing, the FDA reviews the NDA to determine, among other things, whether the proposed product is safe and effective for its intended use, and whether the product is being manufactured in accordance with cGMP to assure and preserve the product's identity, strength, quality and purity. The FDA may refer applications for novel drug or biological products or drug or biological products which present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions. During the drug approval process, the FDA also will determine whether a risk evaluation and mitigation strategy (REMS), is necessary to assure the safe use of the drug. If the FDA concludes a REMS is needed, the sponsor of the NDA must submit a proposed REMS. The FDA will not approve the NDA without a REMS, if required.

Before approving an NDA, the FDA will inspect the facilities at which the product is manufactured. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving an NDA, the FDA will typically inspect one or more clinical sites to assure that the clinical trials were conducted in compliance with IND study requirements. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable it will outline the deficiencies in the submission and often will request additional testing or information.

The NDA review and approval process is lengthy and difficult and the FDA may refuse to approve an NDA if the applicable regulatory criteria are not satisfied or may require additional clinical data or other data and information. Even if such data and information is submitted, the FDA may ultimately decide that the NDA does not satisfy the criteria for approval. Data obtained from clinical trials are not always conclusive and the FDA may interpret data differently than we interpret the same data. The FDA will issue a complete response letter if the agency decides not to approve the NDA. The complete response letter usually describes all of the specific deficiencies in the NDA identified by the FDA. The deficiencies identified may be minor, for example, requiring labeling changes, or major, for example, requiring additional clinical trials. Additionally, the complete response letter may include recommended actions that the applicant might take to place the application in a condition for approval. If a complete response letter is issued, the applicant may either resubmit the NDA, addressing all of the deficiencies identified in the letter, or withdraw the application.

If a product receives regulatory approval, the approval may be significantly limited to specific diseases and dosages or the indications for use may otherwise be limited, which could restrict the commercial value of

the product. Further, the FDA may require that certain contraindications, warnings or precautions be included in the product labeling. In addition, the FDA may require post marketing clinical trials, sometimes referred to as Phase 4 clinical trials testing, which involves clinical trials designed to further assess a drug's safety and effectiveness and may require testing and surveillance programs to monitor the safety of approved products that have been commercialized.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biological product intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and making a drug or biological product available in the United States for this type of disease or condition will be recovered from sales of the product. Orphan product designation must be requested before submitting an NDA. After the FDA grants orphan product designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Orphan product designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

If a product that has orphan designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications to market the same drug or biological product for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan exclusivity. Competitors, however, may receive approval of different products for the indication for which the orphan product has exclusivity or obtain approval for the same product but for a different indication for which the orphan product has exclusivity. Orphan product exclusivity also could block the approval of a product for seven years if a competitor obtains approval of the same drug or biological product as defined by the FDA or if a drug candidate is determined to be contained within the competitor's product for the same indication or disease. If a drug or biological product designated as an orphan product receives marketing approval for an indication broader than what is designated, it may not be entitled to orphan product exclusivity. Orphan drug status in the European Union has similar but not identical benefits to those provided in the United States.

Expedited Development and Review Programs

The FDA has a Fast Track program that is intended to expedite or facilitate the process for reviewing new drugs and biological products that meet certain criteria. Specifically, new drugs and biological products are eligible for Fast Track designation if they are intended to treat a serious or life-threatening condition and demonstrate the potential to address unmet medical needs for the condition. Fast Track designation applies to the combination of the product and the specific indication for which it is being studied. Unique to a Fast Track product, the FDA may consider for review sections of the NDA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the NDA, the FDA agrees to accept sections of the NDA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the NDA.

Any product submitted to the FDA for marketing approval, including a Fast Track program, may also be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. Any product is eligible for priority review if it has the potential to provide safe and effective therapy where no satisfactory alternative therapy exists or a significant improvement in the treatment, diagnosis or prevention of a disease compared to marketed products. The FDA will attempt to direct additional resources to the evaluation of an application for a new drug or biological product designated for priority review in an effort to facilitate the review. Additionally, a product may be eligible for accelerated approval. Drug or biological products studied for their safety and effectiveness in treating serious or life-threatening illnesses and that provide meaningful therapeutic benefit over existing treatments may receive accelerated approval, which means that they may be approved on the basis of adequate and well-controlled clinical trials establishing that the product has an effect on a surrogate endpoint that is reasonably likely to predict a clinical benefit, or on the basis of an effect on a clinical endpoint other than survival or irreversible morbidity. As a condition of approval, the FDA may require that a sponsor of a drug or biological product receiving accelerated approval perform adequate and well-controlled post-marketing clinical trials to establish

safety and efficacy for the approved indication. In addition, the FDA currently requires as a condition for accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product. Fast Track designation, priority review and accelerated approval do not change the standards for approval but may expedite the development or approval process.

Post-Approval Requirements

Any drug products for which we or our strategic alliance partners receive FDA approvals are subject to continuing regulation by the FDA, including, among other things, record-keeping requirements, reporting of adverse experiences with the product, providing the FDA with updated safety and efficacy information, product sampling and distribution requirements, complying with certain electronic records and signature requirements and complying with FDA promotion and advertising requirements. These promotion and advertising agreements include, among others, standards for direct-to-consumer advertising, promoting drugs for uses or in patient populations that are not described in the drug's approved labeling (known as "off-label use"), industry-sponsored scientific and educational activities, and promotional activities involving the internet. Failure to comply with FDA requirements can have negative consequences, including adverse publicity, enforcement letters from the FDA, mandated corrective advertising or communications with doctors, and civil or criminal penalties. Although physicians may prescribe legally available drugs for off-label uses, manufacturers may not market or promote such off-label uses.

We will rely, and expect to continue to rely, on third parties for the production of clinical and commercial quantities of any products that we may commercialize. Our strategic alliance partners may also utilize third parties for some or all of a product we are developing with such strategic alliance partner. Manufacturers of our products are required to comply with applicable FDA manufacturing requirements contained in the FDA's cGMP regulations. cGMP regulations require among other things, quality control and quality assurance as well as the corresponding maintenance of records and documentation. Drug manufacturers and other entities involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP and other laws. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance. Discovery of problems with a product after approval may result in restrictions on a product, manufacturer, or holder of an approved NDA, including withdrawal of the product from the market. In addition, changes to the manufacturing process generally require prior FDA approval before being implemented and other types of changes to the approved product, such as adding new indications and additional labeling claims, are also subject to further FDA review and approval.

The FDA also may require post-marketing testing, known as Phase 4 testing, risk minimization action plans and surveillance to monitor the effects of an approved product or place conditions on an approval that could restrict the distribution or use of the product.

U.S. Patent Term Restoration and Marketing Exclusivity

Depending upon the timing, duration and specifics of the FDA approval of the use of our drug candidates, some of our United States patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, commonly referred to as the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent term restoration period is generally one-half the time between the effective date of an IND and the submission date of an NDA, plus the time between the submission date of an NDA and the approval of that application. Only one patent applicable to an approved drug is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent. The United States Patent and Trademark Office, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we may apply for restoration of patent term for one of our currently owned or licensed patents to add patent life beyond its current expiration date, depending on the expected length of the clinical trials and other factors involved in the filing of the relevant NDA.

Market exclusivity provisions under the FDCA can also delay the submission or the approval of certain applications of other companies seeking to reference another company's NDA. The FDCA provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to obtain approval of an NDA for a new chemical entity. A drug is a new chemical entity if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the action of the drug substance. During the exclusivity period, the FDA may not accept for review an abbreviated new drug application (ANDA), or a 505(b)(2) NDA submitted by another company for another version of such drug where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement to one of the patents listed with the FDA by the innovator NDA holder. The FDCA also provides three years of marketing exclusivity for an NDA, or supplement to an existing NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example new indications, dosages or strengths of an existing drug. This three-year exclusivity covers only the conditions associated with the new clinical investigations and does not prohibit the FDA from approving ANDAs for drugs containing the original active agent. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA. However, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness. Pediatric exclusivity is another type of regulatory market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods and patent terms. This six-month exclusivity, which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric trial in accordance with an FDA-issued "Written Request" for such a trial.

Reimbursement

Sales of pharmaceutical products depend in significant part on the availability of third-party reimbursement. Third-party payors include government health programs such as Medicare and Medicaid, managed care providers, private health insurers and other organizations. These third-party payors are increasingly challenging the price and examining the cost-effectiveness of medical products and services, including prescription drugs. In addition, significant uncertainty exists as to the reimbursement status of newly approved prescription drugs and other healthcare products. We may need to conduct expensive pharmacoeconomic studies in order to demonstrate the cost-effectiveness of any of our products that is successfully developed and approved. Our product candidates may not be considered cost-effective. It is time consuming and expensive to seek reimbursement from third-party payors. Reimbursement may not be available or sufficient to allow the sale of any of our products that is successfully developed and approved on a competitive and profitable basis.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA), established the Medicare Part D program to provide a voluntary prescription drug benefit to Medicare beneficiaries. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities to provide coverage of outpatient prescription drugs. Part D plans include both stand-alone prescription drug benefit plans and prescription drug coverage as a supplement to Medicare Advantage plans. Unlike Medicare Parts A and B, Part D coverage is not standardized. Part D prescription drug plan sponsors are not required to pay for all covered Part D drugs, and each Part D prescription drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, although not necessarily all of the drugs within each category or class. Any formulary used by a Part D prescription drug plan must be developed and reviewed by a pharmacy and therapeutic committee.

It is not clear what long-term effect the MMA will have on the prices paid for currently approved drugs and the pricing options for newly approved drugs. Government payment for some of the costs of prescription drugs may increase demand for any of our products that is successfully developed and approved. However, any negotiated prices for our products covered by a Part D prescription drug plan will likely be lower than the prices we might otherwise obtain. Moreover, although the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their

own payment rates. Accordingly, any reduction in payment that results from the MMA may result in a similar reduction in payments from non-governmental payors.

We expect that there will continue to be a number of federal and state proposals to implement governmental pricing controls and limit the growth of healthcare costs, including the cost of prescription drugs. Currently, Medicare is prohibited from negotiating directly with pharmaceutical companies for drugs. However, the U.S. Congress may in the future consider legislation that would lift the ban on federal negotiations.

The American Recovery and Reinvestment Act of 2009 provides funding for the federal government to compare the effectiveness of different treatments for the same illness. A plan for the research would be developed by the Department of Health and Human Services, the Agency for Healthcare Research and Quality and the National Institutes of Health, and periodic reports on the status of the research and related expenditures would be made to the U.S. Congress. Although the results of the comparative effectiveness studies are not intended to mandate coverage policies for public or private payors, it is not clear whether research would have any effect on the sales of any of our products that is successfully developed and approved, if the product or the condition that it is intended to treat becomes the subject of a study. It is also possible that comparative effectiveness research demonstrating benefits of a competitor's product could adversely affect the sales of any of our products that is successfully developed and approved. If third-party payors do not consider our products to be cost-effective compared to other available therapies, they may not cover our products after approval as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow us to sell our products on a profitable basis.

The Patient Protection and Affordable Care Act (ACA), as amended by the Health Care and Education Affordability Reconciliation Act of 2010, is expected to have a significant impact on the health care industry. The ACA is expected to expand coverage for the uninsured while at the same time containing overall healthcare costs. Among other things, the ACA is expected to expand and increase industry rebates for drugs covered under Medicaid programs and make changes to the coverage requirements under the Medicare Part D program. We cannot predict the impact of the ACA on pharmaceutical companies because many of the ACA's reforms require the promulgation of detailed regulations to implement the statutory provisions, which has not yet occurred. In addition, although the United States Supreme Court has upheld the constitutionality of most of the ACA, some states have indicated that they intend not to implement certain sections of the ACA and some members of the U.S. Congress are still working to repeal the ACA. These challenges add to the uncertainty of the effects of the ACA.

The Physician Payment Sunshine Act (Sunshine Act), which was enacted as part of ACA, requires covered manufacturers of drugs covered under Medicare, Medicaid or the Children's Health Insurance Program to report annually to the Secretary of the Department of Health and Human Services payments or other transfers of value made by that entity, or by a third party as directed by that entity, to physicians and teaching hospitals, or to third parties on behalf of physicians or teaching hospitals, during the course of the preceding calendar year. The final rule implementing the Sunshine Act, published on February 8, 2013, requires data collection on payments to begin on August 1, 2013. Failure to submit required information may result in civil monetary penalties of up to $150,000 per year (up to $1 million per year for "knowing failures") for all payments, transfers of value or ownership or investment interests not reported in an annual submission.

If not preempted by the ACA, several states require pharmaceutical manufacturers to report expenses relating to the marketing and promotion of pharmaceutical products and to report gifts and payments to individual physicians in the states. Other states prohibit providing various other marketing related activities. Still other states require the posting of information relating to clinical studies and their outcomes. In addition, some states, such as California, Nevada and Massachusetts, require pharmaceutical manufacturers to implement compliance programs or marketing codes. Currently, several additional states are considering similar proposals. Compliance with these laws is difficult and time consuming, and companies that do not comply with these state laws face civil penalties.

In some foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing vary widely from country to country. For example, the

European Union provides options for its member states to restrict the range of medicinal products for which their respective national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products for which we receive marketing approval. Historically, the price structures for products launched in the European Union do not follow those of the United States and tend to be significantly lower.

Europe/Rest of World Government Regulation

In addition to regulations in the United States, we and our strategic alliance partners will be subject to a variety of regulations in other jurisdictions governing, among other things, clinical trials and any commercial sales and distribution of our products.

Whether or not we or our collaborators obtain FDA approval for a product, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical trials or marketing of the product in those countries. Certain countries outside of the United States have a similar process that requires the submission of a clinical trial application much like the IND prior to the commencement of human clinical trials. In the European Union, for example, a clinical trial application (CTA), must be submitted to each country's national health authority and an independent ethics committee, much like the FDA and IRB, respectively. Once the CTA is approved in accordance with a country's requirements, clinical trial development may proceed.

The requirements and process governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, the clinical trials are conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

To obtain regulatory approval of an investigational drug or biological product under European Union regulatory systems, we or our strategic alliance partners must submit a marketing authorization application. The application used to file the NDA or a Biologics License Application in the United States is similar to that required in the European Union, with the exception of, among other things, country-specific document requirements.

For other countries outside of the European Union, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, again, the clinical trials are conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

If we or our strategic alliance partners fail to comply with applicable foreign regulatory requirements, we may be subject to, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

Environmental, Health and Safety Regulations

We are subject to various environmental, health and safety regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous substances. From time to time, and in the future, our operations may involve the use of hazardous materials.

Employees

As of March 31, 2014, we had 55 full-time employees. Of these employees, 41 employees are engaged in research and development activities and 14 employees are engaged in finance, legal, human resources, facilities and general management. We have no collective bargaining agreements with our employees and we have not experienced any work stoppages. We consider our relations with our employees to be good.

Corporate Information

We were incorporated in the State of Delaware in April 2000. Our corporate headquarters are located at 2505 Meridian Parkway, Suite 340, Durham, North Carolina 27713 in a facility we lease encompassing approximately 14,500 square feet of office space. The leases for this facility expire in February 2015 and 2018. We separately lease an additional 4,600 square feet of laboratory space in Durham, North Carolina. The lease for this facility expires in June 2014.

Our corporate website address is *www.chimerix.com*. The information contained on, or that can be accessed through, our website is not part of this prospectus supplement or the accompanying prospectus, and the inclusion of our website address in this prospectus supplement is an inactive textual reference only.

MATERIAL U.S. FEDERAL INCOME AND ESTATE TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following discussion describes the material U.S. federal income and estate tax consequences of the acquisition, ownership and disposition of our common stock acquired in this offering by Non-U.S. Holders (as defined below). This discussion does not address all aspects of U.S. federal income and estate taxes, does not discuss the potential application of the alternative minimum or Medicare Contribution tax, and does not deal with state, local or non-U.S. tax consequences that may be relevant to Non-U.S. Holders in light of their particular circumstances, nor does it address U.S. federal tax consequences other than income and estate taxes. Rules different from those described below may apply to certain Non-U.S. Holders that are subject to special treatment under the Code such as financial institutions, insurance companies, tax-exempt organizations, "foreign governments," international organizations, broker-dealers and traders in securities, U.S. expatriates, "controlled foreign corporations," "passive foreign investment companies," corporations that accumulate earnings to avoid U.S. federal income tax, persons that hold our common stock as part of a "straddle," "conversion transaction," or other risk reduction strategy, partnerships and other pass-through entities, and investors in such pass-through entities or entities that are treated as disregarded entities for U.S. federal income tax purposes (regardless of their places of organization or formation). Such Non-U.S. Holders are urged to consult their own tax advisors to determine the U.S. federal, state, local and other tax consequences that may be relevant to them. Furthermore, the discussion below is based upon the provisions of the Code, and Treasury regulations, rulings and judicial decisions thereunder as of the date hereof, and such authorities may be repealed, revoked or modified, perhaps retroactively, so as to result in U.S. federal income or estate tax consequences different from those discussed below. We have not requested a ruling from the IRS with respect to the statements made and the conclusions reached in the following summary. This discussion assumes that the Non-U.S. Holder holds our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment).

The following discussion is for general information only and is not tax advice for Non-U.S. Holders under their particular circumstances. Persons considering the purchase of our common stock pursuant to this offering should consult their own tax advisors concerning the U.S. federal income and estate tax consequences of acquiring, owning and disposing of our common stock in light of their particular situations as well as any consequences arising under the laws of any other taxing jurisdiction, including any state, local and non-U.S. tax consequences and any U.S. federal non-income tax consequences.

For the purposes of this discussion, a "Non-U.S. Holder" is, for U.S. federal income tax purposes, a beneficial owner of common stock that is not a U.S. Holder. A "U.S. Holder" means a beneficial owner of our common stock that is for U.S. federal income tax purposes (a) an individual who is a citizen or resident of the United States, (b) a corporation or other entity treated as a corporation created or organized in or under the laws of the United States, any state thereof or the District of Columbia, (c) an estate the income of which is subject to U.S. federal income taxation regardless of its source or (d) a trust if it (1) is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person. Also, partnerships, or other entities that are treated as partnerships for U.S. federal income tax purposes (regardless of their place of organization or formation) and entities that are treated as disregarded entities for U.S. federal income tax purposes (regardless of their place of organization or formation) are not addressed by this discussion and are, therefore, not considered to be Non-U.S. Holders for the purposes of this discussion.

Distributions

Subject to the discussion below, distributions, if any, made on our common stock to a Non-U.S. Holder of our common stock generally will constitute dividends for U.S. tax purposes to the extent made out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles) and will be subject to withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. To obtain a reduced rate of withholding under a treaty, a Non-U.S. Holder generally will be required to provide us with a properly executed IRS Form W-8BEN, W-BEN-E or other appropriate form, certifying the Non-U.S. Holder's entitlement to benefits under that treaty. In the case of a Non-U.S. Holder that is an entity, Treasury Regulations and the relevant tax treaty provide rules to determine whether, for

purposes of determining the applicability of a tax treaty, dividends will be treated as paid to the entity or to those holding an interest in that entity. If a Non-U.S. Holder holds stock through a financial institution or other agent acting on the holder's behalf, the holder will be required to provide appropriate documentation to such agent. The holder's agent may then be required to provide certification to us or our paying agent, either directly or through other intermediaries. If you are eligible for a reduced rate of U.S. federal withholding tax under an income tax treaty, you should consult with your own tax advisor to determine if you are able to obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for a refund with the IRS.

Withholding tax is generally not imposed on dividends paid to a Non-U.S. Holder that are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment that such holder maintains in the United States) if a properly executed IRS Form W-8ECI, stating that the dividends are so connected, is furnished to us (or, if stock is held through a financial institution or other agent, to such agent). In general, such effectively connected dividends will be subject to U.S. federal income tax, on a net income basis at the regular graduated rates, unless a specific treaty exemption applies. A Non-U.S. Holder that is a corporation for U.S. federal income tax purposes that receives effectively connected dividends may also be subject to an additional "branch profits tax," which is imposed, under certain circumstances, at a rate of 30% (or such lower rate as may be specified by an applicable treaty) on the corporate Non-U.S. Holder's effectively connected earnings and profits, subject to certain adjustments.

To the extent distributions on our common stock, if any, exceed our current and accumulated earnings and profits, they will first reduce your adjusted basis in our common stock as a non-taxable return of capital, but not below zero, and then any excess will be treated as gain and taxed in the same manner as gain realized from a sale or other disposition of common stock as described in the next section.

Gain on Disposition of Our Common Stock

Subject to the discussion below regarding backup withholding and foreign accounts, a Non-U.S. Holder generally will not be subject to U.S. federal income tax with respect to gain realized on a sale or other disposition of our common stock unless (a) the gain is effectively connected with a trade or business of such holder in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment that such holder maintains in the United States), (b) the Non-U.S. Holder is a nonresident alien individual and is present in the United States for 183 or more days in the taxable year of the disposition and certain other conditions are met, or (c) we are or have been a "United States real property holding corporation" within the meaning of Code Section 897(c)(2) at any time within the shorter of the five-year period preceding such disposition or such holder's holding period.

If you are a Non-U.S. Holder described in (a) above, you will be required to pay tax on the net gain derived from the sale at regular graduated U.S. federal income tax rates, unless a specific treaty exemption applies, and corporate Non-U.S. Holders described in (a) above may be subject to the additional branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. If you are an individual Non-U.S. Holder described in (b) above, you will be required to pay a flat 30% tax on the gain derived from the sale, which gain may be offset by U.S. source capital losses (even though you are not considered a resident of the United States). With respect to (c) above, in general, we would be a United States real property holding corporation if interests in U.S. real estate constituted (by fair market value) at least half of our total worldwide real property interests plus business assets. We believe that we are not, and do not anticipate becoming, a United States real property holding corporation; however, there can be no assurance that we will not become a U.S. real property holding corporation in the future. Even if we are treated as a U.S. real property holding corporation, such treatment will not cause gain realized by a Non-U.S. Holder on a disposition of our common stock to be subject to U.S. federal income tax so long as (1) the Non-U.S. Holder owned, directly, indirectly and constructively, no more than five percent of our common stock at all times within the shorter of (i) the five-year period preceding the disposition or (ii) the holder's holding period and (2) our common stock is regularly traded on an established securities market. There can be no assurance that our common stock will continue to qualify as regularly traded on an established securities market.

Information Reporting Requirements and Backup Withholding

Generally, we or certain financial middlemen must report information to the IRS with respect to any dividends we pay on our common stock including the amount of any such dividends, the name and address of the recipient, and the amount, if any, of tax withheld. A similar report is sent to the holder to whom any such dividends are paid. Pursuant to tax treaties or certain other agreements, the IRS may make its reports available to tax authorities in the recipient's country of residence.

Dividends paid by us (or certain financial middlemen) to a Non-U.S. Holder may also be subject to U.S. backup withholding. U.S. backup withholding generally will not apply to a Non-U.S. Holder who provides a properly executed appropriate IRS Form W-8 or otherwise establishes an exemption.

Under current U.S. federal income tax law, U.S. information reporting and backup withholding requirements generally will apply to the proceeds of a disposition of our common stock effected by or through a U.S. office of any broker, U.S. or non-U.S., unless the holder provides a properly executed IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, or otherwise establishes an exemption. Generally, U.S. information reporting and backup withholding requirements will not apply to a payment of disposition proceeds to a Non-U.S. Holder where the transaction is considered effected outside the United States through a non-U.S. office of a non-U.S. broker. Information reporting and backup withholding requirements may, however, apply to a payment of disposition proceeds if the broker has actual knowledge, or reason to know, that the holder is, in fact, a U.S. person. For information reporting purposes, certain brokers with substantial U.S. ownership or operations will generally be treated in a manner similar to U.S. brokers.

If backup withholding is applied to you, you should consult with your own tax advisor to determine if you are able to obtain a tax refund or credit with respect to the amount withheld.

Foreign Accounts

A U.S. federal withholding tax of 30% may apply to dividends and the gross proceeds of a disposition of our common stock paid to a foreign financial institution (as specifically defined by applicable rules), including when the foreign financial institution holds our common stock on behalf of a Non-U.S. Holder, unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equity holders of such institution, as well as certain account holders that are foreign entities with U.S. owners). This U.S. federal withholding tax of 30% will also apply to dividends and the gross proceeds of a disposition of our common stock paid to a non-financial foreign entity unless such entity provides the withholding agent with either a certification that it does not have any substantial direct or indirect U.S. owners or provides information regarding direct and indirect U.S. owners of the entity. The withholding tax described above will not apply if the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from the rules. An intergovernmental agreement between the United States and an applicable foreign country may modify these requirements. Under certain circumstances, a Non-U.S. Holder might be eligible for refunds or credits of such taxes. Holders are encouraged to consult with their own tax advisors regarding the possible implications of this withholding tax on their investment in our common stock.

The withholding provisions described above will generally apply to payments of dividends made on or after July 1, 2014 and to payments of gross proceeds from a sale or other disposition of common stock on or after January 1, 2017.

Federal Estate Tax

An individual who at the time of death is not a citizen or resident of the United States and who is treated as the owner of, or has made certain lifetime transfers of, an interest in our common stock will be required to include the value thereof in his or her taxable estate for U.S. federal estate tax purposes, and may be subject to U.S. federal estate tax unless an applicable estate tax treaty provides otherwise. The test for whether an individual is a resident of the United States for federal estate tax purposes differs from the test used for U.S. federal income tax purposes. Some individuals, therefore, may be "Non-U.S. Holders" for U.S. federal income tax purposes, but not for U.S. federal estate tax purposes, and vice versa.

EACH PROSPECTIVE INVESTOR SHOULD CONSULT HIS, HER OR ITS OWN TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAW, AS WELL AS TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL, NON-U.S. OR U.S. FEDERAL NON-INCOME TAX LAWS.

UNDERWRITERS

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus supplement, the underwriters named below, for whom Morgan Stanley & Co. LLC and J.P. Morgan Securities LLC are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares indicated below:

Name	Number of Shares
Morgan Stanley & Co. LLC	
J.P. Morgan Securities LLC	
Cowen and Company, LLC	
Total:	6,200,000

The underwriters and the representatives are collectively referred to as the "underwriters" and the "representatives," respectively. The underwriters are offering the shares of common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered by this prospectus supplement are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus supplement if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters' option to purchase additional shares described below.

The underwriters initially propose to offer part of the shares of common stock directly to the public at the offering price listed on the cover page of this prospectus supplement and part to certain dealers at a price that represents a concession not in excess of $ a share under the public offering price. After the initial offering of the shares of common stock, the offering price and other selling terms may from time to time be varied by the representatives. Sales of shares made outside of the United States may be made by affiliates of the underwriters.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus supplement, to purchase up to 930,000 additional shares of common stock at the public offering price listed on the cover page of this prospectus supplement, less underwriting discounts and commissions. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of common stock as the number listed next to the underwriter's name in the preceding table bears to the total number of shares of common stock listed next to the names of all underwriters in the preceding table.

The following table shows the per share and total public offering price, underwriting discounts and commissions, and proceeds before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase up to an additional shares of common stock.

		Total	
	Per Share	No Exercise	Full Exercise
Public offering price	$	$	$
Underwriting discounts and commissions to be paid by us	$	$	$
Proceeds, before expenses, to us	$	$	$

The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions, are approximately $500,000. We have agreed to reimburse the underwriters for expenses relating to clearance of this offering with the Financial Industry Regulatory Authority, Inc. up to $.

Our common stock is listed on the Nasdaq Global Market under the trading symbol "CMRX."

We, all of our directors and officers, certain of our existing stockholders have agreed that, without the prior written consent of the representatives on behalf of the underwriters, we and they will not, during the period ending 90 days after the date of this prospectus supplement (the restricted period):

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock,

whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise. In addition, we have agreed that, without the prior written consent of the representatives on behalf of the underwriters, we will not, during the restricted period, file any registration statement with the SEC relating to the offering of any shares of common stock or any security convertible into or exercisable or exchangeable for common stock (other than on Form S-8 with respect to our equity incentive plans described in this prospectus supplement), and such other person have agreed that they will not, during the restricted period, make any demand for, or exercise any right with respect to, the registration of, any shares of common stock or any security convertible into or exercisable or exchangeable for common stock.

The restrictions described in the immediately preceding paragraph to do not apply to:

- the sale of the shares to the underwriters;
- the issuance by us of shares of our common stock or other securities convertible into or exercisable for shares of our common stock upon the exercise of an option or warrant or the conversion of a security outstanding on the date of this prospectus supplement;
- the issuance by us of shares of our common stock or other securities convertible into or exercisable for shares of our common stock pursuant to our equity incentive plans described in this prospectus supplement; *provided* that, prior to the issuance of any such shares of common stock or other securities where the shares of common stock or other securities vest within the restricted period, we cause each recipient of such shares or other securities to sign and deliver a lock-up letter substantially to the effect of the restrictions described in this and the immediately preceding paragraph;
- (i) the entry into an agreement providing for the issuance by us of shares of our common stock or any security convertible into or exercisable for shares of our common stock in connection with the acquisition by us or any of our subsidiaries of the securities, business, or other assets of another person or entity or pursuant to an employee benefit plan assumed by us in connection with such acquisition, and the issuance of any such securities pursuant to any such agreement, and (ii) the entry into an agreement providing for the issuance of shares of common stock or any security convertible into or exercisable for shares of our common stock in connection with joint ventures, commercial relationships or other strategic transactions, and the issuance of any such securities pursuant to any such agreement; *provided* that the aggregate number of shares of common stock that we may sell or issue or agree to sell or issue, or that may be issuable upon conversion or exercise of all other securities that we may sell or issue or agree to sell or issue, pursuant to this bullet point shall not exceed 5% of the total number of shares of our common stock issued and outstanding immediately following the completion of this offering; and *provided further*, that each recipient of shares or other securities issued pursuant to this bullet point shall sign and deliver a lock-up letter substantially to the effect of the restrictions described in this and the immediately preceding paragraph, and we shall enter stop transfer instructions with our transfer agent and registrar on such shares or other securities, which we agree we will not waive or amend without the prior written consent of the representatives;

- transfers by a director, officer or stockholder of shares of common stock or any security convertible into common stock as a bona fide gift, by will or intestate succession, or to any trust for the direct or indirect benefit of such director, officer or stockholder and/or their immediate family, or certain distributions by a stockholder of shares of common stock or any security convertible into common stock to partners, members, stockholders or holders of similar equity interests in such stockholder; *provided* that in the case of any such transfer or distribution, (i) each done, transferee or distributee shall sign and deliver a lock-up letter substantially to the effect of the restrictions described in this and the immediately preceding paragraph, and (ii) no filing under Section 16(a) of the Exchange Act, reporting a reduction in beneficial ownership of shares of common stock, shall be required or shall be voluntarily made during the restricted period;
- transactions by a director, officer or stockholder relating to shares of our common stock acquired in open market transactions after the completion of this offering; *provided* that no filing under Section 16(a) of the Exchange Act shall be required or shall be voluntarily made in connection with subsequent dispositions of our common stock acquired in such open market transactions during the restricted period;
- the establishment by a director, officer or stockholder of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of our common stock; *provided* that such plan does not provide for the transfer of shares of our common stock during the restricted period and no public announcement or filing under the Exchange Act regarding the establishment of such plan shall be required or shall be voluntarily made by or on behalf of such director, officer or stockholder or us during the restricted period;
- transactions by an officer relating to shares of our common stock executed under a trading plan pursuant to Rule 10b5-1 under the Exchange Act in existence as of the date of this prospectus supplement providing for the transfer of shares of our common stock; *provided* that any filing under Section 16(a) of the Exchange Act that is made in connection with any such transaction during the restricted period shall state that such transaction has been executed under a trading plan pursuant to Rule 10b5-1 under the Exchange Act, and shall also state the date such trading plan was adopted; or
- transfers by a director, officer or stockholder to us of shares of our common stock or other securities convertible into or exercisable or exchangeable for our common stock (i) upon a vesting event of our securities or the exercise of options issued pursuant to our equity incentive plans in full or partial payment of taxes or tax withholding obligations required to be paid or satisfied upon such vesting or exercise, or (ii) in exercise of our right to repurchase or reacquire the securities of such director, officer or stockholder pursuant to agreements that permit us to repurchase or reacquire such securities upon termination of the services of such director, officer or stockholder; *provided* that in the case of any transfer pursuant to this bullet point, no filing under Section 16(a) of the Exchange Act, reporting a reduction in beneficial ownership of shares of our common stock, shall be required or shall be voluntarily made during the restricted period.

The representatives, in their sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time.

In order to facilitate the offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the option to purchase additional shares. The underwriters can close out a covered short sale by exercising the option or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the option. The underwriters may also sell shares in excess of the option, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in this offering. As an additional means of

facilitating this offering, the underwriters may bid for, and purchase, shares of common stock in the open market to stabilize the price of the common stock. These activities may raise or maintain the market price of the common stock above independent market levels or prevent or retard a decline in the market price of the common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time.

In addition, in connection with this offering certain of the underwriters (and selling group members) may engage in passive market making transactions in our common stock on The Nasdaq Stock Market prior to the pricing and completion of this offering. Passive market making consists of displaying bids on The Nasdaq Stock Market no higher than the bid prices of independent market makers and making purchases at prices no higher than these independent bids and effected in response to order flow. Net purchases by a passive market maker on each day are generally limited to a specified percentage of the passive market maker's average daily trading volume in the common stock during a specified period and must be discontinued when such limit is reached. Passive market making may cause the price of our common stock to be higher than the price that otherwise would exist in the open market in the absence of these transactions. If passive market making is commenced, it may be discontinued at any time.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

A prospectus in electronic format may be made available on websites maintained by one or more underwriters, or selling group members, if any, participating in this offering. The representatives may agree to allocate a number of shares of common stock to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters that may make Internet distributions on the same basis as other allocations.

Other Relationships

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they received or will receive customary fees and expenses.

In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve our securities and instruments. The underwriters and their respective affiliates may also make investment recommendations or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

Selling Restrictions

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a Relevant Member State) an offer to the public of any shares of our common stock may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any shares of our common stock may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

(a) to any legal entity which is a qualified investor as defined in the Prospectus Directive;

(b) to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives for any such offer; or

(c) in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares of our common stock shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares of our common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of our common stock to be offered so as to enable an investor to decide to purchase any shares of our common stock, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State, and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

United Kingdom

Each underwriter has represented and agreed that:

(a) It has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 (the FSMA)) received by it in connection with the issue or sale of the shares of our common stock in circumstances in which Section 21(1) of the FSMA does not apply to us; and

(b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of our common stock in, from or otherwise involving the United Kingdom.

LEGAL MATTERS

The validity of the common stock offered by this prospectus supplement and the accompanying prospectus will be passed upon for us by Cooley LLP, San Diego, California. The underwriters are being represented by Davis Polk & Wardwell LLP, New York, New York.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2013, as set forth in their report, which is incorporated by reference in this prospectus supplement and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus supplement and the accompanying prospectus are part of the registration statement on Form S-3 we filed with the SEC under the Securities Act and do not contain all the information set forth in the registration statement. Whenever a reference is made in this prospectus supplement or the accompanying prospectus to any of our contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated by reference in this prospectus supplement and the accompanying prospectus for a copy of such contract, agreement or other document. Because we are subject to the information and reporting requirements of the Exchange Act, we file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at *http://www.sec.gov*. You may also read and copy any document we file at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room.

We maintain a website at *www.chimerix.com*. Information contained in or accessible through our website does not constitute a part of this prospectus supplement or the accompanying prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information from other documents that we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus supplement and the accompanying prospectus. Information contained in this prospectus supplement and the accompanying prospectus and information that we file with the SEC in the future and incorporate by reference in this prospectus supplement and the accompanying prospectus will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings (other than Current Reports on Form 8-K furnished under Item 2.02 or Item 7.01 and exhibits furnished along with such form that are related to such items) we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the prospectus supplement and before the sale of all the securities covered by this prospectus supplement:

- our Annual Report on Form 10-K for the year ended December 31, 2013, filed with the SEC on March 7, 2014;
- our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2014 (filed on May 9, 2014);
- our Current Reports on Form 8-K (other than information furnished rather than filed) filed with the SEC on February 3, 2014, February 6, 2014, March 14, 2014, April 1, 2014, April 11, 2014, May 16, 2014 and May 19, 2014;
- the information specifically incorporated by reference into our Annual Report on Form 10-K for the fiscal year ended December 31, 2013 from our definitive proxy statement on Schedule 14A (other than information furnished rather than filed) filed with the SEC on April 29, 2014;
- the description of our common stock, which is registered under Section 12 of the Exchange Act, in our registration statement on Form 8-A, filed with the SEC on April 5, 2013, including any amendments or reports filed for the purpose of updating such description; and
- all filings we make with the SEC pursuant to the Exchange Act after the date of this prospectus supplement and before termination of this offering.

You can request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

Chimerix, Inc.
2505 Meridian Parkway, Suite 340
Durham, NC 27713
(919) 806-1074
Attn: Investor Relations

PROSPECTUS

$200,000,000

Common Stock
Preferred Stock
Debt Securities
Warrants

From time to time, we may offer up to $200,000,000 of any combination of the securities described in this prospectus in one or more offerings. We may also offer securities as may be issuable upon conversion, redemption, repurchase, exchange or exercise of any securities registered hereunder, including any applicable antidilution provisions.

This prospectus provides a general description of the securities we may offer. Each time we offer securities, we will provide specific terms of the securities offered in a supplement to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement and any related free writing prospectus may also add, update or change information contained in this prospectus. You should carefully read this prospectus, the applicable prospectus supplement and any related free writing prospectus, as well as any documents incorporated by reference, before you invest in any of the securities being offered.

This prospectus may not be used to consummate a sale of any securities unless accompanied by a prospectus supplement.

Our common stock is traded on the Nasdaq Global Market under the symbol "CMRX." On May 15, 2014, the last reported sales price of our common stock was $16.16 per share. The applicable prospectus supplement will contain information, where applicable, as to any other listing on the Nasdaq Global Market or any securities market or other exchange of the securities, if any, covered by the prospectus supplement.

We will sell these securities directly to investors, through agents designated from time to time or to or through underwriters or dealers, on a continuous or delayed basis. For additional information on the methods of sale, you should refer to the section entitled "Plan of Distribution" in this prospectus. If any agents or underwriters are involved in the sale of any securities with respect to which this prospectus is being delivered, the names of such agents or underwriters and any applicable fees, commissions, discounts or over-allotment options will be set forth in a prospectus supplement. The price to the public of such securities and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading "Risk Factors" contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is May 16, 2014.

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ABOUT THIS PROSPECTUS

This prospectus is a part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or SEC, utilizing a "shelf" registration process. Under this shelf registration process, we may sell any combination of the securities described in this prospectus in one or more offerings up to a total aggregate offering price of $200,000,000. This prospectus provides you with a general description of the securities we may offer.

Each time we sell securities under this prospectus, we will provide a prospectus supplement that will contain specific information about the terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. The prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change information contained in this prospectus or in any documents that we have incorporated by reference into this prospectus. You should read this prospectus, any applicable prospectus supplement and any related free writing prospectus, together with the information incorporated herein by reference as described under the heading "Incorporation of Certain Information By Reference," before investing in any of the securities offered.

THIS PROSPECTUS MAY NOT BE USED TO CONSUMMATE A SALE OF SECURITIES UNLESS IT IS ACCOMPANIED BY A PROSPECTUS SUPPLEMENT.

Neither we, nor any agent, underwriter or dealer has authorized any person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus, any applicable prospectus supplement or any related free writing prospectus prepared by or on behalf of us or to which we have referred you. This prospectus, any applicable supplement to this prospectus or any related free writing prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor do this prospectus, any applicable supplement to this prospectus or any related free writing prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction.

You should not assume that the information contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus, any applicable prospectus supplement or any related free writing prospectus is delivered, or securities are sold, on a later date.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading "Where You Can Find More Information."

SUMMARY

This summary highlights selected information from this prospectus and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus, the applicable prospectus supplement and any related free writing prospectus, including the risks of investing in our securities discussed under the heading "Risk Factors" contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus. You should also carefully read the information incorporated by reference into this prospectus, including our financial statements, and the exhibits to the registration statement of which this prospectus is a part.

Unless the context indicates otherwise, as used in this prospectus, the terms "Chimerix," "the Company," "we," "us" and "our" refer to Chimerix, Inc., a Delaware corporation. We have obtained a registered trademark for Chimerix® in the United States. All other trademarks or trade names referred to in this prospectus are the property of their respective owners.

Company Overview

Chimerix is a biopharmaceutical company dedicated to discovering, developing and commercializing novel, oral antivirals to address unmet medical needs. We were founded in 2000 based on the promise of our proprietary lipid technology to unlock the potential of some of the most broad-spectrum antivirals by enhancing their antiviral activity and safety profiles in convenient, orally administered dosing regiments. We currently have two nucleotide compounds in clinical development that utilize our proprietary lipid technology. Our lead compound, brincidofovir (CMX001), is in Phase 3 clinical development; our second compound, CMX157, was licensed to Merck Sharp & Dohme Corp. after completing a Phase 1 study. In addition, we have an active discovery program leveraging our lipid technology and the Chimerix Chemical Library, both focusing on viral targets in areas of high unmet medical need.

Corporate Information

We were incorporated in Delaware in April 2000. Our principal executive offices are located at 2505 Meridian Parkway, Suite 340, Durham, North Carolina 27713, and our telephone number is (919) 806-1074. Our corporate website address is *www.chimerix.com*. We do not incorporate by reference into this prospectus the information on, or accessible through, our website, and you should not consider it as part of this prospectus.

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012. We will remain an emerging growth company until the earlier of (a) December 31, 2018, (b) the last day of the fiscal year in which we have total annual gross revenue of at least $1.0 billion, (c) the last day of the fiscal year in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700.0 million as of the prior June 30th, and (d) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

The Securities We May Offer

We may offer shares of our common stock and preferred stock, various series of debt securities and warrants to purchase any of such securities, up to a total aggregate offering price of $200,000,000 from time to time in one or more offerings under this prospectus, together with any applicable prospectus supplement and any related free writing prospectus, at prices and on terms to be determined by market conditions at the time of the relevant offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

- designation or classification;
- aggregate principal amount or aggregate offering price;
- maturity, if applicable;

- original issue discount, if any;
- rates and times of payment of interest or dividends, if any;
- redemption, conversion, exchange or sinking fund terms, if any;
- conversion or exchange prices or rates, if any, and, if applicable, any provisions for changes to or adjustments in the conversion or exchange prices or rates and in the securities or other property receivable upon conversion or exchange;
- ranking, if applicable;
- restrictive covenants, if any;
- voting or other rights, if any; and
- important United States federal income tax considerations.

The prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change information contained in this prospectus or in documents we have incorporated by reference. However, no prospectus supplement or free writing prospectus will offer a security that is not registered and described in this prospectus at the time of the effectiveness of the registration statement of which this prospectus is a part.

This prospectus may not be used to consummate a sale of securities unless it is accompanied by a prospectus supplement.

We may sell the securities directly to investors or through underwriters, dealers or agents. We, and our underwriters or agents, reserve the right to accept or reject all or part of any proposed purchase of securities. If we do offer securities through underwriters or agents, we will include in the applicable prospectus supplement:

- the names of those underwriters or agents;
- applicable fees, discounts and commissions to be paid to them;
- details regarding over-allotment options, if any; and
- the estimated net proceeds to us.

Common Stock. We may issue shares of our common stock from time to time. The holders of our common stock are entitled to one vote for each share held of record on all matters submitted to a vote of stockholders and do not have cumulative voting rights. Subject to preferences that may be applicable to any outstanding shares of preferred stock, the holders of our common stock are entitled to receive ratably such dividends as may be declared by our board of directors out of legally available funds. Upon our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preferences of any then outstanding shares of preferred stock. Our common stock does not carry any preemptive rights enabling a holder to subscribe for, or receive shares of, any class of our common stock or any other securities convertible into shares of any class of our common stock, or any redemption rights.

Preferred Stock. We may issue shares of our preferred stock from time to time, in one or more series. Under our amended and restated certificate of incorporation, our board of directors has the authority, without further action by the stockholders (unless such stockholder action is required by applicable law or the rules of any stock exchange or market on which our securities are then traded), to designate up to 10,000,000 shares of preferred stock in one or more series and to determine the designations, voting powers, preferences and rights of each series of the preferred stock, as well as the qualifications, limitations or restrictions thereof, including dividend rights, conversion rights, preemptive rights, terms of redemption or repurchase, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of any series, any or all of which may be greater than the rights of the common stock. Any convertible preferred stock we may issue will be convertible into our common stock or our other securities. Conversion may be mandatory or at the holder's option and would be at prescribed conversion rates.

If we sell any series of preferred stock under this prospectus, we will fix the designations, voting powers, preferences and rights of such series of preferred stock, as well as the qualifications, limitations or restrictions thereof, in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock that we are offering before the issuance of the related series of preferred stock. We urge you to read the applicable prospectus supplement (and any free writing prospectus that we may authorize to be provided to you) related to the series of preferred stock being offered, as well as the complete certificate of designation that contains the terms of the applicable series of preferred stock.

Debt Securities. We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. The senior debt securities will rank equally with any other unsecured and unsubordinated debt. The subordinated debt securities will be subordinate and junior in right of payment, to the extent and in the manner described in the instrument governing the debt, to all of our senior indebtedness. Convertible debt securities will be convertible into our common stock or preferred stock. Conversion may be mandatory or at the holder's option and would be at prescribed conversion rates.

The debt securities will be issued under one or more documents called indentures, which are contracts between us and a national banking association or other eligible party, as trustee. In this prospectus, we have summarized certain general features of the debt securities. We urge you, however, to read the applicable prospectus supplement (and any free writing prospectus that we may authorize to be provided to you) related to the series of debt securities being offered, as well as the complete indentures that contain the terms of the debt securities. A form of indenture has been filed as an exhibit to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

Warrants. We may issue warrants for the purchase of common stock, preferred stock and/or debt securities in one or more series. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from these securities. In this prospectus, we have summarized certain general features of the warrants. We urge you, however, to read the applicable prospectus supplement (and any free writing prospectus that we may authorize to be provided to you) related to the particular series of warrants being offered, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants. Forms of the warrant agreements and forms of warrant certificates containing the terms of the warrants being offered have been filed as exhibits to the registration statement of which this prospectus is a part, and supplemental warrant agreements and forms of warrant certificates will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

We will evidence each series of warrants by warrant certificates that we will issue. Warrants may be issued under an applicable warrant agreement that we enter into with a warrant agent. We will indicate the name and address of the warrant agent, if applicable, in the prospectus supplement relating to the particular series of warrants being offered.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully review the risks and uncertainties described under the heading "Risk Factors" contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in our Annual Report on Form 10-K for the year ended December 31, 2013, and our Quarterly Report on Form 10-Q for the period ended March 31, 2014, as updated by our annual, quarterly and other reports and documents that are incorporated by reference into this prospectus, before deciding whether to purchase any of the securities being registered pursuant to the registration statement of which this prospectus is a part. Each of the risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities, and the occurrence of any of these risks might cause you to lose all or part of your investment. Additional risks not presently known to us or that we currently believe are immaterial may also significantly impair our business operations.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, each prospectus supplement and the information incorporated by reference in this prospectus and each prospectus supplement contain forward-looking statements within the meaning of Section 27A of the Securities Act, and Section 21E of the Exchange Act that involve a number of risks and uncertainties. Although our forward-looking statements reflect the good faith judgment of our management, these statements can only be based on facts and factors currently known by us. Consequently, these forward-looking statements are inherently subject to risks and uncertainties, and actual results and outcomes may differ materially from results and outcomes discussed in the forward-looking statements.

Forward-looking statements can be identified by the use of forward-looking words such as "believes," "expects," "hopes," "may," "will," "plan," "intends," "estimates," "could," "should," "would," "continue," "seeks," "pro forma," or "anticipates," or other similar words (including their use in the negative), or by discussions of future matters such as the development of new products, technology enhancements, possible collaborations, possible changes in legislation and other statements that are not historical. These statements include but are not limited to statements under the captions "Business," "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and in other sections incorporated by reference from our Annual Report on Form 10-K and Quarterly Reports on Form 10-Q, as applicable, as well as our other filings with the SEC. You should be aware that the occurrence of any of the events discussed under the heading "Risk Factors" in any applicable prospectus supplement and any documents incorporated by reference herein or therein could substantially harm our business, operating results and financial condition and that if any of these events occurs, it could adversely affect the value of an investment in our securities.

The cautionary statements made in this prospectus are intended to be applicable to all related forward-looking statements wherever they may appear in this prospectus or in any prospectus supplement or any documents incorporated by reference herein or therein. We urge you not to place undue reliance on these forward-looking statements, which speak only as of the date they are made. Except as required by law, we assume no obligation to update our forward-looking statements, even if new information becomes available in the future.

RATIO OF EARNINGS TO FIXED CHARGES

The following table sets forth our ratio of earnings to fixed charges and the ratio of earnings to combined fixed charges and preference securities dividends for each of the periods indicated. The following table is qualified by the more detailed information appearing in the computation table set forth in Exhibit 12.1 to the registration statement of which this prospectus is part and the historical financial statements, including the notes to those financial statements, incorporated by reference in this prospectus.

	Year Ended December 31,				Three Months Ended
	2010	2011	2012	2013	March 31, 2014
Ratio of earnings to fixed charges[1][2]	—	—	—	—	—

(1) For purposes of computing the ratio of earnings to fixed charges, earnings consist of our net loss before income tax for the period plus fixed charges. We had no capitalized interest during any period. Fixed charges consist of interest expense on debt outstanding, amortization of debt discount and deferred financing costs and an estimate of the interest portion of rental expense. The ratio of earnings to fixed charges was less than one-to-one for each of the periods presented. We have not included a ratio of earnings to combined fixed charges and preferred stock dividends because we do not have any preferred stock outstanding as of the date of this prospectus.

(2) Earnings were insufficient to cover fixed charges by $25.5 million in 2010, $25.6 million in 2011, $4.4 million in 2012, $36.4 million in 2013, and $10.4 million for the three months ended March 31, 2014.

USE OF PROCEEDS

We will retain broad discretion over the use of the net proceeds from the sale of the securities offered hereby. Unless otherwise indicated in any prospectus supplement, we intend to use the net proceeds from the sale of the securities under this prospectus for general corporate purposes, which may include clinical trial and other research and development expenses, capital expenditures, working capital and general and administrative expenses, and potential acquisitions of or investments in businesses, products and technologies that complement our business, although we have no present commitments or agreements to make any such acquisitions or investments. We will set forth in the applicable prospectus supplement or free writing prospectus our intended use for the net proceeds received from the sale of any securities sold pursuant to the prospectus supplement or free writing prospectus. Pending these uses, we intend to invest the net proceeds in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

DESCRIPTION OF CAPITAL STOCK

As of the date of this prospectus, our amended and restated certificate of incorporation authorizes us to issue 200,000,000 shares of common stock, par value $0.001 per share, and 10,000,000 shares of preferred stock, par value $0.001 per share. As of April 29, 2014, 26,946,370 shares of common stock were outstanding and no shares of preferred stock were outstanding.

The following summary description of our capital stock is based on the provisions of our amended and restated certificate of incorporation, as well as our amended and restated bylaws and the applicable provisions of the Delaware General Corporation Law. This information is qualified entirely by reference to the applicable provisions of our amended and restated certificate of incorporation, amended and restated bylaws and the Delaware General Corporation Law. For information on how to obtain copies of our amended and restated certificate of incorporation and amended and restated bylaws, which are exhibits to the registration statement of which this prospectus is a part, see “Where You Can Find Additional Information.”

Common Stock

Our common stock is entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, including the election of directors, and does not have cumulative voting rights. Subject to preferences that may be applicable to any then outstanding preferred stock, the holders of common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds. In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any outstanding shares of preferred stock.

Holders of our common stock have no preemptive, conversion or subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock that we may designate and issue in the future.

All of our outstanding shares of common stock are fully paid and nonassessable.

Preferred Stock

Pursuant to our amended and restated certificate of incorporation our board of directors has the authority, without further action by the stockholders (unless such stockholder action is required by applicable law or stock exchange listing rules), to designate and issue up to 10,000,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the designations, powers, preferences, privileges and relative participating, optional or special rights and the qualifications, limitations or restrictions thereof, including dividend rights, conversion rights, voting rights, terms of redemption and liquidation preferences, any or all of which may be greater than the rights of the common stock, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

The board of directors, without stockholder approval, can issue preferred stock with voting, conversion or other rights that could adversely affect the voting power and other rights of the holders of common stock. Preferred stock could be issued quickly with terms designed to delay or prevent a change in control of our company or make removal of management more difficult. Additionally, the issuance of preferred stock may have the effect of decreasing the market price of the common stock and may adversely affect the voting power of holders of common stock and reduce the likelihood that common stockholders will receive dividend payments and payments upon liquidation.

Our board of directors will fix the designations, voting powers, preferences and rights of the each series, as well as the qualifications, limitations or restrictions thereof, of the preferred stock of each series that we offer under this prospectus and applicable prospectus supplements in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering. This description will include:

- the title and stated value;
- the number of shares we are offering;
- the liquidation preference per share;
- the purchase price per share;
- the dividend rate per share, dividend period and payment dates and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- our right, if any, to defer payment of dividends and the maximum length of any such deferral period;
- the procedures for any auction and remarketing, if any;
- the provisions for a sinking fund, if any;
- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
- any listing of the preferred stock on any securities exchange or market;
- whether the preferred stock will be convertible into our common stock or other securities of ours, including depositary shares and warrants, and, if applicable, the conversion period, the conversion price, or how it will be calculated, and under what circumstances it may be adjusted;
- whether the preferred stock will be exchangeable into debt securities, and, if applicable, the exchange period, the exchange price, or how it will be calculated, and under what circumstances it may be adjusted;
- voting rights, if any, of the preferred stock;
- preemption rights, if any;
- restrictions on transfer, sale or other assignment, if any;
- whether interests in the preferred stock will be represented by depositary shares;
- a discussion of any material or special United States federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;
- any limitations on issuances of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock being issued as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
- any other specific terms, rights, preferences, privileges, qualifications or restrictions of the preferred stock.

The General Corporation Law of the State of Delaware, the state of our incorporation, provides that the holders of preferred stock will have the right to vote separately as a class (or, in some cases, as a series) on an amendment to our amended and restated certificate of incorporation if the amendment would change the

par value or, unless the amended and restated certificate of incorporation provided otherwise, the number of authorized shares of the class or change the powers, preferences or special rights of the class or series so as to adversely affect the class or series, as the case may be. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

Anti-takeover Effects of Provisions of Delaware Law and Charter Documents

Delaware Anti-Takeover Law

We are subject to Section 203 of the Delaware General Corporation Law, or Section 203. Section 203 generally prohibits a public Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- the interested stockholder owned at least 85% of the voting stock of the corporation outstanding upon consummation of the transaction, excluding for purposes of determining the number of shares outstanding (a) shares owned by persons who are directors and also officers and (b) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to the consummation of the transaction, the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Provisions of our amended and restated certificate of incorporation and amended and restated bylaws may delay or discourage transactions involving an actual or potential change in our control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our common stock. Among other things, our amended and restated certificate of incorporation and amended and restated bylaws:

- permit our board of directors to issue up to 10,000,000 shares of preferred stock, with any rights, preferences and privileges as they may designate (including the right to approve an acquisition or other change in our control);

- provide that the authorized number of directors may be changed only by resolution adopted by a majority of the board of directors;
- provide that the board of directors or any individual director may only be removed with cause and the affirmative vote of the holders of at least 66 2/3% of the voting power of all of our then outstanding common stock;
- provide that all vacancies, including newly created directorships, may, except as otherwise required by law or subject to the rights of holders of preferred stock as designated from time to time, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- divide our board of directors into three classes;
- require that any action to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders and not be taken by written consent;
- provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide notice in writing in a timely manner and also specify requirements as to the form and content of a stockholder's notice;
- do not provide for cumulative voting rights (therefore allowing the holders of a majority of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose);
- provide that special meetings of our stockholders may be called only by the chairman of the board, our Chief Executive Officer or by the board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors (whether or not there exists any vacancies); and
- provide that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors or officers to us or our stockholders, (iii) any action asserting a claim against us arising pursuant to any provision of the DGCL or our certificate of incorporation or bylaws, or (iv) any action asserting a claim against us governed by the internal affairs doctrine.

The amendment of any of these provisions, with the exception of the ability of our board of directors to issue shares of preferred stock and designate any rights, preferences and privileges thereto, would require the affirmative vote of the holders of at least 66 2/3% of the voting power of all of our then outstanding common stock.

Transfer Agent And Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A. The transfer agent and registrar's address is P.O. Box 43078, Providence, Rhode Island 02940. The transfer agent for any series of preferred stock that we may offer under this prospectus will be named and described in the prospectus supplement for that series.

Listing on the Nasdaq Global Market

Our common stock is listed on the Nasdaq Global Market under the symbol CMRX.

DESCRIPTION OF DEBT SECURITIES

We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. While the terms we have summarized below will apply generally to any debt securities that we may offer under this prospectus, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. The terms of any debt securities offered under a prospectus supplement may differ from the terms described below. Unless the context requires otherwise, whenever we refer to the indenture, we also are referring to any supplemental indentures that specify the terms of a particular series of debt securities.

We will issue the debt securities under the indenture that we will enter into with trustee named in the indenture. The indenture will be qualified under the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act. We have filed the form of indenture as an exhibit to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The following summary of material provisions of the debt securities and the indenture is subject to, and qualified in its entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplements and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete indenture that contains the terms of the debt securities.

General

The indenture does not limit the amount of debt securities that we may issue. It provides that we may issue debt securities up to the principal amount that we may authorize and may be in any currency or currency unit that we may designate. Except for the limitations on consolidation, merger and sale of all or substantially all of our assets contained in the indenture, the terms of the indenture do not contain any covenants or other provisions designed to give holders of any debt securities protection against changes in our operations, financial condition or transactions involving us.

We may issue the debt securities issued under the indenture as “discount securities,” which means they may be sold at a discount below their stated principal amount. These debt securities, as well as other debt securities that are not issued at a discount, may be issued with “original issue discount,” or OID, for U.S. federal income tax purposes because of interest payment and other characteristics or terms of the debt securities. Material U.S. federal income tax considerations applicable to debt securities issued with OID will be described in more detail in any applicable prospectus supplement.

We will describe in the applicable prospectus supplement the terms of the series of debt securities being offered, including:

- the title of the series of debt securities;
- any limit upon the aggregate principal amount that may be issued;
- the maturity date or dates;
- the form of the debt securities of the series;
- the applicability of any guarantees;
- whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
- whether the debt securities rank as senior debt, senior subordinated debt, subordinated debt or any combination thereof, and the terms of any subordination;
- if the price (expressed as a percentage of the aggregate principal amount thereof) at which such debt securities will be issued is a price other than the principal amount thereof, the portion of the principal amount thereof payable upon declaration of acceleration of the maturity thereof, or if applicable, the portion of the principal amount of such debt securities that is convertible into another security or the method by which any such portion shall be determined;

- the interest rate or rates, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;
- our right, if any, to defer payment of interest and the maximum length of any such deferral period;
- if applicable, the date or dates after which, or the period or periods during which, and the price or prices at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;
- the date or dates, if any, on which, and the price or prices at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
- the denominations in which we will issue the series of debt securities, if other than denominations of $1,000 and any integral multiple thereof;
- any and all terms, if applicable, relating to any auction or remarketing of the debt securities of that series and any security for our obligations with respect to such debt securities and any other terms which may be advisable in connection with the marketing of debt securities of that series;
- whether the debt securities of the series shall be issued in whole or in part in the form of a global security or securities; the terms and conditions, if any, upon which such global security or securities may be exchanged in whole or in part for other individual securities; and the depositary for such global security or securities;
- if applicable, the provisions relating to conversion or exchange of any debt securities of the series and the terms and conditions upon which such debt securities will be so convertible or exchangeable, including the conversion or exchange price, as applicable, or how it will be calculated and may be adjusted, any mandatory or optional (at our option or the holders' option) conversion or exchange features, the applicable conversion or exchange period and the manner of settlement for any conversion or exchange;
- if other than the full principal amount thereof, the portion of the principal amount of debt securities of the series which shall be payable upon declaration of acceleration of the maturity thereof;
- additions to or changes in the covenants applicable to the particular debt securities being issued, including, among others, the consolidation, merger or sale covenant;
- additions to or changes in the Events of Default with respect to the securities and any change in the right of the trustee or the holders to declare the principal, premium, if any, and interest, if any, with respect to such securities to be due and payable;
- additions to or changes in or deletions of the provisions relating to covenant defeasance and legal defeasance;
- additions to or changes in the provisions relating to satisfaction and discharge of the indenture;
- additions to or changes in the provisions relating to the modification of the indenture both with and without the consent of holders of debt securities issued under the indenture;
- the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars;
- whether interest will be payable in cash or additional debt securities at our or the holders' option and the terms and conditions upon which the election may be made;
- the terms and conditions, if any, upon which we will pay amounts in addition to the stated interest, premium, if any, and principal amounts of the debt securities of the series to any holder that is not a "United States person" for federal tax purposes;

- any restrictions on transfer, sale or assignment of the debt securities of the series; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, any other additions or changes in the provisions of the indenture, and any terms that may be required by us or advisable under applicable laws or regulations.

Conversion or Exchange Rights

We will set forth in the applicable prospectus supplement the terms on which a series of debt securities may be convertible into or exchangeable for our common stock or our other securities. We will include provisions as to settlement upon conversion or exchange and whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common stock or our other securities that the holders of the series of debt securities receive would be subject to adjustment.

Consolidation, Merger or Sale

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the indenture will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of our assets as an entirety or substantially as an entirety. However, any successor to or acquirer of such assets (other than a subsidiary of ours) must assume all of our obligations under the indenture or the debt securities, as appropriate.

Events of Default under the Indenture

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the following are events of default under the indenture with respect to any series of debt securities that we may issue:

- if we fail to pay any installment of interest on any series of debt securities, as and when the same shall become due and payable, and such default continues for a period of 90 days; provided, however, that a valid extension of an interest payment period by us in accordance with the terms of any indenture supplemental thereto shall not constitute a default in the payment of interest for this purpose;
- if we fail to pay the principal of, or premium, if any, on any series of debt securities as and when the same shall become due and payable whether at maturity, upon redemption, by declaration or otherwise, or in any payment required by any sinking or analogous fund established with respect to such series; provided, however, that a valid extension of the maturity of such debt securities in accordance with the terms of any indenture supplemental thereto shall not constitute a default in the payment of principal or premium, if any;
- if we fail to observe or perform any other covenant or agreement contained in the debt securities or the indenture, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive written notice of such failure, requiring the same to be remedied and stating that such is a notice of default thereunder, from the trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the applicable series; and
- if specified events of bankruptcy, insolvency or reorganization occur.

If an event of default with respect to debt securities of any series occurs and is continuing, other than an event of default specified in the last bullet point above, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal of, premium, if any, and accrued interest, if any, of such series of debt securities due and payable immediately. If an event of default specified in the last bullet point above occurs with respect to us, the principal amount of and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the trustee or any holder.

The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver shall cure the default or event of default.

Subject to the terms of the indenture, if an event of default under an indenture shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the trustee reasonable indemnity. The holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or power conferred on the trustee, with respect to the debt securities of that series, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act, the trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

A holder of the debt securities of any series will have the right to institute a proceeding under the indenture or to appoint a receiver or trustee, or to seek other remedies only if:

- the holder has given written notice to the trustee of a continuing event of default with respect to that series;
- the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made written request,
- such holders have offered to the trustee indemnity satisfactory to it against the costs, expenses and liabilities to be incurred by the trustee in compliance with the request; and
- the trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities.

We will periodically file statements with the trustee regarding our compliance with specified covenants in the indenture.

Modification of Indenture; Waiver

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, we and the trustee may change an indenture without the consent of any holders with respect to specific matters:

- to cure any ambiguity, defect or inconsistency in the indenture or in the debt securities of any series;
- to comply with the provisions described above under “Description of Debt Securities — Consolidation, Merger or Sale;”
- to provide for uncertificated debt securities in addition to or in place of certificated debt securities;
- to add to our covenants, restrictions, conditions or provisions such new covenants, restrictions, conditions or provisions for the benefit of the holders of all or any series of debt securities, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default or to surrender any right or power conferred upon us in the indenture;
- to add to, delete from or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication and delivery of debt securities, as set forth in the indenture;

- to make any change that does not adversely affect the interests of any holder of debt securities of any series in any material respect;
- to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series as provided above under "Description of Debt Securities — General" to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;
- to evidence and provide for the acceptance of appointment under any indenture by a successor trustee; or
- to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act.

In addition, under the indenture, the rights of holders of a series of debt securities may be changed by us and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, we and the trustee may make the following changes only with the consent of each holder of any outstanding debt securities affected:

- extending the fixed maturity of any debt securities of any series;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption of any series of any debt securities; or
- reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

Discharge

The indenture provides that we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for specified obligations, including obligations to:

- provide for payment;
- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
- pay principal of and premium and interest on any debt securities of the series;
- maintain paying agencies;
- hold monies for payment in trust;
- recover excess money held by the trustee;
- compensate and indemnify the trustee; and
- appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium, if any, and interest on, the debt securities of the series on the dates payments are due.

Form, Exchange and Transfer

We will issue the debt securities of each series only in fully registered form without coupons and, unless we provide otherwise in the applicable prospectus supplement, in denominations of $1,000 and any integral multiple thereof. The indenture provides that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company, or DTC, or another depositary named by us and identified in the applicable prospectus supplement with respect to that series. To the extent the debt securities of a series are issued in global form and as book-entry, a description of terms relating to any book-entry securities will be set forth in the applicable prospectus supplement.

At the option of the holder, subject to the terms of the indenture and the limitations applicable to global securities described in the applicable prospectus supplement, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indenture and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, we will impose no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

If we elect to redeem the debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or
- register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

Information Concerning the Trustee

The trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs. Subject to this provision, the trustee is under no obligation to exercise any of the powers given it by the indenture at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that unless we otherwise indicate in the applicable prospectus supplement, we will make interest payments by check that we will mail to the holder or by wire transfer to certain holders. Unless we otherwise indicate in the applicable prospectus supplement, we will designate the corporate trust office of the trustee as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the trustee for the payment of the principal of or any premium or interest on any debt securities that remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

Governing Law

The indenture and the debt securities, and any claim, controversy or dispute arising under or related to the indenture or the debt securities, will be governed by and construed in accordance with the laws of the State of New York, except to the extent that the Trust Indenture Act of 1939 is applicable.

DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements and free writing prospectuses, summarizes the material terms and provisions of the warrants that we may offer under this prospectus, which may consist of warrants to purchase common stock, preferred stock or debt securities and may be issued in one or more series. Warrants may be issued independently or together with common stock, preferred stock or debt securities offered by any prospectus supplement, and may be attached to or separate from those securities. While the terms we have summarized below will apply generally to any warrants that we may offer under this prospectus, we will describe the particular terms of any series of warrants that we may offer in more detail in the applicable prospectus supplement and any applicable free writing prospectus. The terms of any warrants offered under a prospectus supplement may differ from the terms described below. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

We have filed forms of the warrant agreements as exhibits to the registration statement of which this prospectus is a part. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant agreement, if any, including a form of warrant certificate, that describes the terms of the particular series of warrants we are offering. The following summaries of material provisions of the warrants and the warrant agreements are subject to, and qualified in their entirety by reference to, all the provisions of the warrant agreement and warrant certificate applicable to the particular series of warrants that we may offer under this prospectus. We urge you to read the applicable prospectus supplements related to the particular series of warrants that we may offer under this prospectus, as well as any related free writing prospectuses, and the complete warrant agreements and warrant certificates that contain the terms of the warrants.

General

We will describe in the applicable prospectus supplement the terms relating to a series of warrants being offered, including:

- the title of such securities;
- the offering price or prices and aggregate number of warrants offered;
- the currency or currencies for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- if applicable, the minimum or maximum amount of such warrants which may be exercised at any one time;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at which, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which, and the currency in which, these shares may be purchased upon such exercise;

- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreements and the warrants;
- the terms of any rights to redeem or call the warrants;
- the terms of any rights to force the exercise of the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreements and warrants may be modified;
- a discussion of any material or special United States federal income tax consequences of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including:

- in the case of warrants to purchase debt securities, the right to receive payments of principal of, or premium, if any, or interest on, the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture; or
- in the case of warrants to purchase common stock or preferred stock, the right to receive dividends, if any, or, payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to the specified time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent in connection with the exercise of the warrant.

Upon receipt of the required payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate are exercised, then we will issue a new warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

Governing Law

Unless we provide otherwise in the applicable prospectus supplement, the warrants and warrant agreements, and any claim, controversy or dispute arising under or related to the warrants or warrant agreements, will be governed by and construed in accordance with the laws of the State of New York.

Enforceability of Rights by Holders of Warrants

Each warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its warrants.

Outstanding Warrants to Purchase Common Stock

As of April 29, 2014, an aggregate of 1,330,958 shares of common stock were issuable upon exercise of outstanding warrants with an exercise price of $7.26 per share. These warrants were issued in connection with an equity financing agreement with certain investors for the sale of Series F preferred stock. The warrants issued in connection with the Series F preferred stock financing are exercisable for seven years after the issuance date of each respective warrant (each of which was issued in February of 2011), unless terminated earlier as a result of certain reorganizations or changes in control as set forth in the warrant. These warrants provide for cashless exercise at the option of the holder, and also contain provisions for the adjustment of the exercise price and the number of shares issuable upon the exercise of the warrants in the event of stock dividends, stock splits, reorganizations and reclassifications and consolidations.

LEGAL OWNERSHIP OF SECURITIES

We can issue securities in registered form or in the form of one or more global securities. We describe global securities in greater detail below. We refer to those persons who have securities registered in their own names on the books that we or any applicable trustee or depositary maintain for this purpose as the “holders” of those securities. These persons are the legal holders of the securities. We refer to those persons who, indirectly through others, own beneficial interests in securities that are not registered in their own names, as “indirect holders” of those securities. As we discuss below, indirect holders are not legal holders, and investors in securities issued in book-entry form or in street name will be indirect holders.

Book-Entry Holders

We may issue securities in book-entry form only, as we will specify in the applicable prospectus supplement. This means securities may be represented by one or more global securities registered in the name of a financial institution that holds them as depositary on behalf of other financial institutions that participate in the depositary’s book-entry system. These participating institutions, which are referred to as participants, in turn, hold beneficial interests in the securities on behalf of themselves or their customers.

Only the person in whose name a security is registered is recognized as the holder of that security. Global securities will be registered in the name of the depositary or its participants. Consequently, for global securities, we will recognize only the depositary as the holder of the securities, and we will make all payments on the securities to the depositary. The depositary passes along the payments it receives to its participants, which in turn pass the payments along to their customers who are the beneficial owners. The depositary and its participants do so under agreements they have made with one another or with their customers; they are not obligated to do so under the terms of the securities.

As a result, investors in a global security will not own securities directly. Instead, they will own beneficial interests in a global security, through a bank, broker or other financial institution that participates in the depositary’s book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect holders, and not legal holders, of the securities.

Street Name Holders

A global security may be terminated in certain situations as described under “— Special Situations When A Global Security Will Be Terminated,” or issue securities that are not issued in global form. In these cases, investors may choose to hold their securities in their own names or in “street name.” Securities held by an

investor in street name would be registered in the name of a bank, broker or other financial institution that the investor chooses, and the investor would hold only a beneficial interest in those securities through an account he or she maintains at that institution.

For securities held in street name, we or any applicable trustee or depositary will recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities, and we or any such trustee or depositary will make all payments on those securities to them. These institutions pass along the payments they receive to their customers who are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold securities in street name will be indirect holders, not holders, of those securities.

Legal Holders

Our obligations, as well as the obligations of any applicable trustee or third party employed by us or a trustee, run only to the legal holders of the securities. We do not have obligations to investors who hold beneficial interests in global securities, in street name or by any other indirect means. This will be the case whether an investor chooses to be an indirect holder of a security or has no choice because we are issuing the securities only in global form.

For example, once we make a payment or give a notice to the legal holder, we have no further responsibility for the payment or notice even if that legal holder is required, under agreements with its participants or customers or by law, to pass it along to the indirect holders but does not do so. Similarly, we may want to obtain the approval of the holders to amend an indenture, to relieve us of the consequences of a default or of our obligation to comply with a particular provision of an indenture, or for other purposes. In such an event, we would seek approval only from the legal holders, and not the indirect holders, of the securities. Whether and how the legal holders contact the indirect holders is up to the legal holders.

Special Considerations for Indirect Holders

If you hold securities through a bank, broker or other financial institution, either in book-entry form because the securities are represented by one or more global securities or in street name, you should check with your own institution to find out:

- how it handles securities payments and notices;
- whether it imposes fees or charges;
- how it would handle a request for the holders' consent, if ever required;
- whether and how you can instruct it to send you securities registered in your own name so you can be a holder, if that is permitted in the future;
- how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and
- if the securities are in book-entry form, how the depositary's rules and procedures will affect these matters.

Global Securities

A global security is a security that represents one or any other number of individual securities held by a depositary. Generally, all securities represented by the same global securities will have the same terms.

Each security issued in book-entry form will be represented by a global security that we issue to, deposit with and register in the name of a financial institution or its nominee that we select. The financial institution that we select for this purpose is called the depositary. Unless we specify otherwise in the applicable prospectus supplement, The Depository Trust Company, New York, New York, known as DTC, will be the depositary for all securities issued in book-entry form.

A global security may not be transferred to or registered in the name of anyone other than the depositary, its nominee or a successor depositary, unless special termination situations arise. We describe those situations

below under "— Special Situations When A Global Security Will Be Terminated." As a result of these arrangements, the depositary, or its nominee, will be the sole registered owner and legal holder of all securities represented by a global security, and investors will be permitted to own only beneficial interests in a global security. Beneficial interests must be held by means of an account with a broker, bank or other financial institution that in turn has an account with the depositary or with another institution that does. Thus, an investor whose security is represented by a global security will not be a legal holder of the security, but only an indirect holder of a beneficial interest in the global security.

If the prospectus supplement for a particular security indicates that the security will be issued as a global security, then the security will be represented by a global security at all times unless and until the global security is terminated. If termination occurs, we may issue the securities through another book-entry clearing system or decide that the securities may no longer be held through any book-entry clearing system.

Special Considerations For Global Securities

As an indirect holder, an investor's rights relating to a global security will be governed by the account rules of the investor's financial institution and of the depositary, as well as general laws relating to securities transfers. We do not recognize an indirect holder as a holder of securities and instead deal only with the depositary that holds the global security.

If securities are issued only as global securities, an investor should be aware of the following:

- an investor cannot cause the securities to be registered in his or her name, and cannot obtain non-global certificates for his or her interest in the securities, except in the special situations we describe below;
- an investor will be an indirect holder and must look to his or her own bank or broker for payments on the securities and protection of his or her legal rights relating to the securities, as we describe above;
- an investor may not be able to sell interests in the securities to some insurance companies and to other institutions that are required by law to own their securities in non-book-entry form;
- an investor may not be able to pledge his or her interest in the global security in circumstances where certificates representing the securities must be delivered to the lender or other beneficiary of the pledge in order for the pledge to be effective;
- the depositary's policies, which may change from time to time, will govern payments, transfers, exchanges and other matters relating to an investor's interest in the global security;
- we and any applicable trustee have no responsibility for any aspect of the depositary's actions or for its records of ownership interests in the global security, nor will we or any applicable trustee supervise the depositary in any way;
- the depositary may, and we understand that DTC will, require that those who purchase and sell interests in the global security within its book-entry system use immediately available funds, and your broker or bank may require you to do so as well; and
- financial institutions that participate in the depositary's book-entry system, and through which an investor holds its interest in the global security, may also have their own policies affecting payments, notices and other matters relating to the securities.

There may be more than one financial intermediary in the chain of ownership for an investor. We do not monitor and are not responsible for the actions of any of those intermediaries.

Special Situations When A Global Security Will Be Terminated

In a few special situations described below, a global security will terminate and interests in it will be exchanged for physical certificates representing those interests. After that exchange, the choice of whether to hold securities directly or in street name will be up to the investor. Investors must consult their own banks or brokers to find out how to have their interests in securities transferred to their own names, so that they will be direct holders. We have described the rights of holders and street name investors above.

A global security will terminate when the following special situations occur:

- if the depositary notifies us that it is unwilling, unable or no longer qualified to continue as depositary for that global security and we do not appoint another institution to act as depositary within 90 days;
- if we notify any applicable trustee that we wish to terminate that global security; or
- if an event of default has occurred with regard to securities represented by that global security and has not been cured or waived.

The applicable prospectus supplement may also list additional situations for terminating a global security that would apply only to the particular series of securities covered by the prospectus supplement. When a global security terminates, the depositary, and neither we nor any applicable trustee, is responsible for deciding the names of the institutions that will be the initial direct holders.

PLAN OF DISTRIBUTION

We may sell the securities from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods. We may sell the securities to or through underwriters or dealers, through agents, or directly to one or more purchasers. We may distribute securities from time to time in one or more transactions:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

We may also sell equity securities covered by this registration statement in an "at the market offering" as defined in Rule 415 under the Securities Act. Such offering may be made into an existing trading market for such securities in transactions at other than a fixed price, either:

- on or through the facilities of the Nasdaq Global Market or any other securities exchange or quotation or trading service on which such securities may be listed, quoted or traded at the time of sale; and/or
- to or through a market maker otherwise than on the Nasdaq Global Market or such other securities exchanges or quotation or trading services.

Such at-the-market offerings, if any, may be conducted by underwriters acting as principal or agent.

A prospectus supplement or supplements (and any related free writing prospectus that we may authorize to be provided to you) will describe the terms of the offering of the securities, including, to the extent applicable:

- the name or names of any underwriters, dealers or agents, if any;
- the purchase price of the securities and the proceeds we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and other items constituting agents' or underwriters' compensation;
- any public offering price;
- any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchange or market on which the securities may be listed.

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all of the securities offered by the prospectus supplement. Any public offering price and any discounts or concessions allowed or reallowed or paid to dealers may change from time to time. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship.

We may sell securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities, and we will describe any commissions we will pay the agent in the prospectus supplement. Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

We may provide agents and underwriters with indemnification against civil liabilities related to this offering, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

All securities we offer, other than common stock, will be new issues of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. We cannot guarantee the liquidity of the trading markets for any securities.

Any underwriter may engage in overallotment, stabilizing transactions, short covering transactions and penalty bids. Overallotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a stabilizing or covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time. These transactions may be effected on any exchange or over-the-counter market or otherwise.

Any underwriters who are qualified market makers on the Nasdaq Global Market may engage in passive market making transactions in the securities on the Nasdaq Global Market in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the securities. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker’s bid, however, the passive market maker’s bid must then be lowered when certain purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, certain legal matters in connection with the offering and the validity of the securities offered by this prospectus, and any supplement thereto, will be passed upon by Cooley LLP.

EXPERTS

The financial statements of Chimerix, Inc. appearing in Chimerix, Inc.’s Annual Report on Form 10-K for the year ended December 31, 2013 have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their reports thereon, included therein, and are incorporated by reference in this prospectus. Such financial statements are incorporated herein by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. Neither we nor any agent, underwriter or dealer has authorized any person to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front page of this prospectus, regardless of the time of delivery of this prospectus or any sale of the securities offered by this prospectus.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy the registration statement, as well as any other document filed by us with the SEC, at the SEC's Public Reference Room at 100 F Street NE, Washington, D.C. 20549. You can also request copies of these documents by writing to the SEC and paying a fee for the copying cost. You may obtain information on the operation of the Public Reference Room by calling the SEC at (800) SEC-0330. The SEC maintains a website that contains reports, proxy statements and other information regarding issuers that file electronically with the SEC, including Iridium. The address of the SEC website is *www.sec.gov*.

We maintain a website at *www.chimerix.com*. Information contained in or accessible through our website does not constitute a part of this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The SEC file number for the documents incorporated by reference in this prospectus is 001-35867. The documents incorporated by reference into this prospectus contain important information that you should read about us.

The following documents are incorporated by reference into this document:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2013 filed with the SEC on March 7, 2014;
- our Quarterly Report on Form 10-Q for the quarter ended March 31, 2014 filed with the SEC on May 9, 2014;
- the information specifically incorporated by reference into our Annual Report on Form 10-K for the fiscal year ended December 31, 2013 from our definitive proxy statement on Schedule 14A (other than information furnished rather than filed) filed with the SEC on April 29, 2014;
- our Current Reports on Form 8-K (other than information furnished rather than filed) filed with the SEC on February 3, 2014, February 6, 2014, March 14, 2014, April 1, 2014 and April 11, 2014; and
- the description of our common stock, which is registered under Section 12 of the Exchange Act, in our registration statement on Form 8-A, filed with the SEC on April 5, 2013, including any amendments or reports filed for the purpose of updating such description.

We also incorporate by reference into this prospectus all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (i) after the date of the initial filing of the registration statement of which this prospectus forms a part and prior to effectiveness of the registration statement, or (ii) after the date of this prospectus but prior to the termination of the offering. These documents include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus but not delivered with the prospectus, including exhibits which are specifically

incorporated by reference into such documents. You should direct any requests for documents by writing us at 2505 Meridian Parkway, Suite 340, Durham, North Carolina 27713 or telephoning us at (919) 806-1074.

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this document will be deemed to be modified or superseded for purposes of the document to the extent that a statement contained in this document or any other subsequently filed document that is deemed to be incorporated by reference into this document modifies or supersedes the statement.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITY

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling the registrant pursuant to the foregoing provisions, the registrant has been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.


CHIMERIX, INC.