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

FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended September 30, 2012

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File Number 001-33095

ACHILLION PHARMACEUTICALS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**52-2113479**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
300 George Street, New Haven, CT	**06511**
(Address of principal executive offices)	**(Zip Code)**

(203) 624-7000
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

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

Large accelerated filer	☐	Accelerated filer	☒
Non-accelerated filer	☐ (Do not check if smaller reporting company)	Smaller reporting company	☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of November 1, 2012, the registrant had 79,517,386 shares of Common Stock, $0.001 par value per share, outstanding.

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

Achillion Pharmaceuticals, Inc.
Balance Sheets
(in thousands, except per share amounts)
(Unaudited)

	September 30, 2012	December 31, 2011
Assets		
Current assets:		
Cash and cash equivalents	$ 20,841	$ 16,110
Marketable securities	60,066	37,456
Accounts and other receivables	463	103
Prepaid expenses and other current assets	2,290	1,423
Total current assets	83,660	55,092
Marketable securities	9,741	26,377
Fixed assets, net	1,308	994
Deferred financing costs	10	15
Restricted cash	152	152
Total assets	$ 94,871	$ 82,630
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 5,866	$ 4,795
Accrued expenses	6,549	4,008
Current portion of long-term debt	345	141
Total current liabilities	12,760	8,944
Long-term debt	436	229
Deferred revenue	—	2,489
Total liabilities	13,196	11,662
Commitments and contingencies		
Stockholders' Equity:		
Common Stock, $0.001 par value; 200,000 shares authorized: 79,517 and 69,788 shares issued and outstanding at September 30, 2012 and December 31, 2011, respectively	80	70
Additional paid-in capital	393,073	346,518
Accumulated deficit	(311,523)	(275,600)
Accumulated other comprehensive income (loss)	45	(20)
Total stockholders' equity	81,675	70,968
Total liabilities and stockholders' equity	$ 94,871	$ 82,630

The accompanying notes are an integral part of these financial statements.

Achillion Pharmaceuticals, Inc.
Statements of Comprehensive Loss
(in thousands, except per share amounts)
(Unaudited)

	For the Three Months Ended September 30,		For the Nine Months Ended September 30,	
	2012	2011	2012	2011
Revenue	$ —	$ 64	$ 2,489	$ 185
Operating expenses				
Research and development	12,641	8,615	30,562	25,504
General and administrative	2,647	1,922	7,965	6,581
Total operating expenses	15,288	10,537	38,527	32,085
Loss from operations	(15,288)	(10,473)	(36,038)	(31,900)
Other income (expense)				
Interest income	49	44	168	114
Interest expense	(16)	(9)	(53)	(35)
Net loss	(15,255)	(10,438)	(35,923)	(31,821)
Total comprehensive loss	(15,222)	(10,485)	(35,858)	(31,866)
Basic and diluted net loss per share	$ (0.20)	$ (0.15)	$ (0.50)	$ (0.51)
Weighted average number of shares used in computing basic and diluted net loss per share	74,647	69,725	72,099	62,392

The accompanying notes are an integral part of these financial statements.

Achillion Pharmaceuticals, Inc.
Statements of Cash Flows
(in thousands)
(Unaudited)

	Nine Months Ended September 30,	
	2012	2011
Cash flows from operating activities		
Net loss	$ (35,923)	$ (31,821)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	319	236
Noncash stock based compensation	2,669	1,984
Noncash interest expense	—	9
(Gain) loss on disposal of equipment	—	(110)
Premium on purchases of marketable securities	(622)	(470)
Amortization of premium on marketable securities	314	351
Changes in operating assets and liabilities:		
Accounts and other receivables	(360)	153
Prepaid expenses and other assets	(867)	129
Accounts payable	1,071	1,396
Accrued expenses	2,541	2,021
Deferred revenue	(2,489)	—
Net cash used in operating activities	(33,347)	(26,122)
Cash flows from investing activities		
Purchases of fixed assets	(628)	(593)
Purchases of marketable securities	(71,051)	(72,405)
Maturities of marketable securities	65,450	35,694
Net cash used in investing activities	(6,229)	(37,304)
Cash flows from financing activities		
Proceeds from sale of common stock, net of issuance costs	41,682	60,947
Proceeds from exercise of stock options	2,126	511
Proceeds from sale of common stock under Employee Stock Purchase Plan	88	75
Payment of deferred financing costs	—	(18)
Borrowings of debt	609	438
Repayments of debt	(198)	(512)
Net cash provided by financing activities	44,307	61,441
Net increase (decrease) in cash and cash equivalents	4,731	(1,985)
Cash and cash equivalents, beginning of period	16,110	25,373
Cash and cash equivalents, end of period	$ 20,841	$ 23,388
Supplemental disclosure of cash flow information		
Cash paid for interest	$ 46	$ 20
Supplemental disclosure of noncash financing activities		
Cashless exercise of warrants	$ 14,106	$ —

The accompanying notes are an integral part of these financial statements.

Achillion Pharmaceuticals, Inc.

Notes to Financial Statements
(in thousands, except per share amounts)
(Unaudited)

1. Nature of the Business

Achillion Pharmaceuticals, Inc. (the "Company") was incorporated on August 17, 1998 in Delaware. The Company was established to discover, develop and commercialize innovative anti-infective drug therapies. The Company is devoting substantially all of its efforts towards product research and development.

The Company incurred losses of $297,661 from inception through September 30, 2012 and had an accumulated deficit of $311,523 at September 30, 2012, which includes preferred stock dividends recognized until the Company's initial public offering in 2006. The Company has funded its operations primarily through the sale of equity securities.

The Company believes that its existing cash, cash equivalents and marketable securities will be sufficient to support its current operating plan through at least September 30, 2013. However, the Company's operating plan may change as a result of many factors, including but not limited to:

- the costs involved in the clinical development, manufacturing and formulation of sovaprevir (formerly known as ACH-1625), ACH-2684 and ACH-3102;
- the Company's ability to, and its choice whether to, enter into corporate collaborations for its hepatitis C ("HCV") candidates and the terms and success of these collaborations;
- the costs involved in obtaining regulatory approvals for the Company's drug candidates;
- the scope, prioritization and number of programs the Company pursues;
- the costs involved in preparing, filing, prosecuting, maintaining, enforcing and defending patent and other intellectual property claims;
- the Company's ability to raise incremental debt or equity capital, including any changes in the credit market that may impact its ability to obtain capital in the future;
- the Company's acquisition and development of new technologies and drug candidates; and
- competing technological and market developments currently unknown to the Company.

Certain prior period amounts have been reclassified to conform to the current year's presentation. The premiums paid on the purchase of marketable securities were reclassified from investing activities to operating activities on the Statement of Cash Flows for the nine months ended September 30, 2011.

2. Accounting Standards Updates

In June 2011, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2011-05 "Comprehensive Income: Presentation of Comprehensive Income." Under the amendment, an entity has the option to present the total of comprehensive income, the components of net income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. This amendment, therefore, eliminated the option to present the components of other comprehensive income as part of the statement of changes in stockholders' equity. The amendment did not change the items that must be reported in other comprehensive income or when an item of other comprehensive income must be reclassified to net income. In December 2011, the FASB issued ASU No. 2011-12, "Comprehensive Income: Deferral of the Effective Date for Amendments to the Presentation of Reclassifications of Items Out of Accumulated Other Comprehensive Income in ASU No. 2011-05" ("ASU 2011-12"). ASU 2011-12 deferred changes in Update 2011-05 that relate to the presentation of reclassification adjustments. ASU 2011-12 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2011. The Company adopted this guidance as of January 1, 2012 and elected the single continuous statement option. As this guidance relates to presentation only, the adoption of this guidance did not have any other effect on the Company's financial statements.

In May 2011, the FASB issued ASU 2011-04, "Fair Value Measurement (Topic 820): Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and International Financial Reporting Standards ("IFRS")." ASU 2011-04 represents converged guidance between generally accepted accounting principles in the United States ("U.S. GAAP") and IFRS resulting in common requirements for measuring fair value and for disclosing information about fair value measurements. This new guidance is effective for interim and annual periods beginning after December 15, 2011. The Company adopted this guidance as of January 1, 2012. The adoption of ASU 2011-04 did not have a material impact on the Company's condensed consolidated financial statements.

3. Basis of Presentation

The accompanying unaudited financial statements of the Company should be read in conjunction with the audited financial statements and notes as of and for the year ended December 31, 2011 included in the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission ("SEC") on March 8, 2012. The accompanying financial statements have been prepared in accordance with U.S. GAAP for interim financial information, in accordance with the instructions to Form 10-Q and the guidance in Article 10 of Regulation S-X. Accordingly, since they are interim financial statements, the accompanying financial statements do not include all of the information and disclosures required by U.S. GAAP for complete financial statements. The accompanying financial statements reflect all adjustments, consisting of normal recurring adjustments, that are, in the opinion of management, necessary for a fair statement of the results of operations for the interim periods presented. Interim results are not necessarily indicative of results for a full year.

The preparation of financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect amounts reported in the financial statements and notes thereto. A discussion of the Company's critical accounting policies and management estimates is described in "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in Part I, Item II of this quarterly report on Form 10-Q.

4. Financing Activities

In August 2012, the Company issued 6,368 shares of the Company's common stock, par value $0.001 per share, at a price per share of $6.57, in a registered direct offering to funds managed by QVT Financial LP. The shares were offered and sold pursuant to a registration statement on Form S-3 and a related prospectus supplement filed with the SEC on August 30, 2012. The offering resulted in net proceeds to the Company of $41,682.

5. Earnings (Loss) Per Share ("EPS")

Basic EPS is calculated by dividing net income or loss attributable to common stockholders by the weighted average common stock outstanding. Diluted EPS is calculated by adjusting weighted average common stock outstanding for the dilutive effect of common stock options and warrants. In periods in which a net loss is recorded, no effect is given to potentially dilutive securities, since the effect would be antidilutive. Securities that could potentially dilute basic EPS in the future were not included in the computation of diluted EPS because to do so would have been antidilutive. Potentially dilutive securities were as follows as of September 30, 2012 and 2011:

	September 30,	
	2012	2011
Options	5,704	5,684
Warrants	5,369	9,664
Total potentially dilutive securities outstanding	11,073	15,348

6. Collaboration Arrangements

Gilead Sciences, Inc.

In November 2004, the Company entered into a research collaboration and license agreement with Gilead Sciences, Inc. ("Gilead") pursuant to which the Company agreed to collaborate exclusively with Gilead to develop and commercialize compounds for the treatment of chronic hepatitis C which inhibit HCV replication through a novel mechanism of action targeting the HCV NS4A protein. In February 2012, following on-going discussions between the Company and Gilead, Gilead provided a notice of termination of the collaboration as neither party was devoting significant time to advancing the compounds under the agreement. The Company retains the right to develop ACH-1095, an NS5A antagonist, although it does not have current plans to do so.

The Company received $10,000 from Gilead upon the execution of the license agreement, of which $2,000 was allocated to the fair value of the preferred stock purchased. The remaining $8,000 of the non-refundable up-front license fee, as well as a $2,000 milestone achieved during the period prior to achievement of proof-of-concept, were accounted for under the proportionate performance model.

During the nine months ended September 30, 2012 and 2011, the Company recognized revenue related to external costs billed by the Company to Gilead of $0 and $185, respectively, under the license agreement.

During the nine months ended September 30, 2011, the Company did not recognize any revenue related to the amortization of deferred revenue as it was unable to estimate its total performance obligations under the collaboration. During the nine months ended September 30, 2012, effective with the termination of the collaboration, the Company recognized the remaining $2,489 of deferred revenue as it no longer has any future obligations under the collaboration.

GCA Therapeutics, Ltd.

In February 2010, the Company entered into a license agreement (the "Agreement") with GCA Therapeutics, Ltd. ("GCAT") for elvucitabine, the Company's nucleoside reverse transcriptase inhibitor for the treatment of both hepatitis B virus ("HBV") infection and human immunodeficiency virus ("HIV") infection. The Agreement was amended and restated in March 2010. The exclusive license grants GCAT the right, through a Chinese joint venture with Tianjing Institute of Pharmaceutical Research, to clinically develop and commercialize elvucitabine in mainland China, Hong Kong and Taiwan.

Under the terms of the Agreement, GCAT, through a sublicense agreement with a Chinese joint venture, T&T Pharma Co., Ltd., will assume all development and regulatory responsibility and associated costs for elvucitabine. There was no financial impact upon the signing of the Agreement. The Company will be eligible to receive development milestones and royalties on net sales in those territories.

The Agreement may be terminated by either party based upon material breaches by the other party, effective 90 days after providing written notice to the breaching party, if the breaching party fails to cure its material breach.

The Company may terminate the Agreement upon 30 days written notice in the event GCAT fails to meet any of the development or commercialization diligence milestones by the deadlines specified in the Agreement, or may terminate upon 90 days written notice in the event of a change of corporate control. In the event of a change of control, as defined in the Agreement, the Company shall pay GCAT termination fees, in an amount determined based upon specified progress milestones.

7. Marketable Securities

The Company applies the provisions of Accounting Standards Codification ("ASC") 820, "*Fair Value Measurements and Disclosures,"* for financial assets and liabilities measured on a recurring basis which requires disclosure that establishes a framework for measuring fair value. The guidance requires that fair value measurements be classified and disclosed in one of the three categories:

Level 1: Quoted prices in active markets for identical assets and liabilities that the reporting entity has the ability to access at the measurement date;

Level 2: Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly; or

Level 3: Unobservable inputs.

The fair value of the Company's marketable securities of $69,807 and $63,833 as of September 30, 2012 and December 31, 2011, respectively, are valued based on level 2 inputs. The Company's investments consist mainly of U.S. government and agency securities, government sponsored bond obligations and certain other corporate debt securities. Fair value is determined by taking into consideration valuations obtained from third-party pricing services. The third-party pricing services utilize industry standard valuation models, for which all significant inputs are observable, either directly or indirectly, to estimate fair value. These inputs include reported trades of and broker/dealer quotes on the same or similar securities; issuer credit spreads; benchmark securities; and other observable inputs. The Company classifies its entire investment portfolio as available for sale as defined in ASC 320, "*Debt and Equity Securities*." Securities are carried at fair value with the unrealized gains (losses) reported as a separate component of stockholders' equity within accumulated other comprehensive income.

The unrealized gain (loss) from marketable securities was $45 and $(20) at September 30, 2012 and December 31, 2011, respectively.

As of September 30, 2012 and December 31, 2011, none of the Company's investments were determined to be other than temporarily impaired.

The following table summarizes the Company's investments:

	September 30, 2012				December 31, 2011			
	Amortized Cost	Unrealized Gain	Unrealized (Loss)	Estimated Fair Value	Amortized Cost	Unrealized Gain	Unrealized (Loss)	Estimated Fair Value
Commercial Paper	$39,185	$ 45	—	$39,230	$19,488	$ 11	—	$19,499
Corporate Debt Securities	28,028	4	(4)	28,028	12,866	—	(18)	12,848
Government and Agency Securities	2,549	—	—	2,549	28,499	4	(17)	28,486
Certificate of Deposit	—	—	—	—	3,000	—	—	3,000
Total	$69,762	$ 49	(4)	$69,807	$63,853	$ 15	(35)	$63,833

8. Accrued Expenses

Accrued expenses consist of the following:

	September 30, 2012	December 31, 2011
Accrued compensation	$ 2,033	$ 1,169
Accrued research and development expenses	3,891	2,341
Accrued professional fees	342	281
Other accrued expenses	283	217
Total	$ 6,549	$ 4,008

Accrued research and development expenses are comprised of amounts owed to third-party contract research organizations, clinical investigators, laboratories and data managers for research and development work performed on behalf of the Company.

9. Debt

Debt consists of the following:

	September 30, 2012	December 31, 2011
2011 Credit Facility, payable in monthly installments through March 2015, with fixed interest of 6.44% to 6.79% per annum	$ 781	$ 370
Total debt	781	370
Less: current portion	(345)	(141)
Total long-term debt, net of current portion	$ 436	$ 229

In March 2011, the Company entered into a Master Security Agreement for a $2,000 Capital Expenditure Line of Credit, (the "2011 Credit Facility") with Webster Bank. Under the 2011 Credit Facility, the Company can draw down equipment loan advances for the purchase of new laboratory equipment through March 2013. The purchased equipment serves as collateral for the 2011 Credit Facility. Through September 30, 2012, the Company had drawn down a total of $1,047 under the 2011 Credit Facility.

The fair value for this debt would be classified as a level 2 measurement due to the use of inputs based on similar liabilities in the market. At this time, the carrying value approximates fair value.

10. Stock Based Compensation

The Company's 2006 Stock Incentive Plan, as amended ("2006 Plan"), is administered by the Company's Board of Directors and provides for the grant of incentive stock options, nonstatutory stock options, restricted stock, restricted stock units, stock appreciation rights and other stock based awards. The Company's officers, employees, consultants, advisors and directors are eligible to receive awards under the 2006 Plan; however, incentive stock options may only be granted to employees. Options granted are exercisable for a period determined by the Company, but in no event longer than ten years from the date of the grant. Options generally vest ratably over four years. There were 7,189 shares available to be granted under the 2006 Plan as of September 30, 2012.

A summary of the status of the Company's stock option activity for the nine months ended September 30, 2012 is presented in the table and narrative below:

	Options	Weighted Average Exercise Price
Outstanding at January 1, 2012	6,610	$ 4.40
Granted	254	6.86
Exercised	(797)	2.67
Cancelled	(27)	3.38
Forfeited	(336)	5.33
Outstanding at September 30, 2012	5,704	$ 4.70
Options exercisable at September 30, 2012	3,215	$ 4.55
Weighted-average fair value of options granted during the period		$ 4.96

The Company utilizes the Black-Scholes option pricing model for determining the estimated fair value for stock based awards. The Black-Scholes model requires the use of assumptions which determine the fair value of the stock based awards. The assumptions used to value options granted are as follows:

	For the Nine Months Ended	
	September 30, 2012	September 30, 2011
Expected term of option	5.0 - 6.1 years	5.0 - 6.1 years
Expected volatility	88 - 90%	87 - 88%
Risk free interest rate	0.83 - 1.33%	1.19 - 2.57%
Expected dividend yield	0%	0%

Total compensation expense recorded in the accompanying statements of comprehensive loss associated with option grants made to employees was $847 and $615 for the three months ended September 30, 2012 and 2011, respectively. Total compensation expense recorded in the accompanying statements of operations associated with option grants made to employees was $2,450 and $1,828 for the nine months ended September 30, 2012 and 2011, respectively. The Company recorded no tax benefit related to these options since the Company currently maintains a full valuation allowance on its deferred tax assets.

As of September 30, 2012, the intrinsic value of the options outstanding was $34,119, of which $20,364 related to vested options and $13,755 related to unvested options. The intrinsic value of stock options is calculated based on the difference between the exercise prices of the common stock underlying the awards and the quoted stock price of the Company's common stock as of the reporting date.

As of September 30, 2012, the total compensation cost related to unvested options not yet recognized in the financial statements is approximately $7,183, net of estimated forfeitures, and the weighted average period over which this amount is expected to be recognized is 1.4 years.

11. Stockholders' Equity

Changes in stockholders' equity for the nine months ended September 30, 2012 and 2011 were as follows:

	For the Nine Months Ended September 30,	
	2012	2011
Balance at December 31, 2011 and 2010	$ 70,968	$ 50,544
Net loss	(35,923)	(31,821)
Stock based compensation	2,669	1,984
Exercise of stock options	2,126	511
Change in unrealized gain on marketable securities	65	(45)
Issuance of common stock	41,682	60,947
Issuance of common stock under the Employee Stock Purchase Plan	88	75
Balance at September 30, 2012 and 2011	$ 81,675	$ 82,195

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This quarterly report on Form 10-Q contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, that involve risks and uncertainties. All statements other than statements relating to historical matters including statements to the effect that we "believe," "expect," "anticipate," "plan," "target," "intend" and similar expressions should be considered forward-looking statements. Our actual results could differ materially from those discussed in the forward-looking statements as a result of a number of important factors, including factors discussed in this section and elsewhere in this quarterly report on Form 10-Q, including those discussed in Part II, Item 1A of this report under the heading "Risk Factors," and the risks discussed in our other filings with the Securities and Exchange Commission. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect management's analysis, judgment, belief or expectation only as the date hereof. We assume no obligation to update these forward-looking statements to reflect events or circumstances that arise after the date hereof.

Overview

We are a biopharmaceutical company that was established to discover, develop and commercialize innovative treatments for infectious diseases. Within the anti-infective market, we are currently concentrating on the development of antivirals for the treatment of chronic hepatitis C infection, or HCV, and the development of antibacterials for the treatment of resistant bacterial infections. We are currently focusing our efforts on developing the following drug candidates for the treatment of HCV:

- Sovaprevir, formerly ACH-1625, a NS3 protease inhibitor being investigated for the treatment of HCV, currently in phase II clinical development;
- ACH-2684, a NS3 protease inhibitor being investigated for the treatment of HCV, currently in phase I clinical development;
- ACH-2928, a NS5A inhibitor for the potential treatment of HCV, which recently completed phase I clinical development; and
- ACH-3102, a NS5A inhibitor being investigated for the treatment of HCV, currently in phase I and II clinical development.

In addition, we have established a pipeline of certain antibacterial product candidates for which we are currently seeking 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 ACH-2881 for the treatment of serious resistant bacterial infections, including methicillin resistant staphylococcus aureus.

We have devoted and are continuing to devote substantially all of our efforts toward product research and development. We have incurred losses of $298 million from inception through September 30, 2012 and had an accumulated deficit of $312 million at September 30, 2012, which includes preferred stock dividends recognized until our initial public offering in 2006. Our net losses were $35.9 million and $31.8 million for the nine months ended September 30, 2012 and 2011, respectively.

We have funded our operations primarily through proceeds from the sale of equity securities, including our initial public offering in October 2006, private placements of our common stock in August 2008 and August 2010 and registered offerings of our common stock in January 2010, June 2011 and August 2012;

We expect to incur substantial and increasing losses for at least the next several years as we seek to:

- continue clinical testing of sovaprevir, ACH-2684, and ACH-3102; and
- identify and progress additional drug candidates.

In August 2012, we issued 6,367,853 shares of our common stock in a registered direct offering with funds managed by QVT financial LP. We received net proceeds of $41.7 million.

We will need substantial additional financing to obtain regulatory approvals, fund operating losses, and, if deemed appropriate, establish manufacturing and sales and marketing capabilities, which we will seek to raise through public or private equity or debt financings, collaborative or other arrangements with third parties or through other sources of financing. Such funds may not be available on terms favorable to us, if at all.

In addition to the risks associated with companies at our current stage of development, we cannot assure you that we will successfully complete our research and development, obtain adequate patent protection for our technology, obtain necessary government regulatory approval for drug candidates we develop, find and maintain appropriate collaboration partners or that any approved drug candidates will be commercially viable. In addition, we may not be profitable even if we succeed in commercializing any of our drug candidates.

Financial Operations Overview

Revenue

To date, we have not generated revenue from the sale of any drugs. The majority of our revenue recognized to date has been derived from our former collaboration with Gilead to develop compounds for use in treating chronic hepatitis C. During the nine months ended September 30, 2012 and 2011 we recognized $2.5 million and $185,000, respectively, under this collaboration agreement.

Upon initiating the collaboration with Gilead in 2004, we received a payment of $10.0 million, which included an equity investment by Gilead determined to be worth approximately $2.0 million. The remaining $8.0 million, as well as a $2.0 million milestone achieved during the period prior to proof-of-concept, was accounted for under the proportionate performance model. Revenue under the proportionate performance model was recognized as effort under the collaboration was incurred. Payments made by us to Gilead in connection with this collaboration were recognized as a reduction of revenue.

In February 2012, following on-going discussions between us and Gilead, Gilead provided a notice of termination of the collaboration as neither party was devoting significant time to advancing the compounds under the agreement. We retain the right to develop ACH-1095, a compound discovered and developed under the collaboration, although we do not have current plans to do so.

We did not recognize any revenue related to the amortization of deferred revenue during the nine months ended September 30, 2011, as we were unable to accurately estimate our total performance obligations under the Gilead collaboration. Effective with the February 2012 termination of the collaboration, we recognized the remaining $2.5 million of deferred revenue.

Research and Development

Our research and development expenses reflect costs incurred for our proprietary research and development projects which consist primarily of salaries and benefits for our research and development personnel, costs of services by clinical research organizations, other outsourced research, materials used during research and development activities, facility-related costs such as rent and utilities associated with our laboratory and clinical development space and operating supplies.

We have established our current drug candidate pipeline primarily through our internal discovery capabilities except for elvucitabine, which we in-licensed. Through these efforts we have identified and are developing the following drug candidates and programs:

- **Sovaprevir, a NS3 Protease Inhibitor for Chronic HCV Infection.** In April 2012, we announced data from an on-going phase IIa clinical trial conducted in both the United States and Europe to assess sovaprevir's safety, tolerability, pharmacokinetic properties and efficacy in treatment-naïve genotype 1 HCV-infected subjects. In this trial, patients received sovaprevir at doses of 200mg, 400mg and 800mg once-daily in combination with pegylated interferon alpha and ribavirin, or P/R. Sovaprevir was demonstrated to achieve a complete early virologic response, or cEVR, in 94% to 100% of patients. Mean viral load, a measurement of the amount of virus in the blood stream, was reduced in HCV-infected patients by 4.56 log10 to 5.08 log10, or reduction of over 99.9% of the virus. Sovaprevir continued to be safe and well-tolerated with no significant drug-related adverse events. Liver enzyme elevations were transient with all patients returning to baseline values while on treatment, and attributable to non-drug-related factors. The phase IIa clinical trial is continuing with certain patients receiving P/R therapy for up to 48 weeks. In September 2012, we reported sustained virologic response twelve weeks (SVR12) after the completion of 24 weeks of therapy consisting of 12 weeks of sovaprevir and P/R followed by an additional 12 weeks of P/R. In all, 39 patients were assigned to receive 24 weeks of therapy with the remaining 18 patients assigned to receive an additional 36 weeks of P/R. The SVR12 rates were 80%, 77%, and 85% in the 200 mg, 400 mg, and 800 mg dose groups, respectively. Additional SVR data will be presented when all patients complete their four and twelve week post-treatment visits, expected in the first quarter of 2013. Sovaprevir was also demonstrated to show efficacy in a pilot study of treatment-naïve patients infected with genotype 3 HCV. In addition, mutations commonly associated with protease inhibitor therapy including mutations at R155, A156 and D168 were not observed with sovaprevir treatment. In December 2011, sovaprevir was granted Fast Track status by the United States Food and Drug Administration, or FDA.

- **ACH-2684, a NS3 Protease Inhibitor for Chronic HCV Infection.** In preclinical studies, ACH-2684 demonstrated excellent potency, as well as good pharmacokinetic and safety profiles. Pharmacokinetics refers to the way in which the compound is taken into, moves through, and is eliminated from the body. The potency and virology profiles of ACH-2684 demonstrate that it effectively suppresses a broad range of viral subtypes and natural variants of HCV, and may be effective in the prevention and treatment of emerging resistant variants. This compound also retains potent *in vitro* activity against all known HCV genotypes 1-6. In preclinical studies, ACH-2684 was effective in combination with other HCV inhibitors, and *in vitro* is synergistic with NS5B nucleoside polymerase inhibitors. In phase I clinical studies, twice daily doses of 400mg of ACH-2684 reduced viral load by a maximal 4.63 $\log_{10}$ in genotype 1 HCV patients and by a maximal 2.03 $\log_{10}$ in genotype 3 HCV patients. Additionally, once daily doses of 400mg of ACH-2684 reduced viral load by a mean maximum 3.73 $\log_{10}$ in patients with HCV genotype 1. The compound demonstrated good safety and tolerability both in healthy volunteers and in patients with HCV in all segments of these phase I clinical trials. Additional arms of this phase I trial in HCV-infected patients remain on-going.
- **ACH-2928, a NS5A Inhibitor for Chronic HCV Infection.** In preclinical studies, this compound demonstrated excellent potency against HCV replication, as well as good pharmacokinetic and safety profiles. ACH-2928 is highly active and potent against HCV genotypes 1a and 1b, as well as across other genotypes. We believe the high potency of ACH-2928, in the picomolar range, and its favorable pharmacokinetic properties, strongly suggest once-daily dosing. Importantly, NS5A inhibitors have been demonstrated in clinical trials to be highly effective in combination with NS3 protease inhibitors, and in *in vitro* studies to be highly effective in combination with NS5B polymerase inhibitors, interferon and ribavirin. In phase I clinical studies, ACH-2928 was demonstrated to reduce viral load by a maximal 4.86 $\log_{10}$ and was safe and well-tolerated. Within the NS5A class of compounds, our future clinical focus will be on ACH-3102 due to that compound's differentiated resistance profile.
- **ACH-3102, a NS5A Inhibitor for Chronic HCV Infection.** In preclinical studies, ACH-3102 has demonstrated potent pan-genotypic activity, meaning activity against HCV subtypes referred to as genotypes 1 through 6, including excellent activity against both the 1a genotype and known mutant variants of genotype 1 HCV. We filed an IND for ACH-3102 in March 2012 and initiated a phase I clinical trial in May 2012. In September 2012, we reported that 42 healthy volunteers had received a single dose of ACH-3102, ranging from 25 mg to 1,000 mg, and 32 healthy volunteers had received 14 days of once daily ACH-3102, with dose regimens evaluating day 1 doses of 25 mg to 300 mg and subsequent doses on days 2 to 14 ranging from 25 mg to 100 mg. Preliminary data from both the single and multiple ascending dose groups demonstrated that ACH-3102 was well tolerated with no serious adverse events and no clinically significant changes in vital signs, electrocardiograms (ECGs), or laboratory evaluations. All reported adverse events were classified as mild or moderate, and were transient in nature. Further, we announced proof-of-concept results from an ongoing phase I trial evaluating a single dose of ACH-3102 in patients with genotype 1a HCV. In all, 12 patients were treated with a single dose of either 50 mg, 150 mg, or 300 mg of ACH-3102, with a mean maximum decline in HCV RNA 3.78, 3.52, and 3.93 $\log_{10}$ achieved, respectively. No serious adverse events were reported and there were no patient discontinuations. An assessment of clinical virology, whereby the genetic sequencing of the HCV virus obtained from patient samples was analyzed, revealed that at baseline one patient had a L31M mutation and another had a Y93C mutation. Both of these mutations have been previously reported to convey a high level of resistance to first-generation NS5A inhibitors that was not observed following exposure to ACH-3102. In September 2012, we initiated an open-label phase II pilot trial evaluating 12-weeks of once-daily ACH-3102 in combination with ribavirin for the treatment of HCV genotype 1b. The study will initially enroll up to 16 treatment-naïve patients with GT 1b HCV who will receive 225 mg of ACH-3102 on day 1 followed by 75 mg of ACH-3102 once daily on subsequent days in combination with twice daily ribavirin. Preliminary results consisting of RVR are anticipated during the fourth quarter of 2012. In May 2012, ACH-3102 was granted Fast Track status by the FDA.

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

All costs associated with internal research and development, and research and development services for which we have externally contracted, are expensed as incurred. The costs of obtaining patents for our candidates are expensed as incurred as indirect costs.

	Nine Months Ended September 30,	
	2012	2011
	(in thousands)	
Clinical candidate direct external costs:		
Sovaprevir (and related compounds)	$ 8,565	$ 9,660
ACH-2684 (and related compounds)	2,924	4,076
ACH-2928 (and related compounds)	512	2,528
ACH-3102 (and related compounds)	8,301	630
Other	914	101
	21,216	16,995
Direct internal personnel costs	7,170	5,598
Sub-total direct costs	28,386	22,593
Indirect costs and overhead	2,425	3,084
Research and development tax credit	(249)	(173)
Total research and development	$ 30,562	$ 25,504

We are currently conducting phase II clinical trials of sovaprevir, phase I clinical trials of ACH-2684 and phase I and II clinical trials of ACH-3102.

We expect research and development expenses associated with the completion of these programs to be substantial and to increase over time. We do not believe, however, that it is possible at this time to know or accurately project the nature, timing or total amount of program-specific expenses through commercialization. There exist numerous factors associated with the successful commercialization of any of our drug candidates, including future trial design and various regulatory requirements, many of which cannot be determined with accuracy at this time based on our stage of development. Additionally, future commercial and regulatory factors beyond our control will evolve and therefore impact our clinical development programs and plans over time.

General and Administrative

Our general and administrative expenses consist primarily of salaries and benefits for management and administrative personnel, professional fees for legal, accounting and other services, travel costs and facility-related costs such as rent, utilities and other general office expenses for general and administrative personnel.

Critical Accounting Standards and Estimates

Preparation of our financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. A summary of our critical accounting estimates is included in Management's Discussion and Analysis of Financial Condition and Results of Operations contained in our Annual Report on Form 10-K for the year ended December 31, 2011. We continually review these estimates and their underlying assumptions to ensure they are appropriate for the circumstances. Changes in the estimates and assumptions we use could have a significant impact on our financial results. During the first nine months of 2012, there were no significant changes in our estimates and critical accounting policies.

Results of Operations

Results of operations may vary from period to period depending on numerous factors, including the timing of payments received under existing or future strategic alliances, joint ventures or financings, if any, the progress of our research and development projects, technological advances and determinations as to the commercial potential of proposed products.

Comparison of Three and Nine Months Ended September 30, 2012 and 2011

Revenue. We recognized revenue of $0 and $64,000 for the three months ended September 30, 2012 and 2011, and $2.5 million and $185,000 for the nine months ended September 30, 2012 and 2011, respectively. The increase in revenue in 2012 is primarily related to the recognition of $2.5 million of deferred revenue related to our former collaboration with Gilead which was terminated in February 2012.

During the three and nine months ended September 30, 2011, revenue related to external costs incurred by us and shared with Gilead. During this period, we were unable to estimate our future performance obligations under the collaboration, and therefore, ceased recognizing revenue related to upfront, milestone and full time equivalent payments previously received until we could reasonably estimate our total future performance obligations. During the nine months ended September 30, 2012, effective with the termination of the collaboration, we recognized the remaining $2.5 million of deferred revenue as we no longer have any future obligations under the collaboration.

Research and Development Expenses. Research and development expenses were $12.6 million and $8.6 million for the three months ended September 30, 2012 and 2011, respectively, and $30.6 million and $25.5 million for the nine months ended September 30, 2012 and 2011, respectively. The increase for the three and nine months ended September 30, 2012 was primarily due to increased expenses related to preclinical and clinical testing of ACH-3102, partially offset by decreased clinical trial expenses for sovaprevir, ACH-2684 and ACH-2928. Personnel costs also increased due to the addition of personnel in our development group. We expect research and development expenses for the remainder of the year to remain consistent with recent quarters, as we continue clinical testing of sovaprevir, ACH-2684, and ACH-3102. Research and development expenses for the three and nine months ended September 30, 2012 and 2011 are comprised as follows:

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2012	2011	Change	2012	2011	Change
Personnel costs	$ 2,122	$ 1,546	$ 576	$ 6,227	$ 4,767	$ 1,460
Stock based compensation	325	287	38	943	830	113
Outsourced research and supplies	9,295	5,891	3,404	20,366	16,961	3,405
Professional and consulting fees	449	560	(111)	1,542	1,610	(68)
Facilities costs	547	497	50	1,552	1,430	122
Travel and other costs	48	(66)	114	181	79	102
Research and development tax credit	(145)	(100)	(45)	(249)	(173)	(76)
Total	$ 12,641	$ 8,615	$ 4,026	$30,562	$25,504	5,058

General and Administrative Expenses. General and administrative expenses were $2.6 million and $1.9 million for the three months ended September 30, 2012 and 2011, respectively, and $8.0 million and $6.6 million for the nine months ended September 30, 2012 and 2011, respectively. The increase for the three months ended September 30, 2012 was primarily due to increased salaries and non-cash stock compensation charges combined with increased public relations fees. The increase for the nine months ended September 30, 2012 was primarily due to an increase in professional and consulting fees including corporate legal fees, directors' compensation and business development consulting fees. Non-cash charges related to stock based compensation also increased. We expect that general and administrative expenses will be consistent for the remainder of the year. General and administrative expenses for the three and nine months ended September 30, 2012 and 2011 are comprised as follows:

	Three Months Ended September 30,			Nine Months Ended September 30,		
	2012	2011	Change	2012	2011	Change
Personnel costs	$ 895	$ 686	$ 209	$ 2,444	$ 2,206	$ 238
Stock based compensation	609	371	238	1,726	1,154	572
Professional and consulting fees	615	428	187	2,250	1,682	568
Facilities costs	237	232	5	731	747	(16)
Travel and other costs	291	205	86	814	792	22
Total	$ 2,647	$ 1,922	$ 725	$ 7,965	$ 6,581	$ 1,384

Other Income (Expense). Interest income was $49,000 and $44,000 for the three months ended September 30, 2012 and 2011, respectively. The increase was primarily due to increased average cash balances in 2012. Interest expense was $16,000 and $9,000 for the three months ended September 30, 2012 and 2011, respectively. The increase was primarily due to higher average debt facility balances outstanding in 2012.

Interest income was $168,000 and $114,000 for the nine months ended September 30, 2012 and 2011, respectively. The increase was primarily due to increased average cash balances in 2012. Interest expense was $53,000 and $35,000 for the nine months ended September 30, 2012 and 2011, respectively. The increase was primarily due to higher average debt facility balances outstanding in 2012.

Liquidity and Capital Resources

Since our inception in August 1998, we have financed our operations primarily through the issuance of capital stock. Through September 30, 2012, we have received approximately $374.0 million in aggregate gross proceeds from stock issuances, including convertible preferred stock, our initial public offering, our 2008 and 2010 private placements and our 2010, 2011 and 2012 public offerings.

As of September 30, 2012, our debt balance due to borrowings was $781,000 with a weighted average interest rate of 6.56%.

We had $90.6 million and $79.9 million in cash, cash equivalents and marketable securities as of September 30, 2012 and December 31, 2011, respectively. We regularly review our investments and monitor the financial markets. As of September 30, 2012, our cash, cash equivalents and marketable securities included high-quality financial instruments, primarily money market funds, government sponsored bond obligations and other corporate debt securities which we believe are subject to limited credit risk due to the duration of maturities.

Cash used in operating activities was $33.3 million for the nine months ended September 30, 2012 and was primarily attributable to our $35.9 million net loss combined with a decrease in deferred revenue and an increase in prepaid expenses. This was partially offset by non-cash stock based compensation, combined with an increase in accounts payable and accrued expenses. Cash used in operating activities was $26.1 million for the nine months ended September 30, 2011 and was primarily attributable to our $31.8 million net loss, offset primarily by non-cash stock based compensation, combined with increases in accounts payable and accrued expenses.

Cash used in investing activities was $6.2 million for the nine months ended September 30, 2012 and was primarily attributable to the purchase of marketable securities offset by maturities of marketable securities. Cash used in investing activities was $37.3 million for the nine months ended September 30, 2011 and was primarily attributable to the purchases of marketable securities offset by maturities of marketable securities.

Cash provided by financing activities was $44.3 million for the nine months ended September 30, 2012 and was primarily attributable to proceeds from the sale of 6,367,853 shares of common stock in August 2012 combined with proceeds from the exercise of stock options. Cash provided by financing activities was $61.4 million for the nine months ended September 30, 2011 and was primarily attributable to $61.0 million in net proceeds from the sale of 11,040,000 shares of common stock in June 2011.

We expect to incur continuing and increasing losses from operations for at least the next several years as we seek to:

- continue clinical testing of sovaprevir, ACH-2684 and ACH-3102; and
- identify and progress additional drug candidates.

We believe that our existing cash, cash equivalents and marketable securities will be sufficient to meet our projected operating requirements through at least September 30, 2013. However, our funding resources and requirements may change and will depend upon numerous factors, including but not limited to:

- the costs involved in the clinical development, manufacturing and formulation of sovaprevir, ACH-2684 and ACH-3102;
- our ability to, and our choice whether to, enter into corporate collaborations for our HCV candidates 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
- competing technological and market developments currently unknown to us.

We intend to augment our cash balance through financing transactions, including the issuance of debt or equity securities, and/or further corporate alliances. There can be no assurance that we will be able to obtain adequate levels of additional funding or favorable terms, if at all. If adequate funds are not available, we will be required to:

- delay, reduce the scope of or eliminate research and development programs;
- obtain funds through arrangements with collaborators or others on terms unfavorable to us or that may require us to relinquish rights to certain drug candidates that we might otherwise seek to develop or commercialize independently; and/or
- pursue merger or acquisition strategies.

Any future equity funding may dilute the ownership of our equity investors.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements or relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities.

Recently Issued Accounting Standards

None.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk. Our exposure to market risk is confined to our cash, cash equivalents and marketable securities. We regularly review our investments and monitor the financial markets. We invest in high-quality financial instruments, primarily money market funds, government sponsored bond obligations and government-backed corporate debt securities, with the effective duration of the portfolio less than twelve months and no security with an effective duration in excess of twenty four months, which we believe are subject to limited credit risk. We currently do not hedge interest rate exposure. Due to the short-term nature of our investments, we do not believe that we have any material exposure to interest rate risk or changes in credit ratings arising from our investments.

Capital Market Risk. We currently have no product revenues and depend on funds raised through other sources. One source of funding is through future debt or equity offerings. Our ability to raise funds in this manner depends upon capital market forces affecting our stock price.

ITEM 4. CONTROLS AND PROCEDURES

Our management, with the participation of our chief executive officer and chief financial officer, evaluated the effectiveness of our disclosure controls and procedures as of September 30, 2012. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, or the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company’s management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of September 30, 2012, our chief executive officer and chief financial officer concluded that, as of such date, our disclosure controls and procedures were effective, at the reasonable assurance level.

No change in our internal control over financial reporting (as defined in Rules 13a–15(d) and 15d–15(d) under the Exchange Act) occurred during the fiscal quarter ended September 30, 2012 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

ITEM 1A. RISK FACTORS

You should carefully consider the risks described below in addition to the other information contained in this report, before making an investment decision. Our business, financial condition or results of operations could be harmed by any of these risks. The risks and uncertainties described below are not the only ones we face. Additional risks not currently known to us or other factors not perceived by us to present significant risks to our business at this time also may impair our business operations. These risk factors restate and supersede in their entirety the risk factors previously disclosed in "Part I, Item 1A. Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2011.

Risks Related to Our Business

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

We have invested a significant portion of our efforts and financial resources in the development of our candidates for the treatment of HCV, including our protease inhibitors, sovaprevir and ACH-2684, and our NS5A inhibitors, ACH-2928 and ACH-3102. Our ability to generate revenues will depend heavily on the successful development and commercialization of these drug candidates. The development and commercial success of these drug candidates will depend on several factors, including the following:

- our ability to provide acceptable evidence of the safety and efficacy of these drug candidates in current and future clinical trials;
- our ability to provide acceptable evidence of the ability of our drug candidates to be dosed safely in combination with other drugs and/or drug candidates, both ours and others;
- our ability to develop drug formulations that will deliver the appropriate drug exposures in longer term clinical trials;
- our ability to obtain patent protection for our drug candidates and freedom to operate under third party intellectual property;
- receipt of marketing approvals from the FDA and similar foreign regulatory authorities;
- establishing commercial manufacturing arrangements with third-party manufacturers;
- launching commercial sales of 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 currently conducting phase II clinical trials for sovaprevir, phase I clinical trials for ACH-2684, and phase I and II clinical trials for ACH-3102. Positive results in preclinical studies of a drug candidate may not be predictive of similar results in human clinical trials, and promising results from early clinical trials of a drug candidate may not be replicated in later clinical trials. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials even after achieving promising results in early-stage development. Accordingly, the results from the preclinical studies or completed clinical trials for sovaprevir, ACH-2684, ACH-2928 or ACH-3102, may not be predictive of the results we may obtain in later stage trials.

We do not expect any of our drug candidates for the treatment of HCV 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 September 30, 2012, our accumulated deficit was approximately $312 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 a segment of the pharmaceutical industry that is 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 generally and HCV in particular. 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 HCV. Additionally, there may be competitive drugs currently under development of which we are not aware.

If approved, our protease inhibitors, sovaprevir, and ACH-2684, and our NS5A inhibitors, ACH-2928 and ACH-3102, would compete with drugs currently approved for the treatment of HCV, e.g., the interferon-alpha-based products from Roche (Pegasys and Roferon-A) or Merck (Intron-A or Peg-Intron), the ribavirin-based products from Merck (Rebetrol), Roche (Copegus) or generic versions sold by various companies, as well as protease inhibitors telaprevir (Incivek) by Vertex and boceprevir (Victrelis) by Merck. 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 Bristol - Myers Squibb's interferon lambda, and with other products in development in multiple classes including protease inhibitors, polymerase inhibitors (nucleoside and non-nucleoside), NS5A inhibitors, toll-like receptor inhibitors and cyclophilin inhibitors also under development for the treatment of HCV by companies such as Abbott, Astra-Zeneca, BioCryst, Boehringer Ingelheim, Bristol-Myers Squibb, Celgene, Enanta, Gilead, GlaxoSmithKline, Idenix, Johnson & Johnson, Presidio, Medivir, Merck, Novartis, Pfizer, Roche, Valeant and Vertex.

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, specific classes of competitive products, or combinations of 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.

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, cash equivalents and marketable securities will be sufficient to support our current operating plan through at least September 30, 2013. Our operating plan may change as a result of many factors, including:

- the costs involved in the clinical development, manufacturing and formulation of our protease inhibitors, sovaprevir, and ACH-2684, and our NS5A inhibitor, ACH-3102;
- our ability to enter into corporate collaborations for our HCV candidates 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
- competing technological, regulatory 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. We may seek additional financing through a combination of private and public equity offerings, debt financings and collaboration, strategic alliance and licensing arrangements. For example, in November 2012 we entered into an agreement with Cantor Fitzgerald & Co. pursuant to which, from time to time, we may offer and sell up to $50,000,000 of shares of our common stock "at the market" through Cantor pursuant to a universal shelf registration statement. To the extent that we raise additional capital through the sale of equity or convertible debt securities, ownership interest will be diluted, and the terms may include adverse liquidation or other preferences that adversely affect your rights as a stockholder. Since August 2008, we have issued an aggregate of 59,713,859 shares of our common stock in two private placements and three registered offerings as well as warrants to purchase an aggregate of 13,279,028 shares of our common stock, of which 5,368,628 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. 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.

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 president of research and development 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.

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.

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

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

For a further discussion of the estimates and judgments that we make and the critical accounting policies that affect these estimates and judgments, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Standards and Estimates" elsewhere in this Quarterly Report on Form 10-Q.

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

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

Risks Related to the Development of Our Drug Candidates

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

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

- offer therapeutic or other improvement over existing, comparable drugs;
- be proven safe and effective in clinical trials;
- have the desired effects, or may include undesirable effects or may have other unexpected characteristics;
- meet applicable regulatory standards;
- 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 as potential participants have access to commercially launched direct acting antivirals, or DAAs, telaprevir (Incivek) or boceprevir (Victrelis), as well as other experimental therapies under development, 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 in our trials, or in third-party trials of similar HCV drug candidates, are exposed to unacceptable health risks;
- IRBs or regulators, including the FDA, may require that we hold, suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements;
- the FDA may require us to carry out more extensive studies, evaluate different treatment combinations or complete comparative effectiveness studies, resulting in significant delays and/or increased costs; and
- the supply or quality of our drug candidates or other materials necessary to conduct our clinical trials may be insufficient or inadequate.

In addition, in the phase IIa clinical study currently on-going, sovaprevir is being studied in combination with P/R, the current standard of care. Recently approved therapies, including telaprevir (Incivek) and boceprivir (Victrelis), could result in a change to the standard of care which may require us to carry out more extensive studies, evaluate different treatment combinations or complete comparative effectiveness studies, resulting in significant delays and/or increased costs.

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.

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 sovaprevir, ACH-2684, ACH-2928, ACH-3102 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;
- the results may not meet the level of statistical significance required by the FDA or other regulatory agencies; and
- the FDA or other regulatory agencies may require us to carry out additional studies.

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

Any delay in obtaining or failure to 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. 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.

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

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

Further, we cannot predict whether or how recent program discontinuations by certain of our competitors (such as the recent discontinuation by Bristol-Myers Squibb of BMS-986094, a nucleotide polymerase inhibitor, due to serious cardiac-related adverse events) may increase the level of scrutiny by the FDA, slowing data review and response times or otherwise creating delays or difficulties in initiating and progressing 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;
- delays in gathering and interpreting clinical data;
- the need to repeat clinical trials as a result of inconclusive or negative results or unforeseen complications in testing;
- the requirement by the FDA, in connection with future HCV development guidelines recently circulated for comment, to carry out additional studies;
- delays in completing formulation development of our drug candidates, or delays in planning and executing the bridging studies required to use the new formulations in subsequent clinical trials;
- inadequate supply or deficient quality of drug candidate materials or other materials necessary to conduct our clinical trials;
- unfavorable FDA inspection and review of a clinical trial site or records of any clinical or preclinical investigation;
- serious and unexpected drug-related side effects experienced by participants in our clinical trials or in third-party clinical trials of similar HCV drug candidates; 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 existence of clinical trials for competing drugs also in clinical development, the proximity of patients to clinical sites, the availability of effective treatments for the relevant disease and the eligibility criteria for the clinical trial. Delays in patient enrollment may result in increased costs and longer development times. We currently face competition for subjects to enroll in our clinical trials and may have to expand the number of sites at which the trials are conducted. If we are not successful in doing so, the planned timing for release of data from these trials may not be achieved. In addition, subjects may drop out of our clinical trials, and thereby impair the validity or statistical significance of the trials.

We, the FDA or other applicable regulatory authorities may suspend clinical trials of a drug candidate at any time if we or they believe the subjects or patients participating in such clinical trials are being exposed to unacceptable health risks or for other reasons. For example, as we advance sovaprevir into longer term clinical trials in phase II, we have established predetermined stopping rules, as well as a Data Safety Monitoring Board (DSMB) in order to monitor and ensure patient safety. Any interruption of these clinical trials, whether as a result of one of our drug candidates, or of co-administration of a concomitant anti-HCV agent, or of administrative review delays on the part of the FDA, could cause delays in our drug development.

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

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

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

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

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

Even if we receive regulatory approval of any drugs we are developing or may develop, we will be subject to continuing regulatory review, including the review of clinical results which are reported after our drug candidates become commercially available approved drugs. As greater numbers of patients use a drug following its approval, side effects and other problems may be observed after approval that were not seen or anticipated during pre-approval clinical trials. In addition, the manufacturer, and the manufacturing facilities we use to make any approved drugs, will also be subject to periodic review and inspection by the FDA.

The subsequent discovery of previously unknown problems with the drug, manufacturer or facility may result in restrictions on the drug, manufacturer or facility, including withdrawal of the drug from the market. If we fail to comply with applicable continuing regulatory requirements, we may be subject to fines, suspension or withdrawal of regulatory approval, product recalls and seizures, operating restrictions and criminal prosecutions.

Our product promotion and advertising is also subject to regulatory requirements and continuing regulatory review. In particular, the marketing claims we will be permitted to make in labeling or advertising regarding our marketed products will be limited by the terms and conditions of the FDA-approved labeling. We must submit copies of our advertisements and promotional labeling to the FDA at the time of initial publication or dissemination. If the FDA believes these materials or statements promote our products for unapproved indications, or with unsubstantiated claims, or if we fail to provide appropriate safety-related information, the FDA could allege that our promotional activities misbrand our products. Specifically, the FDA could issue a warning letter, which may demand, among other things, that we cease such promotional activities and issue corrective advertisements and labeling. The FDA also could take enforcement action including seizure of allegedly misbranded product, injunction or criminal prosecution against us and our officers or employees. If we repeatedly or deliberately fail to submit such advertisements and labeling to the 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 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 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 an existing arrangement with GCA Therapeutics, LTD, or GCAT, for the development and commercialization of our HIV drug candidate, elvucitabine, in mainland China, Hong Kong, and Taiwan. We may enter into additional license arrangements in the future.

We also may enter into alliances with major biotechnology or pharmaceutical companies to jointly develop, and commercialize if approved, our protease inhibitor candidates and/or our NS5A inhibitor candidates. 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 or in a timely manner, if at all. There are a limited number of collaboration partners whose pipeline of HCV clinical candidates are suitable for co-development with ours. There are also a limited number of potential collaboration partners without a robust HCV drug candidate pipeline, but demonstrated commercial interest in HCV therapeutics who may have interest in gaining rights to our HCV drug candidates. Recent consolidation may have reduced the number of potential partners further, making achieving a suitable partnership more difficult, potentially limiting our ability to command a significant premium in any such transaction. Further, if potential collaboration partners enter alliances with other competing HCV companies, our future business prospects may be harmed, as these alliances could reduce the pool of potential partners for our compounds and/or limit the value of such alliance.

Even if we do succeed in securing such alliances, we may not be able to maintain them if development or approval of a drug candidate is delayed or sales of an approved drug are disappointing. For example, a 2004 license and collaboration agreement between us and Gilead for the advancement of certain HCV compounds operating by the mechanism of action known as NS4A antagonism was terminated as neither party was devoting significant time to advancing the compounds under the agreement. Furthermore, any delay in entering into collaboration agreements could delay the development and commercialization of our drug candidates and reduce their competitiveness even if they reach the market. Any such delay related to our collaborations could adversely affect our business. At this time, we do not plan to clinically advance our antibacterial drug candidates, ACH-702 and ACH-2881, independently.

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

In late 2011 and early 2012, several acquisitions of smaller biopharmaceutical companies by larger biopharmaceutical companies took place at substantial premiums over the market capitalizations of the target companies, including the acquisitions of Anadys Pharmaceuticals, Pharmasset, Inc. and Inhibitex Pharmaceuticals, by Roche, Gilead and Bristol Myers Squibb, respectively. If such consolidation continues to take place, we may face competitive pressures to a far greater degree than had those consolidations not occurred, resulting from the greater resources the larger pharmaceutical companies can put toward their development pipelines. Further, if investors who provide capital to our industry continue to seek and advocate for similar acquisitions at similar premiums, we may not be able to satisfy their higher expectations for market value appreciation and our stock price may decline.

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. We also depend on third parties to assist us in developing appropriate formulations of our drug candidates. If, in the future, we manufacture any of our drug candidates, we will be required to incur significant costs and devote significant efforts to establish and maintain these capabilities.

We rely upon third parties to produce material for preclinical and clinical testing purposes and intend to continue to do so in the future. We also depend on third parties to assist us in developing appropriate formulations of our drug candidates. We also expect to rely upon third parties to produce materials required for the commercial production of our drug candidates if we succeed in obtaining necessary regulatory approvals. If we are unable to arrange for third-party manufacturing, or to do so on commercially reasonable terms, we may not be able to complete development of our drug candidates or market them. Further, if third parties are not successful in formulation development of our drug candidates, our development timelines may be delayed. Reliance on third-party manufacturers entails risks to which we would not be subject if we manufactured drug candidates ourselves, including reliance on the third party for regulatory compliance and quality assurance, the possibility of breach of the manufacturing agreement by the third party because of factors beyond our control and the possibility of termination or nonrenewal of the agreement by the third party, based on its own business priorities, at a time that is costly or damaging to us. In addition, the FDA and other regulatory authorities require that our drug candidates be manufactured according to current good manufacturing practice regulations. Any failure by us or our third-party manufacturers to comply with current good manufacturing practices and/or our failure to scale up our manufacturing processes could lead to a delay in, or failure to obtain, regulatory approval of any of our drug candidates. In addition, such failure could be the basis for action by the FDA to withdraw approvals for drug candidates previously granted to us and for other regulatory action.

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

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

Risks Related to Commercialization of Our Drug Candidates

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

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

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

We are developing multiple DAA compounds, in two distinct classes, for treatment of HCV. Other companies are also developing DAAs in these classes, as well as other classes. Until the recent introduction of DAA therapy, the standard of care for HCV infection included therapy with pegylated interferon and ribavirin. Two DAAs developed by our competitors,

telaprevir (Incivek) by Vertex and boceprevir (Victrelis) by Merck, were approved by the FDA. We cannot currently predict with any certainty the impact of the commercial launch of these compounds or any other compounds on the HCV market, although marketed DAAs may now be added to that standard regimen.

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

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

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

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

Even if sovaprevir, ACH-2684, ACH-2928, ACH-3102 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, and the impact of the recent commercial launch of telaprevir (Incivek) by Vertex and boceprevir (Victrelis) by Merck;
- the demonstrated clinical safety and efficacy of our product candidates compared to other drugs and other drug candidates;
- the suitability of our drug candidates to be co-administered or combined with other drugs or drug candidates;
- the durability of our drug candidates in their ability to prevent the emergence of drug-resistant viral mutants;
- the convenience and ease of administration of our product candidates;
- the existence, prevalence and severity of adverse side effects;
- other potential advantages of alternative treatment methods;
- the effectiveness of marketing and distribution support;
- the cost-effectiveness of our product candidates; and
- the availability of reimbursement from managed care plans, the government and other third-party payors.

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

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

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

- a covered benefit under its health plan;
- safe, effective and medically necessary;

- appropriate for the specific patient;
- cost effective; and
- neither experimental nor investigational.

Obtaining reimbursement approval for a product from each third-party and government payor is a time-consuming and costly process that could require us to provide supporting scientific, clinical and cost-effectiveness data for the use of any approved drugs to each payor. We may not be able to provide data sufficient to gain acceptance with respect to reimbursement. There also exists substantial uncertainty concerning third-party reimbursement for the use of any drug candidate incorporating new technology, and even if determined eligible, coverage may be more limited than the purposes for which the drug is approved by the FDA. Moreover, eligibility for coverage does not imply that any drug will be reimbursed in all cases or at a rate that allows us to make a profit or even cover our costs. Interim payments for new products, if applicable, may also be insufficient to cover our costs and may not be made permanent. Reimbursement rates may vary according to the use of the drug and the clinical setting in which it is used, may be based on payments allowed for lower-cost products or combinations of products that are already reimbursed, may be incorporated into existing payments for other products or services, and may reflect budgetary constraints and/or imperfections in Medicare or Medicaid data used to calculate these rates. Net prices for products may be reduced by mandatory discounts or rebates required by government health care programs or by any future relaxation of laws that restrict imports of certain medical products from countries where they may be sold at lower prices than in the United States.

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

Risks Related to Patents and Licenses

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

We own or hold exclusive licenses to several issued patents U.S. and pending U.S. provisional and non-provisional patent applications, as well as pending PCT applications and associated non-US patents and patent applications. Our success

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

Even if patents have issued or will issue, we cannot guarantee that the claims of these patents are or will be valid or enforceable or will provide us with any significant protection against competitive products or otherwise be commercially valuable to us. Patent applications in the United States are maintained in confidence for up to 18 months after their filing. In some cases, however, patent applications remain confidential in the U.S. Patent and Trademark Office, which we refer to as the U.S. Patent Office, for the entire time prior to issuance as a U.S. patent. Similarly, publication of discoveries in the scientific or patent literature often 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 HCV inhibitor space is particularly crowded in terms of intellectual property, and we are aware that certain competitors such as Merck, Vertex, AstraZeneca, Bayer, Gilead and Bristol-Myers Squibb, have disclosed compounds that may be prior art to our patent applications and prevent issuance or alter the scope of any claims that we may pursue related to our drug candidates. For example, with regard to ACH-2928, we are aware that this compound and closely related inhibitors have been disclosed in third party published patent applications and ultimately could be deemed to constitute prior art. These competitive activities may substantially impact our ability to obtain patent protection on our lead drug candidates and/or to commercialize such drug candidates in the absence of patent rights from one or more third parties.

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

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

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

The Leahy-Smith America Invents Act, or the America Invents Act, was signed into law in September 2011, with many of the substantive changes becoming effective in one year or 18 months. The America Invents Act reforms United States patent law in part by changing the standard for patent approval from a “first to invent” standard to a “first to file” standard and developing a post-grant review system. This new legislation changes United States patent law in a way that may weaken our ability to obtain patent protection in the United States.

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

We are party to a number of licenses that give us rights to third-party intellectual property that is necessary or useful for our business. In particular, we have obtained licenses from Yale University and Emory University with respect to elvucitabine. We may enter into additional licenses for third-party intellectual property in the future. Our success will depend in part on the ability of our licensors to obtain, maintain and enforce patent protection for their intellectual property, in particular, those patents to which we have secured exclusive rights. Our licensors may not successfully prosecute the patent applications to which we are licensed. Even if patents issue in respect of these patent applications, our licensors may fail to maintain these patents, may determine not to pursue litigation against other companies that are infringing these patents, or may pursue such litigation less aggressively than we would. In addition, our licensors may terminate their agreements with us in the event we breach the applicable license agreement and fail to cure the breach within a specified period of time. Without protection for the intellectual property we license, other companies might be able to offer substantially identical products for sale, which could adversely affect our competitive business position and harm our business prospects.

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

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

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

Our research, development and commercialization activities, including any drug candidates resulting from these activities, may infringe or be claimed to infringe patents or other proprietary rights owned by third parties and to which we do not hold licenses or other rights. There may be applications that have been filed but not published that, if issued, could be asserted against us. We are aware that certain third parties, including Bristol-Myers Squibb, Gilead, GlaxoSmithKline plc and Enanta Pharmaceuticals, Inc., have applications that are broadly directed to HCV inhibitors. Certain of these third parties, in particular Gilead and Enanta, have patent applications with pending claims that, if issued, could be construed to encompass our drug candidate, ACH-2928. These third parties could bring claims against us that would cause us to incur substantial expenses and, if successful against us, could cause us to pay substantial damages. Further, if a patent infringement suit were brought against us, we could be forced to stop or delay research, development, manufacturing or sales of the drug or drug candidate that is the subject of the suit.

As a result of intellectual property infringement claims, or in order to avoid potential claims, we may choose or be required to seek a license from the third party. These licenses may not be available on acceptable terms, or at all. Even if we are able to obtain a license, the license would likely obligate us to pay license fees or royalties or both, and the rights granted to us might be nonexclusive, which could result in our competitors gaining access to the same intellectual property. Ultimately, we could be prevented from commercializing a product, or be forced to cease some aspect of our business operations, if, as a result of actual or threatened patent infringement claims, we are unable to enter into licenses on acceptable terms. All of the issues described above could also affect our potential collaborators to the extent we have any collaborations then in place, which would also affect the success of the collaboration and therefore us.

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

Litigation regarding patents, 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 Yale University we have the right, but not an obligation, to bring actions against an infringing third party. If we do not bring an action within a specified number of days, the licensor may bring an action against the infringing party. Proceedings involving our patents or patent applications or those of others could result in adverse decisions regarding:

- the patentability of our inventions relating to our drug candidates; and/or
- the enforceability, validity or scope of protection offered by our patents relating to our drug candidates.

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

- incur substantial monetary damages;
- encounter significant delays in bringing our drug candidates to market; and/or
- be precluded from participating in the manufacture, use or sale of our drug candidates or methods of treatment requiring licenses.

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

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.

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

Many foreign countries, including certain countries in Europe, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, most countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may be limited to monetary relief and may be unable to enjoin infringement, which could materially diminish the value of the patent. Compulsory

licensing of life-saving products is also becoming increasingly popular in developing countries, either through direct legislation or international initiatives. Such compulsory licenses could be extended to include some of our product candidates, which may limit our potential revenue opportunities.

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

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

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

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

We rely on trade secrets to protect our technology, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. In order to protect our proprietary technology and processes, we also rely in part on confidentiality and intellectual property assignment agreements with our corporate partners, employees, consultants, outside scientific collaborators and sponsored researchers and other advisors. These agreements may not effectively prevent disclosure of confidential information nor result in the effective assignment to us of intellectual property, and may not provide an adequate remedy in the event of unauthorized disclosure of confidential information or other breaches of the agreements. In addition, others may independently discover our trade secrets and proprietary information, and in such case we could not assert any trade secret rights against such party. Enforcing a claim that a party illegally obtained and is using our trade secrets is difficult, expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States may be less willing to protect trade secrets. Costly and time-consuming litigation could be necessary to seek to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

Risks Relating to Our Securities

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

In connection with capital raising activities, we may be required to dilute our existing stockholders substantially. For example, since August 2008, we have issued an aggregate of 59,713,859 shares of our common stock in private and registered offerings, as well as warrants to purchase an aggregate of 13,279,028 shares of our common stock, of which 5,368,628 remain outstanding. All of the shares of common stock we issued, as well as those shares issuable upon exercise of the warrants, are freely tradable pursuant to effective registration statements, making such shares available for immediate resale in the public market. In November 2012, we filed a universal shelf registration on Form S-3 to register for sale from time to time up to $200,000,000 of common stock, preferred stock, warrants and/or units in one or more offerings. Moreover, in November 2012, we entered into a sales agreement with Cantor Fitzgerald & Co. pursuant to which, from time to time, we may offer and sell shares of our common stock having an aggregate offering price of up to $50,000,000 through Cantor pursuant to such universal shelf registration statement. Sales of our common stock, if any, under the agreement with Cantor may be made in sales deemed to be “at-the-market” equity offerings as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, or the Securities Act, including sales made directly on or through the NASDAQ Global Select Market, the existing trading market for our common stock, sales made to or through a market maker other than on an exchange or otherwise, in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices, and/or any other method permitted by law, including in privately negotiated transactions. No sales will be made under the agreement with Cantor unless and until the universal shelf registration statement is declared effective by the Securities and Exchange Commission, or SEC. Sales of substantial amounts of shares of our common stock or other securities could lower the market price of our common stock.

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 November 1, 2012, 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 clinical trials of our protease inhibitors, sovaprevir and ACH-2684 and our NS5A inhibitor, ACH-3102;
- the results of clinical trials conducted by others on drugs that would compete with our drug candidates;
- the announcements of those data, particularly at high profile medical meetings, and the investment community's perception of and reaction to those data;
- the ability of our drug candidates to be dosed safely in combination with other drugs and/or drug candidates, both ours and others;
- the entry into, modification of, or termination of key agreements, or any new collaboration agreement we may enter;
- market expectations about the timeliness of our entry into, or failure to enter, collaboration arrangements with third parties;
- the entry by a potential third-party collaborator into an alliance with a competitor, or the entry by any other HCV drug developer into an alliance that may be perceived as competitive to us;
- the continued industry consolidation of pharmaceutical companies developing HCV drug therapies, or the acquisition of any one of our HCV drug development competitors;
- the premiums on other transactions and any significant increases or decreases of those premiums;
- the results of regulatory reviews relating to the approval of our drug candidates;
- our failure to obtain patent protection for any of our drug candidates or the issuance of third party patents that cover our drug candidates;
- the initiation of, material developments in, or conclusion of litigation 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 launch of drugs by others that would compete with our drug candidates;
- the failure or discontinuation of any of our research programs;
- issues in manufacturing our drug candidates or any approved products;
- the introduction of technological innovations or new commercial products by us or our competitors;
- changes in estimates or recommendations by securities analysts, if any, who cover our common stock;
- future sales of our common stock;
- changes in the structure of health care payment systems;
- period-to-period fluctuations in our financial results; 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, 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.

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 or, if our independent auditors are unable to provide us with an attestation and an unqualified report as to the effectiveness of our internal controls over financial reporting, investors could lose confidence in the reliability of our financial statements, which could result in a decrease in the value of our common stock.

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.

ITEM 5. OTHER INFORMATION

On November 8, 2012, we entered into a sales agreement with Cantor Fitzgerald & Co., or Cantor, pursuant to which we may issue and sell up to $50.0 million of shares of our common stock, par value $0.001 per share, from time to time through Cantor acting as agent. We expect that the shares of our common stock to be sold under the sales agreement, if any, will be sold pursuant to a universal shelf registration statement that we filed with the SEC on November 8, 2012. No sales will be made by us pursuant to the sales agreement unless and until such registration statement is declared effective by the SEC.

In accordance with the terms of the sales agreement, upon delivery of a placement notice and subject to the terms and conditions of the sales agreement, Cantor may sell our common stock by any method permitted by law deemed to be an "at-the-market" offering as defined in Rule 415 promulgated under the Securities Act, including sales made directly on the NASDAQ Global Select Market, on any other existing trading market for our common stock or to or through a market maker. Cantor may also sell our common stock by any other method permitted by law, including in privately negotiated transactions. We or Cantor may suspend or terminate the offering of our common stock upon notice and subject to other conditions.

We will pay Cantor in cash, upon each sale of our common stock pursuant to the sales agreement, a commission in an amount equal to 3.0% of the aggregate gross proceeds from each sale of our common stock. We have agreed to provide indemnification and contribution to Cantor against certain civil liabilities, including liabilities under the Securities Act.

The offering of our common stock pursuant to the sales agreement will terminate upon the earlier of (i) the sale of all of our common stock provided for under the agreement, or (ii) termination of the sales agreement as permitted therein. Cantor may terminate the sales agreement at any time in certain circumstances, including the occurrence of a material adverse change with respect to us that, in Cantor's judgment, makes it impracticable or inadvisable to market the shares, if there has occurred any material adverse change in the U.S. financial markets or international financial markets, which in Cantor's judgment makes it impracticable to market the shares, if trading in the shares has been suspended or limited by the SEC or the NASDAQ Global Select Market, or if trading generally has been suspended or limited by the NASDAQ Global Select Market, if any suspension of trading of any shares of the Company on any exchange or over-the-counter market shall have occurred and be continuing, if there is a major disruption of securities settlements or clearance services in the U.S. which shall be continuing, or if a banking moratorium has been declared by either U.S. Federal or New York authorities. We and Cantor may each terminate the sales agreement at any time upon 10 days prior notice.

The foregoing summary of the material terms of the sales agreement is qualified by reference to the full text of the sales agreement, which is filed herewith as Exhibit 10.2 to this Quarterly Report on Form 10-Q and is incorporated herein by reference.

This information shall not constitute an offer to sell or the solicitation of any offer to buy the securities discussed herein, nor shall there be any offer, solicitation or sale of the securities in any state in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of such state.

ITEM 6. EXHIBITS

10.1	Subscription Agreement, dated August 30, 2012, by and between funds managed by QVT Financial LP and the Registrant.
10.2	Sales Agreement, dated November 8, 2012, by and between Cantor Fitzgerald & Co. and the Registrant.
31.1	Certification of President and Chief Executive Officer of Achillion Pharmaceuticals, Inc. pursuant to Rule 13a-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
31.2	Certification of Chief Financial Officer of Achillion Pharmaceuticals, Inc. pursuant to Rule 13a-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
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101.INS	XBRL Instance Document*
101.SCH	XBRL Taxonomy Extension Schema Document*
101.CAL	XBRL Calculation Linkbase Document*
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document *
101.LAB	XBRL Label Linkbase Document*
101.PRE	XBRL Taxonomy Presentation Linkbase Document*

* Submitted electronically herewith

Attached as Exhibit 101 to this report are the following formatted in XBRL (Extensible Business Reporting Language): (i) Balance Sheets at September 30, 2012 and December 31, 2011 (unaudited), (ii) Statements of Comprehensive Loss for the three and nine months ended September 30, 2012 and 2011 (unaudited), (iii) Statements of Cash Flows for the nine months ended September 30, 2012 and 2011 (unaudited), and (iv) Notes to Financial Statements (unaudited).

In accordance with Rule 406T of Regulation S-T, the XBRL-related information in Exhibit 101 to this Quarterly Report on Form 10-Q is deemed not filed or part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act, is deemed not filed for purposes of section 18 of the Exchange Act, and otherwise is not subject to liability under these sections.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized.

ACHILLION PHARMACEUTICALS, INC.

Date: November 8, 2012

/s/ Michael D. Kishbauch
President and Chief Executive Officer
(Principal Executive Officer)

Date: November 8, 2012

/s/ Mary Kay Fenton
Chief Financial Officer
(Principal Financial and Accounting Officer)

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Exhibit 10.1

August 30, 2012

Achillion Pharmaceuticals, Inc.
300 George Street
New Haven, Connecticut 06511-6624

Ladies and Gentlemen:

Each of the undersigned (each, an "Investor" and collectively, the "Investors") hereby confirms and agrees, severally and not jointly, with you as follows:

1. This Purchase Agreement (together with the attached schedule and annexes, the "Agreement") is made as of the date hereof between Achillion Pharmaceuticals, Inc., a Delaware corporation (the "Company"), and each Investor that is a signatory to this Agreement.

2. The Company has authorized the sale and issuance of up to 6,367,853 shares to the Investors (the "Offered Securities") of common stock, par value $0.001 per share (the "Common Stock"). The offering of the Offered Securities (the "Offering") is being made pursuant to an effective shelf registration statement on Form S-3 (SEC File No. 333-172594) (the "Registration Statement" and the base prospectus, prospectus supplement and any free writing prospectus relating to the Offered Securities, the "Prospectus").

3. The Company and the each Investor, severally and not jointly, agree that the Offering is being made subject to the delivery of the base prospectus relating to the Offered Securities and delivery of additional offering information, including pricing information. The Company and each Investor, severally and not jointly, agree that such Investor will purchase from the Company and the Company will issue and sell to such Investor the number of Offered Securities set forth opposite such Investor's name on Schedule I hereto, at a purchase price of $6.57 per share, pursuant to the Terms and Conditions for Purchase of Offered Securities attached hereto as Annex I and incorporated herein by reference as if fully set forth herein. Each Investor, severally and not jointly, acknowledges that the Offering is not being underwritten. The Offered Securities will be credited to each Investor at the Closing using customary book-entry procedures by crediting the account of each applicable Investor's broker pursuant to the instructions set forth on Annex II attached hereto completed by such Investor.

4. Each Investor, severally and not jointly, confirms that it has had full access to all filings made by the Company with the Securities and Exchange Commission (the "Commission"), including the Registration Statement and base prospectus relating to the Offered Securities, and the documents incorporated by reference therein, and that it was able to read, review, download and print each such filing.

Please confirm that the foregoing correctly sets forth the agreement between us by signing in the space provided below for that purpose.

Name of Investor: **QVT FUND IV LP**
By: QVT Associates GP LLC
Its: General Partner

By: /s/ Tracy Fu

Name: Tracy Fu
Title: Managing Member

By: /s/ Dan Gold

Name: Dan Gold
Title: Managing Member

Name of Investor: **QVT FUND V LP**
By: QVT Associates GP LLC
Its: General Partner

By: /s/ Tracy Fu

Name: Tracy Fu
Title: Managing Member

By: /s/ Dan Gold

Name: Dan Gold
Title: Managing Member

Name of Investor: **QUINTESSENCE FUND L.P.**
By: QVT Associates GP LLC
Its: General Partner

By: /s/ Tracy Fu

Name: Tracy Fu
Title: Managing Member

By: /s/ Dan Gold

Name: Dan Gold
Title: Managing Member

[SIGNATURE PAGE TO SUBSCRIPTION AGREEMENT]

AGREED AND ACCEPTED:

ACHILLION PHARMACEUTICALS, INC.

By: /s/ Mary Kay Fenton

Name: Mary Kay Fenton

Title: SVP & CFO

[SIGNATURE PAGE TO SUBSCRIPTION AGREEMENT]

SCHEDULE I

Investor	Address and Facsimile Number	Number of Offered Securities to be Purchased	Aggregate Purchase Price of Offered Securities
QVT Fund V LP	c/o QVT Financial LP 1177 Avenue of the Americas, 9th Floor New York, New York 10036 Attention: General Counsel Telephone: 212-705-8888 Facsimile: 212-705-8820 Email: legalnotices@qvt.com	4,853,514	$31,887,586
QVT Fund IV LP	c/o QVT Financial LP 1177 Avenue of the Americas, 9th Floor New York, New York 10036 Attention: General Counsel Telephone: 212-705-8888 Facsimile: 212-705-8820 Email: legalnotices@qvt.com	825,974	$ 5,426,651
Quintessence Fund L.P.	c/o QVT Financial LP 1177 Avenue of the Americas, 9th Floor New York, New York 10036 Attention: General Counsel Telephone: 212-705-8888 Facsimile: 212-705-8820 Email: legalnotices@qvt.com	688,365	$ 4,522,557

ANNEX I

TERMS AND CONDITIONS FOR PURCHASE OF OFFERED SECURITIES

1. Agreement to Sell and Purchase the Offered Securities. Upon the terms and subject to the conditions hereinafter set forth, at the Closing (as defined in Section 2 below), the Company will sell to each Investor, and each such Investor, severally and not jointly, will purchase from the Company, the number of Offered Securities set forth on Schedule I of this Agreement opposite such Investor's name for the aggregate purchase price set forth therein.

2. Delivery of the Offered Securities at Closing. The completion of the purchase and sale of the Offered Securities (the "Closing") shall take place by no later than September 5, 2012 or such other date as is mutually agreed by the Company and the Investors (the "Closing Date") at such place as is mutually agreed by the Company and the Investors.

The Company's obligation to issue and sell the Offered Securities at Closing to each Investor shall be subject to the accuracy in all material respects of the representations and warranties made by such Investor (except for those representations and warranties that are qualified by materiality, which shall be accurate in all respects) and the fulfillment of those covenants and undertakings of such Investor to be fulfilled at or prior to the Closing.

Each Investor's obligation to purchase the Offered Securities to be purchased by such Investor at Closing from the Company shall be subject to:

(i) the accuracy of the representations and warranties made by the Company and the fulfillment of those covenants and undertakings of the Company to be fulfilled at or prior to the Closing, in each case solely to the extent such inaccuracy or non-fulfillment (x) constitute a material adverse effect on the legality, validity or enforceability of the Agreement, (y) shall be reasonably expected to constitute a material adverse effect on the Investors' ability, taken as a whole, to purchase the Offered Securities at Closing, or (z) shall be reasonably expected to constitute a material adverse effect on the Company's business, financial condition or results of operations, taken as a whole, and

(ii) from the date hereof to the Closing Date, trading in the Common Stock shall not have been suspended by the Commission or The NASDAQ Global Select Market and, at any time prior to the Closing Date, trading in securities generally as reported by Bloomberg Financial Markets shall not have been suspended or limited, or minimum prices shall not have been established on securities whose trades are reported by such service, nor shall a banking moratorium have been declared either by the United States or New York State authorities, nor shall there have occurred any material adverse change in the financial markets which, in each case, in the reasonable judgment of the Investors, acting in good faith, makes it impracticable or inadvisable to purchase the Offered Securities at the Closing.

At the Closing, each Investor shall remit by wire transfer the amount of funds equal to the aggregate purchase price for the Offered Securities being purchased by such Investor to the following account:

State Street Bank & Trust Company
1200 Crown Colony
Quincy, MA 02169

ABA Routing # 011000028
Account #17039843 (Custody Services Wire Clearance)
For credit to: DE1725
Account Name: ACHILLION PHARMACEUTICALS, INC.
Attn: Melissa Johns
Phone: 617-537-3181

Contemporaneously with, but upon receipt of payment by, or on behalf of each Investor, the Company shall (a) deliver the Offered Securities purchased by such Investor to such Investor through DTC directly to the account(s) of the applicable DTC Holder as set forth on Annex II.

3. Representations, Warranties and Covenants of the Company. The Company represents and warrants to each Investor as of the date hereof and the Closing Date, and agrees with each Investor, as follows:

3.1 Registration Statement and Prospectuses. The Registration Statement, Prospectus and any documents incorporated therein by reference comply with the requirements of the Securities Act of 1933, as amended (the "1933 Act") and the Securities Exchange Act of 1934, as amended (the "1934 Act"), as applicable. No stop order suspending the effectiveness of the Registration Statement or the use of any Prospectus has been issued and no proceedings for any of those purposes have been instituted or are pending. Neither the Registration Statement nor any amendment thereto (or any amendment or supplement thereto or documents incorporated by reference therein), at its effective time, at the time of any filing with the Commission or at the time of the Closing, contained, contains or will contain an untrue statement of a material fact or omitted, omits or will omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. As of the date hereof, the Closing Date, and the time of any filing with the Commission, no Prospectus (or any amendment or supplement thereto or documents incorporated by reference therein) included, includes or will include an untrue statement of a material fact or omitted, omits or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

3.2 Good Standing of the Company. The Company has been duly organized and is validly existing as a corporation in good standing under the laws of the State of Delaware and has corporate power and authority to own, lease and operate its properties and to conduct its business as described in the Registration Statement and the Prospectus and to enter into and perform its obligations under this Agreement.

3.3 Authorization; Enforceability. This Agreement has been duly authorized, executed and delivered by the Company. This Agreement constitutes a valid and binding obligation of the Company enforceable against the Company in accordance with its terms, subject to the effect of applicable bankruptcy, insolvency or similar laws affecting creditors' rights generally and equitable principles of general applicability. No filing with, or authorization, approval, consent, license, order, registration, qualification or decree of, any governmental entity is necessary or required for the performance by the Company of its obligations hereunder, except such as have been already obtained or as may be required under the 1933 Act or the requirement to file a listing application pursuant to the rules of the NASDAQ Stock Market LLC. The Offered Securities to be purchased by the Investors from the Company have been duly authorized for issuance and sale to the Investors pursuant to this Agreement and, when issued and delivered by the Company pursuant to this Agreement against payment of the consideration set forth herein, will be (i) duly and validly issued and fully paid and non-assessable and (ii) issued pursuant to the Registration Statement without any restrictions or limitations on transfer and without any restrictive legends such that the Offered Securities will be freely tradable on The NASDAQ Global Select Market by the Investors from and after the Closing; and the issuance of the Offered Securities (x) is not subject to the preemptive or other similar rights of any securityholder of the Company and (y) will not trigger any

antidilution adjustments under any instrument of the Company. As of the date hereof, there are 72,586,028 shares of Common Stock issued and outstanding. The Company is, and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with all listing and maintenance requirements of The NASDAQ Global Select Market.

3.4 No Integration. The Company has not and shall not effect any offer or sale of any equity or equity-related securities that would result in the transactions contemplated hereby becoming subject to stockholder approval under the rules and regulations of FINRA or The NASDAQ Global Select Market.

4. Representations, Warranties and Covenants of each Investor. Each Investor, severally and not jointly, represents and warrants to the Company as follows:

4.1 Such Investor has received the Company's base prospectus relating to the Offered Securities. Such Investor acknowledges that such Investor has received certain additional information regarding the Offering, including pricing information (the "Offering Information"). Such Offering Information may be provided to such Investor by any means permitted under the 1933 Act, including through a prospectus supplement, a free writing prospectus and oral communications.

4.2 Such Investor has full right, power, authority and capacity to enter into this Agreement and to consummate the transactions contemplated hereby and has taken all necessary action to authorize the execution, delivery and performance of this Agreement, and this Agreement constitutes a valid and binding obligation of such Investor enforceable against such Investor in accordance with its terms, subject to the effect of applicable bankruptcy, insolvency or similar laws affecting creditors' rights generally and equitable principles of general applicability.

4.3 Such Investor is knowledgeable, sophisticated and experienced in making, and is qualified to make, decisions with respect to investments in shares representing an investment decision like that involved in the purchase of the Offered Securities and has, in connection with its decision to purchase the number of Offered Securities set forth opposite its name on Schedule I to the Agreement, relied solely upon the Registration Statement, the base prospectus, the Offering Information and any amendments or supplements thereto and any other written material provided by the Company.

4.4 Such Investor understands that nothing in the Registration Statement, the base prospectus, the Offering Information and any amendments or supplements thereto, this Agreement or any other materials presented to such Investor in connection with the purchase and sale of the Offered Securities constitutes legal, tax or investment advice. Such Investor has consulted such legal, tax and investment advisors as it, in its sole discretion, has deemed necessary or appropriate in connection with its purchase of Offered Securities.

4.5 From and after obtaining knowledge of the sale of the Offered Securities contemplated hereby, such Investor has not engaged in any purchases or sales of the securities of the Company (including, without limitation, any Short Sales (as defined in Regulation SHO) involving the Company's securities), and has not violated its obligations of confidentiality. Such Investor covenants that it will not engage in any purchases or sales of the securities of the Company (including Short Sales) or disclose any information about the contemplated offering (other than to its advisors that are under a legal obligation of confidentiality) prior to the time that the transactions contemplated by this Agreement are publicly disclosed.

5. Covenants and Indemnification.

5.1 Indemnification of Investors. Subject to the provisions of this Section 5.1, the Company will indemnify and hold each Investor and its directors, officers, stockholders, members, partners, employees and agents (and any other persons with a functionally equivalent role of a person holding such titles notwithstanding a lack of such title or any other title), each person who controls such Investor (within the meaning of Section 15 of the 1933 Act and Section 20 of the 1934 Act), and the directors, officers, agents, members, partners or employees (and any other persons with a functionally equivalent role of a person holding such titles notwithstanding a lack of such title or any other title) of such controlling person (each, a "Investor Party") harmless from any and all losses, liabilities, claims, contingencies, damages, costs and reasonable expenses, including all judgments, amounts paid in settlements, court costs and reasonable attorneys' fees and costs of investigation that any such Investor Party may suffer or incur as a result of or relating to (a) any breach of any of the representations and warranties made by the Company in this Agreement; or (b) any action instituted against an Investor Party by any third party with respect to any of the transactions contemplated by this Agreement (unless such action is based upon a breach of such Investor's representations, warranties or covenants under this Agreement or any agreements or understandings such Investor may have with any such stockholder or any violations by such Investor of state or federal securities laws or any conduct by such Investor which constitutes fraud, gross negligence, willful misconduct or malfeasance). If any action shall be brought against any Investor Party in respect of which indemnity may be sought pursuant to this Agreement, such Investor Party shall promptly notify the Company in writing (provided, however, that the failure to provide such notice shall not relieve the Company of its indemnification obligations hereunder, except to the extent of any material prejudice to the Company as a direct result of such failure), and the Company shall have the right to assume the defense thereof with counsel of its own choosing. Any Investor Party shall have the right to employ separate counsel in any such action and participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Investor Party except to the extent that (i) the employment thereof has been specifically authorized by the Company in writing, (ii) the Company has failed after a reasonable period of time to assume such defense and to employ counsel or (iii) in such action there is, in the reasonable opinion of such separate counsel, a material conflict on any material issue between the position of the Company and the position of such Investor Party. The Company will not be liable to any Investor Party under this Agreement (A) for any settlement by an Investor Party effected without the Company's prior written consent, which shall not be unreasonably withheld or delayed; or (B) to the extent, but only to the extent that a loss, claim, damage or liability is attributable to any Investor Party's breach of any of the representations, warranties, covenants or agreements made by the Investors in this Agreement. The Company shall not enter into any settlement or compromise of any claim in the event such settlement or compromise imposes any liability or obligation on an Investor Party without such Investor Party's prior written consent, which shall not be unreasonably withheld or delayed. To the extent any indemnification by the Company is prohibited or limited by law, the Company agrees to make the maximum contribution with respect to any amounts for which it would otherwise be liable under this Section 5.1 to the fullest extent permitted by law.

5.2 Publicity; Fees and Expenses. The Company shall not disclose the name of any Investor or its affiliates in any filing, press release or otherwise without the consent of such Investor unless such disclosure is required by law, regulation or any trading market on which the Company's securities are then listed or quoted. Except as expressly set forth herein to the contrary, each party shall pay the fees and expenses of its advisers, counsel, accountants and other experts, if any, and all other expenses incurred by such party incident to the negotiation, preparation, execution, delivery and performance of this Agreement. The Company shall reimburse, at the Closing, the reasonable fees for the Investors' legal counsel, fees to other advisors retained by the Investors to represent them in the transactions contemplated by this Agreement, as well as the Investors' due diligence expenses, in an aggregate amount not to exceed $45,000. The Company shall pay all transfer agent fees, stamp taxes and other taxes and duties levied in connection with the delivery of any Offered Securities to the Investors.

5.3. Post-Closing Disclosures. The Company shall not, and shall cause each of its officers, directors, employees and agents not to, provide any Investor with any material, nonpublic information regarding the Company from and after the filing of the Form 8-K describing this Agreement with the Commission, except pursuant to a mutually agreed upon written undertaking of confidentiality. In the event that the Company breaches the foregoing covenant, the Company agrees to comply with any applicable requirements that may, in such instance, be mandated by Regulation FD.

6. Survival of Representations, Warranties and Agreements. Notwithstanding any investigation made by any party to this Agreement, all covenants, agreements, representations and warranties made by the Company and the Investors herein shall survive the execution of this Agreement, and the delivery to the Investors of the Offered Securities being purchased and the payment therefor.

7. Notices. All notices, requests, consents and other communications hereunder shall be in writing, shall be mailed (A) if within domestic United States, by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, email or by facsimile, or (B) if delivered from outside the United States, by International Federal Express email or facsimile, and shall be deemed given (i) if delivered by first-class registered or certified mail domestic, three business days after so mailed, (ii) if delivered by a nationally recognized overnight carrier, one business day after so mailed, (iii) if delivered by International Federal Express, two business days after so mailed, (iv) if delivered by facsimile, upon electronic confirmation of receipt, (v) on the date sent, if by email and on a business day (and if sent on a day that is not a business day, then on the following business day) and shall be delivered as addressed as follows: (a) if to the Company, at the office of the Company, 300 George Street, New Haven, Connecticut 06511-6624, Facsimile: 203-624-7003, Email: mfenton@achillion.com, Attention: Michael D. Kishbauch, with copies to Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109, Attention: Steven D. Singer; and (b) if to an Investor, at its address on Schedule I hereto, or at such other address or addresses as may have been furnished to the Company in writing by such Investor.

8. Changes. This Agreement may not be modified or amended except pursuant to an instrument in writing signed by the Company and the Investors.

9. Headings. The headings of the various sections of this Agreement have been inserted for convenience or reference only and shall not be deemed to be part of this Agreement.

10. Severability. In case any provision contained in this Agreement should be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

11. Governing Law. This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of New York, without giving effect to the principles of conflicts of law. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in The City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper.

12. Counterparts; Facsimile. This Agreement may be executed in two or more counterparts, each of which shall constitute an original, but all of which, when taken together, shall constitute one instrument, and shall become effective when one or more counterparts have been signed by each party hereto and delivered to the other parties. Facsimile and .pdf signatures shall be as effective as original signatures.

13. Successors and Assigns; Remedies. This Agreement shall be binding upon and inure to the benefit of the parties and their successors and assigns. In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, each Investor and the Company will be entitled to specific performance under this Agreement. The parties agree that monetary damages may not be adequate compensation for any loss incurred by reason of any breach of obligations described in the foregoing sentence and hereby agrees to waive in any action for specific performance of any such obligation the defense that a remedy at law would be adequate.

ANNEX II

ACHILLION PHARMACEUTICALS, INC.

INVESTOR QUESTIONNAIRE

Pursuant to Annex I to the Agreement, please provide us with the following information:

1. The exact name that your Offered Securities are to be registered in. You may use a nominee name if appropriate: _____

2. The relationship between the Investor and the registered holder listed in response to item 1 above: _____

3. The mailing address of the registered holder listed in response to item 1 above: _____

4. The Social Security Number or Tax Identification Number of the registered holder listed in the response to item 1 above: _____

5. Name of DTC Participant (broker-dealer at which the account or accounts to be credited with the Offered Securities are maintained): _____

6. DTC Participant Number: _____

7. Name of Account at DTC Participant being credited with the Offered Securities: _____

8. Account Number at DTC Participant being credited with the Offered Securities: _____

Exhibit 10.2

ACHILLION PHARMACEUTICALS, INC.
$50,000,000 of
Shares of Common Stock
(par value $0.001 per share)

Controlled Equity Offering℠

Sales Agreement

November 8, 2012

Cantor Fitzgerald & Co.
499 Park Avenue
New York, NY 10022

Ladies and Gentlemen:

Achillion Pharmaceuticals, Inc., a Delaware corporation (the "**Company**"), confirms its agreement (this "**Agreement**") with Cantor Fitzgerald & Co. (the "**Agent**"), as follows:

1. Issuance and Sale of Shares. The Company agrees that, from time to time during the term of this Agreement, on the terms and subject to the conditions set forth herein, it may issue and sell through the Agent, up to $50,000,000 of shares of common stock (the "**Placement Shares**") of the Company, par value $0.001 per share (the "**Common Stock**"); *provided, however*, that in no event shall the Company issue or sell through the Agent such number of Placement Shares that would (a) exceed the number or dollar amount of shares of Common Stock registered on the effective Registration Statement (as defined below) pursuant to which the offering is being made or (b) exceed the number of authorized but unissued shares of the Common Stock (the "**Maximum Amount**"). Notwithstanding anything to the contrary contained herein, the parties hereto agree that compliance with the limitations set forth in this Section 1 on the amount of Placement Shares issued and sold under this Agreement shall be the sole responsibility of the Company and that Agent shall have no obligation in connection with such compliance. The issuance and sale of Placement Shares through Agent will be effected pursuant to the Registration Statement (as defined below) filed by the Company and which will be declared effective by the Securities and Exchange Commission (the "**Commission**"), although nothing in this Agreement shall be construed as requiring the Company to use the Registration Statement to issue Common Stock.

The Company has filed or will file, in accordance with the provisions of the Securities Act of 1933, as amended (the "**Securities Act**") and the rules and regulations thereunder (the "**Securities Act Regulations**"), with the Commission a registration statement on Form S-3, including one or more base prospectuses, relating to certain securities, including the Placement Shares to be issued from time to time by the Company, and which incorporates by reference documents that the Company has filed or will file in accordance with the provisions of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), and the rules and regulations thereunder. The Company will, if necessary, prepare a prospectus supplement specifically relating to the Placement Shares to be issued from time to time by the Company (the "**Prospectus Supplement**"). The Company will furnish to the Agent, for use by the Agent,

copies of the prospectus included as part of such registration statement, as supplemented, if necessary, by the Prospectus Supplement, relating to the Placement Shares to be issued from time to time by the Company. The Company may file one or more additional registration statements from time to time that will contain one or more base prospectuses with respect to the Placement Shares. Except where the context otherwise requires, such registration statement(s), including all documents filed as part thereof or incorporated by reference therein, and including any information contained in a Prospectus (as defined below) subsequently filed with the Commission pursuant to Rule 424(b) under the Securities Act Regulations or deemed to be a part of such registration statement pursuant to Rule 430B of the Securities Act Regulations, is herein called the "**Registration Statement**." The base prospectus or base prospectuses, including all documents incorporated therein by reference, included in the Registration Statement, as it may be supplemented, if necessary, by the Prospectus Supplement, in the form in which such prospectus or prospectuses and/or Prospectus Supplement have most recently been filed by the Company with the Commission pursuant to Rule 424(b) under the Securities Act Regulations, together with the then issued Issuer Free Writing Prospectus(es), is herein called the "**Prospectus**." Any reference herein to the Registration Statement, the Prospectus or any amendment or supplement thereto shall be deemed to refer to and include the documents incorporated by reference therein, and any reference herein to the terms "amend," "amendment" or "supplement" with respect to the Registration Statement or the Prospectus shall be deemed to refer to and include the filing after the execution hereof of any document with the Commission deemed to be incorporated by reference therein.

Any reference herein to the Registration Statement, any Prospectus Supplement, Prospectus or any Issuer Free Writing Prospectus (defined below) shall be deemed to refer to and include the documents, if any, incorporated by reference therein (the "**Incorporated Documents**"), including, unless the context otherwise requires, the documents, if any, filed as exhibits to such Incorporated Documents. Any reference herein to the terms "amend," "amendment" or "supplement" with respect to the Registration Statement, any Prospectus Supplement, the Prospectus or any Issuer Free Writing Prospectus shall be deemed to refer to and include the filing of any document under the Exchange Act on or after the most-recent effective date of the Registration Statement, or the date of any Prospectus Supplement, Prospectus or such Issuer Free Writing Prospectus, as the case may be, and incorporated therein by reference. For purposes of this Agreement, all references to the Registration Statement, the Prospectus or to any amendment or supplement thereto shall be deemed to include the most recent copy filed with the Commission pursuant to its Electronic Data Gathering Analysis and Retrieval System, or if applicable, the Interactive Data Electronic Application system when used by the Commission (collectively, "**EDGAR**").

2. Placements. Each time that the Company wishes to issue and sell Placement Shares hereunder (each, a "**Placement**"), it will notify the Agent by email notice (or other method mutually agreed to in writing by the Parties) of the number of Placement Shares, the time period during which sales are requested to be made, any limitation on the number of Placement Shares that may be sold in any one day and any minimum price below which sales may not be made (a "**Placement Notice**"), the form of which is attached hereto as Schedule 1. The Placement Notice shall originate from any of the individuals from the Company set forth on Schedule 3 (with a copy to each of the other individuals from the Company listed on such schedule), and shall be addressed to each of the individuals from the Agent set forth on Schedule 3,

as such Schedule 3 may be amended from time to time. The Placement Notice shall be effective unless and until (i) the Agent declines to accept the terms contained therein for any reason, in its sole discretion, within three (3) business days from the time the Placement Notice was received, (ii) the entire amount of the Placement Shares thereunder have been sold, (iii) the Company suspends or terminates the Placement Notice or (iv) this Agreement has been terminated under the provisions of Section 12. The amount of any discount, commission or other compensation to be paid by the Company to Agent in connection with the sale of the Placement Shares shall be calculated in accordance with the terms set forth in Schedule 2. It is expressly acknowledged and agreed that neither the Company nor the Agent will have any obligation whatsoever with respect to a Placement or any Placement Shares unless and until the Company delivers a Placement Notice to the Agent and the Agent does not decline such Placement Notice pursuant to the terms set forth above, and then only upon the terms specified therein and herein. In the event of a conflict between the terms of this Agreement and the terms of a Placement Notice, the terms of the Placement Notice will control.

3. Sale of Placement Shares by Agent. (a) Subject to the provisions of Section 5(a), the Agent, for the period specified in the Placement Notice, will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of the NASDAQ Global Select Market (the "**Exchange**"), to sell the Placement Shares up to the amount specified, and otherwise in accordance with the terms of such Placement Notice. The Agent will provide written confirmation to the Company no later than the opening of the Trading Day (as defined below) immediately following the Trading Day on which it has made sales of Placement Shares hereunder setting forth the number of Placement Shares sold on such day, the compensation payable by the Company to the Agent pursuant to Section 2 with respect to such sales, and the Net Proceeds (as defined below) payable to the Company, with an itemization of the deductions made by the Agent (as set forth in Section 5(b)) from the gross proceeds that it receives from such sales. Subject to the terms of the Placement Notice, the Agent may sell Placement Shares by any method permitted by law deemed to be an "at the market" offering as defined in Rule 415 of the Securities Act Regulations, including without limitation sales made directly on the Exchange, on any other existing trading market for the Common Stock or to or through a market maker. Subject to the terms of a Placement Notice, the Agent may also sell Placement Shares by any other method permitted by law, including but not limited to in privately negotiated transactions. "**Trading Day**" means any day on which Common Stock is traded on the Exchange.

(b) During the term of this Agreement, neither Agent nor any of its affiliates or subsidiaries shall engage in (i) any short sale of any security of the Company, as defined in Regulation SHO, (ii) any sale of any security of the Company that Agent does not own or any sale which is consummated by the delivery of a security of the Company borrowed by, or for the account of, Agent or (iii) any market making, bidding, stabilization or other trading activity with regard to the Common Stock or related derivative securities if such activity would be prohibited under Regulation M or other anti-manipulation rules under the Securities Act or any other law applicable to the Company.

4. Suspension of Sales. The Company or the Agent may, upon notice to the other party in writing (including by email correspondence to each of the individuals of the other Party

set forth on Schedule 3, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) or by telephone (confirmed immediately by verifiable facsimile transmission or email correspondence to each of the individuals of the other Party set forth on Schedule 3), suspend any sale of Placement Shares (a "**Suspension**"); provided, however, that such suspension shall not affect or impair any party's obligations with respect to any Placement Shares sold hereunder prior to the receipt of such notice. While a Suspension is in effect any obligation under Sections 7(l), 7(m), and 7(n) with respect to the delivery of certificates, opinions, or comfort letters to the Agent, shall be waived, provided, however, that such waiver shall not apply for the Representation Date (defined below) occurring on the date that the Company files its annual report on Form 10-K. Each of the parties agrees that no such notice under this Section 4 shall be effective against any other party unless it is made to one of the individuals named on Schedule 3 hereto, as such Schedule may be amended from time to time.

5. Sale and Delivery to the Agent; Settlement.

(a) Sale of Placement Shares. On the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, upon the Agent's acceptance of the terms of a Placement Notice, and unless the sale of the Placement Shares described therein has been declined, suspended, or otherwise terminated in accordance with the terms of this Agreement, the Agent, for the period specified in the Placement Notice, will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable law and regulations to sell such Placement Shares up to the amount specified, and otherwise in accordance with the terms of such Placement Notice. The Company acknowledges and agrees that (i) there can be no assurance that the Agent will be successful in selling Placement Shares, (ii) the Agent will incur no liability or obligation to the Company or any other person or entity if it does not sell Placement Shares for any reason other than a failure by the Agent to use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable law and regulations to sell such Placement Shares as required under this Agreement and (iii) the Agent shall be under no obligation to purchase Placement Shares on a principal basis pursuant to this Agreement, except as otherwise agreed by the Agent and the Company.

(b) Settlement of Placement Shares. Unless otherwise specified in the applicable Placement Notice, settlement for sales of Placement Shares will occur on the third (3rd) Trading Day (or such earlier day as is industry practice for regular-way trading) following the date on which such sales are made (each, a "**Settlement Date**"). The Agent shall notify the Company of each sale of Placement Shares on the date of such sale. The amount of proceeds to be delivered to the Company on a Settlement Date against receipt of the Placement Shares sold (the "**Net Proceeds**") will be equal to the aggregate sales price received by the Agent, after deduction for (i) the Agent's commission, discount or other compensation for such sales payable by the Company pursuant to Section 2 hereof, and (ii) any transaction fees imposed by any governmental or self-regulatory organization in respect of such sales.

(c) Delivery of Placement Shares. On or before each Settlement Date, the Company will, or will cause its transfer agent to, electronically transfer the Placement Shares being sold by crediting the Agent's or its designee's account (provided the Agent shall have given the Company written notice of such designee at least one Trading Day prior to the

Settlement Date) at The Depository Trust Company through its Deposit and Withdrawal at Custodian System or by such other means of delivery as may be mutually agreed upon by the parties hereto which in all cases shall be freely tradable, transferable, registered shares in good deliverable form. On each Settlement Date, the Agent will deliver the related Net Proceeds in same day funds to an account designated by the Company on, or prior to, the Settlement Date. The Company agrees that if the Company, or its transfer agent (if applicable), defaults in its obligation to deliver Placement Shares on a Settlement Date, the Company agrees that in addition to and in no way limiting the rights and obligations set forth in Section 10(a) hereto, it will (i) hold the Agent harmless against any loss, claim, damage, or expense (including reasonable legal fees and expenses), as incurred, arising out of or in connection with such default by the Company or its transfer agent (if applicable) and (ii) pay to the Agent any commission, discount, or other compensation to which it would otherwise have been entitled absent such default.

(d) Limitations on Offering Size. Under no circumstances shall the Company cause or request the offer or sale of any Placement Shares if, after giving effect to the sale of such Placement Shares, the aggregate gross sales proceeds of Placement Shares sold pursuant to this Agreement would exceed the lesser of (A) together with all sales of Placement Shares under this Agreement, the Maximum Amount, (B) the amount available for offer and sale under the currently effective Registration Statement and (C) the amount authorized from time to time to be issued and sold under this Agreement by the Company's board of directors, a duly authorized committee thereof or a duly authorized executive committee, and notified to the Agent in writing. Under no circumstances shall the Company cause or request the offer or sale of any Placement Shares pursuant to this Agreement at a price lower than the minimum price authorized from time to time by the Company's board of directors, a duly authorized committee thereof or a duly authorized executive committee, and notified to the Agent in writing. Further, under no circumstances shall the Company cause or permit the aggregate offering amount of Placement Shares sold pursuant to this Agreement to exceed the Maximum Amount.

6. Representations and Warranties of the Company. The Company represents and warrants to, and agrees with Agent that as of the date of this Agreement and as of each Applicable Time (as defined below), unless such representation, warranty or agreement specifies a different time:

(a) Registration Statement and Prospectus. The Company and the transactions contemplated by this Agreement meet the requirements for and comply with the conditions for the use of Form S-3 under the Securities Act. The Registration Statement has been or will be filed with the Commission and will be declared effective by the Commission under the Securities Act prior to the issuance of any Placement Notices by the Company. The Prospectus will name the Agent as the agent in the section entitled "Plan of Distribution." The Company has not received, and has no notice of, any order of the Commission preventing or suspending the use of the Registration Statement, or threatening or instituting proceedings for that purpose. The Registration Statement and the offer and sale of Placement Shares as contemplated hereby meet the requirements of Rule 415 under the Securities Act and comply in all material respects with said Rule. Any statutes, regulations, contracts or other documents that are required to be described in the Registration Statement or the Prospectus or to be filed as exhibits to the Registration Statement have been so described or filed. Copies of the Registration

Statement, the Prospectus, and any such amendments or supplements and all documents incorporated by reference therein that were filed with the Commission on or prior to the date of this Agreement have been delivered, or are available through EDGAR, to Agent and its counsel. The Company has not distributed and, prior to the later to occur of each Settlement Date and completion of the distribution of the Placement Shares, will not distribute any offering material in connection with the offering or sale of the Placement Shares other than the Registration Statement and the Prospectus and any Issuer Free Writing Prospectus (as defined below) to which the Agent has consented, any such consent not to be unreasonably withheld, conditioned or delayed. The Common Stock is registered pursuant to Section 12(b) of the Exchange Act and is currently listed on the Exchange under the trading symbol "ACHN." The Company has taken no action designed to, or likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act or delisting the Common Stock from the Exchange, nor has the Company received any notification that the Commission or the Exchange is contemplating terminating such registration or listing. To the Company's knowledge, it is in compliance with all applicable listing requirements of the Exchange. The Company has no reason to believe that it will not in the foreseeable future continue to be in compliance with all such listing and maintenance requirements.

(b) No Misstatement or Omission. The Registration Statement, when it became or becomes effective, and the Prospectus, and any amendment or supplement thereto, on the date of such Prospectus or amendment or supplement, conformed and will conform in all material respects with the requirements of the Securities Act. At each Settlement Date, the Registration Statement and the Prospectus, as of such date, will conform in all material respects with the requirements of the Securities Act. The Registration Statement, when it became or becomes effective, did not, and will not, contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The Prospectus and any amendment and supplement thereto, on the date thereof and at each Applicable Time (defined below), did not or will not include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading. The documents incorporated by reference in the Prospectus or any Prospectus Supplement did not, and any further documents filed and incorporated by reference therein will not, when filed with the Commission, contain an untrue statement of a material fact or omit to state a material fact required to be stated in such document or necessary to make the statements in such document, in light of the circumstances under which they were made, not misleading. The foregoing shall not apply to statements in, or omissions from, any such document made in reliance upon, and in conformity with, information furnished to the Company by Agent specifically for use in the preparation thereof.

(c) Conformity with Securities Act and Exchange Act. The Registration Statement, the Prospectus, any Issuer Free Writing Prospectus or any amendment or supplement thereto, and the documents incorporated by reference in the Registration Statement, the Prospectus or any amendment or supplement thereto, when such documents were or are filed with the Commission under the Securities Act or the Exchange Act or became or become effective under the Securities Act, as the case may be, conformed or will conform in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable.

(d) Financial Information. The financial statements of the Company included or incorporated by reference in the Registration Statement, the Prospectus and the Issuer Free Writing Prospectuses, if any, together with the related notes and schedules, present fairly, in all material respects, the financial position of the Company as of the dates indicated and the results of operations, cash flows and changes in stockholders' equity of the Company for the periods specified (subject, in the case of unaudited statements, to normal year-end audit adjustments) and have been prepared in compliance with the requirements of the Securities Act and Exchange Act, as applicable, and in conformity with GAAP (as defined below) applied on a consistent basis (except for such adjustments to accounting standards and practices as are noted therein) during the periods involved; the other financial and statistical data with respect to the Company contained or incorporated by reference in the Registration Statement, the Prospectus and the Issuer Free Writing Prospectuses, if any, are accurately and fairly presented in all material respects and prepared on a basis materially consistent with the financial statements and books and records of the Company; there are no financial statements (historical or pro forma) that are required to be included or incorporated by reference in the Registration Statement, or the Prospectus that are not included or incorporated by reference as required; the Company does not have any material liabilities or obligations, direct or contingent (including any off-balance sheet obligations), not described in the Registration Statement (excluding the exhibits thereto), and the Prospectus; and all disclosures contained or incorporated by reference in the Registration Statement, the Prospectus and the Issuer Free Writing Prospectuses, if any, regarding "non-GAAP financial measures" (as such term is defined by the rules and regulations of the Commission) comply in all material respects with Regulation G of the Exchange Act and Item 10 of Regulation S-K under the Securities Act, to the extent applicable.

(e) Conformity with EDGAR Filing. The Prospectus delivered to the Agent for use in connection with the sale of the Placement Shares pursuant to this Agreement will be identical to the versions of the Prospectus created to be transmitted to the Commission for filing via EDGAR, except to the extent permitted by Regulation S-T.

(f) Organization. The Company is, and will be, duly organized, validly existing as a corporation and in good standing under the laws of its jurisdiction of organization. The Company is, and will be, duly licensed or qualified as a foreign corporation for transaction of business and in good standing under the laws of each other jurisdiction in which its ownership or lease of property or the conduct of its business requires such license or qualification, and has all corporate power and authority necessary to own or hold its properties and to conduct its business as described in the Registration Statement and the Prospectus, except where the failure to be so qualified or in good standing or have such power or authority would not, individually or in the aggregate, have a material adverse effect or would reasonably be expected to have a material adverse effect on or affecting the assets, business, operations, earnings, properties, condition (financial or otherwise), prospects, stockholders' equity or results of operations of the Company, or prevent or materially interfere with consummation of the transactions contemplated hereby (a "**Material Adverse Effect**").

(g) Subsidiaries. The Company has no subsidiaries.

(h) No Violation or Default. The Company is not (i) in violation of its charter or by-laws or similar organizational documents; (ii) in default, and no event has occurred that, with notice or lapse of time or both, would constitute such a default, in the due performance or

observance of any term, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company is a party or by which the Company is bound or to which any of the property or assets of the Company is subject; or (iii) in violation of any law or statute or any judgment, order, rule or regulation of any court or arbitrator or governmental or regulatory authority, except, in the case of each of clauses (ii) and (iii) above, for any such violation or default that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. To the Company's knowledge, no other party under any material contract or other agreement to which it is a party is in default in any respect thereunder where such default would have a Material Adverse Effect.

(i) No Material Adverse Change. Subsequent to the respective dates as of which information is given in the Registration Statement, the Prospectus and the Free Writing Prospectuses, if any (including any document deemed incorporated by reference therein), there has not been (i) any Material Adverse Effect or the occurrence of any development that the Company reasonably expects will result in a Material Adverse Effect, (ii) other than this Agreement, any transaction which is material to the Company, (iii) any obligation or liability, direct or contingent (including any off-balance sheet obligations), incurred by the Company, which is material to the Company, (iv) any material change in the capital stock or outstanding long-term indebtedness of the Company (other than (a) as a result of the sale of Placement Shares, (b) as described in a proxy statement filed on Schedule 14A or a Registration Statement on Form S-4 and otherwise publicly announced, or (c) changes in the number of shares of outstanding Common Stock of the Company due to the issuance of shares upon the exercise or conversion of securities exercisable for, or convertible into, shares of Common Stock outstanding on the date hereof, or the vesting of restricted stock units outstanding on the date hereof) or (v) any dividend or distribution of any kind declared, paid or made on the capital stock of the Company, other than, in each case above, (A) in the ordinary course of business or (B) as otherwise disclosed in the Registration Statement or Prospectus (including any document deemed incorporated by reference therein).

(j) Capitalization. The issued and outstanding shares of capital stock of the Company have been validly issued, are fully paid and nonassessable and, other than as disclosed in the Registration Statement or the Prospectus, are not subject to any preemptive rights, rights of first refusal or similar rights. The Company has an authorized, issued and outstanding capitalization as set forth in the Registration Statement and the Prospectus as of the dates referred to therein (other than the grant of additional options or restricted stock units or stock awards under the Company's existing stock option plans, or changes in the number of outstanding shares of Common Stock of the Company due to the issuance of shares upon the exercise or conversion of securities exercisable for, or convertible into, Common Stock outstanding on the date hereof) and such authorized capital stock conforms in all material respects to the description thereof set forth in the Registration Statement and the Prospectus. The description of the securities of the Company in the Registration Statement and the Prospectus is complete and accurate in all material respects. Except as disclosed in or contemplated by the Registration Statement or the Prospectus, as of the date referred to therein, the Company did not have outstanding any options to purchase, or any rights or warrants to subscribe for, or any securities or obligations convertible into, or exchangeable for, or any contracts or commitments to issue or sell, any shares of capital stock or other securities.

(k) Authorization; Enforceability. The Company has full legal right, power and authority to enter into this Agreement and perform the transactions contemplated hereby. This Agreement has been duly authorized, executed and delivered by the Company and is a legal, valid and binding agreement of the Company enforceable against the Company in accordance with its terms, except to the extent that enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally and by general equitable principles.

(l) Authorization of Placement Shares. The Placement Shares, when issued and delivered pursuant to the terms approved by the board of directors of the Company or a duly authorized committee thereof, or a duly authorized executive committee, against payment therefor as provided herein, will be duly and validly authorized and issued and fully paid and nonassessable, free and clear of any pledge, lien, encumbrance, security interest or other claim (other than any pledge, lien, encumbrance, security interest or other claim arising from an act or omission of the Agent or a purchaser), including any statutory or contractual preemptive rights, resale rights, rights of first refusal or other similar rights, and will be registered pursuant to Section 12 of the Exchange Act. The Placement Shares, when issued, will conform in all material respects to the description thereof set forth in or incorporated into the Prospectus.

(m) No Consents Required. No consent, approval, authorization, order, registration or qualification of or with any court or arbitrator or governmental or regulatory authority is required for the execution, delivery and performance by the Company of this Agreement, the issuance and sale by the Company of the Placement Shares, except for the registration of the Placement Shares under the Securities Act and such consents, approvals, authorizations, orders and registrations or qualifications as may be required under applicable state securities laws or by the by-laws and rules of the Financial Industry Regulatory Authority ("**FINRA**") or the Exchange in connection with the sale of the Placement Shares by the Agent.

(n) No Preferential Rights. Except as set forth in the Registration Statement and the Prospectus, (i) no person, as such term is defined in Rule 1-02 of Regulation S-X promulgated under the Securities Act (each, a "**Person**"), has the right, contractual or otherwise, to cause the Company to issue or sell to such Person any Common Stock or shares of any other capital stock or other securities of the Company (other than upon the exercise of options or warrants to purchase Common Stock or upon the exercise of options or vesting of restricted stock units or stock awards that may be granted from time to time under the Company's stock option plans and which are disclosed in the Registration Statement and Prospectus), (ii) no Person has any preemptive rights, resale rights, rights of first refusal, or any other rights (whether pursuant to a "poison pill" provision or otherwise) to purchase any Common Stock or shares of any other capital stock or other securities of the Company, (iii) no Person has the right to act as an underwriter or as a financial advisor to the Company in connection with the offer and sale of the Placement Shares, and (iv) no Person has the right, contractual or otherwise, to require the Company to register under the Securities Act any Common Stock or shares of any other capital stock or other securities of the Company, or to include any such shares or other securities in the Registration Statement or the offering contemplated thereby, whether as a result of the filing or effectiveness of the Registration Statement or the sale of the Placement Shares as contemplated thereby or otherwise, except for such rights as have been waived in writing on or prior to the date hereof.

(o) Independent Registered Public Accounting Firm. PricewaterhouseCoopers LLP (the "**Accountant**"), whose report on the financial statements of the Company is filed with the Commission as part of the Company's most recent Annual Report on Form 10-K filed with the Commission and incorporated into the Registration Statement and the Prospectus, are and, during the periods covered by their report, were an independent registered public accounting firm within the meaning of the Securities Act and the Public Company Accounting Oversight Board (United States). To the Company's knowledge, the Accountant is not in violation of the auditor independence requirements of the Sarbanes-Oxley Act of 2002 (the "**Sarbanes-Oxley Act**") with respect to the Company.

(p) Enforceability of Agreements. To the Company's knowledge, all agreements between the Company and third parties expressly referenced in the Prospectus, other than such agreements that have expired by their terms or whose termination is disclosed in the Registration Statement and the Prospectus, are legal, valid and binding obligations of the Company enforceable in accordance with their respective terms, except to the extent that (i) enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally and by general equitable principles and (ii) the indemnification provisions of certain agreements may be limited by federal or state securities laws or public policy considerations in respect thereof, except for any unenforceability that, individually or in the aggregate, would not reasonably be expected to have a Material Adverse Effect.

(q) No Litigation. Except as set forth in the Registration Statement or the Prospectus, there are no legal, governmental or regulatory actions, suits or proceedings pending, nor, to the Company's knowledge, any legal, governmental or regulatory audits or investigations, to which the Company is a party or to which any property of the Company is the subject that, individually or in the aggregate, if determined adversely to the Company, would reasonably be expected to have a Material Adverse Effect or materially and adversely affect the ability of the Company to perform its obligations under this Agreement; to the Company's knowledge, no such actions, suits or proceedings are threatened or contemplated by any governmental or regulatory authority or threatened by others; and (i) there are no current or pending legal, governmental or regulatory audits or investigations, actions, suits or proceedings that are required under the Securities Act to be described in the Prospectus that are not so described; and (ii) there are no contracts or other documents that are required under the Securities Act to be filed as exhibits to the Registration Statement that are not so filed.

(r) Consents and Permits. Except as disclosed in the Registration Statement and the Prospectus, the Company has made all filings, applications and submissions required by, and possesses all approvals, licenses, certificates, certifications, clearances, consents, grants, exemptions, marks, notifications, orders, permits and other authorizations issued by, the appropriate federal, state or foreign governmental or regulatory authorities (including, without limitation, the United States Food and Drug Administration (the "**FDA**"), and any other foreign, federal, state, provincial, court or local government or regulatory authorities performing functions similar to those performed by the FDA) necessary for the ownership or lease of its properties or to conduct its business as described in the Registration Statement and the Prospectus (collectively, "**Permits**"), except for such Permits the failure of which to possess, obtain or make the same would not reasonably be expected to have a Material Adverse Effect;

the Company is in compliance with the terms and conditions of all such Permits, except where the failure to be in compliance would not reasonably be expected to have a Material Adverse Effect; all of the Permits are valid and in full force and effect, except where any invalidity, individually or in the aggregate, would be not reasonably expected to have a Material Adverse Effect; and the Company has not received any written notice of proceedings relating to the limitation, revocation, cancellation, suspension, modification or non-renewal of any such Permit which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a Material Adverse Effect, and has any reason to believe that any such license, certificate, permit or authorization will not be renewed in the ordinary course. To the extent required by applicable laws and regulations of the FDA, the Company has submitted to the FDA an Investigational New Drug Application or amendment or supplement thereto for each clinical trial it has conducted or sponsored or is conducting or sponsoring; all such submissions were in material compliance with applicable laws and rules and regulations when submitted and no material deficiencies have been asserted by the FDA with respect to any such submissions.

(s) Regulatory Filings. Except as disclosed in the Registration Statement and the Prospectus, all such filings, declarations, listings, registrations, reports or submissions were in compliance with applicable laws when filed and no deficiencies have been asserted by any applicable regulatory authority with respect to any such filings, declarations, listings, registrations, reports or submissions, except for any deficiencies that, individually or in the aggregate, would not have a Material Adverse Effect. The Company has operated and currently is, in all material respects, in compliance with the United States Federal Food, Drug, and Cosmetic Act, all applicable rules and regulations of the FDA and other federal, state, local and foreign governmental bodies exercising comparable authority. The Company has no knowledge of any Company studies, tests or trials not described in the Prospectus the results of which reasonably call into question in any material respect the results of the Company's studies, tests and trials described in the Prospectus.

(t) Intellectual Property. Except as disclosed in the Registration Statement or the Prospectus, the Company owns, possesses, licensees or has other enforceable rights to use all foreign and domestic patents, patent applications, trademarks (both registered and unregistered), service marks, trade names, trademark registrations, service mark registrations, copyrights, licenses, inventions and know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures) (collectively, the "**Intellectual Property**"), necessary for the conduct of its business as conducted as of the date hereof, except to the extent that the failure to own or possess or acquire adequate rights to use such Intellectual Property would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; except as disclosed in writing to the Agent, to the Company's knowledge, there is no infringement by third parties of any such Intellectual Property; the Company has not received any written notice of any claim of infringement or conflict which asserted Intellectual Property rights of others, which infringement or conflict, if the subject of an unfavorable decision, would result in a Material Adverse Effect; there are no pending, or to the Company's knowledge, threatened judicial proceedings or interference proceedings against the Company challenging the Company's rights in or to or the validity of the scope of any of the Company's patents, patent applications or proprietary information except such proceedings that have been disclosed in writing to the Agent or would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; no other entity or individual has any

right or claim in any of the Company's patents, patent applications or any patent to be issued therefrom by virtue of any contract, license or other agreement entered into between such entity or individual and the Company or by any non-contractual obligation of the Company, other than by written licenses granted by the Company except for such right or claim that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; the Company has not received any written notice of any claim challenging the rights of the Company in or to any Intellectual Property owned, licensed or optioned by the Company which claim, if the subject of an unfavorable decision would reasonably be expected to result in a Material Adverse Effect.

(u) Clinical Studies. To the Company's knowledge, the clinical, pre-clinical and other studies and tests described in the Prospectus conducted by or, to the knowledge of the Company, on behalf of the Company were, and, if still pending, are being, to the Company's knowledge, conducted in accordance in all material respects with all statutes, laws, rules and regulations, as applicable (including, without limitation, those administered by the FDA or by any foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA), except where such noncompliance would not reasonably be expected to have a Material Adverse Effect. Except as set forth in the Registration Statement and Prospectus, the Company has not received any written notices or other written correspondence from the FDA or any other foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA requiring the Company to terminate or suspend any ongoing clinical or pre-clinical studies or tests.

(v) Market Capitalization. At the time the Registration Statement was or will be originally declared effective, and as of the date of the Prospectus, the Company met or will meet the then applicable requirements for the use of Form S-3 under the Securities Act, including but not limited Instruction I.B.1 of Form S-3. At the time the Registration Statement was or will be originally declared effective, and as of the date of the Prospectus, the Company satisfies or will satisfy the pre-1992 eligibility requirements for the use of a registration statement on Form S-3 in connection with this offering (the pre-1992 eligibility requirements for the use of the registration statement on Form S-3 include (i) having a non-affiliate, public common equity float of at least $150 million or a non-affiliate, public common equity float of at least $100 million and annual trading volume of at least three million shares and (ii) having been subject to the Exchange Act reporting requirements for a period of 36 months). The Company is not a shell company (as defined in Rule 405 under the Securities Act) and has not been a shell company for at least 12 calendar months previously.

(w) No Material Defaults. The Company has not defaulted on any installment on indebtedness for borrowed money or on any rental on one or more long-term leases, which defaults, individually or in the aggregate, would reasonably be expected to have a Material Adverse Effect. The Company has not filed a report pursuant to Section 13(a) or 15(d) of the Exchange Act since the filing of its last Annual Report on Form 10-K, indicating that it (i) has failed to pay any dividend or sinking fund installment on preferred stock or (ii) has defaulted on any installment on indebtedness for borrowed money or on any rental on one or more long-term leases, which defaults, individually or in the aggregate, would reasonably be expected to have a Material Adverse Effect.

(x) Certain Market Activities. Neither the Company nor, to the Company's knowledge, any of its directors, officers or controlling persons has taken, directly or indirectly, any action designed, or that has constituted or might reasonably be expected to cause or result in, under the Exchange Act or otherwise, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Placement Shares.

(y) Broker/Dealer Relationships. Neither the Company nor any related entities (i) is required to register as a "broker" or "dealer" in accordance with the provisions of the Exchange Act or (ii) directly or indirectly through one or more intermediaries, controls or is a "person associated with a member" or "associated person of a member" (within the meaning set forth in the FINRA Manual).

(z) No Reliance. The Company has not relied upon the Agent or legal counsel for the Agent for any legal, tax or accounting advice in connection with the offering and sale of the Placement Shares.

(aa) Taxes. The Company has filed all federal, state, local and foreign tax returns which have been required to be filed and paid all taxes shown thereon through the date hereof, to the extent that such taxes have become due and are not being contested in good faith, except where the failure to so file or pay would not reasonably be expected to have a Material Adverse Effect. Except as otherwise disclosed in or contemplated by the Registration Statement or the Prospectus, no tax deficiency has been determined adversely to the Company which has had, or would reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect. The Company has no knowledge of any federal, state or other governmental tax deficiency, penalty or assessment which has been or might be asserted or threatened against it which would reasonably be expected to have a Material Adverse Effect.

(bb) Title to Real and Personal Property. Except as set forth in the Registration Statement or the Prospectus, the Company has good and marketable title in fee simple to all items of real property owned by it, good and valid title to all personal property (excluding Intellectual Property, which is discussed in Section 6(s) above) described in the Registration Statement or Prospectus as being owned by it that are material to its business, in each case free and clear of all liens, encumbrances and claims, except those that (i) do not materially interfere with the use made of such property by the Company or (ii) would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect. Any real or personal property described in the Registration Statement or Prospectus as being leased by the Company is held by the Company under valid, existing and enforceable leases, except those that (A) do not materially interfere with the use made of such property by the Company or (B) would not be reasonably expected, individually or in the aggregate, to have a Material Adverse Effect. The Company has not received from any governmental or regulatory authorities any notice of any condemnation of, or zoning change affecting, the properties of the Company, and the Company knows of no such condemnation or zoning change which is threatened, except for such that would not reasonably be expected to interfere in any material respect with the use made and proposed to be made of such property by the Company or otherwise have a Material Adverse Effect, individually or in the aggregate.

(cc) Environmental Laws. Except as set forth in the Registration Statement or the Prospectus, the Company (i) is in compliance with any and all applicable federal, state, local

and foreign laws, rules, regulations, decisions and orders relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants (collectively, "**Environmental Laws**"); (ii) has received and is in compliance with all permits, licenses or other approvals required of it under applicable Environmental Laws to conduct its business as described in the Registration Statement and the Prospectus; and (iii) has not received notice of any actual or potential liability for the investigation or remediation of any disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants, except, in the case of any of clauses (i), (ii) or (iii) above, for any such failure to comply or failure to receive required permits, licenses, other approvals or liability as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(dd) Disclosure Controls. The Company maintains systems of internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company's internal control over financial reporting is effective and the Company is not aware of any material weaknesses in its internal control over financial reporting (other than as set forth in the Prospectus). Since the date of the latest audited financial statements of the Company included in the Prospectus, there has been no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting (other than as set forth in the Prospectus). The Company has established disclosure controls and procedures (as defined in Exchange Act Rules 13a-15 and 15d-15) for the Company and designed such disclosure controls and procedures to ensure that material information relating to the Company is made known to the certifying officers by others within those entities, particularly during the period in which the Company's Annual Report on Form 10-K or Quarterly Report on Form 10-Q, as the case may be, is being prepared. The Company's certifying officers have evaluated the effectiveness of the Company's controls and procedures as of a date within 90 days prior to the filing date of the Form 10-K for the fiscal year most recently ended (such date, the **"Evaluation Date**"). The Company presented in its Form 10-K for the fiscal year most recently ended the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date and the disclosure controls and procedures are effective. Since the Evaluation Date, there have been no significant changes in the Company's internal controls (as such term is defined in Item 307(b) of Regulation S-K under the Securities Act) or, to the Company's knowledge, in other factors that could significantly affect the Company's internal controls.

(ee) Sarbanes-Oxley. There is and has been no failure on the part of the Company or, to the knowledge of the Company, any of the Company's directors or officers, in their capacities as such, to comply in all material respects with any applicable provisions of the Sarbanes-Oxley Act and the rules and regulations promulgated thereunder. Each of the principal executive officer and the principal financial officer of the Company (or each former principal executive officer of the Company and each former principal financial officer of the Company as applicable) has made all certifications required by Sections 302 and 906 of the Sarbanes-Oxley

Act with respect to all reports, schedules, forms, statements and other documents required to be filed by it or furnished by it to the Commission. For purposes of the preceding sentence, "principal executive officer" and "principal financial officer" shall have the meanings given to such terms in the Sarbanes-Oxley Act.

(ff) Finder's Fees. The Company has not incurred any liability for any finder's fees, brokerage commissions or similar payments in connection with the transactions herein contemplated, except as may otherwise exist with respect to Agent pursuant to this Agreement.

(gg) Labor Disputes. No labor disturbance by or dispute with employees of the Company exists or, to the knowledge of the Company, is threatened which would reasonably be expected to result in a Material Adverse Effect.

(hh) Investment Company Act. The Company is not and, after giving effect to the offering and sale of the Placement Shares, will not be an "investment company" or an entity "controlled" by an "investment company," as such terms are defined in the Investment Company Act of 1940, as amended (the "**Investment Company Act**").

(ii) Operations. The operations of the Company are and have been conducted at all times in compliance with applicable financial record keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all jurisdictions to which the Company is subject, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "**Money Laundering Laws**"), except as would not reasonably be expected to result in a Material Adverse Effect; and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(jj) Off-Balance Sheet Arrangements. There are no transactions, arrangements and other relationships between and/or among the Company, and/or, to the knowledge of the Company, any of its affiliates and any unconsolidated entity, including, but not limited to, any structural finance, special purpose or limited purpose entity (each, an "**Off Balance Sheet Transaction**") that could reasonably be expected to affect materially the Company's liquidity or the availability of or requirements for its capital resources, including those Off Balance Sheet Transactions described in the Commission's Statement about Management's Discussion and Analysis of Financial Conditions and Results of Operations (Release Nos. 33-8056; 34-45321; FR-61), required to be described in the Prospectus which have not been described as required.

(kk) Underwriter Agreements. The Company is not a party to any agreement with an agent or underwriter for any other "at-the-market" or continuous equity transaction.

(ll) ERISA. To the knowledge of the Company, (i) each material employee benefit plan, within the meaning of Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended ("**ERISA**"), that is maintained, administered or contributed to by the Company (other than a Multiemployer Plan, within the meaning of Section 3(37) of ERISA)or

any of its affiliates for employees or former employees of the Company has been maintained in material compliance with its terms and the requirements of any applicable statutes, orders, rules and regulations, including but not limited to ERISA and the Internal Revenue Code of 1986, as amended (the "**Code**"); (ii) no prohibited transaction, within the meaning of Section 406 of ERISA or Section 4975 of the Code, has occurred which would result in a material liability to the Company with respect to any such plan excluding transactions effected pursuant to a statutory or administrative exemption; and (iii) for each such plan that is subject to the funding rules of Section 412 of the Code or Section 302 of ERISA, no "accumulated funding deficiency" as defined in Section 412 of the Code has been incurred, whether or not waived, and the fair market value of the assets of each such plan (excluding for these purposes accrued but unpaid contributions) equals or exceeds the present value of all benefits accrued under such plan determined using reasonable actuarial assumptions.

(mm) Forward Looking Statements. No forward-looking statement (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) (a "**Forward Looking Statement**") contained or incorporated by reference in the Registration Statement and the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith.

(nn) Agent Purchases. The Company acknowledges and agrees that Agent has informed the Company that the Agent may, to the extent permitted under the Securities Act and the Exchange Act, purchase and sell Common Stock for its own account while this Agreement is in effect, provided, that (i) no such purchase or sales shall take place while a Placement Notice is in effect (except to the extent each Agent may engage in sales of Placement Shares purchased or deemed purchased from the Company as a "riskless principal" or in a similar capacity) and (ii) the Company shall not be deemed to have authorized or consented to any such purchases or sales by the Agent.

(oo) Margin Rules. Neither the issuance, sale and delivery of the Placement Shares nor the application of the proceeds thereof by the Company as described in the Registration Statement and the Prospectus will violate Regulation T, U or X of the Board of Governors of the Federal Reserve System or any other regulation of such Board of Governors.

(pp) Insurance. The Company carries, or is covered by, insurance in such amounts and covering such risks as the Company reasonably believes are adequate for the conduct of its properties and as is customary for companies engaged in similar businesses in similar industries.

(qq) No Improper Practices. (i) Neither the Company nor, to the Company's knowledge, any of its executive officers has, in the past five years, made any unlawful contributions to any candidate for any political office (or failed fully to disclose any contribution in violation of law) or made any contribution or other payment to any official of, or candidate for, any federal, state, municipal, or foreign office or other person charged with similar public or quasi-public duty in violation of any law or of the character required to be disclosed in the Prospectus; (ii) no relationship, direct or indirect, exists between or among the Company or, to the Company's knowledge, any affiliate of the Company, on the one hand, and the directors, officers and stockholders of the Company, on the other hand, that is required by the Securities Act to be described in the Registration Statement and the Prospectus that is not so described;

(iii) no relationship, direct or indirect, exists between or among the Company or any of its affiliates, on the one hand, and the directors, officers, or stockholders of the Company, on the other hand, that is required by the rules of FINRA to be described in the Registration Statement and the Prospectus that is not so described; (iv) except as described in the Prospectus, there are no material outstanding loans or advances or material guarantees of indebtedness by the Company to or for the benefit of any of its officers or directors or any of the members of the families of any of them; and (v) the Company has not offered, or caused any placement agent to offer, Common Stock to any person with the intent to influence unlawfully (A) a customer or supplier of the Company to alter the customer's or supplier's level or type of business with the Company or (B) a trade journalist or publication to write or publish favorable information about the Company or any of its products or services, and, (vi) neither the Company nor, to the Company's knowledge, any employee or agent of the Company has made any payment of funds of the Company or received or retained any funds in violation of any law, rule or regulation (including, without limitation, the Foreign Corrupt Practices Act of 1977), which payment, receipt or retention of funds is of a character required to be disclosed in the Registration Statement or the Prospectus.

(rr) Status Under the Securities Act. The Company was not and is not an ineligible issuer as defined in Rule 405 under the Securities Act at the times specified in Rules 164 and 433 under the Securities Act in connection with the offering of the Placement Shares.

(ss) No Misstatement or Omission in an Issuer Free Writing Prospectus. Each Issuer Free Writing Prospectus, as of its issue date and as of each Applicable Time (as defined in Section 24 below), did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement or the Prospectus, including any incorporated document deemed to be a part thereof that has not been superseded or modified. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus based upon and in conformity with written information furnished to the Company by the Agent specifically for use therein.

(tt) No Conflicts. Neither the execution of this Agreement, nor the issuance, offering or sale of the Placement Shares, nor the consummation of any of the transactions contemplated herein and therein, nor the compliance by the Company with the terms and provisions hereof and thereof will conflict with, or will result in a breach of, any of the terms and provisions of, or has constituted or will constitute a default under, or has resulted in or will result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company pursuant to the terms of any contract or other agreement to which the Company may be bound or to which any of the property or assets of the Company is subject, except (i) such conflicts, breaches or defaults as may have been waived and (ii) such conflicts, breaches and defaults that would not reasonably be expected to have a Material Adverse Effect; nor will such action result (x) in any violation of the provisions of the organizational or governing documents of the Company, or (y) in any violation of the provisions of any statute or any order, rule or regulation applicable to the Company or of any court or of any federal, state or other regulatory authority or other government body having jurisdiction over the Company other than, with respect to this clause (y) only, any violation that would not have a Material Adverse Effect.

(uu) (i) The Company represents that neither the Company nor, to the Company's knowledge, any director, officer, employee, agent, affiliate or representative of the Company, is a government, individual, or entity (in this paragraph (uu), "**Person**") that is, or is owned or controlled by a Person that is:

(A) the subject of any sanctions administered or enforced by the U.S. Department of Treasury's Office of Foreign Assets Control, the United Nations Security Council, the European Union, Her Majesty's Treasury, or other relevant sanctions authority (collectively, "**Sanctions**"), nor

(B) located, organized or resident in a country or territory that is the subject of Sanctions (including, without limitation, Burma/Myanmar, Cuba, Iran, North Korea, Sudan and Syria).

(ii) The Company represents and covenants that it will not, directly or indirectly, use the proceeds of the offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other Person:

(A) to fund or facilitate any activities or business of or with any Person or in any country or territory that, at the time of such funding or facilitation, is the subject of Sanctions; or

(B) in any other manner that will result in a violation of Sanctions by any Person (including any Person participating in the offering, whether as underwriter, advisor, investor or otherwise).

(iii) The Company represents and covenants that, except as detailed in the Registration Statement and the Prospectus, for the past 5 years, it has not knowingly engaged in, is not now knowingly engaged in, and will not engage in, any dealings or transactions with any Person, or in any country or territory, that at the time of the dealing or transaction is or was the subject of Sanctions.

(vv) Stock Transfer Taxes. On each Settlement Date, all stock transfer or other taxes (other than income taxes) which are required to be paid in connection with the sale and transfer of the Placement Shares to be sold hereunder will be, or will have been, fully paid or provided for by the Company and all laws imposing such taxes will be or will have been fully complied with in all material respects.

Any certificate signed by an officer of the Company and delivered to the Agent or to counsel for the Agent pursuant to or in connection with this Agreement shall be deemed to be a representation and warranty by the Company, as applicable, to the Agent as to the matters set forth therein.

7. Covenants of the Company. The Company covenants and agrees with Agent that:

(a) Registration Statement Amendments. After the date of this Agreement and during any period in which a Prospectus relating to any Placement Shares is required to be delivered by Agent under the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act), (i) the Company will notify the Agent promptly of the time when any subsequent amendment to the Registration Statement,

other than documents incorporated by reference, has been filed with the Commission and/or has become effective or any subsequent supplement to the Prospectus has been filed and of any request by the Commission for any amendment or supplement to the Registration Statement or Prospectus or for additional information, (ii) the Company will prepare and file with the Commission, promptly upon the Agent's request, any amendments or supplements to the Registration Statement or Prospectus that, in such Agent's reasonable opinion, may be necessary or advisable in connection with the distribution of the Placement Shares by the Agent (provided, however, that the failure of the Agent to make such request shall not relieve the Company of any obligation or liability hereunder, or affect the Agent's right to rely on the representations and warranties made by the Company in this Agreement and provided, further, that the only remedy the Agent shall have with respect to the failure to make such filing shall be to cease making sales under this Agreement until such amendment or supplement is filed); (iii) the Company will not file any amendment or supplement to the Registration Statement or Prospectus relating to the Placement Shares or a security convertible into the Placement Shares unless a copy thereof has been submitted to Agent within a reasonable period of time before the filing and the Agent has not objected thereto (provided, however, that the failure of the Agent to make such objection shall not relieve the Company of any obligation or liability hereunder, or affect the Agent's right to rely on the representations and warranties made by the Company in this Agreement and provided, further, that the only remedy Agent shall have with respect to the failure by the Company to obtain such consent shall be to cease making sales under this Agreement) and the Company will furnish to the Agent at the time of filing thereof a copy of any document that upon filing is deemed to be incorporated by reference into the Registration Statement or Prospectus, except for those documents available via EDGAR; and (iv) the Company will cause each amendment or supplement to the Prospectus to be filed with the Commission as required pursuant to the applicable paragraph of Rule 424(b) of the Securities Act or, in the case of any document to be incorporated therein by reference, to be filed with the Commission as required pursuant to the Exchange Act, within the time period prescribed (the determination to file or not file any amendment or supplement with the Commission under this Section 7(a), based on the Company's reasonable opinion or reasonable objections, shall be made exclusively by the Company).

(b) Notice of Commission Stop Orders. The Company will advise the Agent, promptly after it receives notice or obtains knowledge thereof, of the issuance or threatened issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement, of the suspension of the qualification of the Placement Shares for offering or sale in any jurisdiction, or of the initiation or threatening of any proceeding for any such purpose; and it will promptly use its commercially reasonable efforts to prevent the issuance of any stop order or to obtain its withdrawal if such a stop order should be issued. The Company will advise the Agent promptly after it receives any request by the Commission for any amendments to the Registration Statement or any amendment or supplements to the Prospectus or any Issuer Free Writing Prospectus or for additional information related to the offering of the Placement Shares or for additional information related to the Registration Statement, the Prospectus or any Issuer Free Writing Prospectus.

(c) Delivery of Prospectus; Subsequent Changes. During any period in which a Prospectus relating to the Placement Shares is required to be delivered by the Agent under the Securities Act with respect to the offer and sale of the Placement Shares, (including in

circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act), the Company will use commercially reasonable efforts to comply with all requirements imposed upon it by the Securities Act, as from time to time in force, and to file on or before their respective due dates all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Sections 13(a), 13(c), 14, 15(d) or any other provision of or under the Exchange Act. If the Company has omitted any information from the Registration Statement pursuant to Rule 430A under the Securities Act, it will use its reasonable best efforts to comply with the provisions of and make all requisite filings with the Commission pursuant to said Rule 430A and to notify the Agent promptly of all such filings. If during such period any event occurs as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances then existing, not misleading, or if during such period it is necessary to amend or supplement the Registration Statement or Prospectus to comply with the Securities Act, the Company will promptly notify Agent to suspend the offering of Placement Shares during such period and the Company will promptly amend or supplement the Registration Statement or Prospectus (at the expense of the Company) so as to correct such statement or omission or effect such compliance; *provided, however*, that the Company may delay any such amendment or supplement if, in the reasonable judgment of the Company, it is in the best interests of the Company to do so. Until such time as the Company shall have corrected such statement or omission or effected such compliance, the Company shall not notify the Agent to resume the offering of Placement Shares.

(d) Listing of Placement Shares. During any period in which the Prospectus relating to the Placement Shares is required to be delivered by the Agent under the Securities Act with respect to the offer and sale of the Placement Shares, the Company will use its reasonable best efforts to cause the Placement Shares to be listed on the Exchange.

(e) Delivery of Registration Statement and Prospectus. The Company will furnish to the Agent and its counsel (at the expense of the Company) copies of the Registration Statement, the Prospectus (including all documents incorporated by reference therein) and all amendments and supplements to the Registration Statement or Prospectus that are filed with the Commission during any period in which a Prospectus relating to the Placement Shares is required to be delivered under the Securities Act (including all documents filed with the Commission during such period that are deemed to be incorporated by reference therein), in each case as soon as reasonably practicable and in such quantities as the Agent may from time to time reasonably request and, at the Agent's reasonable request, will also furnish copies of the Prospectus to each exchange or market on which sales of the Placement Shares may be made; provided, however, that the Company shall not be required to furnish any document (other than the Prospectus) to the Agent to the extent such document is available on EDGAR.

(f) Earnings Statement. The Company will make generally available to its security holders as soon as practicable, but in any event not later than 15 months after the end of the Company's current fiscal quarter, an earnings statement covering a 12-month period that satisfies the provisions of Section 11(a) and Rule 158 of the Securities Act.

(g) Use of Proceeds. The Company will use the Net Proceeds as described in the Prospectus in the section entitled "Use of Proceeds."

(h) Notice of Other Sales. Without the prior written consent of Agent, the Company will not, directly or indirectly, offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Common Stock (other than the Placement Shares offered pursuant to this Agreement) or securities convertible into or exchangeable for Common Stock, warrants or any rights to purchase or acquire, Common Stock during the period beginning on the fifth (5th) Trading Day immediately prior to the date on which any Placement Notice is delivered to Agent hereunder and ending on the fifth (5th) Trading Day immediately following the final Settlement Date with respect to Placement Shares sold pursuant to such Placement Notice (or, if the Placement Notice has been terminated or suspended prior to the sale of all Placement Shares covered by a Placement Notice, the date of such suspension or termination); and will not directly or indirectly in any other "at-the-market" or continuous equity transaction offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Common Stock (other than the Placement Shares offered pursuant to this Agreement) or securities convertible into or exchangeable for Common Stock, warrants or any rights to purchase or acquire, Common Stock prior to the later of the termination of this Agreement and the sixtieth (60th) day immediately following the final Settlement Date with respect to Placement Shares sold pursuant to such Placement Notice; provided, however, that such restrictions will not be required in connection with the Company's issuance or sale of (i) Common Stock, options to purchase Common Stock, restricted stock units or stock awards or Common Stock issuable upon the exercise of options, or vesting of restricted stock units, pursuant to any employee or director stock option or benefits plan, stock ownership plan or dividend reinvestment plan (but not Common Stock subject to a waiver to exceed plan limits in its dividend reinvestment plan) of the Company whether now in effect or hereafter implemented, (ii) Common Stock issuable upon conversion of securities or the exercise of warrants, options or other rights in effect or outstanding, and disclosed in filings by the Company available on EDGAR or otherwise in writing to the Agent and (iii) Common Stock or securities convertible into or exchangeable for shares of Common Stock as consideration for mergers, acquisitions, other business combinations or strategic alliances occurring after the date of this Agreement which are not issued for capital raising purposes.

(i) Change of Circumstances. The Company will, at any time during the pendency of a Placement Notice, advise the Agent promptly after it shall have received notice, or obtained knowledge thereof, of any information or fact that would alter or affect in any material respect any opinion, certificate, letter or other document required to be provided to the Agent pursuant to this Agreement.

(j) Due Diligence Cooperation. The Company will cooperate with any reasonable due diligence review conducted by the Agent or its representatives in connection with the transactions contemplated hereby, including, without limitation, providing information and making available documents and senior corporate officers, during regular business hours and at the Company's principal offices, as the Agent may reasonably request.

(k) Required Filings Relating to Placement of Placement Shares. The Company agrees that on such dates as the Securities Act shall require, the Company will (i) file a prospectus supplement with the Commission under the applicable paragraph of Rule 424(b) under the Securities Act (each and every filing under Rule 424(b), a "**Filing Date**"), which prospectus supplement will set forth, within the relevant period, the amount of Placement Shares sold through the Agent, the Net Proceeds to the Company and the compensation payable by the

Company to the Agent with respect to such Placement Shares, and (ii) deliver such number of copies of each such prospectus supplement to each exchange or market on which such sales were effected as may be required by the rules or regulations of such exchange or market.

(l) Representation Dates; Certificate. (1) On the date that the Registration Statement is first declared effective by the Commission and (2) each time the Company:

(i) files the Prospectus relating to the Placement Shares (other than as part of any filing prior to the time of initial effectiveness of the Registration Statement) or amends or supplements the Registration Statement (other than a prospectus supplement relating solely to an offering of securities other than the Placement Shares) or the Prospectus relating to the Placement Shares by means of a post-effective amendment, sticker, or supplement but not by means of incorporation of documents by reference into the Registration Statement or the Prospectus relating to the Placement Shares;

(ii) files an annual report on Form 10-K under the Exchange Act (including any Form 10-K/A containing amended financial information or a material amendment to the previously filed Form 10-K);

(iii) files its quarterly reports on Form 10-Q under the Exchange Act; or

(iv) files a current report on Form 8-K containing amended financial information (other than information "furnished" pursuant to Items 2.02 or 7.01 of Form 8-K or to provide disclosure pursuant to Item 8.01 of Form 8-K relating to the reclassification of certain properties as discontinued operations in accordance with Statement of Financial Accounting Standards No. 144) under the Exchange Act (each date of filing of one or more of the documents referred to in clauses (i) through (iv) shall be a "**Representation Date**");

the Company shall furnish the Agent (but in the case of clause (iv) above only if the Agent reasonably determines that the information contained in such Form 8-K is material) with a certificate, in the form attached hereto as Exhibit 7(l). The requirement to provide a certificate under this Section 7(l) shall be waived for any Representation Date occurring at a time a Suspension is in effect, which waiver shall continue until the earlier to occur of the date the Company delivers instructions for the sale of Placement Shares hereunder (which for such calendar quarter shall be considered a Representation Date) and the next occurring Representation Date. Notwithstanding the foregoing, if the Company subsequently decides to sell Placement Shares following a Representation Date when a Suspension was in effect and did not provide the Agent with a certificate under this Section 7(l), then before the Company delivers the instructions for the sale of Placement Shares or the Agent sells any Placement Shares pursuant to such instructions, the Company shall provide the Agent with a certificate in conformity with this Section 7(l) dated as of the date that the instructions for the sale of Placement Shares are issued. Moreover, the requirement to provide a certificate under this Section 7(l) with respect to clause (iii) above shall be waived for any Representation Date occurring at a time when no Placement Notice is in effect, which waiver shall continue until the earlier to occur of the date the Company delivers instructions for the sale of Placement Shares hereunder (which for such calendar quarter shall be considered a Representation Date) and the next occurring Representation Date

(m) Legal Opinion. On the date that the Registration Statement is first declared effective by the Commission, the Company shall cause to be furnished to the Agent a written opinion of WilmerHale LLP ("**Company Counsel**"), or other counsel reasonably satisfactory to the Agent, substantially similar to the form attached hereto as Exhibit 7(m). Thereafter, within five (5) Trading Days of each Representation Date with respect to which the Company is obligated to deliver a certificate in the form attached hereto as Exhibit 7(l) for which no waiver is applicable, the Company shall cause to be furnished to the Agent a written letter of Company Counsel, or other counsel satisfactory to the Agent, substantially similar to the form attached hereto as Exhibit 7(m), modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented; provided, however, the Company shall be required to furnish to Agent no more than one opinion hereunder per calendar quarter.

(n) Comfort Letter. (1) On the date that the Registration Statement is first declared effective by the Commission and (2) within five (5) Trading Days of each Representation Date with respect to which the Company is obligated to deliver a certificate in the form attached hereto as Exhibit 7(l) for which no waiver is applicable and excluding the date of this Agreement, the Company shall cause its independent registered public accounting firm to furnish the Agent letters (the "**Comfort Letters**"), dated the date the Comfort Letter is delivered, which shall meet the requirements set forth in this Section 7(n). The Comfort Letter from the Company's independent registered public accounting firm shall be in a form and substance satisfactory to the Agent, (i) confirming that they are an independent registered public accounting firm within the meaning of the Securities Act and the PCAOB, (ii) stating, as of such date, the conclusions and findings of such firm with respect to the financial information and other matters ordinarily covered by accountants' "comfort letters" to underwriters in connection with registered public offerings (the first such letter, the "**Initial Comfort Letter**") and (iii) updating the Initial Comfort Letter with any information that would have been included in the Initial Comfort Letter had it been given on such date and modified as necessary to relate to the Registration Statement and the Prospectus, as amended and supplemented to the date of such letter.

(o) Market Activities. The Company will not, directly or indirectly, (i) take any action designed to cause or result in, or that constitutes or might reasonably be expected to constitute, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of Common Stock or (ii) sell, bid for, or purchase Common Stock, or pay anyone any compensation for soliciting purchases of the Placement Shares other than the Agent.

(p) Investment Company Act. The Company will conduct its affairs in such a manner so as to reasonably ensure that it will not be or become, at any time prior to the termination of this Agreement, required to register as an "investment company," as such term is defined in the Investment Company Act.

(q) No Offer to Sell. Other than an Issuer Free Writing Prospectus approved in advance by the Company and the Agent in its capacity as agent hereunder, neither the Agent nor the Company (including its agents and representatives, other than the Agent in its capacity as such) will make, use, prepare, authorize, approve or refer to any written communication (as defined in Rule 405 under the Securities Act), required to be filed with the Commission, that constitutes an offer to sell or solicitation of an offer to buy Placement Shares hereunder.

(r) Blue Sky and Other Qualifications. The Company will use its commercially reasonable efforts, in cooperation with the Agent, to qualify the Placement Shares for offering and sale, or to obtain an exemption for the Placement Shares to be offered and sold, under the applicable securities laws of such states and other jurisdictions (domestic or foreign) as the Agent may designate and to maintain such qualifications and exemptions in effect for so long as required for the distribution of the Placement Shares (but in no event for less than one year from the date of this Agreement); *provided*, *however*, that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject. In each jurisdiction in which the Placement Shares have been so qualified or exempt, the Company will file such statements and reports as may be required by the laws of such jurisdiction to continue such qualification or exemption, as the case may be, in effect for so long as required for the distribution of the Placement Shares (but in no event for less than one year from the date of this Agreement).

(s) Sarbanes-Oxley Act. The Company will maintain and keep accurate books and records reflecting its assets and maintain internal accounting controls in a manner designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles and including those policies and procedures that (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company, (ii) provide reasonable assurance that transactions are recorded as necessary to permit the preparation of the Company's financial statements in accordance with generally accepted accounting principles, (iii) that receipts and expenditures of the Company are being made only in accordance with management's and the Company's directors' authorization, and (iv) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on its financial statements. The Company will maintain such controls and other procedures, including, without limitation, those required by Sections 302 and 906 of the Sarbanes-Oxley Act, and the applicable regulations thereunder that are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms, including, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive officer and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure and to ensure that material information relating to the Company is made known to it by others within the organization, particularly during the period in which such periodic reports are being prepared.

(t) Secretary's Certificate; Further Documentation. Prior to the date of the first Placement Notice, the Company shall deliver to the Agent a certificate of the Secretary of the Company and attested to by an executive officer of the Company, dated as of such date, certifying as to (i) the Certificate of Incorporation of the Company, (ii) the By-laws of the Company, (iii) the resolutions of the Board of Directors of the Company authorizing the

execution, delivery and performance of this Agreement and the issuance of the Placement Shares and (iv) the incumbency of the officers duly authorized to execute this Agreement and the other documents contemplated by this Agreement. Within five (5) Trading Days of each Representation Date, the Company shall have furnished to the Agent, upon the Agent's request, such further information, certificates and documents as are customarily provided in similar transactions.

8. Payment of Expenses. The Company will pay all expenses incident to the performance of its obligations under this Agreement, including (i) the preparation and filing of the Registration Statement, including any fees required by the Commission, and the printing or electronic delivery of the Prospectus as originally filed and of each amendment and supplement thereto, in such number as the Agent shall deem necessary, (ii) the printing and delivery to the Agent of this Agreement and such other documents as may be required in connection with the offering, purchase, sale, issuance or delivery of the Placement Shares, (iii) the preparation, issuance and delivery of the certificates, if any, for the Placement Shares to the Agent, including any stock or other transfer taxes and any capital duties, stamp duties or other duties or taxes payable upon the sale, issuance or delivery of the Placement Shares to the Agent, (iv) the fees and disbursements of the counsel, accountants and other advisors to the Company, (v) the fees and disbursements of the counsel to the Agent, payable upon the execution of this Agreement, in an amount not to exceed $50,000; (vi) the qualification or exemption of the Placement Shares under state securities laws in accordance with the provisions of Section 7(r) hereof, including filing fees, but excluding fees of the Agent's counsel, (vii) the printing and delivery to the Agent of copies of any Permitted Issuer Free Writing Prospectus and the Prospectus and any amendments or supplements thereto in such number as the Agent shall deem necessary, (viii) the preparation, printing and delivery to the Agent of copies of the blue sky survey, (ix) the fees and expenses of the transfer agent and registrar for the Common Stock, (x) the filing and other fees incident to any review by FINRA of the terms of the sale of the Placement Shares including the fees of the Agent's counsel (subject to the cap, set forth in clause (v) above), and (xi) the fees and expenses incurred in connection with the listing of the Placement Shares on the Exchange.

9. Conditions to Agent's Obligations. The obligations of the Agent hereunder with respect to a Placement will be subject to the continuing accuracy and completeness of the representations and warranties made by the Company herein, to the due performance by the Company of its obligations hereunder, to the completion by the Agent of a due diligence review satisfactory to it in its reasonable judgment, and to the continuing satisfaction (or waiver by the Agent in its sole discretion) of the following additional conditions:

(a) Registration Statement Effective. The Registration Statement shall have become effective and shall be available for the (i) resale of all Placement Shares issued to the Agent and not yet sold by the Agent and (ii) sale of all Placement Shares contemplated to be issued by any Placement Notice.

(b) No Material Notices. None of the following events shall have occurred and be continuing: (i) receipt by the Company of any request for additional information from the Commission or any other federal or state governmental authority during the period of effectiveness of the Registration Statement, the response to which would require any post-effective amendments or supplements to the Registration Statement or the Prospectus; (ii) the issuance by the Commission or any other federal or state governmental authority of any stop

order suspending the effectiveness of the Registration Statement or the initiation of any proceedings for that purpose; (iii) receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Placement Shares for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; or (iv) the occurrence of any event that makes any material statement made in the Registration Statement or the Prospectus or any material document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires the making of any changes in the Registration Statement, the Prospectus or documents so that, in the case of the Registration Statement, it will not contain any materially untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading and, that in the case of the Prospectus, it will not contain any materially untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(c) No Misstatement or Material Omission. Agent shall not have advised the Company that the Registration Statement or Prospectus, or any amendment or supplement thereto, contains an untrue statement of fact that in the Agent's reasonable opinion is material, or omits to state a fact that in the Agent's reasonable opinion is material and is required to be stated therein or is necessary to make the statements therein not misleading.

(d) Material Changes. Except as contemplated in the Prospectus, or disclosed in the Company's reports filed with the Commission, there shall not have been any material adverse change in the authorized capital stock of the Company or any Material Adverse Effect or any development that could reasonably be expected to cause a Material Adverse Effect, or a downgrading in or withdrawal of the rating assigned to any of the Company's securities (other than asset backed securities) by any rating organization or a public announcement by any rating organization that it has under surveillance or review its rating of any of the Company's securities (other than asset backed securities), the effect of which, in the case of any such action by a rating organization described above, in the reasonable judgment of the Agent (without relieving the Company of any obligation or liability it may otherwise have), is so material as to make it impracticable or inadvisable to proceed with the offering of the Placement Shares on the terms and in the manner contemplated in the Prospectus.

(e) Legal Opinion. The Agent shall have received the opinions of Company Counsel required to be delivered pursuant to Section 7(m) on or before the date on which such delivery of such opinion is required pursuant to Section 7(m).

(f) Comfort Letter. The Agent shall have received the Comfort Letter required to be delivered pursuant to Section 7(n) on or before the date on which such delivery of such Comfort Letter is required pursuant to Section 7(n).

(g) Representation Certificate. The Agent shall have received the certificate required to be delivered pursuant to Section 7(l) on or before the date on which delivery of such certificate is required pursuant to Section 7(l).

(h) No Suspension. Trading in the Common Stock shall not have been suspended on the Exchange and the Common Stock shall not have been delisted from the Exchange.

(i) Other Materials. On each date on which the Company is required to deliver a certificate pursuant to Section 7(l), the Company shall have furnished to the Agent, upon the Agent's request, such further opinions, certificates, letters and other documents as are customarily provided in similar transactions. All such opinions, certificates, letters and other documents will be in compliance with the provisions hereof.

(j) Securities Act Filings Made. All filings with the Commission required by Rule 424 under the Securities Act to have been filed prior to the issuance of any Placement Notice hereunder shall have been made within the applicable time period prescribed for such filing by Rule 424.

(k) Approval for Listing. The Placement Shares shall either have been approved for listing quotation on the Exchange, subject only to notice of issuance, or the Company shall have filed an application for listing quotation of the Placement Shares on the Exchange at, or prior to, the issuance of any Placement Notice.

(l) FINRA. FINRA shall have raised no objection to the terms of this offering and the amount of compensation allowable or payable to the Agent as described in the Prospectus.

(m) No Termination Event. There shall not have occurred any event that would permit the Agent to terminate this Agreement pursuant to Section 12(a).

10. Indemnification and Contribution.

(a) Company Indemnification. The Company agrees to indemnify and hold harmless the Agent, its partners, members, directors, officers, employees and agents and each person, if any, who controls the Agent within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act as follows:

(i) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, joint or several, arising out of or based upon any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereto), or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading, or arising out of any untrue statement or alleged untrue statement of a material fact included in any related Issuer Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto), or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(ii) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, joint or several, to the extent of the aggregate amount paid in settlement of any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or of any claim whatsoever based upon any such untrue statement or

omission, or any such alleged untrue statement or omission; provided that (subject to Section 10(d) below) any such settlement is effected with the written consent of the Company, which consent shall not unreasonably be delayed or withheld; and

(iii) against any and all expense whatsoever, as incurred (including the fees and disbursements of counsel), reasonably incurred in investigating, preparing or defending against any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission, to the extent that any such expense is not paid under (i) or (ii) above,

provided, however, that this indemnity agreement shall not apply to any loss, liability, claim, damage or expense to the extent arising out of any untrue statement or omission or alleged untrue statement or omission made solely in reliance upon and in conformity with written information furnished to the Company by the Agent expressly for use in the Registration Statement (or any amendment thereto), or in any related Issuer Free Writing Prospectus or the Prospectus (or any amendment or supplement thereto).

(b) Agent Indemnification. Agent agrees to indemnify and hold harmless the Company and its directors and each officer and director of the Company who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act against any and all loss, liability, claim, damage and expense described in the indemnity contained in Section 10(a), as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement (or any amendments thereto) or the Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with information relating to the Agent and furnished to the Company in writing by the Agent expressly for use therein. The Company hereby acknowledges that the only information that the Agent has furnished to the Company expressly for use in the Registration Statement, the Prospectus or any Issuer Free Writing Prospectus (or any amendment or supplement thereto) are the statements set forth in the seventh and eighth paragraphs under the caption “Plan of Distribution” in the Prospectus.

(c) Procedure. Any party that proposes to assert the right to be indemnified under this Section 10 will, promptly after receipt of notice of commencement of any action against such party in respect of which a claim is to be made against an indemnifying party or parties under this Section 10, notify each such indemnifying party of the commencement of such action, enclosing a copy of all papers served, but the omission so to notify such indemnifying party will not relieve the indemnifying party from (i) any liability that it might have to any indemnified party otherwise than under this Section 10 and (ii) any liability that it may have to any indemnified party under the foregoing provision of this Section 10 unless, and only to the extent that, such omission results in the forfeiture of substantive rights or defenses by the indemnifying party. If any such action is brought against any indemnified party and it notifies the indemnifying party of its commencement, the indemnifying party will be entitled to participate in and, to the extent that it elects by delivering written notice to the indemnified party promptly after receiving notice of the commencement of the action from the indemnified party, jointly with any other indemnifying party similarly notified, to assume the defense of the action, with counsel reasonably satisfactory to the indemnified party, and after notice from the

indemnifying party to the indemnified party of its election to assume the defense, the indemnifying party will not be liable to the indemnified party for any legal or other expenses except as provided below and except for the reasonable costs of investigation subsequently incurred by the indemnified party in connection with the defense. The indemnified party will have the right to employ its own counsel in any such action, but the fees, expenses and other charges of such counsel will be at the expense of such indemnified party unless (1) the employment of counsel by the indemnified party has been authorized in writing by the indemnifying party, (2) the indemnified party has reasonably concluded (based on advice of counsel) that there may be legal defenses available to it or other indemnified parties that are different from or in addition to those available to the indemnifying party, (3) a conflict or potential conflict exists (based on advice of counsel to the indemnified party) between the indemnified party and the indemnifying party (in which case the indemnifying party will not have the right to direct the defense of such action on behalf of the indemnified party) or (4) the indemnifying party has not in fact employed counsel to assume the defense of such action within a reasonable time after receiving notice of the commencement of the action, in each of which cases the reasonable fees, disbursements and other charges of counsel will be at the expense of the indemnifying party or parties. It is understood that the indemnifying party or parties shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the reasonable fees, disbursements and other charges of more than one separate firm admitted to practice in such jurisdiction at any one time for all such indemnified party or parties. All such fees, disbursements and other charges will be reimbursed by the indemnifying party promptly as they are incurred. An indemnifying party will not, in any event, be liable for any settlement of any action or claim effected without its written consent. No indemnifying party shall, without the prior written consent of each indemnified party, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding relating to the matters contemplated by this Section 10 (whether or not any indemnified party is a party thereto), unless such settlement, compromise or consent (1) includes an unconditional release of each indemnified party from all liability arising out of such litigation, investigation, proceeding or claim and (2) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) Settlement Without Consent if Failure to Reimburse. If an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for reasonable fees and expenses of counsel, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 10(a)(ii) effected without its written consent if (1) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request, (2) such indemnifying party shall have received notice of the terms of such settlement at least 30 days prior to such settlement being entered into and (3) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

(e) Contribution. In order to provide for just and equitable contribution in circumstances in which the indemnification provided for in the foregoing paragraphs of this Section 10 is applicable in accordance with its terms but for any reason is held to be unavailable from the Company or the Agent, the Company and the Agent will contribute to the total losses, claims, liabilities, expenses and damages (including any investigative, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit or

proceeding or any claim asserted, but after deducting any contribution received by the Company from persons other than the Agent, such as persons who control the Company within the meaning of the Securities Act, officers of the Company who signed the Registration Statement and directors of the Company, who also may be liable for contribution) to which the Company and the Agent may be subject in such proportion as shall be appropriate to reflect the relative benefits received by the Company on the one hand and the Agent on the other hand. The relative benefits received by the Company on the one hand and the Agent on the other hand shall be deemed to be in the same proportion as the total net proceeds from the sale of the Placement Shares (before deducting expenses) received by the Company bear to the total compensation received by the Agent (before deducting expenses) from the sale of Placement Shares on behalf of the Company. If, but only if, the allocation provided by the foregoing sentence is not permitted by applicable law, the allocation of contribution shall be made in such proportion as is appropriate to reflect not only the relative benefits referred to in the foregoing sentence but also the relative fault of the Company, on the one hand, and the Agent, on the other hand, with respect to the statements or omission that resulted in such loss, claim, liability, expense or damage, or action in respect thereof, as well as any other relevant equitable considerations with respect to such offering. Such relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or the Agent, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Agent agree that it would not be just and equitable if contributions pursuant to this Section 10(e) were to be determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, liability, expense, or damage, or action in respect thereof, referred to above in this Section 10(e) shall be deemed to include, for the purpose of this Section 10(e), any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim to the extent consistent with Section 10(c) hereof. Notwithstanding the foregoing provisions of this Section 10(e), the Agent shall not be required to contribute any amount in excess of the commissions received by it under this Agreement and no person found guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 10(e), any person who controls a party to this Agreement within the meaning of the Securities Act, and any officers, directors, partners, employees or agents of the Agent, will have the same rights to contribution as that party, and each officer and director of the Company who signed the Registration Statement will have the same rights to contribution as the Company, subject in each case to the provisions hereof. Any party entitled to contribution, promptly after receipt of notice of commencement of any action against such party in respect of which a claim for contribution may be made under this Section 10(e), will notify any such party or parties from whom contribution may be sought, but the omission to so notify will not relieve that party or parties from whom contribution may be sought from any other obligation it or they may have under this Section 10(e) except to the extent that the failure to so notify such other party materially prejudiced the substantive rights or defenses of the party from whom contribution is sought. Except for a settlement entered into pursuant to the last sentence of Section 10(c) hereof, no party will be liable for contribution with respect to any action or claim settled without its written consent if such consent is required pursuant to Section 10(c) hereof.

11. Representations and Agreements to Survive Delivery. The indemnity and contribution agreements contained in Section 10 of this Agreement and all representations and warranties of the Company herein or in certificates delivered pursuant hereto shall survive, as of their respective dates, regardless of (i) any investigation made by or on behalf of the Agent, any controlling persons, or the Company (or any of their respective officers, directors or controlling persons), (ii) delivery and acceptance of the Placement Shares and payment therefor or (iii) any termination of this Agreement.

12. Termination.

(a) The Agent may terminate this Agreement, by notice to the Company, as hereinafter specified at any time (1) if there has been, since the time of execution of this Agreement or since the date as of which information is given in the Prospectus, any change, or any development or event involving a prospective change, in the condition, financial or otherwise, or in the business, properties, earnings, results of operations or prospects of the Company, whether or not arising in the ordinary course of business, which individually or in the aggregate, in the sole judgment of the Agent is material and adverse and makes it impractical or inadvisable to market the Placement Shares or to enforce contracts for the sale of the Placement Shares, (2) if there has occurred any material adverse change in the financial markets in the United States or the international financial markets, any outbreak of hostilities or escalation thereof or other calamity or crisis or any change or development involving a prospective change in national or international political, financial or economic conditions, in each case the effect of which is such as to make it, in the judgment of the Agent, impracticable or inadvisable to market the Placement Shares or to enforce contracts for the sale of the Placement Shares, (3) if trading in the Common Stock has been suspended or limited by the Commission or the Exchange, or if trading generally on the Exchange has been suspended or limited, or minimum prices for trading have been fixed on the Exchange, (4) if any suspension of trading of any securities of the Company on any exchange or in the over-the-counter market shall have occurred and be continuing, (5) if a major disruption of securities settlements or clearance services in the United States shall have occurred and be continuing, or (6) if a banking moratorium has been declared by either U.S. Federal or New York authorities. Any such termination shall be without liability of any party to any other party except that the provisions of Section 8 (Payment of Expenses), Section 10 (Indemnification and Contribution), Section 11 (Representations and Agreements to Survive Delivery), Section 17 (Governing Law and Time; Waiver of Jury Trial) and Section 18 (Consent to Jurisdiction) hereof shall remain in full force and effect notwithstanding such termination. If the Agent elects to terminate this Agreement as provided in this Section 12(a), the Agent shall provide the required notice as specified in Section 13 (Notices).

(b) The Company shall have the right, by giving ten (10) days notice as hereinafter specified to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 8, Section 10, Section 11, Section 17 and Section 18 hereof shall remain in full force and effect notwithstanding such termination.

(c) The Agent shall have the right, by giving ten (10) days notice as hereinafter specified to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 8, Section 10, Section 11, Section 17 and Section 18 hereof shall remain in full force and effect notwithstanding such termination.

(d) Unless earlier terminated pursuant to this Section 12, this Agreement shall automatically terminate upon the issuance and sale of all of the Placement Shares through the Agent on the terms and subject to the conditions set forth herein; provided that the provisions of Section 8, Section 10, Section 11, Section 17 and Section 18 hereof shall remain in full force and effect notwithstanding such termination.

(e) This Agreement shall remain in full force and effect unless terminated pursuant to Sections 12(a), (b), (c), or (d) above or otherwise by mutual agreement of the parties; provided, however, that any such termination by mutual agreement shall in all cases be deemed to provide that Section 8, Section 10, Section 11, Section 17 and Section 18 shall remain in full force and effect.

(f) Any termination of this Agreement shall be effective on the date specified in such notice of termination; provided, however, that such termination shall not be effective until the close of business on the date of receipt of such notice by the Agent or the Company, as the case may be. If such termination shall occur prior to the Settlement Date for any sale of Placement Shares, such Placement Shares shall settle in accordance with the provisions of this Agreement.

13. Notices. All notices or other communications required or permitted to be given by any party to any other party pursuant to the terms of this Agreement shall be in writing, unless otherwise specified, and if sent to the Agent, shall be delivered to:

Cantor Fitzgerald & Co.
499 Park Avenue
New York, NY 10022
Attention: Capital Markets/Jeff Lumby
Facsimile: (212) 307-3730

with copies to

Cantor Fitzgerald & Co.
499 Park Avenue
New York, NY 10022
Attention: Stephen Merkel
General Counsel
Facsimile: (212) 307-3730

and with a copy to:

Reed Smith LLP
599 Lexington Avenue
New York, NY 10022
Attention: Daniel I. Goldberg, Esq.
Facsimile: (212) 521-5450

and if to the Company, shall be delivered to:

Achillion Pharmaceuticals, Inc.
300 George Street
New Haven, CT 06511
Attention: Mary Kay Fenton, SVP and Chief Financial Officer
Facsimile: (203) 624-7003

with a copy to:

Wilmer Cutler Pickering Hale and Dorr LLP
399 Park Avenue
New York, NY 10022
Attention: Steven D. Singer, Esq.
Facsimile: (212) 230-8888

Each party to this Agreement may change such address for notices by sending to the parties to this Agreement written notice of a new address for such purpose. Each such notice or other communication shall be deemed given (i) when delivered personally or by verifiable facsimile transmission (with an original to follow) on or before 4:30 p.m., New York City time, on a Business Day or, if such day is not a Business Day, on the next succeeding Business Day, (ii) on the next Business Day after timely delivery to a nationally-recognized overnight courier and (iii) on the Business Day actually received if deposited in the U.S. mail (certified or registered mail, return receipt requested, postage prepaid). For purposes of this Agreement, "**Business Day**" shall mean any day on which the Exchange and commercial banks in the City of New York are open for business.

An electronic communication ("**Electronic Notice**") shall be deemed written notice for purposes of this Section 13 if sent to the electronic mail address specified by the receiving party under separate cover. Electronic Notice shall be deemed received at the time the party sending Electronic Notice receives verification of receipt by the receiving party. Any party receiving Electronic Notice may request and shall be entitled to receive the notice on paper, in a nonelectronic form ("**Nonelectronic Notice**") which shall be sent to the requesting party within ten (10) days of receipt of the written request for Nonelectronic Notice.

14. Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the Company and the Agent and their respective successors and the affiliates, controlling persons, officers and directors referred to in Section 10 hereof. References to any of the parties contained in this Agreement shall be deemed to include the successors and permitted assigns of such party. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assigns any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement. Neither party may assign its rights or obligations under this Agreement without the prior written consent of the other party; provided, however, that, without obtaining the Company's consent, the Agent may assign its rights and obligations hereunder to an affiliate thereof so long as such affiliate is a registered broker-dealer.

15. Adjustments for Stock Splits. The parties acknowledge and agree that all share-related numbers contained in this Agreement shall be adjusted to take into account any stock split, stock dividend or similar event effected with respect to the Placement Shares.

16. Entire Agreement; Amendment; Severability. This Agreement (including all schedules and exhibits attached hereto and Placement Notices issued pursuant hereto) constitutes the entire agreement and supersedes all other prior and contemporaneous agreements and undertakings, both written and oral, among the parties hereto with regard to the subject matter hereof. Neither this Agreement nor any term hereof may be amended except pursuant to a written instrument executed by the Company and the Agent. In the event that any one or more of the provisions contained herein, or the application thereof in any circumstance, is held invalid, illegal or unenforceable as written by a court of competent jurisdiction, then such provision shall be given full force and effect to the fullest possible extent that it is valid, legal and enforceable, and the remainder of the terms and provisions herein shall be construed as if such invalid, illegal or unenforceable term or provision was not contained herein, but only to the extent that giving effect to such provision and the remainder of the terms and provisions hereof shall be in accordance with the intent of the parties as reflected in this Agreement.

17. GOVERNING LAW AND TIME; WAIVER OF JURY TRIAL. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAWS. SPECIFIED TIMES OF DAY REFER TO NEW YORK CITY TIME. THE COMPANY HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY.

18. CONSENT TO JURISDICTION. EACH PARTY HEREBY IRREVOCABLY SUBMITS TO THE NON-EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS SITTING IN THE CITY OF NEW YORK, BOROUGH OF MANHATTAN, FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH ANY TRANSACTION CONTEMPLATED HEREBY, AND HEREBY IRREVOCABLY WAIVES, AND AGREES NOT TO ASSERT IN ANY SUIT, ACTION OR PROCEEDING, ANY CLAIM THAT IT IS NOT PERSONALLY SUBJECT TO THE JURISDICTION OF ANY SUCH COURT, THAT SUCH SUIT, ACTION OR PROCEEDING IS BROUGHT IN AN INCONVENIENT FORUM OR THAT THE VENUE OF SUCH SUIT, ACTION OR PROCEEDING IS IMPROPER. EACH PARTY HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF PROCESS AND CONSENTS TO PROCESS BEING SERVED IN ANY SUCH SUIT, ACTION OR PROCEEDING BY MAILING A COPY THEREOF (CERTIFIED OR REGISTERED MAIL, RETURN RECEIPT REQUESTED) TO SUCH PARTY AT THE ADDRESS IN EFFECT FOR NOTICES TO IT UNDER THIS AGREEMENT AND AGREES THAT SUCH SERVICE SHALL CONSTITUTE GOOD AND SUFFICIENT SERVICE OF PROCESS AND NOTICE THEREOF. NOTHING CONTAINED HEREIN SHALL BE DEEMED TO LIMIT IN ANY WAY ANY RIGHT TO SERVE PROCESS IN ANY MANNER PERMITTED BY LAW.

19. Use of Information. The Agent may not provide any information gained in connection with this Agreement and the transactions contemplated by this Agreement, including due diligence, to any third party other than its legal counsel advising it on this Agreement unless expressly approved by the Company in writing.

20. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Delivery of an executed Agreement by one party to the other may be made by facsimile transmission.

21. Effect of Headings. The section and exhibit headings herein are for convenience only and shall not affect the construction hereof.

22. Permitted Free Writing Prospectuses. The Company represents, warrants and agrees that, unless it obtains the prior consent of the Agent, which shall not be unreasonably withheld, conditioned or delayed, and the Agent represents, warrants and agrees that, unless it obtains the prior consent of the Company, which shall not be unreasonably withheld, conditioned or delayed it has not made and will not make any offer relating to the Placement Shares that would constitute an Issuer Free Writing Prospectus, or that would otherwise constitute a "free writing prospectus," as defined in Rule 405, required to be filed with the Commission. Any such free writing prospectus consented to by the Agent or by the Company, as the case may be, is hereinafter referred to as a "Permitted Free Writing Prospectus." The Company represents and warrants that it has treated and agrees that it will treat each Permitted Free Writing Prospectus as an "issuer free writing prospectus," as defined in Rule 433, and has complied and will comply with the requirements of Rule 433 applicable to any Permitted Free Writing Prospectus, including timely filing with the Commission where required, legending and record keeping. For the purposes of clarity, the parties hereto agree that all free writing prospectuses, if any, listed in Exhibit 22 hereto are Permitted Free Writing Prospectuses.

23. Absence of Fiduciary Relationship.

The Company acknowledges and agrees that:

(a) the Agent is acting solely as agent in connection with the public offering of the Placement Shares and in connection with each transaction contemplated by this Agreement and the process leading to such transactions, and no fiduciary or advisory relationship between the Company or any of its respective affiliates, stockholders (or other equity holders), creditors or employees or any other party, on the one hand, and the Agent, on the other hand, has been or will be created in respect of any of the transactions contemplated by this Agreement, irrespective of whether or not the Agent has advised or is advising the Company on other matters, and the Agent has no obligation to the Company with respect to the transactions contemplated by this Agreement except the obligations expressly set forth in this Agreement;

(b) it is capable of evaluating and understanding, and understands and accepts, the terms, risks and conditions of the transactions contemplated by this Agreement;

(c) the Agent has not provided any legal, accounting, regulatory or tax advice with respect to the transactions contemplated by this Agreement and it has consulted its own legal, accounting, regulatory and tax advisors to the extent it has deemed appropriate;

(d) it is aware that the Agent and its affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and the Agent has no obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship or otherwise; and

(e) it waives, to the fullest extent permitted by law, any claims it may have against the Agent for breach of fiduciary duty or alleged breach of fiduciary duty in connection with the sale of Placement Shares under this Agreement and agrees that the Agent shall not have any liability (whether direct or indirect, in contract, tort or otherwise) to it in respect of such a fiduciary duty claim or to any person asserting a fiduciary duty claim on its behalf or in right of it or the Company, employees or creditors of Company, other than in respect of the Agent's obligations under this Agreement and to keep information provided by the Company to the Agent and the Agent's counsel confidential to the extent not otherwise publicly-available.

24. Definitions.

As used in this Agreement, the following terms have the respective meanings set forth below:

"**Applicable Time**" means (i) each Representation Date and (ii) the time of each sale of any Placement Shares pursuant to this Agreement.

"**Issuer Free Writing Prospectus**" means any "issuer free writing prospectus," as defined in Rule 433, relating to the Placement Shares that (1) is required to be filed with the Commission by the Company, (2) is a "road show" that is a "written communication" within the meaning of Rule 433(d)(8)(i) whether or not required to be filed with the Commission, or (3) is exempt from filing pursuant to Rule 433(d)(5)(i) because it contains a description of the Placement Shares or of the offering that does not reflect the final terms, in each case in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company's records pursuant to Rule 433(g) under the Securities Act Regulations.

"**Rule 164**," "**Rule 172**," "**Rule 405**," "**Rule 415**," "**Rule 424**," "**Rule 424(b)**," "**Rule 430A**," "**Rule 430B**," and "**Rule 433**" refer to such rules under the Securities Act Regulations.

All references in this Agreement to financial statements and schedules and other information that is "contained," "included" or "stated" in the Registration Statement or the Prospectus (and all other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information that is incorporated by reference in the Registration Statement or the Prospectus, as the case may be.

All references in this Agreement to the Registration Statement, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to EDGAR; all references in this Agreement to any Issuer Free Writing Prospectus (other than any Issuer Free Writing Prospectuses that, pursuant to Rule 433, are not

required to be filed with the Commission) shall be deemed to include the copy thereof filed with the Commission pursuant to EDGAR; and all references in this Agreement to "supplements" to the Prospectus shall include, without limitation, any supplements, "wrappers" or similar materials prepared in connection with any offering, sale or private placement of any Placement Shares by the Agent outside of the United States.

[*Signature Page Follows*]

If the foregoing correctly sets forth the understanding between the Company and the Agent, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement between the Company and the Agent.

Very truly yours,

ACHILLION PHARMACEUTICALS, INC.

By: /s/ Mary Kay Fenton
Name: Mary Kay Fenton
Title: SVP and Chief Financial Officer

ACCEPTED as of the date first-above written:

CANTOR FITZGERALD & CO.

By: /s/ Jeffrey Lumby
Name: Jeffrey Lumby
Title: Senior Managing Director

SCHEDULE 1

FORM OF PLACEMENT NOTICE

From: Achillion Pharmaceuticals, Inc.

To: Cantor Fitzgerald & Co.
Attention: _____

Subject: Placement Notice

Gentlemen:

Pursuant to the terms and subject to the conditions contained in the Sales Agreement between Achillion Pharmaceuticals, Inc., a Delaware corporation (the "**Company**"), and Cantor Fitzgerald & Co. ("**Agent**"), dated November 8, 2012, the Company hereby requests that the Agent sell up to _____ of the Company's Common Stock, par value $0.001 per share, at a minimum market price of $_____ per share, during the time period beginning [month, day, time] and ending [month, day, time].

SCHEDULE 2

Compensation

The Company shall pay to the Agent in cash, upon each sale of Placement Shares pursuant to this Agreement, an amount equal to 3% of the aggregate gross proceeds from each sale of Placement Shares.

SCHEDULE 3

Notice Parties

The Company

Michael D. Kishbauch (mkishbauch@achillion.com)

Mary Kay Fenton (mfenton@achillion.com)

The Agent

Jeff Lumby (jlumby@cantor.com)

Josh Feldman (jfeldman@cantor.com)

SCHEDULE 4

Subsidiaries

None.

EXHIBIT 7(l)

Form of Representation Date Certificate

The undersigned, the duly qualified and elected _____, of Achillion Pharmaceuticals, Inc., a Delaware corporation (the "Company"), does hereby certify in such capacity and on behalf of the Company, pursuant to Section 7(l) of the Sales Agreement, dated November 8, 2012 (the "Sales Agreement"), between the Company and Cantor Fitzgerald & Co., that to the best of the knowledge of the undersigned:

(i) The representations and warranties of the Company in Section 6 of the Sales Agreement (A) to the extent such representations and warranties are subject to qualifications and exceptions contained therein relating to materiality or Material Adverse Effect, are true and correct on and as of the date hereof, except for those representations and warranties that speak solely as of a specific date and which were true and correct as of such date, with the same force and effect as if expressly made on and as of the date hereof and (B) to the extent such representations and warranties are not subject to any qualifications or exceptions, are true and correct in all material respects as of the date hereof as if made on and as of the date hereof, except for those representations and warranties that speak solely as of a specific date and which were true and correct as of such date, with the same force and effect as if expressly made on and as of the date hereof; provided, however, that in the case of clauses (A) and (B), such representations and warranties also shall be qualified by the disclosure included or incorporated by reference in the Registration Statement and Prospectus; and

(ii) The Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied pursuant to the Sales Agreement at or prior to the date hereof.

ACHILLION PHARMACEUTICALS, INC.

By: _____

Name: _____

Title: _____

Date:

EXHIBIT 7(m)

Form of Legal Opinion

[PROVIDED SEPARATELY]

Exhibit 22

Permitted Free Writing Prospectus

None.

Exhibit 31.1

Certification of Principal Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of Sarbanes-Oxley Act of 2002

I, Michael D. Kishbauch, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Achillion Pharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15(d)-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: November 8, 2012

/S/ MICHAEL D. KISHBAUCH

Michael D. Kishbauch
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

Certification of Principal Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of Sarbanes-Oxley Act of 2002

I, Mary Kay Fenton, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Achillion Pharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15(d)-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 8, 2012

/S/ MARY KAY FENTON

Mary Kay Fenton
Senior Vice President and Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Achillion Pharmaceuticals, Inc. (the "Company") for the quarter ended September 30, 2012 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Michael D. Kishbauch, President and Chief Executive Officer of the Company, hereby certifies, pursuant to Section 1350 of Chapter 63 of Title 18, United States Code, that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 8, 2012

/s/ Michael D. Kishbauch

Michael D. Kishbauch
President and Chief Executive Officer
(Principal Executive Officer)

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Achillion Pharmaceuticals, Inc. (the "Company") for the quarter ended September 30, 2012 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Mary Kay Fenton, Senior Vice President and Chief Financial Officer of the Company, hereby certifies, pursuant to Section 1350 of Chapter 63 of Title 18, United States Code, that:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 8, 2012

/s/ Mary Kay Fenton

Mary Kay Fenton
Senior Vice President and Chief Financial Officer
(Principal Financial Officer)

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.