

ACHILLION PHARMACEUTICALS INC

Form 424B5

February 10, 2015

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**Filed Pursuant to Rule 424(b)(5)
Registration No. 333-194410**

The information in this preliminary prospectus supplement is not complete and may be changed. A registration statement relating to these securities has been declared effective by 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 an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED FEBRUARY 10, 2015

PRELIMINARY PROSPECTUS SUPPLEMENT

(to Prospectus dated March 7, 2014)

10,000,000 Shares

Common Stock

We are selling 10,000,000 shares of our common stock. Our common stock is listed on The NASDAQ Global Select Market under the symbol ACHN. The last reported sale price of our common stock on The NASDAQ Global Select Market on February 9, 2015 was \$11.66 per share.

Investing in our common stock involves a high degree of risk. Please read Risk Factors beginning on page S-6 of this prospectus supplement and in the documents incorporated by reference into this prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	Per Share	Total
Public offering price	\$	\$
Underwriting discounts and commissions	\$	\$
Proceeds, before expenses, to us	\$	\$

- (1) We have agreed to reimburse the underwriters for certain expenses in connection with this offering. See Underwriting.

We have granted the underwriters an option for a period of 30 days from the date of this prospectus supplement to purchase up to an additional 1,500,000 shares of our common stock at the public offering price, less the underwriting discounts and commissions.

The underwriters expect to deliver the shares of common stock on or about February , 2015.

Joint Book-Running Managers

Leerink Partners

Co-Lead Manager

Deutsche Bank Securities

Wells Fargo Securities

Co-Manager

JMP Securities

February , 2015

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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 March 7, 2014, including the documents incorporated by reference therein, provides more general information, some of which may not apply to the securities offered by this prospectus supplement. 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 unless otherwise specified.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference herein or in the accompanying prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreement, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

You should rely only on the information contained in or incorporated by reference in this prospectus supplement, the accompanying prospectus and in any free writing prospectus we have authorized for use in connection with this offering. We have not, and the underwriters have not, authorized anyone to provide any information other than that contained or incorporated by reference in this prospectus supplement, in the accompanying prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We and the underwriters 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 prepared by or on behalf of us 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 prepared by or on behalf of us 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 we have referred you to in the sections of this prospectus supplement and the accompanying prospectus entitled **Where You Can Find More Information** and **Incorporation by Reference**.

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and

regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

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Unless the context requires otherwise, all references in this prospectus supplement and the accompanying prospectus to Achillion, the Company, we, us, our, or similar references refer to Achillion Pharmaceuticals, Inc. The Achillion logo and all other Achillion product names are trademarks of Achillion in the United States and in other select countries. We may indicate U.S. trademark registrations and U.S. trademarks with the symbols ® and ™, respectively. Other third-party logos and product/trade names are registered trademarks or trade names of their respective owners.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the documents we incorporate by reference herein and therein include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, which we refer to as the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, which we refer to as the Exchange Act. For purposes of these statutes, any statement contained in this prospectus supplement, the accompanying prospectus or in the documents we incorporate by reference herein and therein other than a statement of historical fact, may be a forward-looking statement, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans and objectives of management. In some cases, you can identify forward-looking statements by such terms as anticipate, believe, could, estimate, expect, intend, may, plan, project, should, will, would or other words of future events or outcomes to identify these forward-looking statements. Forward-looking statements may include, but are not limited to, statements about:

the initiation, timing, progress and results of future preclinical studies and clinical trials, and our research and development programs;

our plans to develop and commercialize our product candidates;

our ability to establish and maintain collaborations or obtain additional funding;

the timing or likelihood of regulatory filings and approvals;

the implementation of our business model, strategic plans for our business, product candidates and technology;

our commercialization, marketing and manufacturing capabilities and strategy;

the rate and degree of market acceptance and clinical utility of our products;

our competitive position;

our intellectual property position;

developments and projections relating to our competitors and our industry;

the potential of ACH-3102, ACH-3422 and sovalprevir as therapeutic targets;

the potential advancement of our complement Factor D inhibition platform;

our expectations related to the use of proceeds from this offering; and

our estimates regarding expenses, future revenue, capital requirements and needs for additional financing. Our actual results may differ materially from those indicated by these forward-looking statements as a result of various important factors, including the factors referred to under the heading **Risk Factors** on page S-6 of this prospectus supplement. If one or more of these factors materialize, or if any underlying assumptions prove incorrect, our actual results, performance or achievements may vary materially from any future results, performance or achievements expressed or implied by these forward-looking statements.

You should consider these factors and the other cautionary statements made in this prospectus supplement, the accompanying prospectus and the documents we incorporate by reference herein and therein as being applicable to all related forward-looking statements wherever they appear in this prospectus supplement, the accompanying prospectus, or the documents incorporated by reference. While we may elect to update forward-looking statements wherever they appear in this prospectus supplement, the accompanying prospectus, or the documents incorporated by reference herein and therein, we do not assume, and specifically disclaim, any obligation to do so, whether as a result of new information, future events or otherwise.

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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 and the accompanying prospectus. This summary is not complete and does not contain all of the information that you should consider before deciding to invest in our common stock. For a more complete understanding of our company and this offering, you should read carefully this entire prospectus supplement and the accompanying prospectus, including the information incorporated by reference into this prospectus supplement and the accompanying prospectus, and any free writing prospectus that we have authorized for use in connection with this offering, including the Risk Factors section beginning on page S-6 of this prospectus supplement, our financial statements and the related notes and the other documents incorporated by reference in this prospectus supplement and the accompanying prospectus.

Our Business

We are a biopharmaceutical company seeking to transform innovation into novel treatments that address the needs of patients by discovering and developing small molecule therapeutics for the treatment of infectious diseases and immune system disorders. We are currently focusing our efforts on developing commercially competitive, short-duration combination therapies for the treatment of chronic hepatitis C virus, or HCV, infection that are once-daily and ribavirin-free. Specifically, we are advancing combination regimens containing:

ACH-3102, a NS5A inhibitor, currently in phase II clinical development;

ACH-3422, a NS5B nucleotide polymerase inhibitor, currently in phase I clinical development; and

Sovaprevir, a NS3/4A protease inhibitor, currently in phase II clinical development.

In addition to our work on anti-infectives, we have leveraged our internal discovery capabilities and seek to advance a novel platform for the development of oral inhibitors of complement Factor D. Factor D is an essential protein of the complement pathway, a part of the human innate immune system. Our platform is focused on advancing compounds that inhibit Factor D, can be orally-administered, and potentially can be used in the treatment of immune-related diseases where the complement pathway plays a critical role. We anticipate that our complement inhibitor platform may play a role in addressing needs of patients with paroxysmal nocturnal hemoglobinuria, or PNH, including patients who have suboptimal response to, or who fail to respond to, currently approved treatments for PNH, atypical hemolytic uremic syndrome, or aHUS, myasthenia gravis, and age-related macular degeneration, or AMD. Our compounds in complement Factor D inhibition have demonstrated complete suppression of the complement system with a single oral dose of our inhibitors in non-human primates. We plan to nominate one such compound in early 2015 and advance it to a phase I clinical trial by the end of 2015.

We have established our current drug candidate pipeline entirely through our internal discovery capabilities. Through these efforts, we have identified the following portfolio of drug candidates which we intend to study in combination with each other:

ACH-3102, a NS5A Inhibitor. We are developing combination drug regimens that include ACH-3102, our pan-genotypic, second generation NS5A inhibitor. To date, we have completed three phase II clinical trials with ACH-3102 including the -007 trial with sovalprevir described below, the -005 study, which examined the use of ACH-3102 with ribavirin alone, and the Doublet Proxy study which examined the use of ACH-3102 in combination with sofosbuvir, a nucleotide NS5B polymerase inhibitor, marketed by Gilead, Inc., or Gilead, under the brand name Sovaldi. Please refer to Recent Developments below for a summary of recently announced interim results for the Doublet Study. ACH-3102 has been granted Fast Track status by the FDA. As a proxy for what we might expect to see with a proprietary triple combination of ACH-3422, ACH-3102 and sovalprevir, we are also initiating the Ithaca Triplet study in the first half of 2015 examining the use of sofosbuvir in combination with ACH-3102 and sovalprevir, and we expect to report results from this trial in the second half of 2015. This study may provide information that will help determine the appropriate dosing and other aspects of our proprietary triplet combination regimen.

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ACH-3422, a NS5B Nucleotide Polymerase Inhibitor. We are seeking to develop combination drug regimens to address all HCV genotypes based on use of ACH-3422, our nucleotide prodrug inhibitor of HCV NS5B polymerase. ACH-3422 has demonstrated excellent potency in a phase 1b proof of concept study in which HCV patients receiving a once-daily 700mg dose of ACH-3422 for fourteen days demonstrated mean maximal viral load reduction of 4.6 log₁₀. We plan to initiate a clinical trial based on ACH-3422 in combination with ACH-3102 in the first half of 2015 for treatment durations of 6, 8 and 12 weeks, and we expect to report data on this trial in the second half of 2015.

Sovaprevir, a NS3/4A Protease Inhibitor. We have completed a phase II clinical trial that evaluated 12 weeks of treatment consisting of sovalprevir and our NS5A inhibitor, ACH-3102, with ribavirin for the treatment of genotype 1 HCV (the -007 trial). In this trial, genotype 1b patients achieved 100% SVR24, however, in genotype 1a patients, the combination regimen results were suboptimal. In June 2013, the FDA placed a clinical hold on sovalprevir after elevations in liver enzymes were noted in a phase I healthy subjects drug-drug interaction study evaluating the effects of concomitant administration of sovalprevir with ritonavir-boosted atazanavir. In June 2014, the FDA lifted the full clinical hold, allowing us to advance sovalprevir in clinical trials of HCV-infected patients, but requiring us to seek FDA approval to conduct multi-dose clinical trials in healthy subjects. Following an internal assessment of our protease inhibitor drug candidates, sovalprevir and ACH-2684, we determined to advance sovalprevir in future clinical trials with ACH-3422 and ACH-3102, rather than ACH-2684. We plan to initiate a drug-drug interaction study with sovalprevir plus compounds that potentially impact active transport mechanisms in the liver and intestines in the first half of 2015. In addition, by the end of 2015, we plan to initiate the multi-dose pharmacokinetic study of the triplet regimen program of ACH-3422, ACH-3102 and sovalprevir.

We intend to continue to focus on the discovery and development of new drug candidates through our extensive expertise in biology and medicinal chemistry. Although significant additional funding and research and development will be required to support these efforts, we believe our drug discovery capabilities will allow us to further expand our product candidate portfolio, providing us with strong growth potential.

Recent Developments

December Stock Sales and Year-End Cash and Equivalents. Between December 22, 2014 and December 31, 2014, we sold 3,236,497 shares of our common stock pursuant to the Sales Agreement, dated November 8, 2012, between us and Cantor Fitzgerald & Co., which we refer to as the Cantor Sales Agreement, which resulted in aggregate net proceeds to us of approximately \$48.3 million. As a result, as of December 31, 2014, we had \$152.9 million in cash, cash equivalents and marketable securities, with \$73.7 million comprised of cash and cash equivalents and \$79.2 million comprised of marketable securities. In addition, as of December 31, 2014, we had \$5.7 million in subscriptions receivable, as a portion of the sales under the Cantor Sales Agreement closed in early January 2015. Based on our current clinical plan, and after giving effect to the net proceeds received from the sale of shares of our common stock in December 2014 pursuant to the Cantor Sales Agreement, we believe that our existing cash, cash equivalents and marketable securities will be sufficient to meet our current projected operating requirements for at least the next 12 months.

ACH-3102 Interim Results from Our Doublet Proxy Study. On February 9, 2015, we announced updated interim results from our Doublet Proxy study. This ongoing study is a Phase II open-label, randomized, partial-crossover study to evaluate the efficacy, safety, and tolerability of eight- and six weeks of 50mg of ACH-3102 and 400mg of sofosbuvir, once daily, in treatment-naïve genotype 1 HCV-infected patients. Initially, eighteen patients were enrolled, including six observational patients, into an eight-week treatment cohort. Following the

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achievement of 100% SVR12 (12/12) in the eight-week cohort, the six-week treatment cohort was initiated. In all, eighteen patients were enrolled, including twelve active and six observational patients. Mean baseline HCV RNA viral load was 10 million ($7 \log_{10}$) IU/ml, range 2 million ($6.23 \log_{10}$) – 97 million ($7.99 \log_{10}$) IU/ml, including seven patients with baseline HCV RNA viral load exceeding 6 million ($6.78 \log_{10}$) IU/ml. Of the 12 active patients enrolled, seven patients were genotype 1a and five were genotype 1b. Twelve weeks after the completion of therapy, 100% (12/12) achieved SVR12, independent of baseline viral load, gender, and IL28B status, in the six-week treatment arm. Additionally, 100% of patients (12/12) in the eight-week treatment duration arm have achieved SVR24. The combination of ACH-3102 and sofosbuvir was well-tolerated with no serious adverse events, no discontinuations due to adverse events, and no clinically significant laboratory or ECG abnormalities.

Company Information

We were incorporated in Delaware in August 1998. Our principal executive office is located at 300 George Street, New Haven, Connecticut 06511, and our telephone number is (203) 624-7000. Our internet address is www.achillion.com. The information contained in, or that can be accessed through, our website is not incorporated by reference into this prospectus and should not be considered to be a part of this prospectus. Our internet address is included in this prospectus as an inactive technical reference only.

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The Offering

Common Stock Offered by Us in this Offering	10,000,000 shares
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Common Stock to be Outstanding Immediately After This Offering	110,247,190 shares
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Option to Purchase Additional Shares of Common Stock

The underwriters have an option to purchase up to an additional 1,500,000 shares of our common stock from us. The underwriters can exercise their option at any time within 30 days from the date of this prospectus supplement.

Use of Proceeds	We estimate that the net proceeds we will receive from this offering will be approximately \$109.3 million (or approximately \$125.8 million if the underwriters exercise their option to purchase additional shares in full), after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, based on an assumed public offering price of \$11.66 per share, which was the last reported sale price of our common stock on The NASDAQ Global Select Market on February 9, 2015.
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We intend to use the net proceeds from this offering to continue clinical development of our lead product candidates ACH-3102, ACH-3422 and sovalprevir, to advance our platform for the development of oral inhibitors of complement Factor D and for general corporate purposes. Pending our use of the net proceeds from this offering, we plan to invest the net proceeds in short-term, investment-grade, interest-bearing instruments and U.S. government securities. See Use of Proceeds on page S-31 of this prospectus supplement.

Risk Factors	Investing in our common stock involves a high degree of risk. See Risk Factors beginning on page S-6 of this prospectus supplement and other information included and incorporated by reference in this prospectus supplement for a discussion of important factors you should carefully consider before deciding to invest in our common stock.
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NASDAQ Global Select Market Listing	Our common stock is listed on The NASDAQ Global Select Market under the symbol ACHN.
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Outstanding Shares

The number of shares of our common stock to be outstanding after this offering is based on 100,247,190 shares outstanding as of September 30, 2014. Unless specifically stated otherwise, the information in this prospectus supplement excludes:

7,838,637 shares of our common stock issuable upon the exercise of stock options outstanding as of September 30, 2014, at a weighted average exercise price of \$5.46 per share;

3,420,381 shares of our common stock available for future issuance as of September 30, 2014 under our 2006 stock incentive plan, as amended, which we refer to as our 2006 Plan;

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102,739 shares of our common stock available for future issuance as of September 30, 2014 under our 2006 employee stock purchase plan, as amended, which we refer to as our 2006 ESPP; and

2,843,980 shares of our common stock issuable upon the exercise of warrants outstanding as of September 30, 2014, at a weighted average exercise price of \$3.13 per share.

Except as otherwise indicated, all information in this prospectus supplement assumes no exercise by the underwriters of their option to purchase additional shares.

In addition, except as otherwise indicated, all information in this prospectus supplement excludes our sale of an aggregate of 3,236,497 shares of our common stock in December 2014 pursuant to the Cantor Sales Agreement, which resulted in aggregate net proceeds to us of \$48.3 million.

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RISK FACTORS

Investing in our securities involves a high degree of risk and uncertainty. In addition to the other information included or incorporated by reference in this prospectus supplement, the accompanying prospectus and in any free writing prospectus that we have authorized for use in connection with this offering, you should read in their entirety and carefully consider the risks described below before making an investment decision with respect to this offering. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be severely harmed. This could cause the trading price of our common stock to decline, and you could lose all or part of your investment.

Risks Related to Our Business

We depend on the success of our HCV drug candidates, which are still under development.

We have invested a significant portion of our efforts and financial resources in the development of our candidates for the treatment of HCV, including our NS5A inhibitor, ACH-3102, our nucleotide polymerase inhibitor, ACH-3422, our protease inhibitor, sovalprevir, and more recently, our complement Factor D inhibitors. Our ability to generate revenues will depend heavily on the successful development and commercialization of these drug candidates. The development and commercial success of these drug candidates will depend on several factors, including the following:

our ability to provide acceptable evidence of the safety and efficacy of these drug candidates in current and future clinical trials;

our ability to provide acceptable evidence of the ability of our drug candidates to be dosed safely in combination with other drugs and/or drug candidates, both ours and others;

our ability to develop drug formulations that will deliver the appropriate drug exposures in longer term clinical trials;

our ability to obtain patent protection for our drug candidates and freedom to operate under third-party intellectual property;

receipt of marketing approvals from the FDA and similar foreign regulatory authorities;

establishing commercial manufacturing arrangements with third-party manufacturers;

launching commercial sales of our drugs, whether alone or in collaboration with others, particularly in a market in which competing therapeutics have very high efficacy rates;

acceptance of our drugs in the medical community and with third-party payors; and

our ability to identify, enter into and maintain collaboration arrangements with appropriate strategic partners for our drug candidates.

Positive results in preclinical studies of a drug candidate may not be predictive of similar results in human clinical trials, and promising results from early clinical trials of a drug candidate may not be replicated in later clinical trials. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials even after achieving promising results in early-stage development. Accordingly, the results from the preclinical studies or completed clinical trials for ACH-3102, ACH-3422, or sovalprevir may not be predictive of the results we may obtain in later stage trials.

We do not expect any of our drug candidates for the treatment of HCV or complement-mediated diseases to be commercially available for at least several years, if at all.

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Our market is subject to intense competition. If we are unable to compete effectively, our drug candidates may be rendered noncompetitive or obsolete.

We are engaged in a segment of the pharmaceutical industry that is highly competitive and rapidly changing. We face potential competition from many different sources pursuing the development of novel drugs that target infectious diseases generally and HCV in particular, including both major and specialty pharmaceutical and biotechnology companies, academic institutions, governmental agencies and public and private research organizations. We face, and expect to continue to face, intense and increasing competition as new products enter the market and advanced technologies become available. In addition to currently approved drugs, there are a significant number of drugs that are currently under development that have demonstrated potential efficacy for the treatment of HCV and may become available in the future for the treatment of HCV. Additionally, there may be competitive drugs currently under development of which we are not aware.

If approved, combinations of our drug candidates that we are advancing, ACH-3102, ACH-3422, and sovalprevir, would compete with drugs currently approved for the treatment of HCV, such as the interferon-alpha-based products from F. Hoffman-La Roche Ltd, or Roche (Pegasys and Roferon-A) or Merck & Co., Inc., or Merck (Intron-A or Peg-Intron), the ribavirin-based products from Merck (Rebetrol), Roche (Copegus) and generic versions sold by various companies, as well as protease inhibitors telaprevir by Vertex Pharmaceuticals Incorporated, or Vertex (Incivek®), boceprevir by Merck (Victrelis®) and simeprevir by Johnson & Johnson (Olysio) and the more recently approved nucleotide inhibitor sofosbuvir (Sovaldi) by Gilead and sofosbuvir/ ledipasvir combination (Harvoni), also by Gilead.

If approved, our drug candidates may also compete with all-oral treatments currently in development to treat HCV infection in multiple classes including protease inhibitors, polymerase inhibitors (nucleoside, nucleotide, and non-nucleoside), NS5A inhibitors, cyclophilin inhibitors and others. Competing drug candidates for the treatment of HCV, or combinations of drug candidates, are being developed by companies such as AbbVie, Inc., or AbbVie, AstraZeneca Plc, or AstraZeneca, Bristol-Myers Squibb Company, or Bristol-Myers Squibb, Enanta Pharmaceuticals, Inc., or Enanta, Gilead, GlaxoSmithKline plc, or GlaxoSmithKline, Johnson & Johnson, Medivir AB, or Medivir, Merck, Novartis AG, or Novartis, Regulus Therapeutics Inc., or Regulus, and Roche.

Many of our competitors have:

significantly greater financial, technical and human resources than we have and may be better equipped to discover, develop, manufacture and commercialize drug candidates;

more extensive experience in preclinical testing and clinical trials, obtaining regulatory approvals and manufacturing and marketing pharmaceutical products;

drug candidates that have been approved or are in late-stage clinical development; and/or

collaborative arrangements in our target markets with leading companies and research institutions.

Mergers and acquisitions in the pharmaceutical and biotechnology industry may result in even more resources being concentrated among a smaller number of our competitors. For example, in August 2014, Merck completed its

acquisition of Idenix Pharmaceuticals, Inc., or Idenix, a potential competitor of ours. This acquisition follows earlier acquisitions in the HCV therapeutic arena such as Gilead's acquisition of Pharmasset Inc., or Pharmasset and Bristol-Myers Squibb's acquisition of Inhibitex, Inc., or Inhibitex. Smaller or early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. For example, Johnson & Johnson recently acquired Alios Biopharma, Inc., or Alios, a private company which, in addition to assets in respiratory syncytial virus, or RSV, also had assets in HCV.

Competitive products, specific classes of competitive products, or combinations of competitive products may render our drug candidates and products obsolete or noncompetitive before we can recover the expenses of developing and commercializing them. Furthermore, the development of new treatment methods for the diseases we are targeting could render our drug candidates noncompetitive, obsolete or uneconomical. If we successfully develop and obtain approval for any of our drug candidates, we will face competition based on the safety and

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effectiveness of our drug candidates, the timing of their entry into the market in relation to competitive products in development, the availability and cost of supply, marketing and sales capabilities, reimbursement coverage, price, patent position and other factors. If we successfully develop drug candidates but those drug candidates do not achieve and maintain market acceptance, our business will not be successful.

As a result of elevations in liver enzymes noted in a phase I drug-drug interaction study for healthy volunteers evaluating the effects of concomitant administration of sovalprevir with ritonavir-boosted atazanavir, the FDA previously placed a clinical hold on sovalprevir. While the FDA removed its clinical hold on sovalprevir for patient studies and single dose studies in healthy volunteers in June 2014, the FDA maintained a partial clinical hold on sovalprevir for certain multiple dose studies in healthy volunteers. Our business may be adversely affected if such regulatory concerns lead to delays in developing sovalprevir or if elevated liver enzyme levels or other adverse drug-drug interactions are observed in subsequent studies.

One of our most advanced compounds under development is sovalprevir, a NS3/4A protease inhibitor in phase II clinical development. In June 2013, the FDA placed a clinical hold on sovalprevir after elevations in liver enzymes were noted in a phase I healthy subjects drug-drug interaction study evaluating the effects of concomitant administration of sovalprevir with ritonavir-boosted atazanavir. In June 2014, the FDA removed the clinical hold on sovalprevir, allowing us to conduct therapeutic trials of sovalprevir in HCV patients with a maximum dose of 200 mg once daily and in single dose studies in healthy volunteers, but the FDA maintained a partial clinical hold on sovalprevir for multiple dose studies that we may conduct in healthy volunteers.

The FDA may not remove the partial clinical hold on sovalprevir and may not allow us to conduct additional multiple dose studies in healthy volunteers without their prior permission. Moreover, elevated liver enzymes or other adverse drug-drug interactions could be observed in our ongoing phase II clinical trial or any other subsequent preclinical studies or clinical trials that we may conduct. If the FDA does not remove the partial clinical hold or if elevated liver enzymes or other adverse drug-drug interactions are observed, our development of sovalprevir may be delayed, and the associated costs may be significantly increased, adversely affecting our business. If the FDA places sovalprevir on clinical hold again, we may terminate the development of sovalprevir, which may adversely affect our business.

We have a limited operating history and have incurred a cumulative loss since inception. If we do not generate significant revenues, we will not be profitable.

We have incurred significant losses since our inception in August 1998. As of September 30, 2014, our accumulated deficit was \$429.1 million. We have not generated any revenue from the sale of drug candidates to date. We expect that our annual operating losses will increase over the next several years as we expand our research, development and commercialization efforts.

To become profitable, we must successfully develop and obtain regulatory approval for our drug candidates and effectively manufacture, market and sell any drug candidates we develop. Accordingly, we may never generate significant revenues and, even if we do generate significant revenues, we may never achieve profitability.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

Under Section 382 of the Internal Revenue Code of 1986, as amended, if a company undergoes an ownership change, generally defined as a greater than 50% change (by value) in its equity ownership over a three-year period, the corporation's ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes (such as research tax credits) to offset its post-change taxable income or taxes may be limited. This offering and other changes in our stock ownership, some of which are outside of our control, may have resulted or could in the future result in an

ownership change. For example, we completed a review of our changes in ownership through December 31, 2011, and determined that we had three ownership changes since inception. The changes of ownership will result in net operating loss and research and development credit carryforwards that we expect to expire unutilized. If additional limitations were to apply, utilization of a portion of our net operating loss and tax credit carryforwards could be further limited in future periods and a portion of the carryforwards could expire before being available to reduce future income tax liabilities.

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We will need substantial additional capital to fund our operations, including drug candidate development, manufacturing and commercialization. If we do not have or cannot raise additional capital when needed, we will be unable to develop and commercialize our drug candidates successfully, and our ability to operate as a going concern may be adversely affected.

Based on our current clinical plan, and after giving effect to our sale of an aggregate of 3,236,497 shares of our common stock in December 2014 pursuant to the Cantor Sales Agreement, which resulted in aggregate net proceeds to us of \$48.3 million, we believe that our existing cash, cash equivalents and marketable securities will be sufficient to meet our current projected operating requirements for at least the next 12 months. This estimate does not give effect to the anticipated net proceeds from this offering. However, our future capital requirements may change and will depend upon numerous factors, including but not limited to:

the costs involved in the clinical development, manufacturing and formulation of ACH-3102, ACH-3422, and sovalprevir;

the costs involved in the preclinical development of certain complement inhibitors;

the scope of and costs associated with entering into cooperative study arrangements, or CSAs, or licensing arrangements, if any, for the collaborative development of our drug candidates in combination with others drug candidates;

the costs involved in obtaining regulatory approvals for our drug candidates;

the scope, prioritization and number of programs we pursue;

the costs involved in preparing, filing, prosecuting, maintaining, enforcing and defending patent and other intellectual property claims;

our ability to raise incremental debt or equity capital, including any changes in the credit or equity markets that may impact our ability to obtain capital in the future;

the costs associated with, and the outcome of, lawsuits against us, if any;

our acquisition and development of new technologies and drug candidates; and

competing technological, regulatory and market developments currently unknown to us.

We intend to augment our cash balance through financing transactions, including through a combination of private and public equity offerings, debt financings and collaboration, strategic alliance and licensing arrangements. In connection with capital raising activities, we may be required to dilute our existing stockholders substantially.

As of September 30, 2014, we have 2,843,980 warrants outstanding at a weighted average exercise price of \$3.13. All of the shares of common stock we issued, as well as those shares issuable upon exercise of the warrants, are freely tradable pursuant to effective registration statements, making such shares available for immediate resale in the public market.

There can be no assurance that we will be able to obtain adequate levels of additional funding on favorable terms, if at all. If adequate funds are not available, we will be required to:

delay, reduce the scope of or eliminate research and development programs;

obtain funds through arrangements with collaborators or others on terms unfavorable to us or that may require us to relinquish rights to certain drug candidates that we might otherwise seek to develop or commercialize independently; and/or

pursue merger or acquisition strategies.

If our operating plan changes, we may need additional funds sooner than planned. Such additional financing may not be available when we need it or may not be available on terms that are favorable to us. In addition, we may seek additional capital due to favorable market conditions or strategic considerations, even if we believe we

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have sufficient funds for our current or future operating plans. If adequate funds are not available to us on a timely basis, or at all, we may be required to terminate or delay preclinical studies, clinical trials or other development activities for one or more of our drug candidates. We may seek additional financing through a combination of private and public equity offerings, debt financings and collaboration, strategic alliance and licensing arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, ownership interest will be diluted, and the terms may include adverse liquidation or other preferences that adversely affect stockholders rights.

If we acquire or license technologies, resources or drug candidates, we will incur a variety of costs and may never realize benefits from the transaction.

If appropriate opportunities become available, we may license or acquire technologies, resources, drugs or drug candidates. We may never realize the anticipated benefits of such a transaction. In particular, due to the risks inherent in drug development, we may not successfully develop or obtain marketing approval for the drug candidates we acquire. Future licenses or acquisitions could result in potentially dilutive issuances of equity securities, the incurrence of debt, the creation of contingent liabilities, material impairment expenses related to goodwill, and impairment or amortization expenses related to other intangible assets, which could harm our financial condition.

If we are not able to attract and retain key management, scientific personnel and advisors, we may not successfully develop our drug candidates or achieve our other business objectives.

We depend upon our senior management and scientific staff for our business success. All of our employment agreements with our senior management employees are terminable without notice by the employee. The loss of the service of any of the key members of our senior management may significantly delay or prevent the achievement of drug development and other business objectives. Our ability to attract and retain qualified personnel, consultants and advisors is critical to our success. We face intense competition for qualified individuals from numerous pharmaceutical and biotechnology companies, universities, governmental entities and other research institutions. We may be unable to attract and retain these individuals, and our failure to do so would adversely affect our business.

If biopharmaceutical companies involved in HCV drug development continue to consolidate, competition in our industry may increase and our business may be harmed.

In recent years, several acquisitions of smaller biopharmaceutical companies by larger biopharmaceutical companies took place at substantial premiums over the market capitalizations of the target companies, including the acquisitions of Anadys Pharmaceuticals, Inc., Pharmasset and Inhibitex by Roche, Gilead and Bristol-Myers Squibb, respectively. Most recently, in August 2014, Merck completed its acquisition of Idenix. As such consolidation continues to take place, we may face competitive pressures to a far greater degree than had those consolidations not occurred, resulting from the greater resources the larger biopharmaceutical companies can put toward their development pipelines. Further, if investors who provide capital to our industry continue to seek and advocate for similar acquisitions at similar premiums, we may not be able to satisfy their higher expectations for market value appreciation and our stock price may decline. In addition, such acquisitions at significant premiums to market price tend to increase volatility of stock prices in our industry, potentially making investors wary of making incremental investment in us.

Our business has a substantial risk of product liability claims. If we are unable to obtain or maintain appropriate levels of insurance, a product liability claim could adversely affect our business.

Our business exposes us to significant potential product liability risks that are inherent in the development, manufacturing and sales and marketing of human therapeutic products. Although we do not currently commercialize

any products, claims could be made against us based on the use of our drug candidates in clinical trials. Product liability claims could delay or prevent completion of our clinical development programs. We

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currently have clinical trial insurance in an amount equal to up to \$20.0 million in the aggregate and will seek to obtain product liability insurance prior to the sales and marketing of any of our drug candidates. However, our insurance may not provide adequate coverage against potential liabilities. Furthermore, clinical trial and product liability insurance is becoming increasingly expensive. As a result, we may be unable to maintain current amounts of insurance coverage or obtain additional or sufficient insurance at a reasonable cost to protect against losses that could have a material adverse effect on us. If a claim is brought against us, we might be required to pay legal and other expenses to defend the claim, as well as uncovered damages awards resulting from a successful claim. Furthermore, whether or not we are ultimately successful in defending any such claims, we might be required to direct significant financial and managerial resources to such defense, and adverse publicity is likely to result.

If the estimates we make and the assumptions on which we rely in preparing our financial statements prove inaccurate, our actual results may vary significantly.

Our financial statements have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of our assets, liabilities, revenues and expenses. Such estimates and judgments include revenue recognition, stock-based compensation expense, accrued expenses and deferred tax assets and liabilities. We base our estimates and judgments on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. However, these estimates and judgments, or the assumptions underlying them, may change over time. Accordingly, our actual financial results may vary significantly from the estimates contained in our financial statements.

Our business and operations would suffer in the event of system failures or security breaches.

Despite the implementation of security measures, our internal computer systems are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. Any system failure, accident or security breach that causes interruptions in our operations could result in a material disruption of our product development programs. For example, the loss of clinical trial data from completed clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach results in a loss or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we may incur liabilities and the further development of our product candidates may be delayed.

Risks Related to the Development of Our Drug Candidates

All of our drug candidates are still in the early stages of development and remain subject to clinical testing and regulatory approval. If we are unable to successfully develop, test and commercialize our drug candidates, we will not be successful.

To date, we have not commercially marketed, distributed or sold any drug candidates. The success of our business depends primarily upon our ability to develop and commercialize our drug candidates successfully. Our drug candidates must satisfy rigorous standards of safety and efficacy before they can be approved for sale. To satisfy these standards, we must engage in expensive and lengthy testing and obtain regulatory approval of our drug candidates. Despite our efforts, our drug candidates may not:

offer therapeutic or other improvement over existing, comparable drugs;

be proven safe and effective in clinical trials;

have the desired effects, or may include undesirable effects or may have other unexpected characteristics;

meet applicable regulatory standards;

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be capable of being produced in commercial quantities at acceptable costs; or

be successfully commercialized.

In addition, we may experience numerous unforeseen events during, or as a result of, preclinical testing and the clinical trial process that could delay or prevent our ability to receive regulatory approval or commercialize our drug candidates, including:

regulators or Institutional Review Boards, or IRBs, may not authorize us to commence a clinical trial or conduct a clinical trial at a prospective trial site;

our preclinical tests or clinical trials for our drug candidates may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional preclinical testing or clinical trials, or we may abandon projects that we expect to be promising;

we might have to suspend or terminate our clinical trials if the participants in our trials, or in third-party trials of similar HCV drug candidates, are exposed to unacceptable health risks;

IRBs or regulators, including the FDA, may require that we hold, suspend or terminate clinical research for various reasons, such as the FDA's recent decision to place a clinical hold on sovalprevir, or noncompliance with regulatory requirements;

due to the high SVR rates demonstrated by newly approved, competitive therapies like nucleotide polymerase inhibitors sofosbuvir (Sovaldi®) and the sofosbuvir and ledipasvir combination (Harvoni®), the FDA may require us to carry out more extensive studies, evaluate different treatment combinations or complete comparative effectiveness studies and analysis, resulting in significant delays and/or increased costs;

enrollment in our clinical trials may be slower than we currently anticipate as potential participants have access to commercially launched direct-acting antiviral drugs, or DAAs, telaprevir (Incivek®), boceprevir (Victrelis®), simeprevir (Olysio®) or sofosbuvir (Sovaldi®), the sofosbuvir/ledipasvir combination (Harvoni®), and the ombitasvir/paritaprevir/ritonavir/dasabuvir/rivavirin combination (Viekira Pak®) as well as other experimental therapies under development, or participants may not remain adherent to our clinical trial protocols or may drop out of our clinical trials at a higher rate than we currently anticipate, each resulting in significant delays;

our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner; and

the supply or quality of our drug candidates or other materials necessary to conduct our clinical trials may be insufficient or inadequate.

In addition, the current standard of care for the treatment of HCV has recently changed from a protease inhibitor such as telaprevir (Incivek®), boceprevir (Victrelis®) or simeprevir (Olysio) in combination with P/R to new classes of compounds that provide better safety and efficacy such as nucleotide polymerase inhibitors sofosbuvir (Sovaldi) and the sofosbuvir and ledipasvir combination (Harvoni). We could be required to carry out more extensive studies, evaluate different treatment combinations or complete comparative effectiveness studies, resulting in significant delays and/or increased costs if the treatment landscape and standard of care continues to change as new therapies are developed.

We, and a number of other companies in the pharmaceutical and biotechnology industries, have suffered significant setbacks in later stage clinical trials even after achieving promising results in early-stage development. For example, in June 2013, the FDA placed a full clinical hold on sovalprevir that was not released until June 2014, during which time we suffered a significant decline in share price.

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Expenses associated with clinical trials may cause our earnings to fluctuate, which could adversely affect our stock price.

The clinical trials required for regulatory approval of our products, as well as clinical trials we are required to conduct after approval, are very expensive. It is difficult to accurately predict or control the amount or timing of these expenses from quarter to quarter, and the FDA and/or other regulatory agencies may require more clinical testing and analysis than we originally anticipated for our drug candidates. Further, we may be required to purchase expensive competitor drugs as comparators to our drug combinations. Uneven and unexpected spending on these programs may cause our operating results to fluctuate from quarter to quarter, and our stock price may decline.

If we are unable to obtain U.S. and/or foreign regulatory approval, we will be unable to commercialize our drug candidates.

Our drug candidates are subject to extensive governmental regulations relating to, among other things, research, testing, development, manufacturing, safety, efficacy, record keeping, labeling, marketing and distribution of drugs. Rigorous preclinical testing and clinical trials and an extensive regulatory approval process are required in the United States and in many foreign jurisdictions prior to the commercial sale of our drug candidates. Satisfaction of these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. It is possible that none of the drug candidates we are developing will obtain marketing approval. In connection with the clinical trials for combinations of ACH-3102, ACH-3422, sovalprevir, and any other drug candidate we may seek to develop in the future, we face risks that:

the drug candidate may not prove to be efficacious;

the drug candidate may not prove to be safe;

the results may not confirm the positive results from earlier preclinical studies or clinical trials;

the results may not meet the level of statistical significance required by the FDA or other regulatory agencies; and

the FDA or other regulatory agencies may require us to carry out additional studies.

We have limited experience in conducting and managing the clinical trials necessary to obtain regulatory approvals, including approval by the FDA. The time required to complete clinical trials and for the FDA and other countries regulatory review processes is uncertain and typically takes many years. Our analysis of data obtained from preclinical and clinical activities is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. We may also encounter unanticipated delays or increased costs due to government regulation from future legislation or administrative action or changes in FDA policy during the period of product development, clinical trials, and FDA regulatory review.

Any delay in obtaining or failure to maintain required approvals could materially adversely affect our ability to progress the development of a drug candidate and to generate revenues from that drug candidate. For example, in June

2013, the FDA placed a full clinical hold on sovalprevir that was not released until June 2014.

Any regulatory approval to market a product may be subject to limitations on the indicated uses for which we may market the product and affect reimbursement by third-party payors. These limitations may limit the size of the market for the product. We are also subject to numerous foreign regulatory requirements governing the conduct of clinical trials, manufacturing and marketing authorization, pricing and third-party reimbursement. The foreign regulatory approval process includes all of the risks associated with FDA approval described above as well as risks attributable to the satisfaction of foreign regulations. Approval by the FDA does not ensure approval by regulatory authorities outside the United States. Foreign jurisdictions may have different approval procedures than those required by the FDA and may impose additional testing requirements for our drug candidates.

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If clinical trials for our drug candidates are prolonged or delayed, we may be unable to commercialize our drug candidates on a timely basis, which would require us to incur additional costs and delay our receipt of any product revenue.

We cannot predict whether we will encounter problems with any of our completed, ongoing or planned clinical trials that will cause us or regulatory authorities to delay, suspend or terminate clinical trials, or delay the analysis of data from our completed or ongoing clinical trials.

Further, we cannot predict whether or how program discontinuations by competitors (such as the discontinuation in 2012 by Bristol-Myers Squibb of BMS-986094, a nucleotide polymerase inhibitor, due to serious cardiac-related adverse events, or the discontinuation in 2013 of Vertex of VX-135, a nucleotide polymerase inhibitor, due to elevations in liver enzymes) may increase the level of scrutiny by the FDA on our drug candidates, slowing data review and response times or otherwise creating delays or difficulties in initiating and progressing clinical trials. We also cannot predict the degree to which new therapies from competitors, like nucleotide polymerase inhibitor sofosbuvir (Sovaldi®), will increase the rigor the FDA applies in its review of subsequent therapies. In addition, in October 2013, the FDA's Center for Drug Evaluation and Research, or CDER, issued for comment new guidelines on the development of DAAs for the treatment of chronic HCV entitled "Chronic Hepatitis C Virus Infection: Developing Direct-Acting Antiviral Drugs for Treatment." The guidelines indicate that there is less certainty around the FDA's expectations for clinical development of DAAs for the treatment of HCV and the extent of preclinical and clinical trials, including required clinical comparators that are necessary for registration and approval of a drug candidate.

Any of the following could delay the clinical development of our drug candidates:

ongoing discussions with the FDA or comparable foreign authorities regarding the scope or design of our clinical trials;

delays in receiving, or the inability to obtain, required approvals from institutional review boards or other reviewing entities at clinical sites selected for participation in our clinical trials;

delays in enrolling volunteers and patients into clinical trials;

a lower than anticipated retention rate of volunteers and patients in clinical trials;

delays in gathering and interpreting clinical data;

the need to repeat clinical trials as a result of inconclusive or negative results or unforeseen complications in testing;

the placement by the FDA of a clinical hold or partial clinical hold on a trial, such as the clinical hold placed on sovalprevir from June 2013 until June 2014 and the partial clinical hold currently on sovalprevir for

multiple dose studies in healthy volunteers;

the requirement by the FDA, in connection with future HCV development guidelines recently circulated for comment, to carry out additional studies;

delays in completing formulation development of our drug candidates, or delays in planning and executing the bridging studies required to use the new formulations in subsequent clinical trials;

inadequate supply or deficient quality of drug candidate materials or other materials necessary to conduct our clinical trials;

unfavorable FDA inspection and review of a clinical trial site or records of any clinical or preclinical investigation; or

serious and unexpected drug-related side effects experienced by participants in our clinical trials or in third-party clinical trials of similar HCV drug candidates.

Our ability to enroll patients in our clinical trials in sufficient numbers and on a timely basis will be subject to a number of factors, including the size of the patient population, the nature of the protocol, the existence of

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clinical trials for competing drugs also in clinical development, the proximity of patients to clinical sites, the availability of effective treatments for the relevant disease and the eligibility criteria for the clinical trial. Delays in patient enrollment may result in increased costs and longer development times. We currently face competition for subjects to enroll in our clinical trials and may have to expand the number of sites at which the trials are conducted. If we are not successful in doing so, the planned timing for release of data from these trials may not be achieved. In addition, subjects may drop out of our clinical trials, and thereby impair the validity or statistical significance of the trials.

We, the FDA or other applicable regulatory authorities may suspend clinical trials of a drug candidate at any time if we or they believe the subjects or patients participating in such clinical trials are being exposed to unacceptable health risks or for other reasons. For example, in June 2013, the FDA placed a full clinical hold on sovalprevir after elevations in liver enzymes were noted in a phase I healthy subject drug-drug interaction study evaluating the effects of concomitant administration of sovalprevir with ritonavir-boosted atazanavir. Such hold was lifted in June 2014, allowing us to continue dosing sovalprevir in HCV-infected subjects. Additionally, when we advanced sovalprevir into longer term clinical trials in phase II, we established predetermined stopping rules, as well as a Data Safety Monitoring Board, or DSMB, in order to monitor and ensure patient safety. Any interruption of these clinical trials, whether as a result of one of our drug candidates, or of co-administration of a concomitant anti-HCV agent, or of administrative review delays on the part of the DSMB or FDA, could cause delays in our drug development.

We cannot predict whether any of our drug candidates will encounter problems during clinical trials which will cause us or regulatory authorities to delay or suspend these trials, or which will delay the analysis of data from these trials. In addition, it is impossible to predict whether legislative changes will be enacted, or whether FDA regulations, guidance or interpretations will be changed, or what the impact of such changes, if any, may be. If we experience any such problems, we may not have the financial resources to continue development of the drug candidate that is affected or the development of any of our other drug candidates.

In addition, we, along with our collaborators or subcontractors, may not employ, in any capacity, persons who have been debarred under the FDA's Application Integrity Policy. Employment of such a debarred person (even if inadvertently) may result in delays in the FDA's review or approval of our products, or the rejection of data developed with the involvement of such persons.

Fast Track designation does not guarantee approval, or expedited approval, of ACH-3102 or sovalprevir and there is no guarantee that ACH-3102 or sovalprevir will maintain Fast Track designation.

In December 2011 and May 2012, we announced that the FDA granted Fast Track designation to sovalprevir and ACH-3102, respectively, for the treatment of HCV. Under the FDA Modernization Act of 1997, Fast Track designation is designed to facilitate the development and expedite the review of new drugs that are intended to treat serious or life-threatening conditions. Compounds selected must demonstrate the potential to address an unmet medical need for such a condition. Mechanisms intended to facilitate development include opportunities for frequent dialogue with FDA reviewers and for timely review of submitted protocols. However, the designation does not guarantee approval or expedited approval of any application for the product. Furthermore, the FDA may revoke Fast Track designation from a product candidate at any time if it determines that the criteria are no longer met.

Even if we obtain regulatory approvals, our drug candidates will be subject to ongoing regulatory review. If we fail to comply with continuing U.S. and applicable foreign regulations, we could lose those approvals, and our business would be seriously harmed.

Even if we receive regulatory approval of any drugs we are developing or may develop, we will be subject to continuing regulatory review, including the review of clinical results which are reported after our drug candidates become commercially available approved drugs. As greater numbers of patients use a drug following

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its approval, side effects and other problems may be observed after approval that were not seen or anticipated during pre-approval clinical trials. In addition, the manufacturer, and the manufacturing facilities we use to make any approved drugs, will also be subject to periodic review and inspection by the FDA.

The subsequent discovery of previously unknown problems with the drug, manufacturer or facility may result in restrictions on the drug, manufacturer or facility, including withdrawal of the drug from the market. If we fail to comply with applicable continuing regulatory requirements, we may be subject to fines, suspension or withdrawal of regulatory approval, product recalls and seizures, operating restrictions and criminal prosecutions. Our product promotion and advertising is also subject to regulatory requirements and continuing regulatory review. In particular, the marketing claims we will be permitted to make in labeling or advertising regarding our marketed products will be limited by the terms and conditions of the FDA-approved labeling. We must submit copies of our advertisements and promotional labeling to the FDA at the time of initial publication or dissemination. If the FDA believes these materials or statements promote our products for unapproved indications, or with unsubstantiated claims, or if we fail to provide appropriate safety-related information, the FDA could allege that our promotional activities misbrand our products. Specifically, the FDA could issue a warning letter, which may demand, among other things, that we cease such promotional activities and issue corrective advertisements and labeling. The FDA also could take enforcement action including seizure of allegedly misbranded product, injunction or criminal prosecution against us and our officers or employees. If we repeatedly or deliberately fail to submit such advertisements and labeling to the FDA, the FDA could withdraw our approvals. Moreover, the Department of Justice can bring civil or criminal actions against companies that promote drugs or biologics for unapproved uses, based on the False Claims Act and other federal laws governing reimbursement for such products under the Medicare, Medicaid and other federally supported healthcare programs. Monetary penalties in such cases have often been substantial, and civil penalties can include costly mandatory compliance programs and exclusion from federal healthcare programs.

If we do not comply with laws regulating the protection of the environment and health and human safety, our business could be adversely affected.

Our research and development efforts involve the controlled use of hazardous materials, chemicals and various radioactive compounds. Although we believe that our safety procedures for the use, manufacture, storage, handling and disposing of these materials comply with the standards prescribed by federal, state and local laws and regulations, the risk of accidental contamination or injury from these materials cannot be eliminated. If an accident occurs, we could be held liable for resulting damages, which could be substantial. We are also subject to numerous environmental, health and workplace safety laws and regulations, including those governing laboratory procedures, exposure to blood-borne pathogens and the handling of biohazardous materials.

Additional federal, state and local laws and regulations affecting our operations may be adopted in the future. Although we maintain workers' compensation insurance to cover us for costs we may incur due to injuries to our employees resulting from the use of these materials, this insurance may not provide adequate coverage against potential liabilities. In addition, though we have environmental liability insurance, such coverage may not provide for all related losses. We may incur substantial costs to comply with, and substantial fines or penalties, if we violate any of these laws or regulations.

In addition to regulations in the United States, we are and will be subject, either directly or through our distribution partners, to a variety of regulations in other jurisdictions governing, among other things, clinical trials and any commercial sales and distribution of our products, if approved.

Whether or not we obtain FDA approval for a product, we must obtain the requisite approvals from regulatory authorities in non-U.S. 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 process that requires the submission of a clinical trial application much like an investigational new drug application prior to the commencement of human clinical trials. In Europe, for example, a clinical trial application, or CTA, must be

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submitted to the competent national health authority and to independent ethics committees in each country in which a company intends to conduct clinical trials. Once the CTA is approved in accordance with a country's requirements, clinical trial development may proceed in that country.

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 must be conducted in accordance with good clinical practices, or GCPs, and other applicable regulatory requirements.

To obtain regulatory approval of an investigational drug under European Union, or E.U., regulatory systems, we must submit a marketing authorization application. This application is similar to the NDA in the United States, with the exception of, among other things, country-specific document requirements. Drugs can be authorized in the E.U. by using (i) the centralized authorization procedure, (ii) the mutual recognition procedure, (iii) the decentralized procedure or (iv) national authorization procedures.

The European Medicines Agency, or EMA, implemented the centralized procedure for the approval of human drugs to facilitate marketing authorizations that are valid throughout the E.U. This procedure results in a single marketing authorization granted by the European Commission that is valid across the European Union, as well as in Iceland, Liechtenstein and Norway. The centralized procedure is compulsory for certain human drugs including those that are: (i) derived from biotechnology processes, such as genetic engineering or (ii) contain a new active substance indicated for the treatment of certain diseases, such as HIV/AIDS, cancer, diabetes, neurodegenerative diseases, autoimmune and other immune dysfunctions and viral diseases.

Market exclusivity provisions under the Federal Food, Drug and Cosmetic Act can delay the submission or the approval of certain applications.

The Federal Food, Drug and Cosmetic Act, or FDCA, provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to gain 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, or 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. The FDCA also provides three years of marketing exclusivity for an NDA, 505(b)(2) NDA or supplement to an approved 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, for 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.

Risks Related to Our Dependence on Third Parties

We may not be able to execute our business strategy if we are unable to enter into alliances with other companies that can provide capabilities and funds for the development and commercialization of our drug candidates. If we are unsuccessful in forming or maintaining these alliances on favorable terms, our business may not succeed.

We may consider forming exclusive or non-exclusive alliances with major biotechnology or pharmaceutical companies to jointly develop, and commercialize if approved, our NS5A inhibitor candidates, our nucleotide polymerase inhibitor candidates and/or our protease inhibitor candidates. In such alliances, we would expect our biotechnology or pharmaceutical collaborators to provide substantial funding, as well as significant capabilities

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in clinical development, regulatory affairs, marketing and sales. We may not be successful in entering into any such alliances on favorable terms or in a timely manner, if at all. There are a limited number of collaboration partners whose pipeline of HCV clinical candidates are suitable for co-development with ours. There are also a limited number of potential collaboration partners without a robust HCV drug candidate pipeline, but demonstrated commercial interest in HCV therapeutics who may have interest in gaining rights to our HCV drug candidates. Recent consolidation may have reduced the number of potential partners further making achieving a suitable partnership more difficult, potentially limiting our ability to command a significant premium in any such transaction. Further, if potential collaboration partners enter alliances with other competing HCV companies, our future business prospects may be harmed, as these alliances could reduce the pool of potential partners for our compounds and/or limit the value of such alliance.

Even if we do succeed in securing such alliances, we may not be able to maintain them if development or approval of a drug candidate is delayed or sales of an approved drug are disappointing. For example, a 2004 license and collaboration agreement between us and Gilead for the advancement of certain HCV compounds operating by the mechanism of action known as NS4A antagonism was terminated in February 2012 as neither party was devoting significant time to advancing the compounds under the agreement. Furthermore, any delay in entering into collaboration agreements could delay the development and commercialization of our drug candidates and reduce their competitiveness even if they reach the market. Any such delay related to our collaborations could adversely affect our business.

We rely on third parties to conduct our clinical trials, and those third parties may not perform satisfactorily, including failing to meet established deadlines for the completion of such trials.

We rely on third parties such as contract research organizations, medical institutions and clinical investigators to enroll qualified patients and conduct our clinical trials. Our reliance on these third parties for clinical development activities reduces our control over these activities. These third-party contractors may not complete activities on schedule, or may not conduct our clinical trials in accordance with regulatory requirements or our trial design. To date, we believe our contract research organizations and other similar entities with which we are working have performed well. However, if these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may be required to replace them. Although we believe that there are a number of other third-party contractors we could engage to continue these activities, it may result in a delay of the affected trial. Accordingly, our efforts to obtain regulatory approvals for and commercialize our drug candidates may be delayed.

We currently depend on third-party manufacturers to produce our preclinical and clinical drug supplies and intend to rely upon third-party manufacturers to produce commercial supplies of any approved drug candidates. We also depend on third parties to assist us in developing appropriate formulations of our drug candidates. If, in the future, we manufacture any of our drug candidates, we will be required to incur significant costs and devote significant efforts to establish and maintain these capabilities.

We rely upon third parties to produce material for preclinical and clinical testing purposes and intend to continue to do so in the future. We also depend on third parties to assist us in developing appropriate formulations of our drug candidates. We also expect to rely upon third parties to produce materials required for the commercial production of our drug candidates if we succeed in obtaining necessary regulatory approvals. If we are unable to arrange for third-party manufacturing, or to do so on commercially reasonable terms, we may not be able to complete development of our drug candidates or market them. Further, if third parties are not successful in formulation development of our drug candidates, our development timelines may be delayed. Reliance on third-party manufacturers entails risks to which we would not be subject if we manufactured drug candidates ourselves, including reliance on the third party for regulatory compliance and quality assurance, the possibility of breach of the

manufacturing agreement by the third party because of factors beyond our control and the possibility of termination or nonrenewal of the agreement by the third party, based on its own business priorities, at a time that is costly or damaging to us. In addition, the FDA and other regulatory authorities require

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that our drug candidates be manufactured according to current good manufacturing practice regulations. Any failure by us or our third-party manufacturers to comply with current good manufacturing practices and/or our failure to scale up our manufacturing processes could lead to a delay in, or failure to obtain, regulatory approval of any of our drug candidates. In addition, such failure could be the basis for action by the FDA to withdraw approvals for drug candidates previously granted to us and for other regulatory action.

To date, our third-party formulators and manufacturers have met our formulation and manufacturing requirements, but we cannot be assured that they will continue to do so. Any performance failure on the part of our existing or future formulators or manufacturers could delay clinical development or regulatory approval of our drug candidates or commercialization of any approved products. If for some reason our current contractors cannot perform as agreed, we may be required to replace them. Although we believe that there are a number of potential replacements given our formulation and manufacturing processes are not contractor specific, we may incur added costs and delays in identifying and qualifying any such replacements. Furthermore, although we generally do not begin a clinical trial unless we believe we have a sufficient supply of a drug candidate to complete the trial, any significant delay in the supply of a drug candidate for an ongoing trial due to the need to replace a third-party manufacturer could delay completion of the trial.

We may in the future elect to manufacture certain of our drug candidates in our own manufacturing facilities. If we do so, we will require substantial additional funds and need to recruit qualified personnel in order to build or lease and operate any manufacturing facilities.

Risks Related to Commercialization of Our Drug Candidates

If we are unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell our drug candidates, we may not generate product revenue.

We have no commercial products, and we do not currently have an organization for the sales and marketing of pharmaceutical products. In order to successfully commercialize any drugs that may be approved in the future by the FDA or comparable foreign regulatory authorities, we must build our sales and marketing capabilities or make arrangements with third parties to perform these services. For certain drug candidates in selected indications where we believe that an approved product could be commercialized by a specialty North American sales force that calls on a limited but focused group of physicians, we may commercialize these products ourselves. However, in therapeutic indications that require a large sales force selling to a large and diverse prescribing population and for markets outside of North America, we may enter into arrangements with other companies for commercialization. If we are unable to establish adequate sales, marketing and distribution capabilities, whether independently or with third parties, we may not be able to generate product revenue and may not become profitable.

The development of directly acting antivirals to treat HCV, and the potential changes in market dynamics that may result from their introduction for HCV therapy, may present additional risks beyond those inherent in drug development.

We are developing multiple DAA compounds, in three distinct classes, for combination treatment of HCV. Other companies are also developing DAAs in these classes, as well as other classes. Until the recent introduction of DAA therapy, the standard of care for HCV infection included therapy with pegylated interferon and ribavirin. DAAs developed by our competitors, telaprevir (Incivek®) by Vertex, boceprevir (Victrelis®) by Merck, simeprevir (Olysio®) by Johnson & Johnson and sofosbuvir (Sovaldi®) by Gilead, were approved by the FDA for use in combination with P/R, and became a new standard of care for genotype 1 HCV (in the case of telaprevir, boceprevir and simeprevir) and for genotype 2/3 in the case of sofosbuvir. In addition, in October 2014, the first all oral DAA combination therapy for

genotype 1 HCV, Gilead's combination therapy of sofosbuvir/ledipasvir (Harvoni[®]), was approved for commercialization by the FDA, followed in December 2014 by AbbVie's ombitasvir/paritaprevir/ritonavir/dasabuvir/ribavirin combination (Viekira Pak[®]). We cannot currently predict when or if additional compounds currently in development may again change the standard of care in the future.

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The development plans for our compounds include treatment regimens with our inhibitors in combination with another DAA, or our inhibitors with one or more DAAs with or without concomitant ribavirin therapy. These development programs carry all the risks inherent in drug development activities, including the risk that they will fail to show efficacy or acceptable safety, as well as the risk that a safety issue related to one compound may negatively impact another compound with which it is dosed. In addition, these development programs may also be subject to additional regulatory, commercial and manufacturing risks that may be additional to the risks inherent in drug development activities.

Regulatory guidelines for approval of DAA drugs for the treatment of HCV are evolving in the United States, Europe, and other countries. We anticipate that regulatory guidelines and regulatory agency responses to our and our competitors' development programs will continue to change, resulting in the risk that our activities may not meet unanticipated new standards or requirements, which could lead to delay, additional expense, or potential failure of development activities.

Furthermore, even if we or our competitors successfully develop DAAs whose use improves the current standard of care, current HCV-treating physicians, HCV patients, healthcare payers, and others may not readily accept or pay for such improvements or new treatments. In addition, because development of DAAs for HCV infection is an emerging field, the delay or failure of a competitor attempting to develop therapeutics that could have been combined with our product candidates or that are perceived to be similar to our product candidates could have a significant adverse effect on the commercial or regulatory environment for our product candidates or on the price of our stock. Other companies developing DAAs have more advanced development programs than we do. Their success or failure to successfully conclude clinical development and obtain marketing approval could have a material adverse effect on our development and commercialization plans and activities.

If our future drugs do not achieve market acceptance, we may be unable to generate significant revenue, if any.

Even if combinations of ACH-3102, ACH-3422, sovalprevir, or any other drug candidates we may develop or acquire in the future obtain regulatory approval, they may not gain market acceptance among physicians, health care payors, patients and the medical community. Factors that we believe could materially affect market acceptance of our product candidates include:

the timing of market introduction of competitive drugs;

the demonstrated clinical safety and efficacy of our product candidates compared to other drugs and other drug candidates;

the suitability of our drug candidates to be co-administered or combined with other drugs or drug candidates;

the durability of our drug candidates in their ability to prevent the emergence of drug-resistant viral mutants;

the convenience and ease of administration of our product candidates;

the existence, prevalence and severity of adverse side effects;

other potential advantages of alternative treatment methods;

the effectiveness of marketing and distribution support;

the cost-effectiveness of our product candidates; and

the availability of reimbursement from managed care plans, the government and other third-party payors.
If our approved drugs fail to achieve market acceptance, we would not be able to generate significant revenue.

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If third-party payors do not adequately reimburse patients for any of our drug candidates that are approved for marketing, they might not be purchased or used, and our revenues and profits will not develop or increase.

Our revenues and profits will depend significantly upon the availability of adequate reimbursement for the use of any approved drug candidates from governmental and other third-party payors, both in the United States and in foreign markets. Reimbursement by a third party may depend upon a number of factors, including the third-party payor's determination that use of a product is:

a covered benefit under its health plan;

safe, effective and medically necessary;

appropriate for the specific patient;

cost effective; and

neither experimental nor investigational.

Obtaining reimbursement approval for a product from each third-party and government payor is a time-consuming and costly process that could require us to provide supporting scientific, clinical and cost-effectiveness data for the use of any approved drugs to each payor. We may not be able to provide data sufficient to gain acceptance with respect to reimbursement. There also exists substantial uncertainty concerning third-party reimbursement for the use of any drug candidate incorporating new technology, and even if determined eligible, coverage may be more limited than the purposes for which the drug is approved by the FDA. Moreover, eligibility for coverage does not imply that any drug will be reimbursed in all cases or at a rate that allows us to make a profit or even cover our costs. Interim payments for new products, if applicable, may also be insufficient to cover our costs and may not be made permanent.

Reimbursement rates may vary according to the use of the drug and the clinical setting in which it is used, may be based on payments allowed for lower-cost products or combinations of products that are already reimbursed, may be incorporated into existing payments for other products or services, and may reflect budgetary constraints and/or imperfections in Medicare or Medicaid data used to calculate these rates. Net prices for products may be reduced by mandatory discounts or rebates required by government health care programs or by any future relaxation of laws that restrict imports of certain medical products from countries where they may be sold at lower prices than in the United States.

Further, we may face future challenges from payors as new HCV drug approvals such as sofosbuvir (Sovaldi) have relatively high cost per course of treatment. For example, Sovaldi is currently priced at approximately \$84,000 per 12 week treatment course, or \$1,000 per daily dose, and Harvoni is currently priced at approximately \$94,500 per 12 week treatment course. As a result, pharmacy benefit managers, or PBMs, such as Express Scripts, Inc. and CVS Caremark Corporation have negotiated and announced discounted pricing for participants in contracted health plans. For example, Gilead Sciences recently announced that they expect aggregate discounts and rebates from list price to total approximately 46% for 2015. Market reaction to announcements about these types of discounts and market expectations about future price pressure may negatively impact our market value and place downward pressure on our stock price.

In the United States, at both the federal and state levels, the government regularly proposes legislation to reform health care and its cost, and such proposals have received increasing political attention. In 2010, Congress recently passed legislation to reform the U.S. health care system by expanding health insurance coverage, reducing health care costs and making other changes. While health care reform may increase the number of patients who have insurance coverage for the use of any approved drug candidate, it may also include changes that adversely affect reimbursement for approved drug candidates. In addition, there has been, and we expect that there will continue to be, federal and state proposals to constrain expenditures for medical products and services, which may affect payments for any of our approved products. The Centers for Medicare and Medicaid Services frequently change product descriptors, coverage policies, product and service codes, payment methodologies and reimbursement values. Third-party payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates and may have sufficient market power to demand significant price

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reductions. As a result of actions by these third-party payors, the health care industry is experiencing a trend toward containing or reducing costs through various means, including lowering reimbursement rates, limiting therapeutic class coverage and negotiating reduced payment schedules with service providers for drug products.

Our inability to promptly obtain coverage and profitable reimbursement rates from government-funded and private payors for any approved products could have a material adverse effect on our operating results and our overall financial condition.

Growing availability of specialty and orphan pharmaceuticals may lead to increased focus on cost containment.

Specialty pharmaceuticals refer to drugs that are generally complex to manufacture, can be difficult to administer, and may require specialty distribution and special patient monitoring. Orphan pharmaceuticals refer to medicines that treat rare or life-threatening conditions that have smaller patient populations, such as certain types of cancer. The growing availability and use of specialty and orphan pharmaceuticals, combined with their relative higher cost as compared to other types of pharmaceutical products, is beginning to generate significant payer interest in developing cost containment strategies targeted to this sector. While the impact on our payers' efforts to control access and pricing of specialty and orphan pharmaceuticals has been limited to date, the increasing use of health technology assessment in markets around the world and the deteriorating finances of governments, may lead to a more significant adverse business impact on drug pricing in the future.

Even if we are able to commercialize any product candidates, the products may become subject to unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives, thereby harming our business.

The regulations that govern marketing approvals, pricing and reimbursement for new therapeutic and diagnostic products vary widely from country to country. Some countries require approval of the sale price of a product before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain regulatory approval for a product in a particular country, but then be subject to price regulations that delay our commercial launch of the product and negatively impact the revenues we are able to generate from the sale of the product in that country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more product candidates, even if our product candidates obtain regulatory approval.

Our ability to commercialize any products successfully also will depend in part on the extent to which reimbursement for these products and related treatments will be available from government health administration authorities, private health insurers and other organizations. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which medications they will pay for and establish reimbursement levels. A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Government authorities and these third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. Increasingly, third-party payors are requiring that companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. We cannot be sure that reimbursement will be available for any product that we commercialize and, if reimbursement is available, what the level of reimbursement will be. Reimbursement may impact the demand for, or the price of, any product for which we obtain marketing approval. Obtaining reimbursement for our products may be particularly difficult because of the higher prices often associated with products administered under the supervision of a physician. If reimbursement is not available or is available only to limited levels, we may not be able to successfully commercialize any product candidate that we successfully develop.

There may be significant delays in obtaining reimbursement for approved products, and coverage may be more limited than the purposes for which the product is approved by the FDA or regulatory authorities in other

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countries. Moreover, eligibility for reimbursement does not imply that any product will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. Interim payments for new products, if applicable, may also not be sufficient to cover our costs and may not be made permanent. Payment rates may vary according to the use of the product and the clinical setting in which it is used, may be based on payments allowed for lower cost products that are already reimbursed, and may be incorporated into existing payments for other services. Net prices for products may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of products from countries where they may be sold at lower prices than in the United States. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement policies. Our inability to promptly obtain coverage and profitable payment rates from both government funded and private payors for new products that we develop could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize products and our overall financial condition.

Risks Related to Patents and Licenses

If our patent position does not adequately protect our drug candidates, others could compete against us more directly, which would harm our business.

We own or hold exclusive licenses to several issued patents U.S. and pending U.S. provisional and non-provisional patent applications, as well as pending PCT applications and associated non-US patents and patent applications. Our success depends in large part on our ability to obtain and maintain patent protection both in the United States and in other countries for our drug candidates. Our ability to protect our drug candidates from unauthorized or infringing use by third parties depends in substantial part on our ability to obtain and maintain valid and enforceable patents. Due to evolving legal standards relating to the patentability, validity and enforceability of patents covering pharmaceutical inventions and the scope of claims made under these patents, our ability to maintain, obtain and enforce patents is uncertain and involves complex legal and factual questions. Accordingly, rights under any issued patents may not provide us with sufficient protection for our drug candidates or provide sufficient protection to afford us a commercial advantage against competitive products or processes. We cannot guarantee that any patents will issue from any pending or future patent applications owned by or licensed to us.

Even if patents have issued or will issue, we cannot guarantee that the claims of these patents are or will be valid or enforceable or will provide us with any significant protection against competitive products or otherwise be commercially valuable to us. Patent applications in the United States are maintained in confidence for up to 18 months after their filing. In some cases, however, patent applications remain confidential in the U.S. Patent and Trademark Office, which we refer to as the U.S. Patent Office, for the entire time prior to issuance as a U.S. patent. Similarly, publication of discoveries in the scientific or patent literature often lags behind actual discoveries. Consequently, we cannot be certain that we or our licensors or co-owners were the first to invent, or the first to file patent applications on, our drug candidates or their use as anti-infective drugs. The costs of these proceedings could be substantial and it is possible that our efforts would be unsuccessful, resulting in a loss of our U.S. patent position. Furthermore, we may not have identified all U.S. and foreign patents or published applications that affect our business either by blocking our ability to commercialize our drugs or by covering similar technologies that affect our drug market.

The HCV inhibitor space is particularly crowded in terms of intellectual property, and certain competitors such as AstraZeneca, Bayer AG, or Bayer, Boehringer Ingelheim GmbH, Bristol-Myers Squibb, Enanta, Gilead (including Pharmasset), GlaxoSmithKline, the Janssen Pharmaceuticals companies of Johnson & Johnson (including Alios), Merck (including Idenix), Novartis and Vertex have disclosed compounds that may be prior art to our patent applications and prevent issuance or alter the scope of any claims that we may pursue related to our drug candidates.

The claims of the issued patents that are licensed to us, and the claims of any patents which may issue in the future and be owned by or licensed to us, may not confer on us significant commercial protection against

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competing products. Additionally, our patents may be challenged by third parties, resulting in the patent being deemed invalid, unenforceable or narrowed in scope, or the third party may circumvent any such issued patents. Also, our pending patent applications may not issue, and we may not receive any additional patents. Our patents might not contain claims that are sufficiently broad to prevent others from utilizing our technologies. For instance, the issued patents relating to our drug candidates may be limited to a particular molecule. Consequently, our competitors may independently develop competing products that do not infringe our patents or other intellectual property. To the extent a competitor can develop similar products using a different molecule, our patents may not prevent others from directly competing with us.

The Leahy-Smith America Invents Act, or the America Invents Act, was signed into law in September 2011, and many of the substantive changes became effective in March 2013. The America Invents Act reforms United States patent law in part by changing the standard for patent approval from a first to invent standard to a first to file standard and developing a post-grant review system. This legislation changes United States patent law in a way that may weaken our ability to obtain patent protection in the United States for those applications filed after March 2013.

Further, the America Invents Act created for the first time new procedures to challenge issued patents in the United States, including post-grant review and inter-partes review proceedings, which some third parties have been using to cause the cancellation of selected or all claims of issued patents of competitors. A post-grant review proceeding can be filed by a third party immediately following the issuance of a U.S. patent if the patent was filed prior to March 16, 2013 and within nine months of the issuance of the patent if the patent was filed on or after March 16, 2013, and an inter-partes review can be filed after nine months from issuance of the patent. Post-grant review proceedings can be brought on any ground of challenge, whereas inter-partes review proceedings can only be brought to raise a challenge based on published prior art. These adversarial actions at the U.S. Patent Office review patent claims without the presumption of validity afforded to U.S. patents in lawsuits in U.S. federal courts, and use a lower burden of proof than used in litigation in U.S. federal courts. Therefore, it is generally considered easier for a competitor or third party to have a U.S. patent cancelled in a Patent Office post-grant review or inter-partes review proceeding than invalidated in a litigation in a U.S. federal court. If any of our patents are challenged by a third party in such a U.S. patent office proceeding, there is no guarantee that we or our licensors will be successful in defending the patent, which would result in a loss of the challenged patent right to us.

The laws of some foreign jurisdictions do not protect intellectual property rights to the same extent as in the United States and many companies have encountered significant difficulties in protecting and defending such rights in foreign jurisdictions. If we encounter such difficulties in protecting or are otherwise precluded from effectively protecting our intellectual property rights in foreign jurisdictions, our business prospects could be substantially harmed.

Because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that, before any of our drug candidates can be commercialized, any related patent may expire or remain in force for only a short period following commercialization of our drug candidates, thereby reducing any advantages of the patent. To the extent our drug candidates based on that technology are not commercialized significantly ahead of the date of any applicable patent, or to the extent we have no other patent protection on such product candidates, those drug candidates would not be protected by patents, and we would then rely solely on other forms of exclusivity, such as regulatory exclusivity provided by the Federal Food, Drug and Cosmetic Act or trade secret protection.

We license patent rights from third-party owners. If such owners do not properly maintain or enforce the patents underlying such licenses, our competitive position and business prospects will be harmed.

We are party to a number of licenses that give us rights to third-party intellectual property that is necessary or useful for our business. In particular, we have obtained licenses from Yale University and Emory University with respect to

elvucitabine. We may enter into additional licenses for third-party intellectual property in the future. Our success will depend in part on the ability of our licensors to obtain, maintain and enforce patent protection for their

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intellectual property, in particular, those patents to which we have secured exclusive rights. Our licensors may not successfully prosecute the patent applications to which we are licensed. Even if patents issue in respect of these patent applications, our licensors may fail to maintain these patents, may determine not to pursue litigation against other companies that are infringing these patents, or may pursue such litigation less aggressively than we would. In addition, our licensors may terminate their agreements with us in the event we breach the applicable license agreement and fail to cure the breach within a specified period of time. Without protection for the intellectual property we license, other companies might be able to offer substantially identical products for sale, which could adversely affect our competitive business position and harm our business prospects.

Because our research and development of drug candidates incorporates compounds and other information that is the intellectual property of third parties, we depend on continued access to such intellectual property to conduct and complete our preclinical and clinical research and commercialize the drug candidates that result from this research. Some of our existing licenses impose, and we expect that future licenses would impose, numerous obligations on us. For example, under our existing and future license agreements, we may be required to pay minimum annual royalty amounts and/or payments upon the achievement of specified milestones. We may also be required to reimburse patent costs incurred by the licensor, or we may be obligated to pay additional royalties, at specified rates, based on net sales of our product candidates that incorporate the licensed intellectual property rights. We may also be obligated under some of these agreements to pay a percentage of any future sublicensing revenues that we may receive. Future license agreements may also include payment obligations such as milestone payments or minimum expenditures for research and development. In addition to our payment obligations under our current licenses, we are required to comply with reporting, insurance and indemnification requirements under the agreements. We expect that any future licenses would contain similar requirements.

If we fail to comply with these obligations or otherwise breach a license agreement, the licensor may have the right to terminate the license in whole, terminate the exclusive nature of the license or bring a claim against us for damages. Any such termination or claim could prevent or impede our ability to market any drug that is covered by the licensed intellectual property. Even if we contest any such termination or claim and are ultimately successful, our financial results and stock price could suffer. In addition, upon any termination of a license agreement, we may be required to grant to the licensor a license to any related intellectual property that we developed. For example, the licensors have the right to terminate our license of the intellectual property covered by its licenses to us under certain circumstances, including our failure to make payments to the licensor when due and our uncured breach of any other terms of the licenses. If access to such intellectual property is terminated, or becomes more expensive as a result of renegotiation of any of our existing license agreements, our ability to continue development of our product candidates or the successful commercialization of our drug candidates could be severely compromised and our business could be adversely affected.

If we infringe or are alleged to infringe intellectual property rights of third parties, our business could be harmed.

Our research, development and commercialization activities, including any drug candidates resulting from these activities, may infringe or be claimed to infringe patents or other proprietary rights owned by third parties and to which we do not hold licenses or other rights. There may be applications that have been filed but not published that, if issued, could be asserted against us. We are aware that certain third parties, including AstraZeneca, Bayer, Bristol-Myers Squibb, Enanta, Gilead, (including Pharmasset), GlaxoSmithKline, the Janssen Pharmaceuticals companies of Johnson & Johnson (including Alios), Merck (including Idenix), Novartis and Vertex have applications that are directed to certain classes of HCV inhibitors, including synthetic nucleotides. If a patent infringement suit were brought against us, we could be forced to stop or delay research, development, manufacturing or sales of the drug or drug candidate that is the subject of the suit. Further, if we are found to have infringed a third-party patent, we could be obligated to pay royalties and/or other payments to the third party for the sale of our product, which may be

substantial, or we could be enjoined from selling our product.

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For example, we are aware that litigation has been instituted between Merck and Gilead, as well as Idenix and Gilead, wherein Merck (including Idenix) has asserted that Gilead's commercialization of Sovaldi (sofosbuvir), a nucleotide analog polymerase inhibitor, for the treatment of chronic hepatitis C would infringe certain patents owned by Merck and certain patents co-owned by Idenix. Given the heightened litigation environment around Sovaldi, it follows that the commercialization of ACH-3422, which is also a uridine nucleotide prodrug, may be subject to similar infringement challenges by Merck, Gilead and/or other companies.

There has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the pharmaceutical and biotechnology industries. In addition to infringement claims against us, we may become a party to other patent litigation and other proceedings, including post-grant review proceedings, inter-partes review proceedings or interference proceedings declared by the U. S. Patent and Trademark Office and/or opposition proceedings in the European Patent Office, regarding intellectual property rights with respect to our product candidates and technology. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

Litigation regarding patents, intellectual property, and other proprietary rights may be expensive and time consuming. If we are involved in such litigation, it could cause delays in bringing drug candidates to market and harm our ability to operate.

Our success will depend in part on our ability to operate without infringing the proprietary rights of third parties. Although we are not currently aware of any litigation or other proceedings or third-party claims of intellectual property infringement against us related to our drug candidates, the pharmaceutical industry is characterized by extensive litigation regarding patents and other intellectual property rights. Other parties may obtain patents in the future and allege that the use of our technologies infringes these patent claims or that we are employing their proprietary technology without authorization. Likewise, third parties may challenge or infringe upon our existing or future patents. Under our license agreements with Yale University we have the right, but not an obligation, to bring actions against an infringing third party. If we do not bring an action within a specified number of days, the licensor may bring an action against the infringing party. Proceedings involving our patents or patent applications or those of others could result in adverse decisions regarding:

the patentability of our inventions relating to our drug candidates; and/or

the enforceability, validity or scope of protection offered by our patents relating to our drug candidates. Even if we are successful in these proceedings, we may incur substantial costs and divert management time and attention in pursuing these proceedings, which could have a material adverse effect on us. If we are unable to avoid infringing the patent rights of others, we may be required to seek a license, defend an infringement action or challenge the validity of the patents in court. Patent litigation is costly and time consuming. We may not have sufficient resources to bring these actions to a successful conclusion. In addition, if we do not obtain a license, develop or obtain non-infringing technology, fail to defend an infringement action successfully or have infringed patents declared invalid, we may:

incur substantial monetary damages;

encounter significant delays in bringing our drug candidates to market; and/or

be precluded from participating in the manufacture, use or sale of our drug candidates or methods of treatment requiring licenses.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, during the course of this kind of litigation, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If investors perceive these results to be negative, the market price for our common stock could be significantly harmed.

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Because of the relative weakness of the Chinese and Indian legal systems in general, and intellectual property rights in particular, we may not be able to enforce intellectual property rights in China and India.

The legal regime protecting intellectual property rights in China and India is weak. Because the Chinese and Indian legal systems in general, and the intellectual property regime in particular, are relatively weak, it is often difficult to create and enforce intellectual property rights in China and India. Accordingly, we may not be able to effectively protect our intellectual property rights for our compounds in China and India.

We rely on our ability to stop others from competing by enforcing our patents, however some jurisdictions may require us to grant licenses to third parties. Such compulsory licenses could be extended to include some of our product candidates, which may limit our potential revenue opportunities.

Many foreign countries, including certain countries in Asia, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, most countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may be limited to monetary relief and may be unable to enjoin infringement, which could materially diminish the value of the patent. Compulsory licensing of life-saving products is also becoming increasingly popular in developing countries, either through direct legislation or international initiatives. Such compulsory licenses could be extended to include some of our product candidates, which may limit our potential revenue opportunities.

The rights we rely upon to protect our unpatented trade secrets may be inadequate.

We rely on unpatented trade secrets, know-how and technology, which are difficult to protect, especially in the pharmaceutical industry, where much of the information about a product must be made public during the regulatory approval process. We seek to protect trade secrets, in part, by entering into confidentiality agreements with employees, consultants and others. These parties may breach or terminate these agreements, or may refuse to enter into such agreements with us, and we may not have adequate remedies for such breaches. Furthermore, these agreements may not provide meaningful protection for our trade secrets or other proprietary information or result in the effective assignment to us of intellectual property, and may not provide an adequate remedy in the event of unauthorized use or disclosure of confidential information or other breaches of the agreements. Despite our efforts to protect our trade secrets, we or our collaboration partners, board members, employees, consultants, contractors or scientific and other advisors may unintentionally or willfully disclose our proprietary information to competitors.

If we fail to maintain trade secret protection, our competitive position may be adversely affected. Competitors may also independently discover our trade secrets. Enforcement of claims that a third party has illegally obtained and is using trade secrets is expensive, time consuming and uncertain. If our competitors independently develop equivalent knowledge, methods and know-how, we would not be able to assert our trade secrets against them and our business could be harmed.

Confidentiality agreements with employees and others may not adequately prevent disclosure of trade secrets and other proprietary information and may not adequately protect our intellectual property.

We rely on trade secrets to protect our technology, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. In order to protect our proprietary technology and processes, we also rely in part on confidentiality and intellectual property assignment agreements with our corporate partners, employees, consultants, outside scientific collaborators and sponsored researchers and other advisors. These agreements may not effectively prevent disclosure of confidential information nor result in the effective assignment to us of intellectual property, and may not provide an adequate remedy in the event of unauthorized disclosure of

confidential information or other breaches of the agreements. In addition, others may independently discover our trade secrets and proprietary information, and in such case we could not

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assert any trade secret rights against such party. Enforcing a claim that a party illegally obtained and is using our trade secrets is difficult, expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States may be less willing to protect trade secrets. Costly and time-consuming litigation could be necessary to seek to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

Risks Related to Our Securities

Our executive officers, directors and principal stockholders have the ability to control or significantly influence all matters submitted to our stockholders for approval, which could have the effect of delaying, deferring or preventing a change in control if us and entrenching our management or board of directors.

As of December 31, 2014, our directors, executive officers and stockholders who own more than 5% of our outstanding common stock, together with their affiliates and related persons, beneficially own, in the aggregate, greater than approximately 40% of our outstanding common stock. As a result, if these stockholders were to choose to act together, they would be able to control or significantly influence all matters submitted to our stockholders for approval, including the election and removal of directors and any merger, consolidation, sale of all or substantially all of our assets or similar transaction, as well as our management and affairs. The interests of this group of stockholders may not always coincide with our corporate interests or the interest of other stockholders, and they may act in a manner with which you may not agree or that may not be in the best interests of other stockholders. This concentration of voting power may have the effect of delaying, deferring or preventing a change in control of our company on terms that other stockholders may desire and entrenching our management or board or directors.

Our stock price has been and may in the future be volatile, and the market price of our common stock may decline in value in the future.

The market price of our common stock has fluctuated in the past and is likely to fluctuate in the future. During the period from January 1, 2009 to December 31, 2014, our stock price has ranged from a low of \$0.70 to a high of \$16.87. Market prices for securities of early stage pharmaceutical, biotechnology and other life sciences companies have historically been particularly volatile. Some of the factors that may cause the market price of our common stock to fluctuate include:

the results of clinical trials of our NS5A inhibitor, ACH-3102, our nucleotide polymerase inhibitor, ACH-3422, and our protease inhibitor, sovalprevir;

further developments relating to the FDA's partial clinical hold on sovalprevir for multiple dose studies in healthy volunteers;

the results of clinical trials conducted by others on drugs that would compete with our drug candidates;

the announcements of those data, particularly at high profile medical meetings, and the investment community's perception of and reaction to those data;

the ability of our drug candidates to be dosed safely in combination with other drugs and/or drug candidates, both ours and others;

the entry into, modification of, or termination of key agreements, or any new collaboration agreement we may enter;

market expectations about the timeliness of our entry into, or failure to enter, collaboration arrangements with third parties;

market expectations about and response to the level of sales achieved by competitive, recently approved drugs such as sofosbuvir (Sovaldi);

the entry by a potential third-party collaborator into an alliance with a competitor, or the entry by any other HCV drug developer into an alliance that may be perceived as competitive to us;

the continued industry consolidation of pharmaceutical companies developing HCV drug therapies, or the acquisition of any one of our HCV drug development competitors;

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the premiums on other transactions and any significant increases or decreases of those premiums;

the results of regulatory reviews and actions relating to the approval of our drug candidates;

our failure to obtain patent protection for any of our drug candidates or the issuance of third-party patents that cover our drug candidates;

the initiation of, material developments in, or conclusion of litigation;

failure of any of our drug candidates, if approved, to achieve commercial success;

general and industry-specific economic conditions that may affect our business, financial condition and operations, including without limitation research and development expenditures;

the launch of drugs by others that would compete with our drug candidates;

the failure or discontinuation of any of our research programs;

issues in manufacturing our drug candidates or any approved products;

the introduction of technological innovations or new commercial products by us or our competitors;

changes in estimates or recommendations by securities analysts, if any, who cover our common stock;

future sales of our common stock;

changes in the structure of health care payment systems;

period-to-period fluctuations in our financial results;

low trading volume of our common stock; and

the other factors described in this Risk Factors section.

In addition, if we fail to reach an important research, development or commercialization milestone or result by a publicly expected deadline, even if by only a small margin, there could be significant impact on the market price of our common stock. Additionally, as we approach the announcement of important clinical data or other significant information and as we announce such results and information, we expect the price of our common stock to be particularly volatile, and negative results would have a substantial negative impact on the price of our common stock.

The stock markets in general have experienced substantial volatility that has often been unrelated to the operating performance of individual companies. These broad market fluctuations may adversely affect the trading price of our common stock. In the past, following periods of volatility in the market price of a company's securities, stockholders have often instituted class action securities litigation against those companies. Such litigation, if instituted, could result in substantial costs and diversion of management attention and resources, which could significantly harm our business operations and reputation. For example, we, and certain of our current and former officers, were named as defendants in a consolidated class action lawsuit following our announcements regarding the FDA's clinical hold related to sovalprevir, our clinical-stage drug candidate for the treatment of chronic hepatitis C viral infection. On May 5, 2014, without any settlement payment by us, any individual defendant or any third party on their behalf, the lead plaintiffs in the consolidated class action lawsuit voluntarily dismissed all of their claims without prejudice.

Unstable market and economic conditions may have serious adverse consequences on our business.

Our general business strategy may be adversely affected by the recent economic downturn and volatile business environment and continued unpredictable and unstable market conditions. If the current equity and credit markets deteriorate further, or do not improve, it may make any necessary debt or equity financing more difficult, more costly, and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and stock

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price and could require us to delay or abandon clinical development plans. In addition, there is a risk that one or more of our current service providers, manufacturers and other partners may not survive these difficult economic times, which would directly affect our ability to attain our operating goals on schedule and on budget.

Our management is required to devote substantial time and incur additional expense to comply with public company regulations. Our failure to comply with such regulations could subject us to public investigations, fines, enforcement actions and other sanctions by regulatory agencies and authorities and, as a result, our stock price could decline in value.

As a public company, the Sarbanes-Oxley Act of 2002 and the related rules and regulations of the SEC, as well as the rules of the NASDAQ Global Select Market, have required us to implement additional corporate governance practices and adhere to a variety of reporting requirements and complex accounting rules. Compliance with these public company obligations places significant additional demands on our limited number of finance and accounting staff and on our financial, accounting and information systems.

In particular, as a public company, our management is required to conduct an annual evaluation of our internal controls over financial reporting and include a report of management on our internal controls in our Annual Reports on Form 10-K. If we are unable to continue to conclude that we have effective internal controls over financial reporting or, if our independent auditors are unable to provide us with an attestation and an unqualified report as to the effectiveness of our internal controls over financial reporting, investors could lose confidence in the reliability of our financial statements, which could result in a decrease in the value of our common stock.

Risks Relating to this Offering

If you purchase shares of common stock in this offering, you will suffer immediate dilution of your investment.

The public offering price of our common stock is substantially higher than the net tangible book value per share of our common stock. Therefore, if you purchase shares of our common stock in this offering, you will pay a price per share that substantially exceeds our net tangible book value per share after giving effect to this offering. If you purchase common stock in this offering, you will incur an immediate and substantial dilution in net tangible book value of \$9.58 per share, after giving effect to the sale by us of 10,000,000 shares in this offering at an assumed public offering price of \$11.66 per share, which was the last reported sale price of our common stock on The NASDAQ Global Select Market on February 9, 2015. For a further description of the dilution that you will experience immediately after this offering, see Dilution. In the past, we have issued options and warrants to acquire common stock at prices significantly below this offering price. To the extent these outstanding options and warrants are ultimately exercised, you will incur additional dilution.

Our management will have broad discretion over the use of the net proceeds from this offering, and you may not agree with how we use the proceeds and the proceeds may not be invested successfully.

Our management will have broad discretion as to the use of the net proceeds from any offering by us and could use them for purposes other than those contemplated at the time of this offering. Accordingly, you may be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that the proceeds will be invested in a way that does not yield a favorable, or any, return for Achillion.

Because we do not anticipate paying any cash dividends on our capital stock in the foreseeable future, capital appreciation, if any, will be your sole source of gain.

We have never declared or paid cash dividends on our capital stock. We anticipate that we will retain our earnings, if any, for future growth and therefore do not anticipate paying cash dividends in the future. As a result, only appreciation of the price of our common stock will provide a return to stockholders.

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USE OF PROCEEDS

We estimate that the net proceeds we will receive from this offering will be approximately \$109.3 million, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, based on an assumed public offering price of \$11.66 per share, which was the last reported sale price of our common stock on The NASDAQ Global Select Market on February 9, 2015. If the underwriters exercise their option to purchase additional shares in full, we estimate that the net proceeds to us will be approximately \$125.8 million, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds from this offering to continue clinical development of our lead product candidates ACH-3102, ACH-3422 and sovalprevir, to advance our platform for the development of oral inhibitors of complement Factor D and for general corporate purposes. The occurrence of unforeseen events or changed business conditions, however, could result in the application of the net proceeds from this offering in a manner other than as described in this prospectus supplement. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering.

Pending our use of the net proceeds from this offering, we plan to invest the net proceeds in short-term, investment-grade, interest-bearing instruments and U.S. government securities.

Table of Contents**PRICE RANGE OF COMMON STOCK**

Our common stock is listed on The NASDAQ Global Select Market and trades under the symbol ACHN. The following table sets forth, for the quarterly periods indicated, the high and low sale price per share of our common stock as reported on The NASDAQ Global Select Market:

	High	Low
Year ended December 31, 2013		
First Quarter	\$ 10.17	\$ 7.78
Second Quarter	\$ 8.80	\$ 6.70
Third Quarter	\$ 8.49	\$ 2.87
Fourth Quarter	\$ 3.65	\$ 2.26
Year ended December 31, 2014		
First Quarter	\$ 4.36	\$ 2.98
Second Quarter	\$ 8.61	\$ 2.45
Third Quarter	\$ 13.80	\$ 6.61
Fourth Quarter	\$ 16.87	\$ 9.32
Year ended December 31, 2015		
First Quarter (through February 9, 2015)	\$ 16.54	\$ 10.75

On February 9, 2015, the last reported sale price of our common stock on The NASDAQ Global Select Market was \$11.66 per share. As of January 31, 2015, we had 73 holders of record of our common stock. The actual number of stockholders is greater than this number of record holders and includes stockholders who are beneficial owners but whose shares are held in street name by brokers and other nominees.

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DIVIDEND POLICY

We have never paid or declared any cash dividends on our common stock. We currently intend to retain any earnings for future growth and, therefore, do not expect to pay cash dividends in the foreseeable future.

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Table of Contents**CAPITALIZATION**

The following table sets forth our cash, cash equivalents and marketable securities and our capitalization as of September 30, 2014:

on an actual basis; and

on a pro forma basis to give effect to (i) the issuance and sale by us of 10,000,000 shares of our common stock in this offering at an assumed public offering price of \$11.66 per share, which was the last reported sale price of our common stock on The NASDAQ Global Select Market on February 9, 2015, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, and (ii) our sale of an aggregate of 3,236,497 shares of our common stock in December 2014 pursuant to the Cantor Sales Agreement, which resulted in aggregate net proceeds to us of \$48.3 million.

This table should be read together with our financial statements and related notes and the other financial information included or incorporated by reference in this prospectus supplement and the accompanying prospectus.

	As of September 30, 2014	
	Actual	Pro Forma⁽¹⁾
(unaudited, in thousands, except share and per share data)		
Cash and cash equivalents	\$ 39,610	\$197,245
Marketable securities	87,009	87,009
Stockholders' equity:		
Preferred stock, \$0.01 par value, 5,000 shares authorized and no shares issued or outstanding		
Common stock, \$0.001 par value, 200,000,000 shares authorized, 100,247,190 shares issued and outstanding, actual; 200,000,000 shares authorized, 113,483,687 shares issued and outstanding, pro forma	100	113
Additional paid-in capital	548,596	706,218
Accumulated deficit	(429,086)	(429,086)
Accumulated other comprehensive (loss)	(7)	(7)
Total stockholders' equity	\$ 119,603	\$277,238

- (1) A \$1.00 increase (decrease) in the assumed public offering price of \$11.66 per share, which was the last reported sale price of our common stock on The NASDAQ Global Select Market on February 9, 2015, would increase (decrease) the pro forma amount of each of cash and cash equivalents and total stockholders' equity by approximately \$9.14 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus supplement, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, an increase (decrease) of 10,000 shares in

the number of shares offered by us, as set forth on the cover page of this prospectus supplement, would increase (decrease) the pro forma amount of each of cash and cash equivalents and total stockholders' equity by approximately \$0.1 million, assuming the assumed public offering price remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. The pro forma information discussed above is illustrative only and will be based on the actual public offering price and other terms of this offering determined at pricing.

The table above is based on 100,247,190 shares of our common stock outstanding as of September 30, 2014 and excludes as of such date:

7,838,637 shares of our common stock issuable upon the exercise of stock options outstanding at a weighted average exercise price of \$5.46 per share;

3,420,381 shares of our common stock available for future issuance under our 2006 Plan;

102,739 shares of our common stock available for future issuance under our 2006 ESPP; and

2,843,980 shares of our common stock issuable upon the exercise of warrants outstanding at a weighted average exercise price of \$3.13 per share.

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Table of Contents**DILUTION**

If you purchase our common stock in this offering, your ownership interest will be diluted immediately to the extent of the difference between the public offering price per share and the net tangible book value per share of our common stock after this offering. We calculate net tangible book value per share by subtracting our total liabilities from our total tangible assets and dividing the difference by the number of outstanding shares of our common stock.

Our net tangible book value at September 30, 2014 was \$119.6 million, or \$1.19 per share. After giving effect to the issuance and sale by us of 10,000,000 shares of our common stock in this offering, at an assumed public offering price of \$11.66 per share, which was the last reported sale price of our common stock on The NASDAQ Global Select Market on February 9, 2015, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value at September 30, 2014 would have been \$228.9 million, or \$2.08 per share. This represents an immediate increase in net tangible book value of \$0.89 per share to existing stockholders and an immediate dilution of \$9.58 per share to investors in this offering. The following table illustrates this per share dilution:

Assumed public offering price per share	\$ 11.66
Net tangible book value per share as of September 30, 2014	\$ 1.19
Increase per share attributable to new investors purchasing shares in this offering	\$ 0.89
Net tangible book value per share as September 30, 2014 after giving effect to this offering	\$ 2.08
Dilution per share to new investors	\$ 9.58

A \$1.00 increase (decrease) in the assumed public offering price of \$11.66 per share, which was the last reported sale price of our common stock on The NASDAQ Global Select Market on February 9, 2015, would increase (decrease) dilution per share to new investors by approximately \$0.91, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. An increase (decrease) of 10,000 shares in the number of shares offered by us, as set forth on the cover page of this prospectus supplement, would decrease (increase) dilution per share to new investors by less than \$0.01, assuming the assumed public offering price remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. The information discussed above is illustrative only and will be based on the actual public offering price and other terms of this offering determined at pricing.

The foregoing information is based on 100,247,190 shares of our common stock outstanding as of September 30, 2014 and excludes as of such date:

7,838,637 shares of our common stock issuable upon the exercise of stock options outstanding at a weighted average exercise price of \$5.46 per share;

3,420,381 shares of our common stock available for future issuance under our 2006 Plan;

102,739 shares of our common stock available for future issuance under our 2006 ESPP; and

2,843,980 shares of our common stock issuable upon the exercise of warrants outstanding at a weighted average exercise price of \$3.13 per share.

If the underwriters exercise their option to purchase additional shares of our common stock or if any additional shares are issued in connection with outstanding options or warrants, there will be further dilution to new investors.

In addition, the foregoing information excludes our sale of an aggregate of 3,236,497 shares of our common stock in December 2014 pursuant to the Cantor Sales Agreement, which resulted in aggregate net proceeds to us of \$48.3 million.

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Table of Contents**UNDERWRITING**

Subject to the terms and conditions set forth in the underwriting agreement, dated February , 2015, between us, and Leerink Partners LLC and Deutsche Bank Securities Inc., as the representatives of the underwriters named below and joint book-running managers of this offering, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the respective number of shares of common stock shown opposite its name below:

Underwriter	Number of Shares
Leerink Partners LLC	
Deutsche Bank Securities Inc.	
Wells Fargo Securities, LLC	
JMP Securities LLC	
Total	

Option to Purchase Additional Shares

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase, from time to time, in whole or in part, up to an aggregate of shares of our common stock from us, at the public offering price set forth on the cover page of this prospectus, less underwriting discounts and commissions. If the underwriters exercise this option, each underwriter will be obligated, subject to specified conditions, to purchase a number of additional shares proportionate to that underwriter's initial purchase commitment as indicated in the table above.

The underwriters have advised us that, following the completion of this offering, they currently intend to make a market in the common stock as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for the common stock, that you will be able to sell any of the common stock held by you at a particular time or that the prices that you receive when you sell will be favorable.

The underwriters are offering the shares of common stock subject to their acceptance of the shares of common stock from us and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commission and Expenses

The underwriters have advised us that they initially propose to offer the shares of common stock to the public at the public offering price set forth on the cover page of this prospectus and to certain dealers, which may include the underwriters, at that price less a concession not in excess of \$ per share of common stock. After the offering, the initial public offering price and concession may be reduced by the representative. No such reduction will change the amount of proceeds to be received by us as set forth on the cover page of this prospectus.

We have agreed to indemnify the underwriters against certain specified liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of any of these

liabilities.

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The following table shows the public offering price, the underwriting discounts and commissions that we are to pay the underwriters and the proceeds, before expenses, to us in connection with this offering. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

		Total	
	Per Share	Without Option to Purchase Additional Shares	With Option to Purchase Additional Shares
Public offering price	\$	\$	\$
Underwriting discounts and commissions paid by us	\$	\$	\$
Proceeds to us, before expenses	\$	\$	\$

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately \$. We have agreed to reimburse the underwriters for expenses related to the qualification of our common stock under state securities laws and clearing of this offering with the Financial Industry Regulatory Authority.

No Sales of Similar Securities

We and each of our executive officers, directors and certain shareholders have agreed that, subject to certain exceptions, without the prior written consent of Leerink Partners LLC and Deutsche Bank Securities Inc., we and such executive officers and directors and certain shareholders will not, during the period ending 60 days after the date of the underwriting agreement:

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 for the sale of, or otherwise dispose of or transfer any shares of the company's common stock or any securities convertible into or exchangeable or exercisable for common stock, whether now owned or hereafter acquired by the director, executive officer or shareholder or with respect to which the director, executive officer or shareholder has or hereafter acquires the power of disposition, or exercise any right with respect to the registration of any of such common stock or securities, or file or cause to be filed any registration statement in connection therewith, under the Securities Act of 1933, as amended; or

enter into any swap or any other agreement or any transaction that transfers, in whole or in part, directly or indirectly, the economic consequence of ownership of the common stock or securities, whether any such swap or transaction is to be settled by delivery of common stock or other securities, in cash or otherwise.

The lock-up restrictions described in the immediately preceding paragraph are subject to certain exceptions, including:

with respect to us:

the shares of our common stock to be sold in this offering;

the issuance of shares of common stock upon the exercise of outstanding stock options or warrants or grants of stock options or other stock-based awards under our equity plans, or with respect to our directors and executive officers:

transfers as a *bona fide* gift or gifts; or

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transfers to the immediate family of the director or executive officer (for purposes of the lock-up agreement, immediate family means any relationship by blood, marriage or adoption, not more remote than first cousin); or

transfers to any trust for the direct or indirect benefit of the director or executive officer or the immediate family of the director or executive officer; or

transfers to any corporation, partnership, limited liability company or other entity all of the beneficial ownership interests of which are held by the director or executive officer or the immediate family of the director, executive officer or shareholder in a transaction not involving a disposition for value; or

transfers as a distribution to limited partners or stockholders of the director or executive officer; or

transfers to the director's or executive officer's affiliates or to any investment fund or other entity controlled or managed by the director or executive officer; or

transfers by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the director or executive officer; or

the exercise an option or warrant to purchase shares of common stock, provided that the underlying shares of common stock shall continue to be subject to the restrictions on transfer set forth in the lock-up agreement; or

effecting transactions pursuant to a trading plan established pursuant to Rule 10b5-1 under the Exchange Act in existence on the date of the lock-up agreement, provided that such trading plans shall not be amended during the 60-day lock-up period; or

establishing a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of common stock, provided that such plan does not provide for any transfers of common stock during the 60-day lock-up period, provided further that the director or executive officer is not required to and does not otherwise voluntarily effect any public filing or report regarding the establishment of such a trading plan during the 60-day lock-up period; or

selling shares of common stock of the company purchased by the director or executive officer on the open market following the offering if and only if (i) such sales are not required to be reported in any public report or filing with the SEC, or otherwise and (ii) the director or executive officer does not otherwise voluntarily effect any public filing or report regarding such sales.

There are no existing agreements between the underwriters and any of our shareholders providing consent to the sale of shares prior to the expiration of the lock-up period.

NASDAQ Capital Market Listing

The shares are listed on The NASDAQ Global Select Market under the symbol ACHN.

Stabilization

The underwriters have advised us that, pursuant to Regulation M under the Securities Exchange Act of 1934, as amended, certain persons participating in the offering may engage in short sale transactions, stabilizing transactions, syndicate covering transactions or the imposition of penalty bids in connection with this offering. These activities may have the effect of stabilizing or maintaining the market price of the common stock at a level above that which might otherwise prevail in the open market. Establishing short sales positions may involve either covered short sales or naked short sales.

Covered short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares of our common stock in this offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares of our common stock or purchasing shares.

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of our common stock in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option to purchase additional shares.

Naked short sales are sales in excess of the option to purchase additional shares of our common stock. 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 shares of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

A stabilizing bid is a bid for the purchase of shares of common stock on behalf of the underwriters for the purpose of fixing or maintaining the price of the common stock. A syndicate covering transaction is the bid for or the purchase of shares of common stock on behalf of the underwriters to reduce a short position incurred by the underwriters in connection with the offering. Similar to other purchase transactions, the underwriter's purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. A penalty bid is an arrangement permitting the underwriters to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if the common stock originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. The underwriters are not obligated to engage in these activities and, if commenced, any of the activities may be discontinued at any time.

The underwriters may also engage in passive market making transactions in our common stock on The NASDAQ Capital Market in accordance with Rule 103 of Regulation M during a period before the commencement of offers or sales of shares of our common stock in this offering and extending through the completion of distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, that bid must then be lowered when specified purchase limits are exceeded.

Electronic Distribution

A prospectus in electronic format may be made available by e-mail or on the web sites or through online services maintained by one or more of the underwriters or their affiliates. In those cases, prospective investors may view offering terms online and may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of common stock for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' web sites and any information contained in any other web site maintained by any of the underwriters is not part of this prospectus, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

Other Activities and Relationships

The underwriters and certain of their 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. The underwriters

and certain of their affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses.

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In the ordinary course of their various business activities, the underwriters and certain of its 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 such investment and securities activities may involve securities and/or instruments issued by us and our affiliates. If the underwriters or their respective affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The underwriters and their respective affiliates may hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the common stock offered hereby. Any such short positions could adversely affect future trading prices of the common stock offered hereby. The underwriters and certain of their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/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 and/or short positions in such securities and instruments.

Notice to Prospective Investors in the European Economic Area

In relation to each Member State of the European Economic Area (each, a Relevant Member State), no offer of shares may be made to the public in that Relevant Member State other than:

- 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; or
- C. in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares shall require us or our representatives to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

Each person in a Relevant Member State who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed that it is a qualified investor within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive. In the case of any shares being offered to a financial intermediary as that term is used in Article 3(2) of the Prospectus Directive, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant Member State to qualified investors as so defined or in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

We, our representatives and our affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

This prospectus has been prepared on the basis that any offer of shares in any Relevant Member State will be made pursuant to an exemption under the Prospectus Directive from the requirement to publish a prospectus for offers of shares. Accordingly any person making or intending to make an offer in that Relevant Member State of shares which are the subject of the offering contemplated in this prospectus may only do so in circumstances in which no obligation arises for us or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Directive in

relation to such offer. Neither we nor the underwriters has authorized, nor do they authorize, the making of any offer of shares in circumstances in which an obligation arises for the Company or the underwriters to publish a prospectus for such offer.

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For the purpose of the above provisions, the expression “an offer to the public” in relation to any shares 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 the shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in the Relevant Member State by any measure implementing the Prospectus Directive in the Relevant Member State and the expression “Prospectus Directive” means Directive 2003/71/EC (including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member States) and includes any relevant implementing measure in the Relevant Member State and the expression “2010 PD Amending Directive” means Directive 2010/73/EU.

Notice to Prospective Investors in the United Kingdom

This prospectus is only being distributed to, and is only directed at, persons in the United Kingdom that are qualified investors within the meaning of Article 2(1)(e) of the Prospectus Directive that are also (i) investment professionals falling within Article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (the Order) or (ii) high net worth entities and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (each such person being referred to as a “relevant person”). This prospectus and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other persons in the United Kingdom. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

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MATERIAL FEDERAL U.S. TAX CONSIDERATIONS FOR NON-U.S. HOLDERS OF COMMON STOCK

The following is a general discussion of material U.S. federal income and estate tax considerations relating to ownership and disposition of our common stock by a non-U.S. holder. For purposes of this discussion, the term non-U.S. holder means a beneficial owner (other than a partnership or other pass-through entity) of our common stock that is not, for U.S. federal income tax purposes:

an individual who is a citizen or resident of the United States;

a corporation, or other entity treated as a corporation for U.S. federal income tax purposes, created or organized in or under the laws of the United States, any state thereof or the District of Columbia;

an estate the income of which is subject to U.S. federal income taxation regardless of its source; or

a trust, if a U.S. court is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have authority to control all substantial decisions of the trust or if the trust has a valid election in effect to be treated as a U.S. person under applicable U.S. Treasury Regulations.

This discussion is based on current provisions of the Code, existing and proposed U.S. Treasury Regulations promulgated thereunder, current administrative rulings, and judicial decisions, all publicly available and as in effect as of the date of this prospectus and all of which are subject to change or to differing interpretation, possibly with retroactive effect. Any change or differing interpretation could alter the tax consequences to non-U.S. holders described in this prospectus. In addition, the IRS could challenge one or more of the tax consequences described in this prospectus and we have not obtained nor do we intend to obtain an opinion of counsel with respect to the U.S. federal income or estate tax consequences to a non-U.S. holder of acquiring, holding, and disposing of our common stock.

This discussion addresses only non-U.S. holders that hold shares of our common stock as a capital asset (generally, property held for investment). This discussion does not address all aspects of U.S. federal income and estate taxation that may be relevant to a particular non-U.S. holder in light of that non-U.S. holder's individual circumstances nor does it address the alternative minimum tax, the Medicare tax on net investment income or any aspects of U.S. state, local, or non-U.S. taxes. This discussion also does not consider any specific facts or circumstances that may apply to a non-U.S. holder and does not address the special tax rules applicable to particular non-U.S. holders, such as:

insurance companies;

tax-exempt organizations;

financial institutions;

brokers or dealers in securities;

regulated investment companies;

pension plans;

controlled foreign corporations;

passive foreign investment companies;

owners that hold our common stock as part of a straddle, hedge, conversion transaction, synthetic security, or other integrated investment; and

certain U.S. expatriates.

In addition, this discussion does not address the tax treatment of partnerships or persons who hold their common stock through partnerships or other entities that are pass-through entities for U.S. federal income tax

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purposes. A partner in a partnership or other pass-through entity that will hold our common stock should consult his, her, or its own tax advisor regarding the tax consequences of the purchase, ownership, and disposition of our common stock through a partnership or other pass-through entity, as applicable.

Prospective investors should consult their own tax advisors regarding the U.S. federal, state, local, and non-U.S. income and other tax considerations of acquiring, holding, and disposing of our common stock.

Dividends

If we pay distributions on our common stock, those distributions generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the non-U.S. holder's investment, up to such holder's tax basis in the common stock. Any remaining excess will be treated as capital gain, subject to the tax treatment described below under the heading **Gain on Disposition of Common Stock**.

Dividends paid to a non-U.S. holder generally will be subject to withholding of U.S. federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence. A non-U.S. holder of our common stock who claims the benefit of an applicable income tax treaty between the United States and such holder's country of residence generally will be required to provide a properly executed IRS Form W-8BEN or W-8BEN-E (or successor form) and satisfy applicable certification and other requirements. A non-U.S. holder that is eligible for a reduced rate of U.S. withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim with the IRS. Non-U.S. holders are urged to consult their own tax advisors regarding their entitlement to benefits under a relevant income tax treaty.

Dividends that are treated as effectively connected with a trade or business conducted by a non-U.S. holder within the United States and, if an applicable income tax treaty so provides, that are attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder within the United States are generally exempt from the 30% withholding tax if the non-U.S. holder satisfies applicable certification and disclosure requirements. However, such U.S. effectively connected income is taxed on a net income basis at the same graduated U.S. federal income tax rates applicable to United States persons (as defined in the Code). Any U.S. effectively connected income received by a non-U.S. holder that is a corporation may also, under certain circumstances, be subject to an additional branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence.

Gain on Disposition of Common Stock

A non-U.S. holder generally will not be subject to U.S. federal income tax on gain recognized on a disposition of our common stock unless:

the gain is effectively connected with the non-U.S. holder's conduct of a trade or business in the United States and, if an applicable income tax treaty so provides, the gain is attributable to a permanent establishment or fixed base maintained by the non-U.S. holder in the United States; in these cases, the non-U.S. holder will be taxed on a net income basis at the regular graduated rates and in the manner applicable to U.S. persons, and if the non-U.S. holder is a foreign corporation, an additional branch profits

tax at a 30% rate, or such lower rate as may be specified by an applicable income tax treaty, may also apply;

the non-U.S. holder is a nonresident alien present in the United States for 183 days or more in the taxable year of the disposition and certain other requirements are met, in which case the non-U.S. holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax

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treaty) on the net gain derived from the disposition, which may be offset by U.S.-source capital losses of the non-U.S. holder, if any; or

we are, or have been at any time during the five-year period preceding such disposition (or the non-U.S. holder's holding period, if shorter), a U.S. real property holding corporation, unless our common stock is regularly traded on an established securities market and the non-U.S. holder held no more than 5% of our outstanding common stock, directly or indirectly, during the shorter of the five year period ending on the date of the disposition or the period that the non-U.S. holder held our common stock. If we are determined to be a U.S. real property holding corporation and the foregoing exception does not apply, then a purchaser may withhold 10% of the proceeds payable to a non-U.S. holder from a sale of our common stock and the non-U.S. holder generally will be taxed on its net gain derived from the disposition at the graduated U.S. federal income tax rates applicable to United States persons (as defined in the Code). Generally, a corporation is a U.S. real property holding corporation if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. Although there can be no assurance, we believe that we are not currently, and we do not anticipate becoming, a U.S. real property holding corporation for U.S. federal income tax purposes. No assurance can be provided that our common stock will be regularly traded on an established securities market for purposes of the rule described above.

Information Reporting and Backup Withholding

We must report annually to the IRS and to each non-U.S. holder the gross amount of the distributions on our common stock paid to such holder and the tax withheld, if any, with respect to such distributions. Non-U.S. holders may have to comply with specific certification procedures to establish that the holder is not a U.S. person (as defined in the Code) in order to avoid backup withholding at the applicable rate, currently 28%, with respect to dividends on our common stock. Generally, a non-U.S. holder will comply with such procedures if it provides a properly executed IRS Form W-8BEN or W-8BEN-E (or other applicable Form W-8) or otherwise meets documentary evidence requirements for establishing that it is a non-U.S. holder, or otherwise establishes an exemption. Dividends paid to non-U.S. holders subject to withholding of U.S. federal income tax, as described above under the heading Dividends, will generally be exempt from U.S. backup withholding.

Information reporting and backup withholding generally will apply to the proceeds of a disposition of our common stock by a non-U.S. holder effected by or through the U.S. office of any broker, U.S. or foreign, unless the holder certifies its status as a non-U.S. holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a non-U.S. holder where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker. Non-U.S. holders should consult their own tax advisors regarding the application of the information reporting and backup withholding rules to them.

Copies of information returns may be made available to the tax authorities of the country in which the non-U.S. holder resides or is incorporated under the provisions of a specific treaty or agreement.

Backup withholding is not an additional tax. Rather, any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder can be refunded or credited against the non-U.S. holder's U.S. federal income tax liability, if any, provided that an appropriate claim is timely filed with the IRS.

FATCA

Sections 1471 through 1474 of the Code (commonly referred to as the Foreign Account Tax Compliance Act or FATCA) generally impose a 30% withholding tax on dividends on, and gross proceeds from the sale or

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other disposition of, our common stock if paid to a foreign entity unless (i) if the foreign entity is a foreign financial institution, the foreign entity undertakes certain due diligence, reporting, withholding, and certification obligations, (ii) if the foreign entity is not a foreign financial institution, the foreign entity identifies certain of its U.S. investors, or (iii) the foreign entity is otherwise excepted under FATCA.

Under applicable U.S. Treasury regulations, withholding under FATCA generally applies currently to payments of dividends on our common stock and will apply to payments of gross proceeds from a sale or other disposition of our common stock made after December 31, 2016. If withholding under FATCA is required on any payment related to our common stock, investors not otherwise subject to withholding (or that otherwise would be entitled to a reduced rate of withholding) on such payment may be required to seek a refund or credit from the IRS. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this section. Non-U.S. holders should consult their own tax advisors regarding the possible implications of FATCA on their investment in our common stock and the entities through which they hold our common stock, including, without limitation, the process and deadlines for meeting the applicable requirements to prevent the imposition of the 30% withholding tax under FATCA.

Federal Estate Tax

Common stock owned or treated as owned by an individual who is a non-U.S. holder (as specially defined for U.S. federal estate tax purposes) at the time of death will be included in the individual's gross estate for U.S. federal estate tax purposes and, therefore, may be subject to U.S. federal estate tax, unless an applicable estate tax or other treaty provides otherwise.

The preceding discussion of material U.S. federal tax considerations is for general information only. It is not tax advice. Prospective investors should consult their own tax advisors regarding the particular U.S. federal, state, local, and non-U.S. tax consequences of purchasing, holding, and disposing of our common stock, including the consequences of any proposed changes in applicable laws.

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LEGAL MATTERS

The validity of the shares of common stock offered by this prospectus supplement and the accompanying prospectus will be passed upon by Wilmer Cutler Pickering Hale and Dorr LLP, New York, New York. Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., New York, New York is acting as counsel for the underwriters in connection with this offering.

EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report of Internal Control over Financial Reporting) incorporated in this prospectus supplement by reference to the Annual Report on Form 10-K for the year ended December 31, 2013 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements and other information with the SEC as required by the Exchange Act. You can find, copy and inspect information we file at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. You can call the SEC at 1-800-SEC-0330 for further information about the public reference room. You can review our electronically filed reports, proxy and information statements on the SEC's web site at <http://www.sec.gov> or on our web site at <http://www.achillion.com>. Information included on our web site is not incorporated into or a part of this prospectus or any prospectus supplement.

This prospectus supplement is part of a registration statement we filed with the SEC. This prospectus supplement and the accompanying prospectus omit some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits in the registration statement for further information on us and our consolidated subsidiaries and the securities we are offering. Statements in this prospectus supplement and the accompanying prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements. You can obtain a copy of the registration statement from the SEC at the address listed above or from the SEC's website.

INCORPORATION BY REFERENCE

The SEC allows us to incorporate by reference much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents listed below (File No. 001-33095) and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed) between the date of the initial registration statement and the effectiveness of

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the registration statement and following the effectiveness of the registration statement until the offering of the securities under the registration statement is terminated or completed:

Annual Report on Form 10-K for the fiscal year ended December 31, 2013, as filed with the SEC on March 7, 2014, including the information specifically incorporated by reference into the Annual Report on Form 10-K from our definitive proxy statement on Schedule 14A for our 2014 Annual Meeting of Stockholders;

Quarterly Reports on Form 10-Q for the fiscal periods ended March 31, 2014, June 30, 2014 and September 30, 2014, as filed with the SEC on May 7, 2014, August 7, 2014 and November 4, 2014, respectively;

Current Reports on Form 8-K filed on June 4, 2014, October 6, 2014, December 22, 2014, January 12, 2015, February 9, 2015 and February 10, 2015; and

The description of our common stock contained in our Registration Statement on Form 8-A, as filed with the SEC on October 18, 2006, including any amendments or reports filed for the purpose of updating such description.

A statement contained in a document incorporated by reference into this prospectus supplement and the accompanying prospectus shall be deemed to be modified or superseded for purposes of this prospectus supplement and the accompanying prospectus to the extent that a statement contained in this prospectus supplement, the accompanying prospectus or in any other subsequently filed document which is also incorporated in this prospectus supplement modifies or replaces such statement. Any statements so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement and the accompanying prospectus.

You may request a copy of these documents, which will be provided to you at no cost, by writing or telephoning us using the following contact information:

Achillion Pharmaceuticals, Inc.

Attention: Investor Relations

300 George Street

New Haven, CT 06511-6624

Phone: (203) 624-7000

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PROSPECTUS

\$150,000,000

Achillion Pharmaceuticals, Inc.

Common Stock

Warrants

Units

We may issue securities from time to time in one or more offerings, for an aggregate initial offering price of \$150,000,000. This prospectus describes the general terms of these securities and the general manner in which these securities may be offered. We will provide you with specific terms of these securities in one or more supplements to this prospectus. The prospectus supplements will also describe the specific manner in which these securities will be offered and may also supplement, update or amend information contained in this document. You should read this prospectus and any applicable prospectus supplement before you invest.

We may offer these securities in amounts, at prices and on terms determined at the time of offering. The securities may be sold directly to you, through agents, or through underwriters and dealers. If agents, underwriters or dealers are used to sell the securities, we will name them and describe their compensation in a prospectus supplement.

Our common stock is listed on the NASDAQ Global Select Market and trades under the symbol ACHN.

Investing in our securities involves certain risks. See Risk Factors on page 4 of this prospectus and in the applicable prospectus supplement and in the documents incorporated by reference in this prospectus for a discussion of the factors you should carefully consider before deciding to purchase our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is March 7, 2014.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, which we refer to as the SEC, utilizing a shelf registration process. Under this shelf registration process, we may from time to time sell any combination of the securities described in this prospectus in one or more offerings for an aggregate initial offering price of up to \$150,000,000.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide one or more prospectus supplements that will contain specific information about the terms of the offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and the accompanying prospectus supplement together with the additional information described under the heading **Where You Can Find More Information** beginning on page 2 of this prospectus.

You should rely only on the information contained in or incorporated by reference in this prospectus, any accompanying prospectus supplement or in any related free writing prospectus filed by us with the SEC. We have not authorized anyone to provide you with different information. This prospectus and any accompanying prospectus supplement do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the securities described in the accompanying prospectus supplement or an offer to sell or the solicitation of an offer to buy such securities in any circumstances in which such offer or solicitation is unlawful. You should assume that the information appearing in this prospectus, any prospectus supplement, the documents incorporated by reference and any related free writing prospectus is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

Unless otherwise stated, all references to **us**, **our**, **Achillion**, **we**, **the Company** and similar designations refer to Achillion Pharmaceuticals, Inc. Our logo, trademarks and service marks are the property of Achillion. Other trademarks or service marks appearing in this prospectus are the property of their respective holders.

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WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements and other information with the SEC as required by the Exchange Act. You can find, copy and inspect information we file at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. You can call the SEC at 1-800-SEC-0330 for further information about the public reference room. You can review our electronically filed reports, proxy and information statements on the SEC's web site at <http://www.sec.gov> or on our web site at <http://www.achillion.com>. Information included on our web site is not incorporated into or a part of this prospectus or any prospectus supplement.

This prospectus is part of a registration statement we filed with the SEC. This prospectus omits some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits in the registration statement for further information on us and our consolidated subsidiaries and the securities we are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

INCORPORATION BY REFERENCE

The SEC allows us to incorporate by reference much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents listed below (File No. 001-33095) and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed) between the date of the initial registration statement and the effectiveness of the registration statement and following the effectiveness of the registration statement until the offering of the securities under the registration statement is terminated or completed:

Annual Report on Form 10-K for the fiscal year ended December 31, 2013, as filed with the SEC on March 7, 2014, including the information specifically incorporated by reference into the Annual Report on Form 10-K from our definitive proxy statement on Schedule 14A for our 2014 Annual Meeting of Stockholders; and

The description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on October 18, 2006, including any amendments or reports filed for the purpose of updating such description.

You may request a copy of these documents, which will be provided to you at no cost, by writing or telephoning us using the following contact information:

Achillion Pharmaceuticals, Inc.

Attention: Investor Relations

300 George Street

New Haven, CT 06511-6624

Phone: (203) 624-7000

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ACHILLION PHARMACEUTICALS, INC.

We are a biopharmaceutical company that was established to discover, develop and commercialize innovative treatments for infectious diseases. Within the anti-infective market, we are currently focusing our efforts on developing commercially competitive, short-duration combination therapies for the treatment of chronic hepatitis C (HCV) infection that are administered once-daily, orally, and without ribavirin. Specifically, we are advancing:

ACH-3102, a NS5A inhibitor, currently in phase II clinical development, and the cornerstone of our genotype 1b strategy;

ACH-3422, a NS5B nucleotide polymerase inhibitor, currently being prepared for phase I clinical development, and the cornerstone of our broad genotypic strategy; and

ACH-2684, a NS3/4A protease inhibitor, currently being prepared for phase II clinical development. In addition, prior to it being placed on clinical hold in June 2013 by the U.S. Food and Drug Administration, or FDA, we were also advancing another of our HCV drug candidates, sovalprevir, a NS3/4A protease inhibitor, in a then on-going phase II clinical trial and preparing for additional phase II clinical development. The FDA placed sovalprevir on clinical hold after elevations in liver enzymes were noted in a phase I healthy subject drug-drug interaction study evaluating the effects of concomitant administration of sovalprevir with ritonavir-boosted atazanavir. In accordance with the clinical hold, the FDA provided that no new clinical trials that included dosing with sovalprevir could be initiated, however, the FDA allowed continued enrollment and treatment of patients in a then-on-going phase II clinical trial. In September 2013, the FDA requested, among other things, additional analysis to more fully characterize sovalprevir pharmacokinetics and the intrinsic and extrinsic factors that may lead to higher than anticipated exposures of sovalprevir or other potential toxicities in addition to the observed liver enzyme elevations. The FDA has approved our plan of analysis and additional clinical, non-clinical and pharmacokinetic data that we intend to submit within the next several weeks. We anticipate comment from the FDA during the first half of 2014.

In addition to our HCV drug candidates, we have established a pipeline of certain antibacterial product candidates for which we have sought appropriate collaborative partners, and to which we are not currently devoting significant resources. We have also developed and out licensed certain development and commercialization rights to elvucitabine, for the treatment of both hepatitis B, or HBV, and human immunodeficiency virus, or HIV.

We were incorporated in Delaware in August 1998. Our principal executive office is located at 300 George Street, New Haven, Connecticut 06511, and our telephone number is (203) 624-7000. Our internet address is www.achillion.com. The information on our web site is not incorporated by reference into this prospectus and should not be considered to be a part of this prospectus. Our internet address is included in this prospectus as an inactive technical reference only.

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RISK FACTORS

Investing in our common stock involves significant risks. Before deciding whether to invest in our common stock, you should consider carefully the risks, uncertainties and assumptions described in this prospectus and any accompanying prospectus supplement, including the risk factors set forth in our filings with the SEC that are incorporated by reference herein and therein, including the risk factors in our most recent Annual Report on Form 10-K, as revised or supplemented by our most recent Quarterly Reports on Form 10-Q, and which may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. If any of these risks actually occurs, our business, business prospects, financial condition or results of operations 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. Please also read carefully the section below entitled Cautionary Note Regarding Forward-Looking Statements.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the information incorporated by reference in this prospectus include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Exchange Act. These statements are based on current expectations, estimates, forecasts and projections about the industry in which we operate and the beliefs and assumptions of our management. Words such as expects, anticipates, targets, goals, projects, intends, plans, believes, seeks, estimates, continues, and may, and such words and similar expressions are intended to identify such forward-looking statements. In addition, any statements that refer to projections regarding our future financial performance, clinical development plans and timelines; our anticipated growth and trends in our businesses; our capital needs and capital expenditures; competitive changes in the marketplace for our product candidates; our ability to innovate new products and technologies; intellectual property and litigation matters; potential acquisitions and divestitures; key personnel; the effect of new accounting pronouncements and other characterizations of future events or circumstances are forward-looking statements. You are cautioned that these forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions that are referenced in the section of any accompanying prospectus supplement entitled Risk Factors. You should also carefully review the risk factors and cautionary statements described in the other documents we file from time to time with the SEC, specifically our most recent Annual Report on Form 10-K, our Quarterly Reports on Form 10-Q and our Current Reports on Form 8-K. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments that we may make. We undertake no obligation to revise or update any forward-looking statements, except to the extent required by law.

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USE OF PROCEEDS

We intend to use the net proceeds from the sale of any securities offered under this prospectus for general corporate purposes unless otherwise indicated in the applicable prospectus supplement. General corporate purposes may include research and development expenditures, the acquisition of companies or businesses, repayment and refinancing of debt, working capital and capital expenditures. We may temporarily invest the net proceeds in investment-grade, interest-bearing securities until they are used for their stated purpose. We have not determined the amount of net proceeds to be used specifically for such purposes. As a result, management will retain broad discretion over the allocation of net proceeds.

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DILUTION

If there is a material dilution of the purchasers' equity interest from the sale of common equity securities offered under this prospectus, we will set forth in any prospectus supplement the following information regarding any such material dilution of the equity interests of purchasers purchasing securities in an offering under this prospectus:

the net tangible book value per share of our equity securities before and after the offering;

the amount of the increase in such net tangible book value per share attributable to the cash payments made by the purchasers in the offering; and

the amount of the immediate dilution from the public offering price which will be absorbed by such purchasers.

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DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock is intended as a summary only. This description is based upon, and is qualified by reference to, our certificate of incorporation, our by-laws and applicable provisions of Delaware corporate law. This summary is not complete. You should read our certificate of incorporation and by-laws, which are filed as exhibits to the registration statement of which this prospectus forms a part, for the provisions that are important to you.

Our authorized capital stock consists of 200,000,000 shares of our common stock, par value \$0.001 per share, and 5,000,000 shares of preferred stock, par value \$0.01 per share. As of March 3, 2014, 96,792,144 shares of common stock were outstanding and no shares of preferred stock were outstanding.

Common Stock

Annual Meeting. Annual meetings of our stockholders are held on the date designated in accordance with our by-laws. Special meetings of our stockholders may be called for any purpose by our board of directors, our chairman of the board, our chief executive officer or our president, but such special meetings may not be called by any other person or persons. Notice of annual or special meetings must be given, in a manner specified in our by-laws and consistent with the General Corporation law of the State of Delaware, to each stockholder entitled to vote at such meeting not less than ten nor more than 60 days before the date of the meeting. The presence in person or by proxy of the holders of record of a majority of our issued and outstanding shares entitled to vote at such meeting constitutes a quorum for the transaction of business at meetings of the stockholders. Notice must state the place, date and time of the meeting and the means of remote communications, in any, by which stockholders and proxyholders may be deemed to be present in person and vote at such meeting. The notice of a special meeting shall state, in addition, the purpose or purposes for which the meeting is called. Except as otherwise provided by law, our restated certificate of incorporation or our by-laws, all elections shall be decided by a plurality of the votes cast by the stockholders entitled to vote on the election, and all other questions shall be decided by the affirmative vote of the holders of a majority of voting power of the shares of stock present or represented and voting on the matter (or if there are two or more classes of stock entitled to vote as separate classes, then in the case of each such class, the holders of a majority in voting power of the shares of stock of that class present or represented and voting on such matter) at a duly held meeting of stockholders at which a quorum is present.

Voting Rights. Each holder of common stock is entitled to one vote for each share held on all matters to be voted upon by stockholders.

Dividends. The holders of common stock, after any preferences of holders of any preferred stock, are entitled to receive dividends when and if declared by the board of directors out of legally available funds.

Liquidation and Dissolution. If we are liquidated or dissolved, the holders of the common stock will be entitled to share in our assets available for distribution to stockholders in proportion to the amount of common stock they own. The amount available for common stockholders is calculated after payment of liabilities. Holders of any preferred stock will receive a preferential share of our assets before the holders of the common stock receive any assets.

Other Rights. Holders of the common stock have no right to:

convert the stock into any other security;

have the stock redeemed; or

purchase additional stock or to maintain their proportionate ownership interest.

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The common stock does not have cumulative voting rights. Holders of shares of the common stock are not required to make additional capital contributions.

Transfer Agent and Registrar. Computershare Trust Company, N.A. is our transfer agent and registrar for the common stock.

Preferred Stock

As of March 3, 2014, no shares of preferred stock were outstanding. Under the terms of our certificate of incorporation, we are authorized to issue blank check preferred stock, which may be issued in one or more series upon authorization of our board of directors. Our board of directors is authorized to fix the designation of the series, the number of authorized shares of the series, dividend rights and terms, conversion rights, voting rights, redemption rights and terms, liquidation preferences and any other rights, powers, preferences and limitations applicable to each series of preferred stock. The authorized shares of our preferred stock are available for issuance without further action by our stockholders, unless such action is required by applicable law or the rules of any stock exchange on which our securities may be listed. If the approval of our stockholders is not required for the issuance of shares of our preferred stock, our board may determine not to seek stockholder approval.

Effects of Authorized but Unissued Stock

We have shares of common stock and preferred stock available for future issuance without stockholder approval, subject to any limitations imposed by the listing standards of The NASDAQ Global Select Market. We may utilize these additional shares for a variety of corporate purposes, including for future public offerings to raise additional capital, or facilitate corporate acquisitions or for payment as a dividend on our capital stock. The existence of unissued and unreserved common stock and preferred stock may enable our board of directors to issue shares to persons friendly to current management or to issue preferred stock with terms that could have the effect of making it more difficult for a third party to acquire, or could discourage a third party from seeking to acquire, a controlling interest in our company by means of a merger, tender offer, proxy contest or otherwise. In addition, if we issue preferred stock, the issuance could adversely affect the voting power of holders of common stock, and the likelihood that such holders will receive dividend payments and payments upon liquidation.

Provisions of Our Certificate of Incorporation and By-laws and Delaware Law That May Have Anti-Takeover Effects

Board of Directors. Our certificate of incorporation and by-laws provide for a board of directors divided as nearly equally as possible into three classes. Each class is elected to a term expiring at the annual meeting of stockholders held in the third year following the year of such election.

Removal of Directors by Stockholders. Our by-laws provide that, subject to the rights of holders of any series of preferred stock, members of our board of directors may be removed only for cause and only by the affirmative vote of the holders of at least 75% of the votes which all the stockholders would be entitled to cast in an election of directors.

Stockholder Nomination of Directors. Our by-laws provide that a stockholder must notify us in writing of any stockholder nomination of a director not earlier than the 120th day and not later than the 90th day prior to the first anniversary of the preceding year's annual meeting; provided, that if the date of the annual meeting is advanced by more than 20 days, or delayed by more than 60 days from such anniversary date, notice by the stockholder to be timely must be so delivered not earlier than the 120th day prior to the date of such annual meeting and not later than the close of business, on the later of (1) the 90th day prior to the date of such meeting and (2) the 10th day following

the day on which notice of the date of such annual meeting was mailed or public disclosure of the date of such annual meeting is first made by us.

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No Action By Written Consent. Our restated certificate of incorporation provides that our stockholders may not act by written consent and may only act at duly called meetings of stockholders.

Super-Majority Voting. The General Corporation Law of the State of Delaware, which we refer to as the DGCL, provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or by-laws, unless a corporation's certificate of incorporation or by-laws, as the case may be, requires a greater percentage. Our by-laws may be amended, altered or repealed by a majority vote of our board of directors or the affirmative vote of the holders of at least 75% of the votes that all our stockholders would be entitled to cast in any annual election of directors or class of directors. In addition, the affirmative vote of the holders of at least 75% of the votes that all our stockholders would be entitled to cast in any annual election of directors or class of directors is required to amend or repeal or to adopt, any provisions inconsistent with any of the provisions of our certificate of incorporation described above.

Delaware Business Combination Statute. Section 203 of the DGCL is applicable to us. Section 203 of the DGCL restricts some types of transactions and business combinations between a corporation and a 15% stockholder. A 15% stockholder is generally considered by Section 203 to be a person owning 15% or more of the corporation's outstanding voting stock. Section 203 refers to a 15% stockholder as an interested stockholder. Section 203 restricts these transactions for a period of three years from the date the stockholder acquires 15% or more of our outstanding voting stock. With some exceptions, unless the transaction is approved by the board of directors and the holders of at least two-thirds of the outstanding voting stock of the corporation, Section 203 prohibits significant business transactions such as:

a merger with, disposition of significant assets to or receipt of disproportionate financial benefits by the interested stockholder, and

any other transaction that would increase the interested stockholder's proportionate ownership of any class or series of our capital stock.

The shares held by the interested stockholder are not counted as outstanding when calculating the two-thirds of the outstanding voting stock needed for approval.

The prohibition against these transactions does not apply if:

prior to the time that any stockholder became an interested stockholder, the board of directors approved either the business combination or the transaction in which such stockholder acquired 15% or more of our outstanding voting stock, or

the interested stockholder owns at least 85% of our outstanding voting stock as a result of a transaction in which such stockholder acquired 15% or more of our outstanding voting stock. Shares held by persons who are both directors and officers or by some types of employee stock plans are not counted as outstanding when making this calculation.

Directors Liability

Our certificate of incorporation limits the personal liability of directors for breach of fiduciary duty to the maximum extent permitted by the DGCL and provides that no director will have personal liability to us or to our stockholders for monetary damages for breach of fiduciary duty as a director. However, these provisions do not eliminate or limit the liability of any of our directors:

for any breach of the director's duty of loyalty to us or our stockholders;

for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;

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for voting or assenting to unlawful payments of dividends, stock repurchases or other distributions; or

for any transaction from which the director derived an improper personal benefit.

Any amendment to or repeal of these provisions will not eliminate or reduce the effect of these provisions in respect of any act, omission or claim that occurred or arose prior to such amendment or repeal. If the DGCL is amended to provide for further limitations on the personal liability of directors of corporations, then the personal liability of our directors will be further limited to the greatest extent permitted by the DGCL.

Our certificate of incorporation provides that we must indemnify our directors and officers and we must advance expenses, including attorneys' fees, to our directors and officers in connection with legal proceedings, subject to very limited exceptions.

We maintain a general liability insurance policy that covers certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers.

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DESCRIPTION OF WARRANTS

We may issue warrants to purchase common stock. We may offer warrants separately or together with one or more additional warrants or common stock, or any combination of those securities in the form of units, as described in the applicable prospectus supplement. If we issue warrants as part of a unit, the accompanying prospectus supplement will specify whether those warrants may be separated from the other securities in the unit prior to the expiration date of the warrants. The applicable prospectus supplement will also describe the following terms of any warrants:

the specific designation and aggregate number of, and the offering price at which we will issue, the warrants;

the currency or currency units in which the offering price, if any, and the exercise price are payable;

the date on which the right to exercise the warrants will begin and the date on which that right will expire or, if you may not continuously exercise the warrants throughout that period, the specific date or dates on which you may exercise the warrants;

whether the warrants are to be sold separately or with common stock as parts of units;

whether the warrants will be issued in definitive or global form or in any combination of these forms, although, in any case, the form of a warrant included in a unit will correspond to the form of the unit and of any common stock included in that unit;

any applicable material U.S. federal income tax consequences;

the identity of the warrant agent for the warrants and of any other depositaries, execution or paying agents, transfer agents, registrars or other agents;

the proposed listing, if any, of the warrants or any common stock purchasable upon exercise of the warrants on any securities exchange;

the terms of any common stock purchasable upon exercise of the warrants;

if applicable, the date from and after which any warrants issued as part of a unit and the related common stock will be separately transferable;

the number of shares of common stock purchasable upon exercise of a warrant and the price at which those shares may be purchased;

if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;

information with respect to book-entry procedures, if any;

the antidilution provisions of, and other provisions for changes to or adjustment in the exercise price of, the warrants, if any;

any redemption or call provisions; and

any additional terms of the warrants, including terms, procedures and limitations relating to the exchange or exercise of the warrants.

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DESCRIPTION OF UNITS

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the units that we may offer under this prospectus. While the terms summarized below will apply generally to any units that we may offer, we will describe the particular terms of any series of units in more detail in the applicable prospectus supplement. If we indicate in the prospectus supplement, the terms of any units offered under that prospectus supplement may differ from the terms described below. Specific unit agreements will contain additional important terms and provisions and will be incorporated by reference as an exhibit to the registration statement that includes this prospectus.

General

We may issue units consisting of common stock and warrants. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

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

the designation and terms of the units and of the common stock and warrants comprising the units, including whether and under what circumstances those securities may be held or transferred separately;

any provisions of the governing unit agreement that differ from those described below; and

any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units.

We may issue units in such amounts and in such numbers of distinct series as we determine.

The provisions described in this section, as well as those described under **Description of Capital Stock** and **Description of Warrants** will apply to each unit, as applicable, and to any common stock and warrant included in each unit, as applicable.

Unit Agent

The name and address of the unit agent for any units we offer will be set forth in the applicable prospectus supplement.

Enforceability of Rights by Holders of Units

Each unit agent will act solely as our agent under the applicable unit agreement and will not assume any obligation or relationship of agency or trust with any holder of any unit. A single bank or trust company may act as unit agent for more than one series of units. A unit agent will have no duty or responsibility in case of any default by us under the applicable unit agreement or unit, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a unit may, without the consent of the related unit agent or the holder

of any other unit, enforce by appropriate legal action its rights as holder under any security included in the unit.

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FORMS OF SECURITIES

Each warrant and unit will be represented either by a certificate issued in definitive form to a particular investor or by one or more global securities representing the entire issuance of securities. Unless the applicable prospectus supplement provides otherwise, certificated securities in definitive form and global securities will be issued in registered form. Definitive securities name you or your nominee as the owner of the security, and in order to transfer or exchange these securities or to receive payments other than interest or other interim payments, you or your nominee must physically deliver the securities to the registrar, paying agent or other agent, as applicable. Global securities name a depositary or its nominee as the owner of the warrants or units represented by these global securities. The depositary maintains a computerized system that will reflect each investor's beneficial ownership of the securities through an account maintained by the investor with its broker/dealer, bank, trust company or other representative, as we explain more fully below.

Registered Global Securities

We may issue the warrants and units in the form of one or more fully registered global securities that will be deposited with a depositary or its nominee identified in the applicable prospectus supplement and registered in the name of that depositary or nominee. In those cases, one or more registered global securities will be issued in a denomination or aggregate denominations equal to the portion of the aggregate face amount of the securities to be represented by registered global securities. Unless and until it is exchanged in whole for securities in definitive registered form, a registered global security may not be transferred except as a whole by and among the depositary for the registered global security, the nominees of the depositary or any successors of the depositary or those nominees.

If not described below, any specific terms of the depositary arrangement with respect to any securities to be represented by a registered global security will be described in the prospectus supplement relating to those securities. We anticipate that the following provisions will apply to all depositary arrangements.

Ownership of beneficial interests in a registered global security will be limited to persons, called participants, that have accounts with the depositary or persons that may hold interests through participants. Upon the issuance of a registered global security, the depositary will credit, on its book-entry registration and transfer system, the participants accounts with the respective principal or face amounts of the securities beneficially owned by the participants. Any dealers, underwriters or agents participating in the distribution of the securities will designate the accounts to be credited. Ownership of beneficial interests in a registered global security will be shown on, and the transfer of ownership interests will be effected only through, records maintained by the depositary, with respect to interests of participants, and on the records of participants, with respect to interests of persons holding through participants. The laws of some states may require that some purchasers of securities take physical delivery of these securities in definitive form. These laws may impair your ability to own, transfer or pledge beneficial interests in registered global securities.

So long as the depositary, or its nominee, is the registered owner of a registered global security, that depositary or its nominee, as the case may be, will be considered the sole owner or holder of the securities represented by the registered global security for all purposes under the applicable warrant agreement or unit agreement. Except as described below, owners of beneficial interests in a registered global security will not be entitled to have the securities represented by the registered global security registered in their names, will not receive or be entitled to receive physical delivery of the securities in definitive form and will not be considered the owners or holders of the securities under the applicable warrant agreement or unit agreement. Accordingly, each person owning a beneficial interest in a registered global security must rely on the procedures of the depositary for that registered global security and, if that person is not a participant, on the procedures of the participant through which the person owns its interest, to exercise any rights of a

holder under the applicable warrant agreement or unit agreement. We understand that under existing industry practices, if we request any action of holders or if an owner of a beneficial interest in a registered global security desires to give or take any

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action that a holder is entitled to give or take under the applicable warrant agreement or unit agreement, the depositary for the registered global security would authorize the participants holding the relevant beneficial interests to give or take that action, and the participants would authorize beneficial owners owning through them to give or take that action or would otherwise act upon the instructions of beneficial owners holding through them.

Any payments to holders with respect to warrants or units represented by a registered global security registered in the name of a depositary or its nominee will be made to the depositary or its nominee, as the case may be, as the registered owner of the registered global security. None of us, the warrant agents, the unit agents or any other agent of ours, or agent of the warrant agents or unit agents will have any responsibility or liability for any aspect of the records relating to payments made on account of beneficial ownership interests in the registered global security or for maintaining, supervising or reviewing any records relating to those beneficial ownership interests.

We expect that the depositary for any of the securities represented by a registered global security, upon receipt of any payment to holders of principal, premium, interest or other distribution of underlying securities or other property on that registered global security, will immediately credit participants' accounts in amounts proportionate to their respective beneficial interests in that registered global security as shown on the records of the depositary. We also expect that payments by participants to owners of beneficial interests in a registered global security held through participants will be governed by standing customer instructions and customary practices, as is now the case with the securities held for the accounts of customers or registered in street name, and will be the responsibility of those participants.

If the depositary for any of the securities represented by a registered global security is at any time unwilling or unable to continue as depositary or ceases to be a clearing agency registered under the Exchange Act, and a successor depositary registered as a clearing agency under the Exchange Act is not appointed by us within 90 days, we will issue securities in definitive form in exchange for the registered global security that had been held by the depositary. Any securities issued in definitive form in exchange for a registered global security will be registered in the name or names that the depositary gives to the relevant warrant agent, unit agent or other relevant agent of ours or theirs. It is expected that the depositary's instructions will be based upon directions received by the depositary from participants with respect to ownership of beneficial interests in the registered global security that had been held by the depositary.

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PLAN OF DISTRIBUTION

We may sell securities:

to or through underwriters, brokers or dealers;

through agents;

directly to one or more purchasers in negotiated sales or competitively bid transactions; or

through a block trade in which the broker or dealer engaged to handle the block trade will attempt to sell the securities as agent, but may position and resell a portion of the block as principal to facilitate the transaction; or

through a combination of any of the above methods of sale.

In addition, we may issue the securities as a dividend or distribution or in a subscription rights offering to our existing security holders.

We may directly solicit offers to purchase securities, or agents may be designated to solicit such offers. We will, in the prospectus supplement relating to such offering, name any agent that could be viewed as an underwriter under the Securities Act, and describe any commissions that we must pay. Any such agent will be acting on a best efforts basis for the period of its appointment or, if indicated in the applicable prospectus supplement, on a firm commitment basis. This prospectus may be used in connection with any offering of our securities through any of these methods or other methods described in the applicable prospectus supplement.

The distribution of the securities may be effected from time to time in one or more transactions:

at a fixed price, or prices, which may be changed from time to time;

at market prices prevailing at the time of sale;

at prices related to such prevailing market prices; or

at negotiated prices.

Each prospectus supplement will describe the method of distribution of the securities and any applicable restrictions.

The prospectus supplement with respect to the securities of a particular series will describe the terms of the offering of the securities, including the following:

the name of the agent or any underwriters;

the public offering or purchase price;

any discounts and commissions to be allowed or paid to the agent or underwriters;

all other items constituting underwriting compensation;

any discounts and commissions to be allowed or paid to dealers; and

any exchanges on which the securities will be listed.

If any underwriters or agents are utilized in the sale of the securities in respect of which this prospectus is delivered, we will enter into an underwriting agreement or other agreement with them at the time of sale to them, and we will set forth in the prospectus supplement relating to such offering the names of the underwriters or agents and the terms of the related agreement with them.

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If a dealer is utilized in the sale of the securities in respect of which the prospectus is delivered, we will sell such securities to the dealer, as principal. The dealer may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale.

If we offer securities in a subscription rights offering to our existing security holders, we may enter into a standby underwriting agreement with dealers, acting as standby underwriters. We may pay the standby underwriters a commitment fee for the securities they commit to purchase on a standby basis. If we do not enter into a standby underwriting arrangement, we may retain a dealer-manager to manage a subscription rights offering for us.

Agents, underwriters, dealers and other persons may be entitled under agreements which they may enter into with us to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, and may be customers of, engage in transactions with or perform services for us in the ordinary course of business.

If so indicated in the applicable prospectus supplement, we will authorize underwriters or other persons acting as our agents to solicit offers by certain institutions to purchase securities from us pursuant to delayed delivery contracts providing for payment and delivery on the date stated in the prospectus supplement. Each contract will be for an amount not less than, and the aggregate amount of securities sold pursuant to such contracts shall not be less nor more than, the respective amounts stated in the prospectus supplement. Institutions with whom the contracts, when authorized, may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and other institutions, but shall in all cases be subject to our approval. Delayed delivery contracts will not be subject to any conditions except that:

the purchase by an institution of the securities covered under that contract shall not at the time of delivery be prohibited under the laws of the jurisdiction to which that institution is subject; and

if the securities are also being sold to underwriters acting as principals for their own account, the underwriters shall have purchased such securities not sold for delayed delivery. The underwriters and other persons acting as our agents will not have any responsibility in respect of the validity or performance of delayed delivery contracts.

Certain agents, underwriters and dealers, and their associates and affiliates may be customers of, have borrowing relationships with, engage in other transactions with, or perform services, including investment banking services, for us or one or more of our respective affiliates in the ordinary course of business.

In order to facilitate the offering of the securities, any underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the securities or any other securities the prices of which may be used to determine payments on such securities. Specifically, any underwriters may overallocate in connection with the offering, creating a short position for their own accounts. In addition, to cover overallocations or to stabilize the price of the securities or of any such other securities, the underwriters may bid for, and purchase, the securities or any such other securities in the open market. Finally, in any offering of the securities through a syndicate of underwriters, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the securities in the offering if the syndicate repurchases previously distributed securities in transactions to cover syndicate short positions, in stabilization transactions or otherwise. Any of these activities may stabilize or maintain the market price of the securities above independent market levels. Any such underwriters are not required to engage in these activities and may end any of these activities at any time.

Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in three business days, unless the parties to any such trade expressly agree otherwise. The applicable prospectus supplement may provide that the original issue date for your securities may be more than three scheduled business days after the trade date for your securities. Accordingly, in such a case, if you wish to trade securities on any date prior to the third business day before the original issue date for your securities, you will be required,

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by virtue of the fact that your securities initially are expected to settle in more than three scheduled business days after the trade date for your securities, to make alternative settlement arrangements to prevent a failed settlement.

The securities may be new issues of securities and may have no established trading market. The securities may or may not be listed on a national securities exchange. We can make no assurance as to the liquidity of or the existence of trading markets for any of the securities.

In compliance with the guidelines of the Financial Industry Regulatory Authority, or FINRA, the aggregate maximum discount, commission or agency fees or other items constituting underwriting compensation to be received by any FINRA member or independent broker-dealer will not exceed 8% of the proceeds from any offering pursuant to this prospectus and any applicable prospectus supplement.

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LEGAL MATTERS

The validity of the issuance of the securities offered by this prospectus is being passed upon for us by Wilmer Cutler Pickering Hale and Dorr LLP.

EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this prospectus by reference to our Annual Report on Form 10-K for the year ended December 31, 2013 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

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10,000,000 Shares

Common Stock

PRELIMINARY PROSPECTUS SUPPLEMENT

February , 2015

Joint Book-Running Managers

Leerink Partners

Co-Lead Manager

Deutsche Bank Securities

Wells Fargo Securities

Co-Manager

JMP Securities