

ACHILLION PHARMACEUTICALS INC

Form S-3

September 17, 2010

Table of Contents

As filed with the Securities and Exchange Commission on September 17, 2010

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3
REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

Achillion Pharmaceuticals, Inc.

(Exact name of registrant as specified in its charter)

Delaware

52-2113479

Edgar Filing: ACHILLION PHARMACEUTICALS INC - Form S-3

(State or other jurisdiction of
incorporation or organization)

(I.R.S. Employer
Identification Number)

300 George Street

New Haven, Connecticut 06511-6624

(203) 624-7000

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Michael D. Kishbauch

President and Chief Executive Officer

Achillion Pharmaceuticals, Inc.

300 George Street

New Haven, Connecticut 06511-6624

Phone: (203) 624-7000

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Steven D. Singer, Esq.

Knute Salhus, Esq.

Susan L. Mazur, Esq.

Wilmer Cutler Pickering Hale and Dorr LLP

399 Park Avenue

New York, New York 10022

Telephone: (212) 230-8800

Telecopy: (212) 230-8888

Approximate date of commencement of proposed sale to public: From time to time after the effective date of this Registration Statement.

Edgar Filing: ACHILLION PHARMACEUTICALS INC - Form S-3

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended, or the Securities Act, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering:

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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

Large accelerated filer <input type="checkbox"/>	Accelerated filer <input type="checkbox"/>
Non-accelerated filer <input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company <input checked="" type="checkbox"/>

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be Registered (1)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee (2)
Common Stock, par value \$0.001 per share	26,696,387	\$74,482,920	\$5,311

- (1) Consists of (a) 19,775,101 shares of common stock that the Registrant issued to investors in a private placement on August 20, 2010, (b) 6,921,286 additional shares of common stock issuable upon the exercise of warrants that the Registrant issued to investors in the private placement on August 20, 2010 and (c) an indeterminate number of additional shares of common stock as may from time to time be issued with respect to the foregoing securities as a result of stock splits, stock dividends, reclassifications, recapitalizations, combinations or similar events, which shares shall be deemed registered hereunder pursuant to Rule 416 under the Securities Act.
- (2) Estimated solely for purposes of calculating the registration fee pursuant to Rule 457(c) under the Securities Act, based on average of high and low price per share of the common stock as reported on the NASDAQ Global Market on September 14, 2010.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

Table of Contents

The information in this prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion, dated September 17, 2010

Achillion Pharmaceuticals, Inc.

Common Stock and Warrants

This prospectus relates to the resale from time to time of up to 26,696,387 shares of common stock of Achillion Pharmaceuticals, Inc. by the selling stockholders identified in this prospectus. This prospectus relates solely to the resale of (i) up to an aggregate of 19,775,101 shares of our common stock that we sold to certain selling stockholders and (ii) up to an aggregate of 6,921,286 shares of our common stock that are issuable upon exercise of warrants to purchase common stock issued to selling stockholders. We will not receive any proceeds from the sale of the shares offered by this prospectus.

We are not selling any shares of common stock and will not receive any proceeds from the sale of the shares under this prospectus. Upon the exercise of the warrants for 6,921,286 shares of our common stock by payment of cash, however, we will receive the exercise price of the warrants, which is \$3.1125 per share. The warrants covered by the registration statement of which this prospectus is a part have a net exercise provision that allows the holders to receive a reduced number of shares of our common stock, equal to the aggregate fair value less the total exercise price of the warrant shares being purchased upon conversion, without paying the exercise price in cash.

We have agreed to bear all of the expenses incurred in connection with the registration of these shares. The selling stockholders will pay or assume brokerage commissions and similar charges incurred for the sale of shares of our common stock.

The selling stockholders identified in this prospectus, or their pledgees, donees, transferees or other successors-in-interest, may offer the shares from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices.

Our common stock is traded on the Nasdaq Global Market under the symbol ACHN. On September 15, 2010, the closing sale price of our common stock on the Nasdaq Global Market was \$2.82 per share. You are urged to obtain current market quotations for the common stock.

Investing in our securities involves significant risks. See Risk Factors beginning on page 3.

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.

Prospectus dated _____, 2010.

Table of Contents

TABLE OF CONTENTS

<u>PROSPECTUS SUMMARY</u>	1
<u>THE OFFERING</u>	2
<u>RISK FACTORS</u>	3
<u>SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS</u>	24
<u>USE OF PROCEEDS</u>	25
<u>SELLING STOCKHOLDERS</u>	25
<u>PLAN OF DISTRIBUTION</u>	28
<u>LEGAL MATTERS</u>	29
<u>EXPERTS</u>	29
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	30
<u>INCORPORATION OF CERTAIN INFORMATION BY REFERENCE</u>	30

Table of Contents

PROSPECTUS SUMMARY

This summary highlights important features of this offering and the information included or incorporated by reference in this prospectus. This summary does not contain all of the information that you should consider before investing in our common stock. You should read the entire prospectus carefully, especially the risks of investing in our common stock discussed under Risk Factors.

Achillion Pharmaceuticals, Inc.

We are a biopharmaceutical company focused on the discovery, development and commercialization of innovative treatments for infectious diseases. Within the anti-infective market, we are currently concentrating on the development of antivirals for the treatment of chronic hepatitis C and the development of antibacterials for the treatment of resistant bacterial infections. We are currently focusing our efforts on developing four HCV drug candidates in three distinct classes: ACH-1625, a protease inhibitor for the treatment of chronic hepatitis C, which recently completed phase Ib clinical testing, ACH-1095, a NS4A antagonist also for the treatment of chronic hepatitis C, to which Gilead Sciences, Inc., or Gilead, retains certain future development rights, which is currently being prepared for IND filing, ACH-2684, a high-potency protease inhibitor which is currently in preclinical testing, and ACH-2928, a NS5A inhibitor currently in preclinical testing. In addition, we have established a pipeline of certain other product candidates for which we are currently seeking additional appropriate collaborative partners, but to which we are not devoting significant resources at this time. These product candidates include ACH-702 for the treatment of dermatologic and ophthalmic infections and elvucitabine for the treatment of HIV infection.

2010 Private Placement

On August 18, 2010, we entered into a Securities Purchase Agreement with selected institutional and other accredited investors. The Securities Purchase Agreement provided for us to sell and issue 19,775,101 shares of our common stock at a price of \$2.49 per share, the consolidated closing bid price reported by NASDAQ on August 17, 2010, as well as to sell and issue warrants to purchase 0.35 shares of common stock for each share of our common stock, or the Common Warrants, at a price of \$0.125 per share of common stock underlying each Common Warrant. The Common Warrants, which represent the right to acquire an aggregate of 6,921,286 shares of common stock, have a seven-year term from the date of issuance and will be exercisable at a price of \$3.1125 per share. The Common Stock Warrants have a net exercise provision that allows the holders to receive a reduced number of shares of our common stock, which have an aggregate fair value equal to the total exercise price of the warrant shares being purchased upon conversion, without paying the exercise price in cash. We received \$50.1 million in gross proceeds from the sale of common stock and Common Warrants pursuant to the Securities Purchase Agreement.

The Securities Purchase Agreement and the form of warrant issued pursuant thereto have been filed as exhibits to this registration statement of which this prospectus is a part.

We issued these shares of common stock and the warrants in reliance on an exemption from registration pursuant to Section 4(2) of the Securities Act of 1933, as amended, or Rule 506 of Regulation D promulgated thereunder. We are now registering for resale under this prospectus the shares of common stock issued to the investors in the private placement and the shares of common stock underlying the warrants issued in the private placement.

Table of Contents

THE OFFERING

Common stock offered by selling stockholders	26,696,387 shares of our common stock, including 6,921,286 shares issuable upon the exercise of warrants.
Use of proceeds	We will not receive any proceeds from the sale of shares in this offering.
Nasdaq Global Market symbol	ACHN

Corporate 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 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.

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.

We have not authorized anyone to provide you with information different from that contained or incorporated by reference in this prospectus. The selling stockholders are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of common stock.

Table of Contents

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below before purchasing our common stock. The risks and uncertainties described below are not the only ones facing our company. Additional risks and uncertainties may also impair our business operations. If any of the following risks actually occur, our business, financial condition or results of operations would likely suffer. In that case, the trading price of our common stock could fall, and you may lose all or part of the money you paid to buy our common stock.

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 HCV candidates, ACH-1625, ACH-1095, ACH-2684 and ACH-2928, for the treatment of chronic hepatitis C infection. 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 develop drug formulations that will deliver the appropriate drug exposures in longer term clinical trials;

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

establishing commercial manufacturing arrangements with third-party manufacturers;

launching commercial sales of the drugs, whether alone or in collaboration with others;

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

our ability to identify, enter into and maintain collaboration agreements with appropriate strategic partners for our compounds. We are initiating a phase IIa clinical trial for ACH-1625, are completing preclinical studies of ACH-2684 and are continuing preclinical studies of ACH-2928. Positive results from clinical trials or 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. Our most advanced HCV compound, ACH-1625, has been tested in human clinical trials for periods no longer than five days. 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 of ACH-1625, ACH-2684 or ACH-2928 or the completed clinical trials for ACH-1625 may not be predictive of the results we may obtain in later stage trials.

We filed an IND for ACH-1625 in August 2010 and anticipate that we will file an IND for ACH-1095 in the fourth quarter of 2010. To date, clinical trials of ACH-1625 have been conducted in Europe under a clinical trial application, or CTA, approved by the health authorities of Belgium and Muldova. There can be no assurance that we will gain FDA approval of the IND applications for these compounds, and if we are not able to advance these compounds, our business may be significantly harmed. Even if we obtain FDA approval of the IND applications, the clinical development timelines and costs may be greater than anticipated. Further, there can be no assurance that planned long term toxicology studies in animals will indicate a safety and tolerability profile appropriate for continued dosing in human subjects.

Table of Contents

We do not expect any of our drug candidates to be commercially available for at least several years, if at all.

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 June 30, 2010, our accumulated deficit was approximately \$218 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 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 segments of the pharmaceutical industry that are highly competitive and rapidly changing. Many large pharmaceutical and biotechnology companies, academic institutions, governmental agencies and other public and private research organizations are pursuing the development of novel drugs that target infectious diseases. 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 and may become available in the future for the treatment of chronic hepatitis C, serious hospital-based bacterial infections and HIV infection. We would expect ACH-1625, ACH-1095, ACH-2684, ACH-2928, ACH-702 and elvucitabine to compete with the following approved drugs and drug candidates currently under development:

If approved, our protease inhibitors, ACH-1625 and ACH-2684, our NS4A antagonist, ACH-1095, and our NS5A inhibitor, ACH-2928, would compete with drugs currently approved for the treatment of hepatitis C, the interferon-alpha-based products from Roche (Pegasys and Roferon-A) or Schering-Plough (Intron-A or Peg-Intron) and the ribavirin based products from Schering-Plough (Rebetrol), Roche (Copegus) or generic versions sold by various companies. In addition, our HCV compounds may compete with the interferon and ribavirin-based drugs currently in development such as Valeant's ribavirin analog (Viramidine) and Human Genome Sciences' Albuferon. Other products in multiple classes including protease inhibitors, polymerase inhibitors (nucleoside and non-nucleoside), NS5A inhibitors, toll-like receptors and cyclophilin inhibitors are also under development for the treatment of hepatitis C by companies such as Abbott, Anadys, Astra-Zeneca, Avila Therapeutics, Boehringer Ingelheim, Bristol-Myers Squibb, Enanta, Gilead, GlaxoSmithKline, Human Genome Sciences, Idenix, Intermune, Johnson & Johnson, Presidio, Medivir, Merck, Novartis, Pfizer, Pharmasset, Roche, Valeant and Vertex.

ACH-702, if developed and approved, would compete with drugs currently marketed for the treatment of tuberculosis infections including first-line drugs: Nydrazid (isoniazid) by Sandoz Pharmaceuticals, Rifadin (rifampin) by Sanofi-Aventis, Myambutol (ethambutol) by X-Gen Pharmaceuticals and Pyrazinamide (pyrazinamide) by Effcon Laboratories or second-line drugs: Avelox (moxifloxacin) by Bayer, Amikacin (amikacin) by Teva Pharmaceuticals, Kantrex

Table of Contents

(kanamycin) by Bristol-Myers Squibb, Capastat (capreomycin) by Eli Lilly, Cipro (ciprofloxacin) by Bayer, Trecator (ethionamide) by Wyeth, Seromycin (cycloserine) by Eli Lilly, and PASER (p-aminosalicylic acid) by Jacobus Pharmaceuticals. In addition, ACH-702 may compete with other drugs currently under development for the treatment of tuberculosis infections including: PA-824 by Chiron/Novartis and TMC207 by Tibotec Pharmaceuticals. In addition, ACH-702 may compete with other drugs currently marketed or under development for the treatment of topical skin infections including Altanax by GlaxoSmithKline and XOMA-629 by Xoma Therapeutics Ltd. and may compete with drugs for serious ophthalmic infections including: Besivance by Bausch and Lomb, Vigamox by Alcon Pharmaceuticals and Zymar by Allergan. We may also compete with the following companies that have a strategic interest in the discovery, development and marketing of drugs for the treatment of bacterial infections: Abbott, Astra-Zeneca, Aventis, Bristol-Myers Squibb, Cubist, Eli Lilly, GlaxoSmithKline, Merck, Novartis, Pfizer, Roche and Wyeth.

Elvucitabine, if developed and approved, elvucitabine would compete with the NRTIs currently marketed for treatment of HIV infection, including: Epivir (lamivudine), Retrovir (AZT), Ziagen (abacavir), Combivir (lamivudine + AZT), Trizivir (lamivudine + AZT + abacavir) and Epzicom (lamivudine + abacavir) from GlaxoSmithKline, Hivid (ddC) from Hoffman-La Roche, Emtriva (FTC), Viread (tenofovir) and Truvada (FTC + tenofovir) from Gilead and Videx EC, Videx (ddI) and Zerit (d4T) from Bristol-Myers Squibb. In addition, elvucitabine may compete with other NRTIs currently under development for HIV by companies such as Avexa, Medivir, and Koronis. Other drugs in other classes recently approved for treatment of HIV infection include Selzentry (maraviroc, an entry inhibitor) from Pfizer and Isentress (raltegravir, an integrase inhibitor) from Merck. In addition, there are other classes of drugs under development for the treatment of HIV infection by companies such as Abbott, Boehringer Ingelheim, GlaxoSmithKline, Johnson & Johnson, Myriad, Roche and Schering-Plough.

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.

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

Table of Contents

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. Key members of our senior team include Michael Kishbauch, our president and chief executive officer, and Dr. Milind Deshpande, our executive vice president and chief scientific officer. 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.

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.

We believe that our existing cash and cash equivalents will be sufficient to support our current operating plan for at least one year. Our operating plan may change as a result of many factors, including:

the costs involved in the clinical development, manufacturing and formulation of ACH-1625;

the costs associated with IND preparation, including the required CMC work, related to ACH-1095;

the costs associated with the preclinical development and manufacturing of ACH-2684 and ACH-2928;

the partnership opportunities we may pursue for elvucitabine or ACH-702;

our ability to enter into corporate collaborations and the terms and success of these collaborations;

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 market that may impact our ability to obtain capital in the future;

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

Edgar Filing: ACHILLION PHARMACEUTICALS INC - Form S-3

competing technological and market developments currently unknown to us.

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 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.

Table of Contents

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 your ownership interest will be diluted, and the terms may include adverse liquidation or other preferences that adversely affect your rights as a stockholder. Since August 2008, we have issued an aggregate of 42,306,006 shares of our common stock in two private placements and one public offering as well as warrants to purchase an aggregate of 9,599,950 shares of our common stock, all of which remain outstanding. These financings substantially diluted our existing stockholders. Stockholders will be further diluted if, and to the extent, any warrants are exercised. Debt financing, if available, may involve covenants that limit or restrict our ability to take specific actions such as incurring additional debt, making capital expenditures or declaring dividends, or may involve immediate repayment of the debt under certain circumstances. For example, each of our debt agreements contains certain subjective acceleration clauses, such that upon the occurrence of a material adverse change in our financial condition, business or operations in the view of the lenders, amounts outstanding under the agreement may become immediately due and payable. If we raise additional funds through collaborations, strategic alliances and licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or drug candidates, or grant licenses on terms that are not favorable to us.

Our business has a substantial risk of product liability claims. If we are unable to obtain 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 currently have clinical trial insurance in an amount equal to up to \$10.0 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.

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;

Table of Contents

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

meet applicable regulatory standards;

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;

enrollment in our clinical trials may be slower than we currently anticipate or participants may drop out of our clinical trials at a higher rate than we currently anticipate, 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;

we might have to suspend or terminate our clinical trials if the participants 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, including noncompliance with regulatory requirements; and

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

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 February 2007, we announced that we discontinued further clinical development of ACH-806, our first NS4A antagonist candidate, which was determined to have positive antiviral effect in a proof-of-concept clinical trial in HCV infected patients, but also to elevate serum creatinine levels, a marker of kidney function. There can be no assurance that we have identified the source of the serum creatinine elevation and that we will not see a similar outcome in human clinical trials with that program's successor compound, ACH-1095 or that observations in preclinical studies of ACH-1095 in one species may not limit or even preclude its clinical use. Accordingly, there can be no assurance that this, or another type of toxicity, will not arise in future clinical trials. Although we anticipate that we will file an IND for ACH-1095 in the fourth quarter of 2010, there can be no assurance that we will gain the agency's approval of the IND application for ACH-1095, and if we are not able to advance ACH-1095, our business may be significantly harmed. Even if we are successful in gaining FDA approval of our IND application for ACH-1095 and advance to human clinical trials, the clinical development timelines and costs may be greater than anticipated. Further, there can be no assurance that planned long term toxicology studies in animals will indicate a safety and tolerability profile appropriate for continued dosing in human subjects. We do not expect any of our drug candidates to be commercially available for several years.

Table of Contents

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 elvucitabine, ACH-1095, ACH-702, ACH-1625 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 may not prove to be safe;

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

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

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 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 obtain 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, as a result of a pre-IND consultation with the FDA on the most appropriate clinical development program for ACH-702, as well as the complexity of the mechanism of action of ACH-702, the complexity of the preclinical results noted with ACH-702, and the evolving regulatory climate for antibacterials, we decided to pursue further discussions with the FDA before initiating human clinical studies, and we are currently not devoting significant resources to this compound. While the FDA provided guidance on an appropriate path toward regulatory approval for topical administration for ACH-702, the Division of Anti-Infective and Ophthalmology Products referred our request for additional guidance on systemic administration of ACH-702 to the Division of Special Pathogen and Transplant Products (the DSPTP). We are currently assessing our strategic and development plans for ACH-702 for topical administration, and plan to consider resubmission to the DSPTP for systemic administration. Even after receiving guidance from the DSPTP, if any, there can be no assurance that the FDA will approve our IND application once filed. Furthermore, 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

Table of Contents

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. 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;

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

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;

serious and unexpected drug-related side effects experienced by participants in our clinical trials; or

the placement by the FDA of a clinical hold on a trial.

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 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. For example, in 2007, we experienced delays in patient enrollment in connection with our phase II trial of elvucitabine in HIV infected patients who have failed a HAART regimen which included Epivir (lamivudine) due to the strict entry criteria for this trial. As a result, we expanded the number of sites at which the trial was conducted and changed the protocol of the trial to include additional treatment with elvucitabine after the initial 14 days of treatment. We may also face competition for subjects to enroll in our ACH-1625 clinical trials and may have to expand the number of sites at which the trials are conducted. 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.

Table of Contents

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.

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 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 an untitled letter or 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 agency, 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

Table of Contents

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.

Risks Relating to Our Common Stock

The number of shares of our common stock outstanding has increased substantially as a result of our private placement, and certain purchasers beneficially own significant blocks of our common stock. Upon registration under the Securities Act of 1933, as amended, or the Securities Act, these shares will be generally available for resale in the public market.

Upon the closing of the private placement on August 20, 2010, we issued to a group of institutional and other accredited investors a total of 19,775,101 shares of our common stock, plus common stock warrants to purchase a total of 6,921,286 additional shares of common stock. The issuance of these shares and warrants resulted in substantial dilution to stockholders who held our common stock prior to the private placement. As of September 15, 2010, the purchasers in the private placement, together with their affiliates, owned, in the aggregate, approximately 53% of our outstanding common stock, assuming the exercise of the common stock warrants. As a result, these stockholders, if acting together, may have significant influence over the outcome of any stockholder vote, including the election of directors and other significant business matters that require stockholder approval. Such other significant business matters could include, for example, the approval of mergers or other business combination transactions.

Under the registration rights agreement for the private placement, we have agreed to file the registration statement of which this prospectus is a part with the Securities and Exchange Commission, or the SEC, covering the resale of the 19,775,101 shares of common stock issued in the private placement and the 6,921,286 shares of common stock issuable upon exercise of the warrants. Upon such registration of the shares issued in the private placement, these shares will become generally available for immediate resale in the public market. The market price of our common stock could fall due to an increase in the number of shares available for sale in the public market.

We may be required to dilute our existing stockholders further in connection with capital raising activities. Additionally, the market price of our common stock may fall due to the increased number of shares available in the public market.

In connection with capital raising activities, we may be required to dilute our existing stockholders substantially. For example, in January and February 2010, we issued an aggregate of 11,816,250 shares of our common stock in an underwritten offering. Additionally, in August 2008, we issued 10,714,655 shares of our common stock, plus common stock warrants to purchase a total of 2,678,664 additional shares of stock in a private placement. Stockholders will be further diluted if, and to the extent, any investors exercise their warrants. The issuance of these shares and warrants resulted in substantial dilution to stockholders who held our common stock prior to the issuance. 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 registration statements filed with the SEC that were declared effective by the SEC on October 30, 2008 and October 16, 2009, making such shares available for immediate resale in the public market.

Table of Contents

We also entered into a Standby Equity Distribution Agreement with YA Global Master SPV Ltd. on July 1, 2009 whereby we have the option, at our sole discretion, to sell up to \$15.0 million of common stock to YA Global. The sale of shares of our common stock pursuant to the SEDA will have a dilutive impact on our stockholders and may cause the market price of our common stock to decline.

In addition, amounts remain available for the future issuance of common stock, preferred stock and/or warrants that we may issue from time to time under the shelf registration statement on Form S-3 that we filed in October 2009. If we issue additional securities pursuant to this shelf registration statement, these securities would be available for immediate resale in the public market.

The market price of our common stock could fall due to an increase in the number of shares available for sale in the public market.

Our executive officers, directors and principal stockholders own a large percentage of our voting common stock and could limit our stockholders' influence on corporate decisions or could delay or prevent a change in corporate control.

As of September 15, 2010, our directors, executive officers and current holders of more than 5% of our outstanding common stock, together with their affiliates and related persons, beneficially own, in the aggregate, approximately 91% of our outstanding common stock. As a result, these stockholders, if acting together, have the ability to determine the outcome of all matters submitted to our stockholders for approval, including the election and removal of directors and any merger, consolidation or sale of all or substantially all of our assets and other extraordinary transactions. 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 ownership may have the effect of:

delaying, deferring or preventing a change in control of our company;

entrenching our management and/or board;

impeding a merger, consolidation, takeover or other business combination involving our company; or

discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of our company.

Our stock price is likely to 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, 2007 to September 15, 2010, our stock price has ranged from a low of \$0.68 to a high of \$19.61. 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 our planned clinical trials of ACH-1625;

the timing of our IND preparation, including the required CMC work, related to ACH-1095;

the results of our preclinical development and manufacturing of ACH-2684 and ACH-2928;

Table of Contents

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

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

the initiation of, material developments in, or conclusion of litigation to enforce or defend any of our intellectual property rights;

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

general and industry-specific economic conditions that may affect our research and development expenditures;

the results of clinical trials conducted by others on drugs 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; including sales made under this prospectus;

changes in the structure of health care payment systems;

period-to-period fluctuations in our financial results; and

low trading volume of our common stock.

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.

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,

Table of Contents

financial performance and stock 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.

Prior to our initial public offering in 2006, as a private company with limited resources, we maintained a small finance and accounting staff. 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 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, investors could lose confidence in the reliability of our financial statements, which could result in a decrease in the value of our common stock.

We do not anticipate paying cash dividends, and accordingly stockholders must rely on stock appreciation for any return on their investment in us.

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.

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 have entered into a collaboration arrangement with Gilead for the development and commercialization of certain of our HCV compounds involving NS4A antagonism. We have also entered into a license agreement with GCA Therapeutics, Ltd., or GCAT, for elvucitabine for the treatment of both HBV and HIV infection in mainland China, Hong Kong, and Taiwan. We may enter into additional collaborative arrangements in the future. We are continuing partnering efforts for elvucitabine with regional companies and institutions, including those in South America, South Africa and elsewhere. We do not plan to clinically advance elvucitabine or ACH-702 independently. We also may enter into alliances with major biotechnology or pharmaceutical companies to jointly develop other specific drug candidates and to jointly commercialize them if they are approved. In such alliances, we would expect our biotechnology or pharmaceutical collaborators to provide substantial funding, as well as significant capabilities in clinical development, regulatory affairs, marketing and sales. We may not be successful in entering into any such alliances on favorable terms, if at all. Even if we do succeed in securing such alliances, we may not be able to maintain them if, for example, development or approval of a drug candidate is delayed or sales of an approved drug are disappointing. 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.

Table of Contents

If a collaborative partner terminates or fails to perform its obligations under agreements with us, the development and commercialization of our drug candidates could be delayed or terminated.

If Gilead, GCAT or another future collaborative partner does not devote sufficient time and resources to collaboration arrangements with us, we may not realize the potential commercial benefits of the arrangement, and our results of operations may be adversely affected. For example, in May 2009, Gilead notified us that they do not intend to initiate clinical development of ACH-1095, and we subsequently amended our collaboration so that we may continue to develop ACH-1095, subject to certain rights of Gilead. Had we not come to an agreed upon arrangement, the program would have been terminated, and our business may have been significantly harmed. Additionally, pursuant to the terms of the amended agreement, if Gilead elects not to exercise their right to opt in to ACH-1095 development, we will then become responsible for the development and commercialization of ACH-1095. Gilead maintains the right to terminate the continuing portions of the collaboration related to other NS4A antagonist compounds, and may exercise that right at any time with requisite notice to us.

In addition, if any existing or future collaboration partner were to breach or terminate its arrangements with us, the development and commercialization of the affected drug candidate could be delayed, curtailed or terminated because we may not have sufficient financial resources or capabilities to continue development and commercialization of the drug candidate on our own. Under our collaboration agreement with Gilead, Gilead may terminate the collaboration for any reason at any time upon 30 days notice. If Gilead were to exercise this right, the development and commercialization of our NS4A compounds for HCV infection would be adversely affected.

Much of the potential revenue from our existing and future collaborations will consist of contingent payments, such as payments for achieving development milestones and royalties payable on sales of drugs developed. The milestone and royalty revenues that we may receive under these collaborations will depend upon our collaborator's ability to successfully develop, introduce, market and sell new products. In addition, our collaborators may decide to enter into arrangements with third parties to commercialize products developed under our existing or future collaborations using our technologies, which could reduce the milestone and royalty revenue that we may receive, if any. In many cases we will not be involved in these processes and accordingly will depend entirely on our collaborators. Our collaboration partners may fail to develop or effectively commercialize products using our products or technologies because they:

decide not to devote the necessary resources due to internal constraints, such as limited personnel with the requisite scientific expertise, limited cash resources or specialized equipment limitations, or the belief that other drug development programs may have a higher likelihood of obtaining regulatory approval or may potentially generate a greater return on investment;

do not have sufficient resources necessary to carry the drug candidate through clinical development, regulatory approval and commercialization; or

cannot obtain the necessary regulatory approvals.

In addition, a collaborator may decide to pursue a competitive drug candidate developed outside of the collaboration. In particular, Gilead is currently developing other products for the treatment of chronic hepatitis C, and the results of its development efforts could affect its commitment to our drug candidates, including Gilead's desire to rejoin us in the future development of ACH-1095. If a collaboration partner fails to develop or effectively commercialize drug candidates or drugs for any of

Table of Contents

these reasons, we may not be able to replace the collaboration partner with another partner to develop and commercialize a drug candidate or drugs under the terms of the collaboration. We may also be unable to obtain, on terms acceptable to us, a license from such collaboration partner to any of its intellectual property that may be necessary or useful for us to continue to develop and commercialize a drug candidate.

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 do not have the ability to independently conduct clinical trials for our drug candidates, and 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. 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 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. 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 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 manufacturers have met our 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 manufacturers could delay clinical development or regulatory approval of our drug candidates or commercialization of any approved products. If for some reason our current contract manufacturers cannot perform as agreed, we may be required to replace them. Although we believe that there are a number of potential replacements given our manufacturing processes are not manufacturer 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.

Table of Contents

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 intend to 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 plan to enter into arrangements with other companies for commercialization. For example, we have entered into an agreement with Gilead for the development and commercialization of certain of our HCV candidates involving NS4A antagonism. 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.

If we are unable to meet the operational, legal and financial challenges that we encounter with international partnerships, we may not be able to grow our business.

We recently entered into an agreement with GCAT which grants GCAT, through its Chinese joint venture with Tianjing Institute of Pharmaceutical Research, the right to clinically develop and commercialize elvucitabine in mainland China, Hong Kong and Taiwan. Conducting business in China exposes us to a variety of risks and uncertainties that are unique to China. The economy of China has been transitioning from a planned economy to a market-oriented economy. Although in recent years the Chinese government has implemented measures emphasizing the utilization of market forces for economic reform, the reduction of state ownership of productive assets and the establishment of sound corporate governance in business enterprises, a substantial portion of productive assets in China is still owned by the Chinese government. In addition, the Chinese government continues to play a significant role in regulating industrial development. It also exercises significant control over China's economic growth through the allocation of resources, controlling payment of foreign currency-denominated obligations, setting monetary policy and providing preferential treatment to particular industries or companies. Efforts by the Chinese government to slow the pace of growth of the Chinese economy could result in interruptions of our development and commercialization efforts in China. In addition, the Chinese legal system is a civil law system based on written statutes. Unlike common law systems, it is a system in which decided legal cases have little precedential value. In 1979, the Chinese government began to promulgate a comprehensive system of laws and regulations governing economic matters in general. Accordingly, we cannot predict the effect of future developments in the Chinese legal system, including the promulgation of new laws, changes to existing laws or the interpretation or enforcement thereof, or the preemption of local regulations by national laws. Our development and commercialization efforts in China could be materially harmed by any changes in the political, legal or economic climate in China or the inability to enforce applicable Chinese laws and regulations. If such commercialization efforts in China are materially harmed, our collaboration partner may not be able to develop and commercialize elvucitabine in China and our elvucitabine business may not grow.

Table of Contents

If physicians and patients do not accept our future drugs, we may be unable to generate significant revenue, if any.

Even if ACH-1625, ACH-1095, ACH-2684, ACH-2928, ACH-702, elvicitabine 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;

the cost-effectiveness of our product candidates;

the availability of reimbursement from managed care plans, the government and other third-party payors;

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; and

the effectiveness of marketing and distribution support.

If our approved drugs fail to achieve market acceptance, we would not be able to generate significant revenue.

The development of directly acting antivirals (DAAs) 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 four DAA compounds, in three distinct classes, for treatment of chronic HCV infection. Other companies are also developing DAAs in these classes, as well as other classes. The current standard of care for HCV infection includes immunomodulatory therapy with pegylated interferon and ribavirin. No DAAs are currently approved for treatment of chronic HCV infection.

The development plans for our compounds include treatment regimens with our inhibitors in combination with the current standard of care (pegylated interferon and ribavirin), our inhibitors with the current standard of care plus another DAA, or our inhibitors with one or more DAAs without concomitant interferon or 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. 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 chronic HCV infection 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.

Table of Contents

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 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 affect on our development and commercialization plans and activities.

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 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.

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. Congress is considering 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,

Table of Contents

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 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.

Healthcare reform measures, if implemented, could hinder or prevent our commercial success.

There have been, and likely will continue to be, legislative and regulatory proposals at the federal and state levels directed at broadening the availability of healthcare and containing or lowering the cost of healthcare. We cannot predict the initiatives that may be adopted in the future. The continuing efforts of the government, insurance companies, managed care organizations and other payors of healthcare services to contain or reduce costs of healthcare may adversely affect:

the demand for any drug products for which we may obtain regulatory approval;

our ability to set a price that we believe is fair for our products;

our ability to generate revenues and achieve or maintain profitability;

the level of taxes that we are required to pay; and

the availability of capital.

Risks Related to Patents and Licenses

If we are unable to adequately protect our drug candidates, or if we infringe the rights of others, our ability to successfully commercialize our drug candidates will be harmed.

We own or hold exclusive licenses to several U.S. issued patents and U.S. pending provisional and non-provisional patent applications, as well as pending PCT applications and associated non-US patents and patent applications. Our success depends in part on our ability to obtain 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. In addition, 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

Table of Contents

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 lag 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. In the event that a third party has also filed a U.S. patent application relating to our drug candidates or a similar invention, we may have to participate in interference proceedings declared by the U.S. Patent Office to determine priority of invention in the United States. 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 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.

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 a sublicense from Vion Pharmaceuticals and a license from 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 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.

Litigation regarding patents, patent applications 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 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 Vion Pharmaceuticals 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. Pursuant to our license agreement with Emory University and our research

Table of Contents

collaboration and license agreement with Gilead Sciences, Emory and Gilead have the primary right, but not an obligation, to bring actions against an infringing third party. However, if Gilead or Emory elects not to bring an action, we 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.

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

The legal regime protecting intellectual property rights in China is weak. Because the Chinese legal system 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. Accordingly, we may not be able to effectively protect our intellectual property rights in China under the GCAT agreement.

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 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.

Table of Contents

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any prospectus supplement and the documents we incorporate by reference in this prospectus 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 herein, in any prospectus supplement or in the documents we incorporate by reference in this prospectus other than a statement of historical fact, may be a forward-looking statement. For example, we may, in some cases, use words such as anticipate, believe, could, estimate, expect, intend, may, plan, project, should, will, would or other words that convey uncertainty of future events to identify these forward-looking statements. 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 above under the heading Risk Factors. These important factors include the factors that we identify in the documents that we incorporate by reference in this prospectus. 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, any prospectus supplement or the documents we incorporate by reference in this prospectus as being applicable to all related forward-looking statements wherever they appear in this prospectus, any prospectus supplement or the documents incorporated by reference. While we may elect to update forward-looking statements wherever they appear in this prospectus, any prospectus supplement or the documents incorporated by reference, we do not assume, and specifically disclaim, any obligation to do so, whether as a result of new information, future events or otherwise.

Table of Contents

USE OF PROCEEDS

We will not receive any proceeds from the sale of the shares offered pursuant to this prospectus. The selling stockholders will receive all of the proceeds from the sale of the shares of common stock offered by this prospectus. For information about the selling stockholders, see Selling Stockholders.

The selling stockholders will pay any underwriting discounts and commissions and expenses incurred by the selling stockholders for brokerage, accounting, tax or legal services or any other expenses incurred by the selling stockholders in disposing of the shares. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including all registration and filing fees and fees and expenses of our counsel and our accountants.

A portion of the shares covered by this prospectus are issuable upon exercise of warrants to purchase common stock. Upon any exercise for cash of the common warrants, the selling stockholders will pay us the exercise price of the warrants. The cash exercise price of the common warrants is \$3.1125 per share. The warrants covered by the registration statement of which this prospectus is a part have a net exercise provision that allows the holders to receive a reduced number of shares of our common stock, equal to the aggregate fair value less the total exercise price of the warrant shares being purchased upon conversion, without paying the exercise price in cash. If all of the warrants are exercised for cash by the selling stockholders, we would receive up to approximately \$21,542,500 in gross proceeds from those exercises. We will use any cash we receive upon the exercise of the warrants for the funding of our research and development programs and otherwise for general corporate purposes and not for the satisfaction of any portion of our debt (other than payment of trade payables in the ordinary course of business or prior practices) or to redeem any common stock or common stock equivalents.

SELLING STOCKHOLDERS

The shares of common stock covered by this prospectus consist of shares of common stock and shares of common stock issuable upon the exercise of warrants to purchase common stock that we issued to the selling stockholders on August 20, 2010. The warrants held by the selling stockholders are exercisable at any time in whole or in part and expire on August 20, 2017. The table below sets forth, to our knowledge, information about the selling stockholders as of September 15, 2010.

We do not know when or in what amounts the selling stockholders may offer shares for sale. The selling stockholders may sell any or all of the shares offered by this prospectus. Because the selling stockholders may offer all or some of the shares pursuant to this offering, and because there are currently no agreements, arrangements or understandings with respect to the sale of any of the shares, we cannot estimate the number of shares that will be held by the selling stockholders after completion of this offering. For purposes of this table, however, we have assumed that, after completion of this offering, none of the shares covered by this prospectus will be held by the selling stockholders. Such shares are subject to limitations on sale pursuant to an agreement between us and the selling stockholders as described below under Plan of Distribution .

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to shares of our common stock. Unless otherwise indicated below, to our knowledge, the selling stockholders named in the table have sole voting and investment power with respect to the shares of common stock beneficially owned by it. The number representing the number of shares of common stock beneficially owned prior to the offering for each selling stockholder includes (i) all shares held by a selling stockholder prior to the private placement, plus (ii) all shares purchased by the selling stockholder pursuant to the private placement and being offered pursuant to the prospectus, as well as (iii) all options or other derivative securities which are exercisable within 60 days of September 15, 2010,

Table of Contents

including the warrants issued in the private placement, held by a selling stockholder. Under the terms of the warrants, the selling stockholders may not exercise the warrants to the extent such conversion or exercise would cause such selling stockholder, together with its affiliates, to beneficially own a number of shares of common stock which would exceed 19.99% of our then outstanding shares of common stock following such exercise, excluding for purposes of such determination shares of common stock issuable upon exercise of the warrants which have not been exercised. The percentages of shares owned after the offering are based on 58,323,428 shares of our common stock outstanding as of September 15, 2010, which includes the outstanding shares of common stock offered by this prospectus. The inclusion of any shares in this table does not constitute an admission of beneficial ownership by the person named below.

Throughout this prospectus, when we refer to the selling stockholders, we mean the persons listed in the table below, as well as the pledgees, donees, assignees, transferees, successors and others who later hold any of the selling stockholders' interests, and when we refer to the shares of our common stock being offered by this prospectus on behalf of the selling stockholders, we are referring to the shares of our common stock sold and the shares of our common stock issuable upon the exercise of the warrants issued in the private placement, collectively, unless otherwise indicated.

The selling stockholders may have sold or transferred, in transactions exempt from the registration requirements of the Securities Act, some or all of their shares of common stock since the date on which the information in the table below is presented. Information about the selling stockholders may change over time.

Name of Selling Stockholder(1)	Shares of Common Stock Beneficially Owned Prior to Offering		Number of Shares of Common Stock Being Offered	Shares of Common Stock to be Beneficially Owned After Offering (2)	
	Number	Percentage		Number	Percentage
Domain Partners VIII, L.P. (9)	10,763,507(3)	17.61%	10,763,507	0	*
DP VIII Associates, L.P. (10)	79,867(4)	*	79,867	0	*
Clarus Lifesciences II, L.P. (11)	12,259,427(5)	19.99%	6,581,928	5,677,499	9.52%
Quaker BioVentures II, L.P. (12)	6,560,241(6)	10.93%	6,560,241	0	*
A.M. Pappas Life Science Ventures IV, L.P. (13)	2,592,452(7)	4.39%	2,587,679	4,773	*
PV IV CEO Fund L.P. (14)	123,392(8)	*	123,165	227	*

* Less than one percent

- (1) The term selling stockholders includes donees, pledgees, transferees or other successors-in-interest selling shares received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other non-sale related transfer.
- (2) Assumes the sale of all shares being offered in this prospectus.
- (3) The number of shares of common stock includes 2,790,539 shares issuable upon the exercise of common stock warrants for an exercise price of \$3.1125 per share.
- (4) The number of shares of common stock includes 20,706 shares issuable upon the exercise of common stock warrants for an exercise price of \$3.1125 per share.
- (5) Includes shares held by Clarus Ventures LLC. The number of shares of common stock includes (i) 1,290,922 shares issuable upon the exercise of common stock warrants for an exercise price of \$3.53 per share and (ii) 1,706,426 shares issuable upon the exercise of common stock warrants for an exercise price of \$3.1125 per share.
- (6) The number of shares of common stock includes 1,700,803 shares issuable upon the exercise of common stock warrants for an exercise price of \$3.1125 per share.
- (7) The number of shares of common stock includes 670,880 shares issuable upon the exercise of common stock warrants for an exercise price of \$3.1125 per share.

Table of Contents

- (8) The number of shares of common stock includes 31,932 shares issuable upon the exercise of common stock warrants for an exercise price of \$3.1125 per share.
- (9) James C. Blair, Brian H. Dovey, Jesse I. Treu, Kathleen K. Schoemaker, Brian K. Halak and Nicole Vitullo (collectively, the **Managing Members**) are each managing members of One Palmer Square Associates VIII, LLC, which is the general partner of Domain Partners VIII, L.P. The Managing Members disclaim beneficial ownership except to the extent of their pecuniary interest therein.
- (10) The Managing Members are each managing members of One Palmer Square Associates VIII, LLC, which is the general partner of DP VIII Associates, L.P. The Managing Members disclaim beneficial ownership except to the extent of their pecuniary interest therein.
- (11) Clarus Ventures II GP, L.P. (**Clarus II GPLP**) is the sole general partner of Clarus Lifesciences II, L.P. and Clarus Ventures II, LLC (**Clarus II GPLLC**) is the sole general partner of Clarus II GPLP. Nicholas Galakatos, Dennis Henner, Jeffrey Leiden, Robert Liptak, Nicholas Simon, Michael Steinmetz, and Kurt Wheeler (collectively, the **Managers**) are all of the managing directors of Clarus II GPLLC. The Managers may be deemed to be the beneficial owners of the shares listed above.
- (12) Quaker BioVentures Capital II, L.P. is the general partner of Quaker BioVentures II, L.P., and Quaker BioVentures Capital II, LLC is the general partner of Quaker BioVentures Capital II, L.P. Brenda D. Gavin, Ira M. Lubert and P. Sherrill Neff (collectively, the **Members**) are the members of Quaker BioVentures Capital II, LLC. The Members disclaim beneficial ownership except to the extent of their pecuniary interest therein.
- (13) The sole general partner of A.M. Pappas Life Science Ventures IV, L.P. is AMP&A Management IV, LLC, which has a management agreement with A.M. Pappas & Associates, LLC (**Pappas**). Arthur M. Pappas is the sole managing member of Pappas. Mr. Pappas may be deemed to be the beneficial owner of the shares listed above.
- (14) The sole general partner of PV IV CEO Fund L.P. is AMP&A Management IV, LLC, which has a management agreement with Pappas. Arthur M. Pappas is the sole managing member of Pappas. Mr. Pappas may be deemed to be the beneficial owner of the shares listed above.

Relationships with the Selling Stockholders

Pursuant to the securities purchase agreement between us and the selling stockholders, we agreed to take any and all actions as may be required to nominate Nicole Vitullo of Domain Associates, L.L.C. be elected to the Board of Directors by September 30, 2010 or, if a vacancy should occur on the Company's Board of Directors before that time, to elect Ms. Vitullo to fill that vacancy. In addition, Nicholas Simon of Clarus Lifesciences II, L.P. has served on our Board of Directors since August 2008 and as a member of our compensation committee since October, 2008. Michael Grey, who has served on our Board of Directors since November 2001 and as a member of our audit committee since September 2002, joined Pappas Ventures as a venture partner in January 2010. Pappas Ventures has advised us that he is not involved in the decision making process of Pappas Ventures regarding any trading of our securities. With the exception of the foregoing, the selling stockholders have not had any position, office or other material relationship with us or our affiliates.

In connection with the sale of shares to the selling stockholders, we entered into a securities purchase agreement and a registration rights agreement with the selling stockholders. The registration statement, of which this prospectus is a part, has been filed in accordance with the registration rights agreement and securities purchase agreement.

Table of Contents

PLAN OF DISTRIBUTION

Each selling stockholder and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their shares of common stock on the Nasdaq Global Market or any other stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. A selling stockholder may use any one or more of the following methods when selling shares:

ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;

purchases by a broker-dealer as principal and resale by the broker-dealer for its account;

an exchange distribution in accordance with the rules of the applicable exchange;

privately negotiated transactions;

settlement of short sales entered into after the effective date of the registration statement of which this prospectus is a part;

broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;

a combination of any such methods of sale;

through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise; or

any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus. The selling stockholders have the sole and absolute discretion not to accept any purchase offer or make any sale of shares if they deem the purchase price to be unsatisfactory at any particular time.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with NASD Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with NASDR IM-2440.

In connection with the sale of the common stock or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of the common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which

Edgar Filing: ACHILLION PHARMACEUTICALS INC - Form S-3

require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

Table of Contents

The selling stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be underwriters within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each selling stockholder has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the Common Stock.

We are required to pay certain fees and expenses incurred by the Company incident to the registration of the shares. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

In addition, any securities covered by this prospectus which qualify for sale pursuant to Rule 144 under the Securities Act may be sold under Rule 144 rather than under this prospectus. Each selling stockholder has advised us that they have not entered into any written or oral agreements, understandings or arrangements with any underwriter or broker-dealer regarding the sale of the resale shares. There is no underwriter or coordinating broker acting in connection with the proposed sale of the resale shares by the selling stockholders.

We agreed to keep this prospectus effective until the earlier of (i) the date all of the Registrable Securities covered by such Registration Statement have been sold and (ii) the later of (a) the second anniversary of the Effectiveness Date or (b) the date upon which the Registrable Securities covered by such Registration Statement may be sold without volume restrictions pursuant to Rule 144(b)(1) as determined by our counsel pursuant to a written opinion letter to such effect, addressed and acceptable to our transfer agent and the affected Holders. The resale shares will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale shares may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale shares may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of shares of the common stock by the selling stockholders or any other person. We will make copies of this prospectus available to the selling stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale.

LEGAL MATTERS

The validity of the issuance of the common stock offered by this prospectus will be 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 the Annual Report on Form 10-K for the year ended December 31, 2009 have been so incorporated in reliance on the reports of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

Table of Contents

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., Room 1580, 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 a part of this prospectus or any prospectus supplement.

This prospectus is part of a registration statement that we filed with the SEC. The registration statement contains more information than this prospectus regarding us and the securities, including exhibits and schedules. You can obtain a copy of the registration statement from the SEC at any address listed above or from the SEC's web site.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

We are incorporating by reference certain documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information in the documents incorporated by reference is considered to be part of this prospectus. Statements contained in documents that we file with the SEC and that are incorporated by reference in this prospectus will automatically update and supersede information contained in this prospectus, including information in previously filed documents or reports that have been incorporated by reference in this prospectus, to the extent the new information differs from or is inconsistent with the old information. Except as set forth below, the SEC file number for the documents incorporated by reference in this prospectus is 001-33095.

We have filed or may file the following documents with the SEC and they are incorporated herein by reference as of their respective dates of filing:

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2009, as filed with the SEC on March 11, 2010;

Our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2010 and June 30, 2010, as filed with the SEC on May 10, 2010 and August 13, 2010;

Our Current Reports on Form 8-K, as filed with the SEC on January 22, 2010, February 2, 2010, February 3, 2010, March 4, 2010, March 12, 2010, April 6, 2010, June 11, 2010 and August 20, 2010;

All documents filed by us pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act (1) after the date of the filing of this registration statement and prior to its effectiveness and (2) until all of the common stock to which this prospectus relates has been sold or the offering is otherwise terminated, except in each case for information contained in any such filing where we indicate that such information is being furnished and is not to be considered filed under the Exchange Act, will be deemed to be incorporated by reference in this prospectus and the accompanying prospectus supplement and to be a part hereof from the date of filing of such documents; and

The description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on October 18, 2006. A statement contained in a document incorporated by reference into this prospectus shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus, any prospectus supplement or in any other subsequently filed document which is also incorporated in this prospectus 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.

Table of Contents

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:

300 George Street

New Haven, CT 06511-6624

Phone: (203) 624-7000

You should rely only on the information contained in this prospectus, including information incorporated by reference as described above, or any prospectus supplement or that we have specifically referred you to. We have not authorized anyone else to provide you with different information. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of those documents or that any document incorporated by reference is accurate as of any date other than its filing date. You should not consider this prospectus to be an offer or solicitation relating to the securities in any jurisdiction in which such an offer or solicitation relating to the securities is not authorized. Furthermore, you should not consider this prospectus to be an offer or solicitation relating to the securities if the person making the offer or solicitation is not qualified to do so, or if it is unlawful for you to receive such an offer or solicitation.

Table of Contents**PART II****INFORMATION NOT REQUIRED IN PROSPECTUS****Item 14. Other Expenses of Issuance and Distribution**

The following table sets forth the fees and expenses to be incurred in connection with the registration of the securities being registered hereby, all of which will be borne by us. Except for the SEC registration fee, all amounts are estimates.

Description	Amount
SEC registration fee	\$ 5,311
Accounting fees and expenses	20,000
Legal fees and expenses	40,000
Miscellaneous expenses	5,000
Total expenses	\$ 70,311

Item 15. Indemnification of Directors and Officers

Section 102 of the Delaware General Corporation Law allows a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. We have included such a provision in our Restated Certificate of Incorporation.

Section 145 of the Delaware General Corporation Law provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against amounts paid and expenses incurred in connection with an action or proceeding to which he is or is threatened to be made a party by reason of such position, if such person shall have acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal proceeding, if such person had no reasonable cause to believe his conduct was unlawful; provided that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the adjudicating court determines that such indemnification is proper under the circumstances.

Our Restated Certificate of Incorporation includes a provision that eliminates the personal liability of its directors for monetary damages for breach of fiduciary duty as a director, except for liability:

for any breach of the director's duty of loyalty to Achillion or its stockholders;

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

under section 174 of the Delaware General Corporation Law regarding unlawful dividends and stock purchases; or

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

These provisions are permitted under Delaware law. Our Restated Certificate of Incorporation provides that:

we must indemnify our directors and officers to the fullest extent permitted by Delaware law;

we may, to the extent authorized from time to time by our Board of Directors, indemnify our other employees and agents to the same extent that we indemnified our officers and directors; and

II-1

Table of Contents

in the event we do not assume the defense in a legal proceeding, we must advance expenses, as incurred, to our directors and executive officers in connection with a legal proceeding to the fullest extent permitted by Delaware law.

The indemnification provisions contained in our Restated Certificate of Incorporation and Amended and Restated Bylaws are not exclusive of any other rights to which a person may be entitled by law, agreement, vote of stockholders or disinterested directors or otherwise. In addition, we maintain insurance on behalf of our directors and executive officers insuring them against any liability asserted against them in their capacities as directors or officers or arising out of such status.

Item 16. Exhibits

Exhibit Number	Description
4.1	Certificate of Incorporation of the Registrant. Previously filed as an exhibit to the Registrant's Registration Statement on Form S-1 (File No. 333-108104) and incorporated herein by reference.
4.2	Bylaws of the Registrant. Previously filed as an exhibit to the Registrant's Registration Statement on Form S-1 (File No. 333-108104) and incorporated herein by reference.
4.3	Form of Common Stock Certificate. Previously filed as an exhibit to the Registrant's Registration Statement on Form S-1 (File No. 333-108104) and incorporated herein by reference.
5.1	Opinion of Wilmer Cutler Pickering Hale and Dorr LLP, counsel to the Registrant.
10.1	Securities Purchase Agreement, dated as of August 18, 2010, by and between the Registrant and the purchasers identified in Exhibit A thereto.
10.2	Form of Common Stock Warrant pursuant to the Securities Purchase Agreement.
10.3	Registration Rights Agreement, dated as of August 18, 2010, by and between the Registrant and the Purchasers named therein.
10.4	Amendment No. 1 to Third Amended and Restated Investor Rights Agreement, dated as of August 20, 2010, by and among the Registrant and the Stockholders named therein.
23.1	Consent of PricewaterhouseCoopers LLP (Independent Registered Public Accounting Firm).
23.2	Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included on signature page).

Item 17. Undertakings

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

- (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

Table of Contents

- (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement; and
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;
provided, however, that paragraphs (1)(i), (1)(ii) and (1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Securities and Exchange Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.
- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act to any purchaser:
- (A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing information required by section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however,* that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

Table of Contents

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

Table of Contents**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New Haven, State of Connecticut, on September 17, 2010.

ACHILLION PHARMACEUTICALS, INC.

By: /s/ MICHAEL D. KISHBAUCH
Michael D. Kishbauch

President and Chief Executive Officer

SIGNATURES AND POWER OF ATTORNEY

We, the undersigned officers and directors of Achillion Pharmaceuticals, Inc., hereby severally constitute and appoint Michael D. Kishbauch and Mary Kay Fenton and each of them singly, our true and lawful attorneys with full power to any of them, and to each of them singly, to sign for us and in our names in the capacities indicated below the registration statement on Form S-3 filed herewith and any and all pre-effective and post-effective amendments to said registration statement and any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and to file the same with all exhibits thereto, and the other documents in connection therewith, with the Securities and Exchange Commission, and generally to do all such things in our name and behalf in our capacities as officers and directors to enable Achillion Pharmaceuticals, Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said registration statement and any and all amendments thereto.

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

Signature	Title	Date
/s/ MICHAEL D. KISHBAUCH Michael D. Kishbauch	President and Chief Executive Officer and Director (Principal Executive Officer)	September 17, 2010
/s/ MARY KAY FENTON Mary Kay Fenton	Vice President, Chief Financial Officer (Principal Financial Officer and Accounting Officer)	September 17, 2010
/s/ JASON FISHERMAN, M.D. Jason Fisherman, M.D.	Director	September 17, 2010
/s/ GARY FRASHIER Gary Frashier	Director	September 17, 2010
/s/ MICHAEL GREY Michael Grey	Director	September 17, 2010

Table of Contents

/s/ DENNIS LIOTTA	Director	September 17, 2010
Dennis Liotta		
/s/ DAVID SCHEER	Director	September 17, 2010
David Scheer		
/s/ NICHOLAS J. SIMON	Director	September 17, 2010
Nicholas J. Simon		
/s/ ROBERT VAN NOSTRAND	Director	September 17, 2010
Robert Van Nostrand		
/s/ DAVID WRIGHT	Director	September 17, 2010
David Wright		

Table of Contents

EXHIBIT INDEX

Exhibit Number	Description
4.1	Certificate of Incorporation of the Registrant. Previously filed as an exhibit to the Registrant's Registration Statement on Form S-1 (File No. 333-108104) and incorporated herein by reference.
4.2	Bylaws of the Registrant. Previously filed as an exhibit to the Registrant's Registration Statement on Form S-1 (File No. 333-108104) and incorporated herein by reference.
4.3	Form of Common Stock Certificate. Previously filed as an exhibit to the Registrant's Registration Statement on Form S-1 (File No. 333-108104) and incorporated herein by reference.
5.1	Opinion of Wilmer Cutler Pickering Hale and Dorr LLP, counsel to the Registrant.
10.1	Securities Purchase Agreement, dated as of August 18, 2010, by and between the Registrant and the purchasers identified in Exhibit A thereto
10.2	Form of Common Stock Warrant pursuant to the Securities Purchase Agreement.
10.3	Registration Rights Agreement, dated as of August 18, 2010, by and between the registrant and the Purchasers named therein.
10.4	Amendment No. 1 to Third Amended and Restated Investor Rights Agreement, dated as of August 20, 2010, by and among the Registrant and the Stockholders named therein.
23.1	Consent of PricewaterhouseCoopers LLP (Independent Registered Public Accounting Firm).
23.2	Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included on signature page).

Indicates confidential treatment requested as to certain portions, which portions were omitted and filed separately with the Securities and Exchange Commission pursuant to a confidential treatment request