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, 2016

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 001-36352

AKEBIA THERAPEUTICS, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	**20-8756903**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**
245 First Street, Suite 1100, Cambridge, MA	**02142**
(Address of Principal Executive Offices)	**(Zip Code)**

(617) 871-2098
(Registrant's Telephone Number, Including Area Code)

(Former Name, Former Address and Former Fiscal Year, if Changed Since Last Report)

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 web site if any, every Interactive Date File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) 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 registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☒
Non-accelerated filer	☐	Smaller reporting company	☐

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Class	Outstanding at October 31, 2016
Common Stock, $0.00001 par value	**38,324,472**

NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements that are being made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, or PSLRA, with the intention of obtaining the benefits of the "safe harbor" provisions of the PSLRA. Forward-looking statements involve risks and uncertainties. All statements other than statements of historical facts contained in this Quarterly Report on Form 10-Q are forward-looking statements. In some cases, you can identify forward-looking statements by words such as "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "seek," "should," "target," "will," "would," or the negative of these words or other comparable terminology. These forward-looking statements include, but are not limited to, statements about:

- the projected timing of (1) our PRO$_2$TECT and INNO$_2$VATE clinical programs, (2) submission of a new drug application, or NDA, for vadadustat, and (3) commencement of Phase 1 clinical studies of AKB-6899;
- the pace of enrollment for the PRO$_2$TECT and INNO$_2$VATE clinical programs;
- our plans to seek a geographic collaboration for the development and commercialization of vadadustat outside the United States;
- our development plans with respect to vadadustat and AKB-6899;
- the timing or likelihood of regulatory filings and approvals, including any required post-marketing testing or any labeling and other restrictions;
- our plans to commercialize vadadustat, if it is approved;
- the implementation of our business model and strategic plans for our business, product candidates and technology;
- our commercialization, marketing and manufacturing capabilities and strategy;
- our competitive position;
- our intellectual property position;
- developments and projections relating to our competitors and our industry;
- our estimates regarding expenses (including those associated with the PRO$_2$TECT and INNO$_2$VATE clinical programs), future revenue, capital requirements and needs for additional financing; and
- other risks and uncertainties, including those listed under Part II, Item 1A. Risk Factors.

All forward-looking statements in this Quarterly Report on Form 10-Q involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by these forward-looking statements. Factors that may cause actual results to differ materially from current expectations include, among other things, those listed under Part II, Item 1A. Risk Factors and elsewhere in this Quarterly Report on Form 10-Q. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

This Quarterly Report on Form 10-Q also contains estimates, projections and other information concerning our industry, our business, and the markets for certain diseases, including data regarding the estimated size of those markets, and the incidence and prevalence of certain medical conditions. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances reflected in this information. Unless otherwise expressly stated, we obtained this industry, business, market and other data from reports, research surveys, studies and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources.

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PART I—FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS.

AKEBIA THERAPEUTICS, INC.

Condensed Consolidated Balance Sheets
(Unaudited)
(in thousands, except share and per share data)

	September 30, 2016	December 31, 2015
Assets		
Current assets:		
Cash and cash equivalents	$ 65,830	$ 49,778
Available for sale securities	95,492	88,676
Prepaid expenses and other current assets	3,825	2,563
Total current assets	165,147	141,017
Property and equipment, net	2,688	540
Deferred offering costs	—	102
Other assets	1,283	1,281
Total assets	$ 169,118	$ 142,940
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 8,524	$ 2,313
Accrued expenses	17,615	9,555
Total current liabilities	26,139	11,868
Deferred rent	2,262	69
Deferred revenue	40,000	—
Other non-current liabilities	7	5
Total liabilities	68,408	11,942
Commitments and contingencies (Note 8)		
Stockholders' equity:		
Preferred stock $0.00001 par value, 25,000,000 shares authorized at September 30, 2016 and December 31, 2015; 0 shares issued and outstanding at September 30, 2016 and December 31, 2015	—	—
Common stock: $0.00001 par value; 175,000,000 shares authorized at September 30, 2016 and December 31, 2015; 38,253,190 and 30,662,218 shares issued and outstanding at September 30, 2016 and December 31, 2015, respectively	—	—
Additional paid-in capital	359,991	292,783
Treasury stock, at cost, 0 shares in 2016, 8,643 shares in 2015	—	(162)
Accumulated other comprehensive loss	(7)	(234)
Accumulated deficit	(259,274)	(161,389)
Total stockholders' equity	100,710	130,998
Total liabilities and stockholders' equity	$ 169,118	$ 142,940

See accompanying notes to unaudited condensed consolidated financial statements.

AKEBIA THERAPEUTICS, INC.

Condensed Consolidated Statements of Operations and Comprehensive Loss
(Unaudited)
(in thousands, except share and per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Operating expenses:				
Research and development	$ 31,238	$ 15,604	$ 82,350	$ 28,772
General and administrative	4,944	4,074	16,066	12,691
Total operating expenses	36,182	19,678	98,416	41,463
Operating loss	(36,182)	(19,678)	(98,416)	(41,463)
Other income (expense):				
Interest income	219	139	722	350
Other income (expense)	(345)	64	(191)	254
Net loss	$ (36,308)	$ (19,475)	$ (97,885)	$ (40,859)
Net loss per share applicable to common stockholders - basic and diluted	$ (0.96)	$ (0.68)	$ (2.61)	$ (1.62)
Weighted-average number of common shares used in net loss per share applicable to common stockholders—basic and diluted	37,897,902	28,784,231	37,528,869	25,175,077
Comprehensive loss:				
Net loss	$ (36,308)	$ (19,475)	$ (97,885)	$ (40,859)
Other comprehensive income (loss) - unrealized gain (loss) on securities	(44)	20	(7)	(7)
Comprehensive loss	$ (36,352)	$ (19,455)	$ (97,892)	$ (40,866)

See accompanying notes to unaudited condensed consolidated financial statements.

AKEBIA THERAPEUTICS, INC.

Condensed Consolidated Statements of Cash Flows
(Unaudited)
(in thousands)

	Nine Months Ended	
	September 30, 2016	**September 30, 2015**
Operating activities:		
Net loss	$ (97,885)	$ (40,859)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	172	85
Amortization of premium/discount on investments	399	418
Loss on disposal of property and equipment	306	—
Stock-based compensation	4,101	3,386
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(1,263)	224
Accounts payable	6,196	3,252
Accrued expense	8,017	4,024
Deferred revenue	40,000	—
Deferred rent	2,193	(25)
Net cash used in operating activities	(37,764)	(29,495)
Investing activities:		
Purchase of equipment	(2,614)	(342)
Proceeds from the maturities of available for sale securities	125,151	49,547
Purchase of available for sale securities	(132,138)	(64,531)
Net cash used in investing activities	(9,601)	(15,326)
Financing activities:		
Proceeds from the issuance of common stock, net of issuance costs	63,205	78,579
Proceeds from the sale of stock under employee stock purchase plan	106	109
Proceeds from the exercise of stock options	125	70
Payments on capital lease obligations	(19)	(5)
Net cash provided by financing activities	63,417	78,753
Decrease in cash and cash equivalents	16,052	33,932
Cash and cash equivalents at beginning of the period	49,778	32,780
Cash and cash equivalents at end of the period	$ 65,830	$ 66,712
Non-cash financing activities		
Unpaid follow-on offering costs	$ 65	$ —
Assets acquired under capital lease	$ —	$ 12

See accompanying notes to unaudited condensed consolidated financial statements

1. Nature of Organization and Operations

Incorporated in Delaware in 2007, Akebia Therapeutics, Inc. (Akebia, or the Company) is a biopharmaceutical company focused on the development of novel proprietary therapeutics based on hypoxia inducible factor, or HIF, biology and the commercialization of these products for patients with serious unmet medical needs. HIF is the primary regulator of the production of red blood cells, or RBCs, in the body and a potentially novel mechanism for the treatment of anemia secondary to chronic kidney disease, or CKD. Pharmacologic modulation of the HIF pathway may also have broader therapeutic applications in acute renal failure, organ protection, ischemia-reperfusion injury, cancer, ophthalmology, and inflammatory diseases. The Company's lead product candidate, vadadustat, is being developed as a once-daily, oral therapy for the treatment of anemia of CKD. The Company has successfully completed Phase 2 development demonstrating that vadadustat can safely and predictably raise hemoglobin levels in patients with anemia related to CKD. The Company has commenced its vadadustat Phase 3 program, which includes the PRO_2TECT studies for non-dialysis patients with anemia secondary to CKD and $INNO_2$VATE studies for dialysis-dependent patients.

The Company's operations to date have been limited to organizing and staffing the Company, business planning, raising capital, acquiring and developing its technology, identifying potential product candidates and undertaking preclinical and clinical studies. The Company has not generated any product revenue to date and may never generate any product revenue in the future. The Company's product candidates are subject to long development cycles and the Company may be unsuccessful in its efforts to develop, obtain regulatory approval for or market its product candidates.

The Company is subject to a number of risks including, but not limited to, the need to obtain adequate additional funding, including the resources necessary to fund its recently commenced global Phase 3 development of vadadustat in non-dialysis and dialysis patients with anemia related to CKD. In December 2015, the Company began dosing patients in its Phase 3 vadadustat program in non-dialysis patients, PRO_2TECT. The Company initiated its Phase 3 program of vadadustat in dialysis-dependent patients, $INNO_2$VATE, in August 2016 and anticipates full enrollment by early 2018. The Company has engaged a clinical research organization for the PRO_2TECT and $INNO_2$VATE programs. The Company expects the cost of the Phase 3 program to be in the range of $80,000 to $85,000 per patient, and it plans to enroll approximately 3,100 patients in PRO_2TECT and approximately 2,600 patients in $INNO_2$VATE.

The Company is also subject to a number of other risks including possible failure of preclinical testing or clinical trials, the need to obtain marketing approval for its product candidates, the development of new technological innovations by competitors, the need to successfully commercialize and gain market acceptance of any of the Company's products that are approved and uncertainty around intellectual property matters. If the Company does not successfully commercialize any of its products, it will be unable to generate product revenue or achieve profitability.

In December 2015, the Company entered into a collaboration agreement with Mitsubishi Tanabe Pharma Corporation, or MTPC, to develop and commercialize vadadustat in Japan and certain other countries in Asia for total milestone payments of up to $350.0 million, including up to $100.0 million in upfront and development payments, of which $40.0 million was received in January 2016. If Japanese patients are not included in either the global Phase 3 PRO_2TECT or $INNO_2$VATE programs, $20.0 million of the $40.0 million received would be used to fund further local development of vadadustat in Japan or be refunded to MTPC. In addition, the Company is also eligible to receive tiered double-digit royalty payments on sales of vadadustat.

Through the end of 2015 the Company had raised approximately $187.4 million of net proceeds from three underwritten public offerings, including our initial public offering. In January 2016, the Company completed a follow-on public offering whereby the Company sold 7,250,000 shares of common stock at a price of $9.00 per share. The aggregate net proceeds received by the Company from the offering were approximately $61.0 million, net of underwriting discounts and commissions and estimated offering expenses payable by the Company.

In May 2016, the Company entered into a Sales Agreement with Cantor Fitzgerald & Co. to periodically sell up to $75.0 million of shares of common stock in an at-the-market, or ATM, offering. During the third quarter of 2016, the Company sold 239,906 shares of common stock pursuant to the Sales Agreement. The aggregate net proceeds received by the Company were approximately $2.2 million, net of commissions.

The Company believes that its cash, cash equivalents and available for sale securities of $161.3 million as of September 30, 2016 is sufficient to fund its current operating plan through the second quarter of 2017. There can be no assurance, however, that the current operating plan will be achieved in the timeframe anticipated by the Company, or that its cash resources will fund the Company's

operating plan for the period anticipated by the Company or that additional funding will be available on terms acceptable to the Company, or at all.

As of September 30, 2016, the Company had cash and cash equivalents of approximately $161.3 million and current accounts payable and accrued expenses of $26.1 million. The Company has incurred substantial losses since inception, primarily due to investments in research and development, and we expect to continue to incur substantial losses over the next four to five years. Without any additional financings or other transactions, the Company anticipates that it will have sufficient cash available to support its development programs and business operations through the second quarter of 2017.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. In the future, the Company's ability to continue as a going concern is dependent on its ability to raise additional capital to fund its research and development programs and meet its obligations on a timely basis. As of September 30, 2016, the financial statements do not include any adjustments relating to recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might be necessary should the Company be unable to continue its existence.

To potentially mitigate the risk that the Company may be unable to continue as a going concern, it plans to pursue all or a combination of potential strategic alliances, collaborations and other strategic transactions. The Company also may seek additional capital through public or private equity offerings (including its ATM offering), which could have a dilutive impact on stockholders and the issuance, or even potential issuance, of shares could have a negative effect on the market price of common stock. Even if the Company is able to secure additional capital, such financings may only be available on unattractive terms, or could result in significant dilution of stockholders' interests. If none of the foregoing alternatives is available or, if available, the Company is unable to raise sufficient capital through such transactions, it may be forced to limit or cease its development activities.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying condensed consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries, Akebia Therapeutics Securities Corporation and Akebia Europe Limited. All intercompany balances and transactions have been eliminated in consolidation. These condensed consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP). Any reference in these notes to applicable guidance is meant to refer to the authoritative U.S. GAAP as found in the Accounting Standards Codification (ASC) and Accounting Standards Update (ASU) of the Financial Accounting Standards Board (FASB).

In the quarter ended December 31, 2015, the Company identified and corrected an error in the historical classification of certain operating costs between research and development and general and administrative expenses. The Company concluded the effect of this classification error was not material to its consolidated financial statements for any prior period. The classification correction had no effect on the Company's current or historical total operating expenses or net loss.

The results of operations for the interim periods are not necessarily indicative of the results of operations to be expected for the full year. These interim condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements as of and for the year ended December 31, 2015, and the notes thereto, which are included in the Company's Annual Report on Form 10-K (File No. 001-36352), which was filed with the Securities and Exchange Commission (SEC) on March 14, 2016.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the FASB or other standard-setting bodies and adopted by the Company as of the specified effective date. Unless otherwise discussed, the Company believes the impact of recently issued standards that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

In March 2016, the FASB issued ASU 2016-09, *Improvements to Employee Share-Based Payment Accounting*, as part of its Simplification Initiative. The areas for simplification in this update involve several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. Some of the areas for simplification apply only to nonpublic entities. The amendments in ASU 2016-09 are effective for fiscal years beginning after December 15, 2016, and interim periods within those fiscal years. Early application is permitted for all entities. The Company is currently evaluating the impact of this new standard on its consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases* (Topic 842), which supersedes the existing guidance for lease accounting, Leases (Topic 840). ASU 2016-02 requires lessees to recognize leases on their balance sheets, and leaves lessor accounting largely unchanged. The amendments in this ASU are effective for fiscal years beginning after December 15, 2018 and interim periods within those fiscal years. Early application is permitted for all entities. ASU 2016-02 requires a modified retrospective approach for all leases existing at, or entered into after, the date of initial application, with an option to elect to use certain transition relief. The Company is currently evaluating the impact of this new standard on its consolidated financial statements.

In August 2014, the FASB issued ASU 2014-15, which requires management of public and private companies to evaluate whether there is substantial doubt about the entity's ability to continue as a going concern within one year after the date that the financial statements are issued. Management's evaluation should be based on relevant conditions and events that are known and reasonably knowable at the date that the financial statements are issued. If conditions or events raise substantial doubt about an entity's ability to continue as a going concern, and substantial doubt is not alleviated after consideration of management's plans, an entity should include a statement in the footnotes indicating that there is substantial doubt about the entity's ability to continue as a going concern within one year after the date that the financial statements are issued. The new standard is effective for annual periods ending after December 15, 2016, and for annual periods and interim periods thereafter. Early application is permitted. While the Company intends to adopt the standard as of December 31, 2016, if this standard had been adopted as of September 30, 2016, management of the Company believes that it would have concluded there is substantial doubt about the Company's ability to continue as a going concern one year from the date of filing of this Form 10-Q. See Note 1 for additional information on our liquidity risks and management's plans.

In May 2014, the FASB issued a new revenue recognition standard which amends revenue recognition principles and provides a single, comprehensive set of criteria for revenue recognition within and across all industries. The new standard provides a five step framework whereby revenue is recognized when promised goods or services are transferred to a customer at an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard also requires enhanced disclosures pertaining to revenue recognition in both interim and annual periods. In August 2015, the FASB deferred the effective date of the new revenue standard from January 1, 2017 to January 1, 2018. Early adoption is permitted any time after the original effective date, which for us is January 1, 2017. The standard allows for adoption using a full retrospective method or a modified retrospective method. The Company is currently evaluating the timing, method of adoption and the expected impact that the standard could have on our consolidated financial statements and related disclosures.

Segment Information

Operating segments are defined as components of an enterprise about which separate discrete information is available for evaluation by the chief operating decision maker, or decision-making group, in deciding how to allocate resources and in assessing performance. The Company views its operations and manages its business in one operating segment, which is the business of developing and commercializing proprietary therapeutics based on HIF biology.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results may differ from those estimates. Management considers many factors in selecting appropriate financial accounting policies and controls, and in developing the estimates and assumptions that are used in the preparation of these financial statements. Management must apply significant judgment in this process. In addition, other factors may affect estimates, including: expected business and operational changes, sensitivity and volatility associated with the assumptions used in developing estimates, and whether historical trends are expected to be representative of future trends. The estimation process often may yield a range of potentially reasonable estimates of the ultimate future outcomes, and management must select an amount that falls within that range of reasonable estimates. Estimates are used in the following areas, among others: prepaid and accrued research and development expense, stock-based compensation expense, accrued expenses and income taxes.

Prior to the initial public offering, the Company utilized significant estimates and assumptions in determining the fair value of its common stock. The Company granted stock options at exercise prices not less than the fair market value of its common stock as determined by the Board of Directors contemporaneously at the date such grants were made, with input from management. Prior to the Company's initial public offering in March 2014, the fair value of common stock at the grant date was adjusted in connection with the Company's retrospective fair value assessment for financial reporting purposes. Accordingly, the Board of Directors determined the estimated fair value of the Company's common stock based on a number of objective and subjective factors, including external market conditions affecting the biotechnology industry sector and the prices at which the Company sold shares of preferred stock, the superior rights and preferences of securities senior to the Company's common stock at the time and the likelihood of achieving a liquidity event, such as an initial public offering or sale of the Company.

Cash and Cash Equivalents

Cash and cash equivalents consist of all cash on hand, deposits and funds invested in available-for-sale securities with original maturities of three months or less at the time of purchase. At September 30, 2016, the Company's cash is primarily in money market funds. The Company may maintain balances with its banks in excess of federally insured limits.

Investments

Management determines the appropriate classification of securities at the time of purchase and reevaluates such designation as of each balance sheet date. Currently, the Company classifies all securities as available-for-sale which are included in current assets as they are intended to fund current operations. The Company carries available-for-sale securities at fair value. The Company conducts periodic reviews to identify and evaluate each investment that has an unrealized loss, in accordance with the meaning of other-than-temporary impairment and its application to certain investments. When assessing whether a decline in the fair value of a security is other-than-temporary, the Company considers the fair market value of the security, the duration of the security's decline, and prospects for the underlying business. Based on these considerations, the Company did not identify any other-than-temporary unrealized losses at September 30, 2016. Unrealized losses on available-for-sale securities that are determined to be temporary, and not related to credit loss, are recorded in accumulated other comprehensive loss, a component of stockholders' equity. The amortized cost of debt securities in this category reflects amortization of premiums and accretion of discounts to maturity computed under the effective interest method. The Company includes this amortization in the caption "Interest income" within the consolidated statements of operations and comprehensive loss. The Company also includes in net investment income, realized gains and losses and declines in value determined to be other than temporary. The Company bases the cost of securities sold upon the specific identification method, and includes interest and dividends on securities in interest income.

Revenue Recognition

To date, the Company has not generated any revenue from the sales of products or other means. For the foreseeable future, the Company expects substantially all of its revenues will be generated from its collaboration with MTPC (see Note 9) and any other collaborations the Company may enter into.

The Company will recognize revenue in accordance with ASC Topic 605, *Revenue Recognition* (ASC 605). Accordingly, revenue will be recognized for each unit of accounting when all of the following criteria are met:

- Persuasive evidence of an arrangement exists;
- Delivery has occurred or services have been rendered;
- The seller's price to the buyer is fixed or determinable; and
- Collectability is reasonably assured.

Amounts received prior to satisfying the revenue recognition criteria are recorded as deferred revenue. Amounts expected to be recognized as revenue within the 12 months following the balance sheet date are classified in current liabilities. Amounts not expected to be recognized as revenue within the 12 months following the balance sheet date are classified as deferred revenue, net of current portion.

The Company evaluates multiple-element arrangements based on the guidance in ASC Topic 605-25, *Revenue Recognition Multiple-Element Arrangements* (ASC 605-25). Pursuant to the guidance in ASC 605-25, the Company evaluates multiple-element arrangements to determine (1) the deliverables included in the arrangement and (2) whether the individual deliverables represent separate units of accounting or whether they must be accounted for as a combined unit of accounting. This evaluation involves subjective determinations and requires the Company to make judgments about the individual deliverables and whether such deliverables are separable from the other aspects of the contractual relationship. Deliverables are considered separate units of accounting provided that the delivered item has value to the customer on a standalone basis and, if the arrangement includes a general right of return relative to the delivered item, delivery or performance of the undelivered item is considered probable and substantially in the Company's control. In assessing whether an item has standalone value, the Company considers factors such as the research, development, manufacturing and commercialization capabilities of the collaboration partner and the availability of the associated expertise in the general marketplace. In addition, the Company considers whether the collaboration partner can use a deliverable for its intended purpose without the receipt of the remaining deliverable, whether the value of the deliverable is dependent on the undelivered item and whether there are other vendors that can provide the undelivered items.

The consideration received under the arrangement that is fixed or determinable is then allocated among the separate units of accounting using the relative selling price method. The Company determines the estimated selling price for units of accounting within each arrangement using vendor-specific objective evidence (VSOE) of selling price, if available, third-party evidence (TPE) of selling price if VSOE is not available, or best estimate of selling price (BESP) if neither VSOE nor TPE is available. Determining the BESP

for a unit of accounting requires significant judgment. In developing the BESP for a unit of accounting, the Company considers applicable market conditions and relevant entity-specific factors, including factors that were contemplated in negotiating the agreement with the customer and estimated costs. The Company validates the BESP for units of accounting by evaluating whether changes in the key assumptions used to determine the BESP will have a significant effect on the allocation of arrangement consideration between multiple units of accounting.

The Company will recognize arrangement consideration allocated to each unit of accounting when all of the revenue recognition criteria in ASC 605 are satisfied for that particular unit of accounting. In the event that a deliverable does not represent a separate unit of accounting, the Company will recognize revenue from the combined unit of accounting over the Company's contractual or estimated performance period for the undelivered elements, which is typically the term of the Company's research and development obligations. If there is no discernible pattern of performance or objectively measurable performance measures do not exist, then the Company will recognize revenue under the arrangement on a straight-line basis over the period the Company is expected to complete its performance obligations. Conversely, if the pattern of performance in which the service is provided to the customer can be determined and objectively measurable performance measures exist, then the Company recognizes revenue under the arrangement using the proportional performance method. Revenue to be recognized is limited to the lesser of the cumulative amount of payments received or the cumulative amount of revenue earned, as determined using the straight-line method or proportional performance method, as applicable, as of the period ending date.

At the inception of an arrangement that includes milestone payments, the Company evaluates whether each milestone is substantive and at risk to both parties on the basis of the contingent nature of the milestone. This evaluation includes an assessment of whether: (1) the consideration is commensurate with either the Company's performance to achieve the milestone or the enhancement of the value of the delivered item(s) as a result of a specific outcome resulting from its performance to achieve the milestone, (2) the consideration relates solely to past performance and (3) the consideration is reasonable relative to all of the deliverables and payment terms within the arrangement. The Company evaluates factors such as the scientific, clinical, regulatory, commercial, and other risks that must be overcome to achieve the particular milestone and the level of effort and investment required to achieve the particular milestone in making this assessment. There is considerable judgment involved in determining whether a milestone satisfies all of the criteria required to conclude that a milestone is substantive. Milestones that are not considered substantive are recognized as earned if there are no remaining performance obligations or over the remaining period of performance, assuming all other revenue recognition criteria are met.

Options are considered substantive if, at the inception of the arrangement, the Company is at risk as to whether the collaboration partner will choose to exercise the option. Factors that the Company considers in evaluating whether an option is substantive include the cost to exercise the option, the overall objective of the arrangement, the benefit the collaborator might obtain from the arrangement without exercising the option and the likelihood the option will be exercised. When an option is considered substantive, the Company does not consider the option or item underlying the option to be a deliverable at the inception of the arrangement and the associated option fees are not included in allocable consideration, assuming the option is not priced at a significant and incremental discount. Conversely, when an option is not considered substantive, the Company would consider the option, including other deliverables contingent upon the exercise of the option, to be a deliverable at the inception of the arrangement and a corresponding amount would be included in allocable arrangement consideration. In addition, if the price of the option includes a significant incremental discount, the discount would be included as a deliverable at the inception of the arrangement.

The Company will recognize royalty revenue in the period of sale of the related product(s), based on the underlying contract terms, provided that the reported sales are reliably measurable and the Company has no remaining performance obligations, assuming all other revenue recognition criteria are met.

Patents

Costs incurred in connection with the application for and issuance of patents are expensed as incurred.

Income Taxes

Income taxes are recorded in accordance with ASC Topic 740, *Income Taxes* (ASC 740), which provides for deferred taxes using an asset and liability approach. The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns. Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Valuation allowances are provided, if, based upon the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

The Company accounts for uncertain tax positions in accordance with the provisions of ASC 740. When uncertain tax positions exist, the Company recognizes the tax benefit of tax positions to the extent that the benefit will more likely than not be realized. The determination as to whether the tax benefit will more likely than not be realized is based upon the technical merits of the tax position,

as well as consideration of the available facts and circumstances. As of September 30, 2016 and 2015, the Company does not have any significant uncertain tax positions. The Company recognizes interest and penalties related to uncertain tax positions in income tax expense.

Stock-Based Compensation

The Company accounts for its stock-based compensation awards in accordance with ASC Topic 718, *Compensation—Stock Compensation* (ASC 718). ASC 718 requires all stock-based payments to employees, including grants of employee stock options, restricted stock, restricted stock units, or RSUs, and modifications to existing stock awards, to be recognized in the statements of operations and comprehensive loss based on their fair values. The Company accounts for stock-based awards to non-employees in accordance with ASC Topic 505-50, *Equity-Based Payments to Non-Employees* (ASC 505-50), which requires the fair value of the award to be re-measured at fair value until a performance commitment is reached or counterparty performance is complete. The Company's stock-based awards are comprised of stock options, shares of restricted stock and shares of common stock. The Company estimates the fair value of options granted using the Black-Scholes option pricing model. The Company uses the quoted market price of comparable public companies to determine the fair value of restricted stock awards and common stock awards.

The Black-Scholes option pricing model requires the input of certain subjective assumptions, including (a) the expected stock price volatility, (b) the calculation of expected term of the award, (c) the risk-free interest rate and (d) expected dividends. Due to the lack of company-specific historical and implied volatility data for trading the Company's stock in the public market, the Company has based its estimate of expected volatility on the historical volatility of a group of similar companies that are publicly traded. The historical volatility is calculated based on a period of time commensurate with the expected term assumption. The computation of expected volatility is based on the historical volatility of a representative group of companies with similar characteristics to the Company, including stage of product development and life science industry focus. The Company is in the product development stage with no revenue and the representative group of companies has certain similar characteristics to the Company. The Company believes the group selected has sufficient similar economic and industry characteristics, and includes companies that are most representative of the Company. The Company uses the simplified method as prescribed by the SEC Staff Accounting Bulletin No. 107, Share-Based Payment, to calculate the expected term for options granted to employees as it does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term. The expected term is applied to the stock option grant group as a whole, as the Company does not expect substantially different exercise or post-vesting termination behavior among its employee population. For options granted to non-employees, the Company utilizes the contractual term of the arrangement as the basis for the expected term assumption. The risk-free interest rate is based on a treasury instrument whose term is consistent with the expected life of the stock options. The expected dividend yield is assumed to be zero as the Company has never paid dividends and has no current plans to pay any dividends on its common stock, which is similar to the Company's peer group.

The Company's stock-based awards are subject to either service- or performance-based vesting conditions. Compensation expense related to awards to employees with service-based vesting conditions is recognized on a straight-line basis based on the grant date fair value over the associated service period of the award, which is generally the vesting term. Consistent with the guidance in ASC 505- 50, compensation expense related to awards to non-employees with service-based vesting conditions is recognized on a straight-line basis based on the then-current fair value at each financial reporting date prior to the measurement date over the associated service period of the award, which is generally the vesting term. Compensation expense related to awards to employees with performance-based vesting conditions is recognized based on the grant date fair value over the requisite service period using the accelerated attribution method to the extent achievement of the performance condition is probable. Consistent with the guidance in ASC 505-50, compensation expense related to awards to non-employees with performance-based vesting conditions is recognized based on the then-current fair value at each financial reporting date prior to the measurement date over the requisite service period using the accelerated attribution method to the extent achievement of the performance condition is probable.

The Company is also required to estimate forfeitures at the time of grant, and revise those estimates in the subsequent periods if actual forfeitures differ from its estimates. The Company uses historical data to estimate pre-vesting forfeitures and record stock-based compensation expense only for those awards that are expected to vest. To the extent that actual forfeitures differ from the Company's estimates, the difference is recorded as a cumulative adjustment in the period the estimates were revised. Stock-based compensation expense recognized in the condensed consolidated financial statements is based on awards that are ultimately expected to vest.

Fair Value of Financial Instruments

The Company is required to disclose information on all assets and liabilities reported at fair value that enables an assessment of the inputs used in determining the reported fair values. ASC Topic 820, *Fair Value Measurements and Disclosures* (ASC 820), establishes a hierarchy of inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the observable inputs be used when available.

Observable inputs are inputs that market participants would use in pricing the asset or liability based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect the Company's assumptions about the inputs that

market participants would use in pricing the asset or liability, and are developed based on the best information available in the circumstances. The fair value hierarchy applies only to the valuation inputs used in determining the reported fair value of the investments, and is not a measure of the investment credit quality. The three levels of the fair value hierarchy are described below:

- Level 1 – Valuations based on unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the measurement date.
- Level 2 – Valuations based on quoted prices for similar assets or liabilities in markets that are not active, or for which all significant inputs are observable, either directly or indirectly.
- Level 3 – Valuations that require inputs that reflect the Company's own assumptions that are both significant to the fair value measurement and unobservable.

To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

Items measured at fair value on a recurring basis include short-term investments (see Note 4). The carrying amounts of prepaid expenses and other current assets, accounts payable and accrued expenses approximate their fair values due to their short-term maturities. The rate implicit within the Company's capital lease obligation approximates market interest rates.

Concentrations of Credit Risk and Off-Balance Sheet Risk

Cash and investments are the only financial instruments that potentially subject the Company to concentrations of credit risk. The Company maintains its cash with high quality, accredited financial institutions and, accordingly, such funds are subject to minimal credit risk. The Company has no significant off-balance sheet concentrations of credit risk, such as foreign currency exchange contracts, option contracts or other hedging arrangements.

Net Loss per Share

Basic net loss per share is calculated by dividing net loss attributable to common stockholders by the weighted-average shares outstanding during the period, without consideration for common stock equivalents. Diluted net loss per share is calculated by adjusting weighted-average shares outstanding for the dilutive effect of common stock equivalents outstanding for the period, determined using the treasury-stock method. For purposes of the diluted net loss per share calculation, preferred stock, stock options, unvested restricted stock and RSUs are considered to be common stock equivalents, but have been excluded from the calculation of diluted net loss per share, as their effect would be anti-dilutive for all periods presented. Therefore, basic and diluted net loss per share were the same for all periods presented.

Property and Equipment

Property and equipment is stated at cost, less accumulated depreciation. Assets under capital lease are included in property and equipment. Property and equipment is depreciated using the straight-line method over the estimated useful lives of the assets, generally three to seven years. Such costs are periodically reviewed for recoverability when impairment indicators are present. Such indicators include, among other factors, operating losses, unused capacity, market value declines and technological obsolescence. Recorded values of asset groups of equipment that are not expected to be recovered through undiscounted future net cash flows are written down to current fair value, which generally is determined from estimated discounted future net cash flows (assets held for use) or net realizable value (assets held for sale).

The following is the summary of property and equipment and related accumulated depreciation as of September 30, 2016 and December 31, 2015.

	Useful Life	September 30, 2016	December 31, 2015
		(in thousands)	
Computer equipment and software	3	$ 466	$ 300
Furniture and fixtures	5	724	243
Equipment	7	50	50
Leasehold improvements	Shorter of the useful life or remaining lease term (10 years)	1,730	70
Office equipment under capital lease	3	36	24
		3,006	687
Less accumulated depreciation		(318)	(147)
Net property and equipment		$ 2,688	$ 540

Depreciation expense, including expense associated with assets under capital leases, was approximately $93,000 and $35,000 for the three months ended September 30, 2016 and 2015, respectively and $171,000 and $85,000 for the nine months ended September 30, 2016 and 2015, respectively.

3. Available for sale securities

Available for sale securities at September 30, 2016 and December 31, 2015 consist of the following:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
		(in thousands)		
September 30, 2016				
Cash and cash equivalents	$ 65,830	$ —	$ —	$ 65,830
Available for sale securities:				
Certificates of deposit	$ 17,575	—	—	$ 17,575
U.S. Government debt securities	71,968	12	(14)	71,966
Corporate debt securities	5,956	—	(5)	5,951
Total available for sale securities	$ 95,499	$ 12	$ (19)	$ 95,492
Total cash, cash equivalents, and available for sale securities	$ 161,329	$ 12	$ (19)	$ 161,322

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
		(in thousands)		
December 31, 2015				
Cash and cash equivalents	$ 49,778	$ —	$ —	$ 49,778
Available for sale securities:				
Certificates of deposit	$ 21,505	—	—	$ 21,505
U.S. Government debt securities	46,461	—	(185)	46,276
Corporate debt securities	20,944	1	(50)	20,895
Total available for sale securities	$ 88,910	$ 1	$ (235)	$ 88,676
Total cash, cash equivalents, and available for sale securities	$ 138,688	$ 1	$ (235)	$ 138,454

The estimated fair value of the Company's available for sale securities balance at September 30, 2016, by contractual maturity, is as follows:

Due in one year or less	$	78,818
Due after one year		16,674
Total available for sale securities	$	95,492

4. Fair Value of Financial Instruments

The Company utilizes a portfolio management company for the valuation of the majority of its investments. This company is an independent, third-party vendor recognized to be an industry leader with access to market information that obtains or computes fair market values from quoted market prices, pricing for similar securities, recently executed transactions, cash flow models with yield curves and other pricing models. For valuations obtained from the pricing service, the Company performs due diligence to understand how the valuation was calculated or derived, focusing on the valuation technique used and the nature of the inputs.

Based on the fair value hierarchy, the Company classifies its cash equivalents and marketable securities within Level 1 or Level 2. This is because the Company values its cash equivalents and marketable securities using quoted market prices or alternative pricing sources and models utilizing market observable inputs.

Assets measured or disclosed at fair value on a recurring basis as of September 30, 2016 and December 31, 2015 are summarized below:

	Fair Value Measurements Using			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
September 30, 2016				
Assets:				
Cash and cash equivalents	$ 65,830	$ —	$ —	$ 65,830
Certificates of deposit	—	17,575	—	17,575
U.S. Government debt securities	—	71,966	—	71,966
Corporate debt securities	—	5,951	—	5,951
	$ 65,830	$ 95,492	$ —	$ 161,322

	Fair Value Measurements Using			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
December 31, 2015				
Assets:				
Cash and cash equivalents	$ 49,778	$ —	$ —	$ 49,778
Certificates of deposit	—	21,505	—	21,505
U.S. Government debt securities	—	46,276	—	46,276
Corporate debt securities	—	20,895	—	20,895
	$ 49,778	$ 88,676	$ —	$ 138,454

The Company had no assets or liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) at September 30, 2016 and December 31, 2015.

The Company's corporate debt securities are all investment grade.

Investment securities are exposed to various risks such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities and the level of uncertainty related to changes in the value of investment securities, it is at least reasonably possible that changes in risks in the near term would result in material changes in the fair value of investments.

5. Accrued Expenses

Accrued expenses are as follows:

	September 30, 2016	December 31, 2015
	(in thousands)	
Accrued clinical	$ 12,490	$ 4,536
Accrued bonus	1,876	2,178
Professional fees	619	647
Accrued vacation	378	310
Accrued payroll	259	518
Accrued severance	44	—
Other	1,949	1,366
Total accrued expenses	$ 17,615	$ 9,555

In January 2016, the Company entered into separation agreements with two employees. During the first quarter of 2016, the Company recorded severance expense in the amount of $0.4 million, of which $0.2 million was recorded to general and administrative expense and $0.2 million was recorded to research and development expense. During the three months ended September 30, 2016, approximately $0.2 million was paid out of the severance accrual and during the nine months ended September 30, 2016, approximately $0.4 was paid out of the severance accrual.

6. Stockholders' Equity

Authorized and Outstanding Capital Stock

As of December 31, 2014, the authorized capital stock of the Company included 175,000,000 shares of common stock, par value $0.00001 per share, of which 38,253,190 and 30,662,218 shares are issued and outstanding at September 30, 2016 and December 31, 2015, respectively; and 25,000,000 shares of undesignated preferred stock, par value $0.00001 per share, of which 0 shares are issued and outstanding at September 30, 2016 and December 31, 2015.

Equity Plans

On February 28, 2014, the Company's Board of Directors adopted its 2014 Incentive Plan (2014 Plan) and its 2014 Employee Stock Purchase Plan (ESPP), which were subsequently approved by its stockholders and became effective upon the closing of the Company's initial public offering on March 25, 2014. The 2014 Plan replaces the 2008 Equity Incentive Plan (2008 Plan), however, any options or awards outstanding under the 2008 Plan at the time of adoption of the 2014 Plan remain outstanding and effective.

The 2014 Plan allows for the granting of stock options, stock appreciation rights, or SARs, restricted stock, unrestricted stock, stock units, performance awards and other awards convertible into or otherwise based on shares of our common stock. Dividend equivalents may also be provided in connection with an award under the 2014 Plan. The Company's employees, officers, directors and consultants and advisors are eligible to receive awards under the 2014 Plan. The Company initially reserved 1,785,000 shares of its common stock for the issuance of awards under the 2014 Plan. The 2014 Plan provides that the number of shares reserved and available for issuance under the 2014 Plan will automatically increase annually on January 1st of each calendar year, by an amount equal to three percent (3%) of the number of shares of stock outstanding on a fully diluted basis as of the close of business on the immediately preceding December 31st (2014 Plan Evergreen Provision). The Company's Board of Directors may act prior to January 1st of any year to provide that there will be no automatic increase in the number of shares available for grant under the 2014 Plan for that year (or that the increase will be less than the amount that would otherwise have automatically been made). Subject to adjustment, no more than 1,131,937 shares of our common stock may be delivered in satisfaction of incentive stock options awarded under the 2014 Plan. During the first nine months of 2016, the Company granted 1,092,275 stock options to employees, 449,838 RSUs to employees and 112,500 stock options to directors under the 2014 Plan.

The ESPP authorizes the initial issuance of up to a total of 262,500 shares of the Company's common stock to participating employees. The maximum aggregate number of shares of common stock available for purchase pursuant to the exercise of options granted under the ESPP will be the lesser of (a) 262,500 shares, increased on each anniversary of the adoption of the ESPP by one percent (1%) of the total shares of common stock then outstanding and (b) 739,611 shares (which is equal to five percent (5%) of the total shares of common stock outstanding on the date of the adoption of the ESPP on a fully diluted, as converted basis (ESPP Evergreen Provision). Under the ESPP, each offering period is six months, at the end of which employees may purchase shares of common stock through payroll deductions made over the term of the offering. The per-share purchase price at the end of each offering period is equal to the lesser of 85% of the closing price of our common stock at the beginning or end of the offering period.

Shares Reserved for Future Issuance

The Company has reserved for future issuance the following number of shares of common stock:

	September 30, 2016	December 31, 2015
Common stock options and RSU's outstanding	3,416,546	2,231,057
Shares available for issuance under the 2014 Plan (1)	1,035,605	1,318,732
Shares available for issuance under the ESPP (2)	803,105	440,304
Total	5,255,256	3,990,093

(1) On January 1, 2016, the shares reserved for future grants under the 2014 Plan increased by 986,800 shares pursuant to the 2014 Plan Evergreen Provision.

(2) On February 28, 2016, the shares reserved for future issuance under the ESPP increased by 379,430 shares pursuant to the ESPP Evergreen Provision.

Stock-Based Compensation

Stock Options

On February 22, 2016, as part of the Company's annual grant of equity, the Company issued 624,275 stock options to employees. In addition, the Company issues stock options to new hires and occasionally to other employees not in connection with the annual grant process. Options granted by the Company vest over periods of between 12 and 48 months. Options vest in installments of (i) 25% at the one year anniversary and (ii) in either 36 or 48 equal monthly or 12 equal quarterly installments beginning in the thirteenth month after the initial Vesting Commencement Date (as defined) or grant date, subject to the employee's continuous service with the Company. Options generally expire ten years after the date of grant. The Company recorded approximately $1.2 million of stock-based compensation expense related to stock options during the three months ended September 30, 2016 and approximately $3.4 million during the nine months ended September 30, 2016.

Restricted Stock

On December 23, 2013, the Company issued 450,224 shares of restricted stock to employees and 79,067 shares of restricted stock to non-employees at a grant date fair value of $7.42 per share. The aggregate grant date fair value for the shares of restricted stock issued on December 23, 2013 totaled approximately $3.9 million. The awards of restricted stock contained a performance condition wherein vesting is contingent upon the Company's consummation of a liquidity event, as defined, prior to the fifth anniversary of the date of grant. Certain of the awards of restricted stock have a requisite service period that was complete upon grant. The remainder of the awards of restricted stock have a requisite service period of four years whereby the award vests 25% on the one year anniversary of the Vesting Commencement Date (as defined), then ratably on the first day of each calendar quarter for 12 quarters, subject to continuous service by the individual and achievement of the performance target. Due to the nature of the performance condition, the Company had concluded that the performance condition was not probable of achievement and therefore, recognition of compensation cost had been deferred until the occurrence of a liquidity event, as defined. Compensation expense related to the restricted stock awards is being recognized over the associated requisite service period which commenced on March 25, 2014. The Company recorded approximately $0.1 million of stock-based compensation expense related to restricted stock during the three months ended September 30, 2016 and recorded approximately $0.1 million during the nine months ended September 30, 2016 as a result of mark to market adjustments related to non-employees.

Restricted Stock Units

On February 22, 2016, as part of the Company's annual grant of equity, the Company issued 382,338 RSUs to employees. In addition, the Company occasionally issues RSUs not in connection with the annual grant process to employees. The RSUs vest 100% on the third year anniversary of the grant date. Total stock-compensation expense to be recognized over the life of the RSUs is $2.9 million and will be recognized on a straight-line basis over the vesting period. The Company recorded approximately $0.2 million of stock-based compensation expense related to the RSUs during the three months ended September 30, 2016 and approximately $0.5 million during the nine months ended September 30, 2016.

ESPP

The first offering period under the ESPP opened on January 2, 2015. There were 16,629 shares issued during the second quarter of 2016. The Company recorded approximately $32,000 of stock-based compensation expense related to ESPP during the three months ended September 30, 2016 and approximately $79,000 during the nine months ended September 30, 2016.

Compensation Expense Summary

The Company has recognized the following compensation cost related to share-based awards:

	Three Months Ended		Nine Months Ended	
	September 30, 2016	September 30, 2015	September 30, 2016	September 30, 2015
	(in thousands)		(in thousands)	
Research and development	$ 636	$ 468	$ 1,393	$ 1,431
General and administrative	992	694	2,708	1,955
Total	$ 1,628	$ 1,162	$ 4,101	$ 3,386

Compensation expense by type of award:

	Three Months Ended		Nine Months Ended	
	September 30, 2016	September 30, 2015	September 30, 2016	September 30, 2015
	(in thousands)		(in thousands)	
Stock options	$ 1,229	$ 1,065	$ 3,378	$ 2,673
Restricted stock	135	61	148	604
Restricted stock units	232	13	496	44
Employee stock purchase plan	32	23	79	65
Total	$ 1,628	$ 1,162	$ 4,101	$ 3,386

7. Income Taxes

Deferred tax assets and deferred tax liabilities are recognized based on temporary differences between the financial reporting and tax basis of assets and liabilities using statutory rates. A valuation allowance is recorded against deferred tax assets if it is more likely than not that some or all of the deferred tax assets will not be realized. There were no significant income tax provisions or benefits for the three or nine months ended September 30, 2016 and 2015. Due to the uncertainty surrounding the realization of the favorable tax attributes in future tax returns, the Company has recorded a full valuation allowance against the Company's otherwise recognizable net deferred tax assets.

8. Commitments and Contingencies

The Company leases approximately 45,362 square feet of office and lab space in Cambridge, Massachusetts under a lease which was most recently amended in July 2016, collectively, the Lease. Total monthly lease payments for base rent are approximately $242,000 per month which is subject to annual rent escalations. In addition to such annual rent escalations, base rent payments for a portion of said premises are scheduled to commence on or about January 1, 2017 in the monthly amount of approximately $22,000. Landlord contributions included in the Lease from the landlord totaled $2,169,920, including $256,765 in leasehold improvements not yet utilized. The landlord contributions are being accounted for as a deferred lease incentive and reduction in monthly rent expense over the term of the Lease. The term of the Lease with respect to the office space expires on September 11, 2026, with one five year extension option available. The term of the Lease for the lab space is five years, with an extension option for one additional period of two years. The total security deposit in connection with the Lease of $1,280,857 is included in other assets in the Company's condensed consolidated balance sheets as of September 30, 2016 and December 31, 2015.

The Company recognizes rent expense for the space which it currently occupies and records a deferred lease obligation representing the cumulative difference between actual facility lease payments and lease expense recognized ratably over the lease period, which is included in the Company's condensed consolidated balance sheets as of September 30, 2016 and December 31, 2015. The Company will begin recognizing rent expense for the lab space and the remaining office space, which the Company did not yet occupy as of September 30, 2016, subsequent to taking possession of the space.

The Company leases office equipment under three year capital leases with payments commencing in February 2014, April 2015 and February 2016, respectively. The capital lease amounts are included in accrued expenses and other liabilities.

At September 30, 2016, the Company's future minimum payments required under these leases are as follows:

	Operating Lease	Capital Lease	Total
		(in thousands)	
2016	$ 714	$ 3	$ 717
2017	3,122	9	3,131
2018	3,122	5	3,127
2019	3,122	—	3,122
2020	3,122	—	3,122
Thereafter	17,789	—	17,789
Total	$ 30,991	17	$ 31,008
Less amount representing interest		—	
Present value of minimum lease payments at September 30, 2016		$ 17	

The Company recorded approximately $0.6 million and $0.2 million in rent expense for the three months ended September 30, 2016 and 2015, respectively and $1.7 million and $0.6 million in rent expense for the nine months ended September 30, 2016 and 2015, respectively.

Under the Company's agreement with a subsidiary of Quintiles IMS Holdings, Inc., or Quintiles, to provide services for the PRO_2TECT and $INNO_2$VATE programs, the total remaining contract costs as of September 30, 2016 were approximately $423.9 million. The estimated period of performance for the committed work with Quintiles is through the third quarter of 2019. The Company contracts with various other organizations to conduct research and development activities with remaining contract costs to the Company of approximately $22.0 million and $5.2 million at September 30, 2016 and December 31, 2015, respectively. The scope of the services under the research and development contracts can be modified and the contracts cancelled by the Company upon written notice. In some instances, the contracts may be cancelled by the third party upon written notice.

In September 2015, a purported securities class action lawsuit was filed against the Company, including its Chief Executive Officer, its Chief Financial Officer, and members of the Company's Board of Directors, in the Business Litigation Section of the Suffolk County Superior Court of Massachusetts. The complaint is brought on behalf of an alleged class of those who purchased common stock of the Company pursuant or traceable to the Company's initial public offering, and purports to allege claims arising under Sections 11, 12(a)(2) and 15 of the Securities Act of 1933, as amended. The complaint generally alleges that the defendants violated the federal securities laws by, among other things, making material misstatements or omissions concerning the Phase 2b clinical study of vadadustat. The complaint seeks, among other relief, unspecified compensatory damages, rescission of certain stock purchases, attorneys' fees, and costs. In October 2015, the Company removed the case to the United States District Court for the District of Massachusetts, and the plaintiff filed a motion to remand the case back to the Business Litigation Section of the Suffolk County Superior Court of Massachusetts. The plaintiff's motion to remand was granted in April 2016. The plaintiff filed an amended complaint in the Suffolk County Superior Court on August 15, 2016, and the Company served a memorandum in support of its motion to dismiss the amended complaint on October 14, 2016. The Company believes such claims are without merit and will engage in a vigorous defense of such litigation.

The Company has had a number of positive developments in our opposition and invalidity proceedings against FibroGen, Inc., or FibroGen. With regard to the opposition that the Company filed in Europe against FibroGen's European Patent No. 1463823, or the '823 patent, an oral proceeding took place March 8 and 9, 2016. Following the oral proceeding, the European Opposition Division ruled that the patent as granted did not meet the requirements for patentability under the European Patent Convention and, therefore, revoked the patent in its entirety. FibroGen has appealed that decision. Likewise, with regard to the invalidity proceeding that the Company filed in Japan against certain claims of FibroGen's Japanese Patent No. 4804131, or the '131 patent, which is the Japanese counterpart to the '823 patent, the Japan Patent Office, or JPO, issued a preliminary decision finding all of the challenged claims to be invalid. FibroGen subsequently amended the claims and the JPO accepted the amendments. The resulting FibroGen Japanese '131 patent does not cover vadadustat or any pyridine carboxamide compounds. To date, FibroGen has been unsuccessful in its attempts to obtain a patent in the United States covering the same claim scope as it obtained initially in Europe and Japan in the '823 and '131 patents. In the event FibroGen were to obtain such a patent in the United States, the Company may decide to challenge them like the Company has done in Europe and Japan.

On May 13, 2015, May 20, 2015 and July 6, 2015 the Company filed oppositions to FibroGen's European Patent Nos. 2322153, 2322155, and 1633333, or the '153 patent, the '155 patent, and the '333 patent, respectively, requesting the patents be revoked in their entirety. These related patents claim, among other things, various compounds that either stabilize HIFα or inhibit a HIF hydroxylase or a HIF prolyl hydroxylase for treating or preventing various conditions, including, *inter alia*, iron deficiency, microcytosis associated with iron deficiency, anemia of chronic disease, anemia wherein the subject has a transferrin saturation of less than 20%, anemia

refractory to treatment with exogenously administered erythropoietin, or EPO, and microcytosis in microcytic anemia. Oppositions to the ’155 patent and to the ’153 patent were also filed by Glaxo Group Limited and by Bayer Intellectual Property GmbH, Bayer Pharma Aktiengesellschaft, and Bayer Animal Health GmbH. While, for the reasons set forth in our oppositions, the Company believes that the ’153 patent, the ’155 patent, and the ’333 patent should be revoked in their entirety, the ultimate outcomes of the oppositions remains uncertain. If the European Patent Office decides not to revoke the ’153 patent, the ’155 patent, or the ’333 patent in their entirety, or only certain claims of those patents, and any surviving claims are determined to encompass the Company’s intended use of the Company’s lead product candidate, the Company may not be able to commercialize the Company’s lead product candidate in the European Union for its intended use, which could materially adversely affect the Company’s business, operating results and financial condition.

The Company’s policy is to record a liability if a loss in a significant legal dispute is considered probable and an amount can be reasonably estimated. The Company provides disclosure when a loss in excess of any reserve is reasonably possible, and the Company is in a position to estimate the potential loss or range of possible loss. Significant judgment is required to assess the likelihood of various potential outcomes and the quantification of loss in those scenarios. The Company’s estimates change as litigation progresses and new information comes to light. Changes in Company estimates could have a material impact on the Company’s results and financial position.

9. Significant Agreements

Mitsubishi Tanabe Pharma Collaboration Agreement

On December 11, 2015, the Company and MTPC, entered into a collaboration agreement (Collaboration Agreement) providing MTPC with exclusive development and commercialization rights to vadadustat, the Company’s product candidate for the treatment of anemia related to chronic kidney disease, in Japan and certain other Asian countries (collectively, the Territory).

Pursuant to the Collaboration Agreement, MTPC will have an exclusive license to develop and commercialize vadadustat in the Territory. In addition, the Company will supply vadadustat for both clinical and commercial use in the Territory. The countries included in the Territory are Japan, Taiwan, South Korea, Singapore, Malaysia, India, Indonesia, East Timor, Mongolia, the Philippines, Vietnam, Laos, Cambodia, Thailand, Brunei, Myanmar, Nepal, Sri Lanka, Bangladesh, Bhutan, Maldives, Palau and Tonga.

In consideration for the exclusive license and other rights contained in the Collaboration Agreement, MTPC will make payments totaling up to $100.0 million to fund the vadadustat global Phase 3 program, including $40.0 million paid in January 2016. If Japanese patients are not included in either the global Phase 3 PRO_2TECT or $INNO_2$VATE programs, $20.0 million of the $40.0 million received would be used to fund further local development of vadadustat in Japan or be refunded to MTPC. The Company is also eligible to receive up to approximately $250.0 million in additional milestone payments, based upon achievement of certain development and sales milestones as well as tiered royalty payments, from low teens up to twenty percent, on sales of vadadustat in the Territory.

The Company and MTPC have established a joint steering committee to oversee development and commercialization of vadadustat in the Territory, including approval of any development or commercialization plans. Unless earlier terminated, the Collaboration Agreement will continue in effect on a country-by-country basis until the later of: expiration of the last-to-expire patent covering vadadustat in such country in the Territory; expiration of marketing or regulatory exclusivity in such country in the Territory; or ten (10) years after the first commercial sale of vadadustat in such country in the Territory. MTPC may terminate the Collaboration Agreement upon twelve (12) months’ notice at any time after the second anniversary of the effective date of the Collaboration Agreement. Either party may terminate the Collaboration Agreement upon the material breach of the other party that is not cured within a specified time period or upon the insolvency of the other party.

As of September 30, 2016, there is $40.0 million of deferred revenue related to the Company’s Collaboration Agreement, all of which is classified as long-term in the accompanying condensed consolidated balance sheet. Revenue recognition for the Collaboration Agreement will commence when all criteria as required under ASC 605 have been satisfied, which the Company expects will be in 2017 when the scope of the Phase 3 program is agreed upon with Japanese regulatory authorities.

10. Employee Retirement Plan

During 2008, the Company established a retirement plan (the Plan) authorized by Section 401(k) of the Internal Revenue Code. In accordance with the Plan, all employees who have attained the age of 21 are eligible to participate in the Plan as of the first Entry Date, as defined, following their date of employment. Each employee can contribute a percentage of compensation up to a maximum of the statutory limits per year. Company contributions are discretionary and contributions in the amount of approximately $21,000

and $71,000 were made during the three months ended September 30, 2016 and 2015, respectively, and $141,000 and $71,000 were made during the nine months ended September 30, 2016 and 2015, respectively.

11. Net Loss per Share

The shares in the table below were excluded from the calculation of diluted net loss per share, prior to the use of the treasury stock method, due to their anti-dilutive effect:

	Three Months Ended		Nine Months Ended	
	September 30, 2016	September 30, 2015	September 30, 2016	September 30, 2015
Outstanding stock options	2,977,986	2,251,908	2,977,986	2,251,908
Unvested restricted stock	132,739	265,402	132,739	265,402
Unvested restricted stock units	438,563	24,425	438,563	24,425
Total	3,549,288	2,541,735	3,549,288	2,541,735

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following information should be read in conjunction with the unaudited financial information and the notes thereto included in this Quarterly Report on Form 10-Q and the condensed consolidated financial statements and notes thereto for the year ended December 31, 2015, and the related Management's Discussion and Analysis of Financial Condition and Results of Operations, contained in our annual report on Form 10-K filed with the United States Securities and Exchange Commission, or the SEC, on March 14, 2016, which we refer to as our annual report.

This report contains forward-looking statements that are being made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, or PSLRA, with the intention of obtaining the benefits of the "safe harbor" provisions of the PSLRA. Forward-looking statements involve risks and uncertainties. In this Quarterly Report on Form 10-Q, words such as "may," "will," "expect," "anticipate," "estimate," "intend," and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) are intended to identify forward-looking statements.

Our actual results and the timing of certain events may differ materially from the results discussed, projected, anticipated, or indicated in any forward-looking statements. We caution our readers that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and the development of the industry in which we operate may differ materially from those expressed or implied by the forward-looking statements contained in this Quarterly Report on Form 10-Q.

The following information, including all forward-looking statements, should be considered in light of factors discussed elsewhere in this Quarterly Report on Form 10-Q, including those risks identified under Part II, Item 1A. Risk Factors.

We caution readers not to place undue reliance on any forward-looking statements made by us, which speak only as of the date they are made. We disclaim any obligation, except as specifically required by law and the rules of the SEC, to publicly update or revise any such statements to reflect any change in our expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

Operating Overview

We are a biopharmaceutical company focused on the development of novel proprietary therapeutics based on hypoxia inducible factor, or HIF, biology and the commercialization of these products for patients with serious unmet medical needs. HIF is the primary regulator of the production of red blood cells, or RBCs, in the body and a potentially novel mechanism for the treatment of anemia secondary to chronic kidney disease, or CKD. Pharmacologic modulation of the HIF pathway may also have broader therapeutic applications in acute renal failure, organ protection, ischemia-reperfusion injury, cancer, ophthalmology, and inflammatory diseases.

Anemia is a serious medical condition in which blood is deficient in RBCs and hemoglobin, each of which is critical in delivering oxygen to tissue. Anemia generally exists when hemoglobin, a protein in RBCs that carries oxygen, is less than 13 g/dL in men or 12 g/dL in women. Untreated anemia is associated with chronic fatigue, increased risk of progression of multiple diseases and death. Anemia is common in patients with CKD, cancer, heart failure, inflammatory diseases and other critical illnesses, as well as in the elderly.

More than 30 million people in the United States have CKD, with estimates that over 1.8 million of these patients suffer from anemia. Anemia from these indications is currently treated with injectable recombinant erythropoiesis-stimulating agents, or rESAs,—including Epogen®, Procrit® and Aranesp® — iron supplementation or RBC transfusions. Based on the reported revenues of companies that market and sell rESAs, we estimate that global sales of injectable rESAs were $7.0 billion in 2014; the vast majority of which were for renal indications.

rESAs are designed to stimulate production of RBCs by binding directly to and saturating erythropoietin, or EPO, receptors. While injectable rESAs and transfusions may be effective in raising hemoglobin levels, they carry significant potential side effects and need to be delivered subcutaneously or intravenously. In particular, injectable rESAs may lead to thrombosis, stroke, myocardial infarction and death. These risks are described in black box warnings on the prescribing information of all products marketed in this class. These safety concerns, which became evident starting in 2006, have led to a significant reduction in the use of injectable rESAs. Today, anemia is either not treated or inadequately treated in the majority of non-dialysis dependent CKD patients. As a result, we believe that a safe, effective, oral therapeutic option will take significant market share and meaningfully grow the market in patients not requiring dialysis.

Given the burdens of the current standard of care and costs associated with administering an injectable rESA, we believe our lead product candidate, vadadustat, is a promising cost-effective alternative for the treatment of anemia in CKD. Vadadustat is being developed as a once-daily, oral therapy and has successfully completed Phase 2 development demonstrating that vadadustat can safely and predictably raise hemoglobin levels in patients with anemia related to CKD. Vadadustat works by a differentiated mechanism of action that we believe has the potential to be safer than that of injectable rESAs and may offer additional beneficial

therapeutics effects beyond anemia including delaying CKD progression. This novel mechanism of action is referred to as HIF prolyl-hydroxylase, or HIF-PH, inhibition. Instead of binding directly to the EPO receptors on cells in the bone marrow, vadadustat leads to activation of critical pathways for hemoglobin and RBC production. This approach mimics the physiological adjustment made by the body when exposed to reduced oxygen levels at higher altitudes.

We have commenced Phase 3 development of vadadustat in non-dialysis CKD patients. Positive results from our Phase 2b study in non-dialysis CKD patients demonstrated that vadadustat raised hemoglobin levels with no safety signal observed. In December 2015, we began dosing patients in our Phase 3 vadadustat program in non-dialysis patients with anemia related to CKD, PRO_2TECT. If the results from the PRO_2TECT program support the results observed across our previous clinical studies, including 29,000 days of patient exposure, we anticipate submitting a New Drug Application, or NDA, to the United States Food and Drug Administration, or FDA, for vadadustat in 2019.

We have also completed a Phase 2 study of vadadustat for the treatment of anemia in patients undergoing dialysis, which found that vadadustat, dosed either once daily or three times per week, maintained stable hemoglobin levels following conversion from rESA therapy with no safety signal observed. We initiated our Phase 3 vadadustat program in dialysis-dependent patients with anemia related to CKD, $INNO_2VATE$, in August 2016, and we anticipate full enrollment by early 2018.

We have engaged Quintiles IMS Holdings, Inc., or Quintiles, as our primary clinical research organization, or CRO, for the PRO_2TECT and $INNO_2VATE$ programs. We expect the cost of the Phase 3 program to be in the range of $80,000 to $85,000 per patient and we plan to enroll approximately 3,100 patients in the PRO_2TECT program and approximately 2,600 patients in the $INNO_2VATE$ program. In September 2016, the Independent Data Monitoring Committee, IDMC, for our global Phase 3 PRO2TECT program the initial meeting according to its charter and recommended continuing the studies without modification.

A subset of dialysis-dependent CKD patients have shown an inadequate hemoglobin response despite receiving high doses of rESAs. Previous studies have shown that rESA hyporesponsiveness is associated with poor clinical outcomes including increased mortality risk. By increasing iron mobilization, in addition to increasing erythropoietin levels, vadadustat may allow for a more consistent hemoglobin response in these patients. We expect to generate clinical data in hyporesponsive dialysis-dependent patients in 2017.

If approved by regulatory authorities, we plan to commercialize vadadustat in the United States for the treatment of anemia in patients with CKD. These patients are primarily treated by approximately 7,000 nephrologists, and we believe we can reach most of this market with a specialty sales force of approximately 125 people. In Japan and certain other Asian countries, we plan to commercialize vadadustat through our collaboration with Mitsubishi Tanabe Pharma Corporation, or MTPC. We intend to seek one or more collaborators to commercialize vadadustat in additional markets.

Our second clinical candidate, AKB-6899, is designed as a small molecule HIF-PH inhibitor with potential therapeutic benefit in anemia, oncology and ophthalmology. We anticipate initiation of a Phase 1 study in 2017.

Since our inception in 2007, we have devoted the largest portion of our resources to our development efforts relating to vadadustat, including preparing for and conducting clinical studies of vadadustat, providing general and administrative support for these operations and protecting our intellectual property. We do not have any products approved for sale and have not generated any revenue from product sales. We have funded our operations primarily through equity offerings.

We have never been profitable and have incurred net losses in each year since inception. Our net losses were $97.9 million and $40.9 million for the nine months ended September 30, 2016 and 2015, respectively. Substantially all of our net losses resulted from costs incurred in connection with our research and development programs and from general and administrative costs associated with our operations.

We expect to continue to incur significant operating expenses and increased operating losses for at least the next several years. We expect our expenses will increase substantially in connection with our ongoing activities, as we:

- conduct a global Phase 3 development program of vadadustat for the treatment of anemia secondary to CKD;
- seek regulatory approvals for our product candidates that successfully complete clinical trials;
- have our product candidates manufactured for clinical trials and for commercial sale;
- establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain marketing approval;
- continue preclinical and clinical development of AKB-6899;
- initiate additional preclinical, clinical or other studies for additional indications for vadadustat, AKB-6899 and other product candidates that we may develop or acquire;

- seek to discover and develop additional product candidates;
- acquire or in-license other commercial products, product candidates and technologies;
- make royalty, milestone or other payments under any future in-license agreements;
- maintain, protect and expand our intellectual property portfolio;
- attract and retain skilled personnel; and
- create additional infrastructure to support our operations as a public company.

We do not expect to generate revenue from product sales unless and until we successfully complete development and obtain regulatory approval for one or more of our product candidates, which we expect will take a number of years and is subject to significant uncertainty. We have no manufacturing facilities, and all of our manufacturing activities are contracted out to third parties. Additionally, we currently utilize third-party contract research organizations, or CROs, to carry out our clinical development activities, and we do not yet have a sales organization. If we obtain regulatory approval for any of our product candidates, we expect to incur significant commercialization expenses related to product sales, marketing, manufacturing and distribution. Accordingly, we will seek to fund our operations through public or private equity or debt financings or other sources including geographic partnerships. However, we may be unable to raise additional funds or enter into other arrangements when needed on favorable terms or at all. Our failure to raise capital or enter into such other arrangements as and when needed would have a negative impact on our financial condition and our ability to develop our products.

In December 2015, we entered into a collaboration agreement with MTPC to develop and commercialize vadadustat in Japan and certain other countries in Asia for total milestone payments of up to $350.0 million, including up to $100.0 million in upfront and development payments, of which $40.0 million was received in January 2016. If Japanese patients are not included in either the global Phase 3 PRO$_2$TECT or INNO$_2$VATE programs, $20.0 million of the $40.0 million received would be used to fund further local development of vadadustat in Japan or be refunded to MTPC. In addition, we are also eligible to receive tiered double-digit royalty payments on vadadustat sales.

Through the end of 2015 we have raised approximately $187.4 million of net proceeds from three underwritten public offerings, including our initial public offering. In January 2016, we completed a follow-on public offering whereby we sold 7,250,000 shares of common stock at a price of $9.00 per share. The aggregate net proceeds received by us from the offering were approximately $61.0 million, net of underwriting discounts and commissions and estimated offering expenses payable by us.

In May 2016, we entered into a Sales Agreement with Cantor Fitzgerald & Co. to periodically sell up to $75 million of shares of our common stock in an at-the-market, or ATM, offering. During the third quarter of 2016, we sold 239,906 shares of common stock pursuant to the Sales Agreement. The aggregate net proceeds received by us were approximately $2.2 million, net of commissions.

Financial Overview

In the quarter ended December 31, 2015, we identified and corrected an error in the historical classification of certain operating costs between research and development and general and administrative expenses. We concluded the effect of this classification error was not material to our consolidated financial statements for any prior period. The classification correction had no effect on our current or historical total operating expenses or net loss.

Revenue

To date, we have not generated any revenue from the sales of products or other means. Our ability to generate product revenue and become profitable depends upon our ability to successfully develop and commercialize products. We expect to incur losses for the foreseeable future, and we expect these losses to increase as we continue our development of, and seek regulatory approvals for, our product candidates and begin to commercialize any approved products. Because of the numerous risks and uncertainties associated with product development, we are unable to predict the timing or amount of increased expenses or when or if we will be able to achieve or maintain profitability. Even if we are able to generate revenue from the sale of our products, we may not become profitable. If we fail to become profitable or are unable to sustain profitability on a continuing basis, then we may be unable to continue our operations at planned levels and be forced to reduce our operations.

For the foreseeable future, we expect substantially all of our revenue will be generated from our collaboration with MTPC and any other collaborations we may enter into.

Research and Development Expenses

Research and development expenses consist primarily of costs incurred for the development of our product candidates, which include:

- employee-related expenses, including salaries, benefits, recruiting fees, travel and stock-based compensation expense;
- expenses incurred under agreements with the CROs and investigative sites that conduct our clinical studies;
- the cost of acquiring, developing and manufacturing clinical study materials;
- facilities, depreciation and other expenses, which include direct and allocated expenses for rent and maintenance of facilities, insurance and other supplies; and
- costs associated with preclinical and clinical activities.

Research and development costs are expensed as incurred. Costs for certain development activities are recognized based on an evaluation of the progress to completion of specific tasks using information and data provided to us by our vendors and our clinical sites.

We cannot determine with certainty the duration and completion costs of the current or future clinical studies of our product candidates or if, when, or to what extent we will generate revenue from the commercialization and sale of any of our product candidates that obtain regulatory approval. We may never succeed in achieving regulatory approval for any of our product candidates.

The duration, costs and timing of clinical studies and development of our product candidates will depend on a variety of factors, including:

- the results of our meetings with the FDA and the EMA and other regulatory authorities and the consequential effect on our study design, study size and resulting operating costs;
- the size, rate of progress, results and costs of initiating and completing our global Phase 3 development of vadadustat;
- difficulties or delays in enrolling patients in our clinical trials;
- assuming favorable Phase 3 clinical results, the timing of, and the costs involved in, obtaining regulatory approvals for vadadustat in dialysis and non-dialysis indications, including to fund the preparation and filing of regulatory submissions for vadadustat with the FDA, the EMA and other regulatory authorities, and whether we will seek regulatory approval for both indications simultaneously;
- the cost, timing and outcome of our efforts to obtain marketing approval for vadadustat in the United States, Europe and in other jurisdictions;
- the scope, progress, results and costs of additional preclinical, clinical, or other studies for additional indications for vadadustat, AKB-6899 and other product candidates that we may develop or acquire;
- the timing of, and the costs involved in, obtaining regulatory approvals for AKB-6899 if clinical studies are successful;
- the cost and timing of future commercialization activities for our products, if any of our product candidates are approved for marketing, including product manufacturing, marketing, sales and distribution costs;
- the cost of having our product candidates manufactured for clinical trials;
- our ability to establish and maintain strategic collaborations, licensing or other arrangements and the financial terms of such agreements; and
- unanticipated changes to laws or regulations applicable to our clinical trials.

A change in the outcome of any of these variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that product candidate. For example, if the FDA, EMA or another regulatory authority were to require us to conduct clinical studies in addition to or different from those that we currently anticipate, or if we experience significant delays in enrollment in any of our clinical studies, we could be required to expend significant additional financial resources and time on the completion of clinical development.

From inception through September 30, 2016, we have incurred $198.4 million in research and development expenses. We plan to increase our research and development expenditures for the foreseeable future as we continue the development of vadadustat and AKB-6899. Our current and/or planned research and development activities include the following:

- global development of vadadustat, including the PRO2TECT and INNO2VATE clinical programs; and
- the initiation of a Phase 1 study of AKB-6899.

Our direct research and development expenses consist principally of external costs, such as fees paid to clinical trial sites, consultants, central laboratories and CROs in connection with our clinical studies, and costs related to acquiring and manufacturing clinical study materials.

We currently have two programs to which our research and development costs are attributable. Historically, we have not accumulated and tracked our research and development costs or our personnel and personnel-related costs on a program-by-program basis. Our employee and infrastructure resources, and many of our costs, were directed broadly to applicable research endeavors. As a result, we are unable to specify precisely the historical costs incurred for each of our programs on a program-by-program basis.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related costs for personnel, including stock-based compensation and travel expenses. Other general and administrative expense include facility-related costs, fees for directors, accounting and legal services fees, recruiting fees and expenses associated with obtaining and maintaining patents.

We anticipate that our general and administrative expenses will increase in the future as we increase our headcount to support our continued research and development and potential commercialization of our product candidates. We also anticipate increased expenses related to finance, legal, regulatory and tax-related services associated with maintaining compliance with exchange listing and SEC requirements, and our other costs associated with being a public company. Additionally, we anticipate an increase in payroll and related expenses if and when we prepare for commercial operations, especially in sales and marketing.

Critical Accounting Policies and Significant Judgments and Estimates

Our management's discussion and analysis of our financial condition and results of operations are based on our consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, and expenses and the disclosure of contingent assets and liabilities in our consolidated financial statements. On an ongoing basis, we evaluate our estimates and judgments, including those related to prepaid and accrued research and development expenses and stock-based compensation. We base our estimates on historical experience, known trends and events, and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are described in more detail in the notes to our consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q, we believe the following accounting policies to be most critical to the judgments and estimates used in the preparation of our consolidated financial statements.

Revenue

We will recognize revenue in accordance with Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 605, *Revenue Recognition*, or ASC 605. Accordingly, revenue will be recognized for each unit of accounting when all of the following criteria are met:

- persuasive evidence of an arrangement exists;
- delivery has occurred or services have been rendered;
- the seller's price to the buyer is fixed or determinable; and
- collectability is reasonably assured.

Amounts received prior to satisfying the revenue recognition criteria are recorded as deferred revenue in our consolidated balance sheets.

Multiple Element Arrangements

Determination of Accounting Units

We analyze multiple element arrangements based on the guidance in ASC Topic 605-25, *Revenue Recognition—Multiple Element Arrangements*, or ASC 605-25. Pursuant to the guidance in ASC 605-25, we evaluate multiple element arrangements to determine (1) the deliverables included in the arrangement and (2) whether the individual deliverables represent separate units of accounting or whether they must be accounted for as a combined unit of accounting. This evaluation involves subjective determinations and requires management to make judgments about the individual deliverables and whether such deliverables are separate from other aspects of the

contractual relationship. Deliverables are considered separate units of accounting provided that: (i) the delivered item(s) has value to the customer on a standalone basis and (ii) if the arrangement includes a general right of return relative to the delivered item(s), delivery or performance of the undelivered item(s) is considered probable and substantially within our control. In assessing whether an item under a collaboration has standalone value, we consider factors such as the research, manufacturing, and commercialization capabilities of the collaboration partner and the availability of the associated expertise in the general marketplace. We also consider whether our collaboration partner can use the other deliverable(s) for their intended purpose without the receipt of the remaining element(s), whether the value of the deliverable is dependent on the undelivered item(s), and whether there are other vendors that can provide the undelivered element(s).

Options under a collaboration are considered substantive if, at the inception of the arrangement, we are at risk as to whether the collaboration partner will choose to exercise the option. Factors that we consider in evaluating whether an option is substantive include the cost to exercise the option, the overall objective of the arrangement, the benefit the collaboration partner might obtain from the arrangement without exercising the option, and the likelihood the option will be exercised. When an option is considered substantive, we would not consider the option or item underlying the option to be a deliverable at the inception of the arrangement and the associated option fees are not included in allocable consideration, assuming the option is not priced at a significant and incremental discount. Conversely, when an option is not considered substantive, we would consider the option, including other deliverables contingent upon the exercise of the option, to be a deliverable at the inception of the arrangement and a corresponding amount would be included in allocable arrangement consideration. In addition, if the price of the option includes a significant incremental discount, the discount would be included as a deliverable at the inception of the arrangement.

Allocation of Arrangement Consideration

Arrangement consideration that is fixed or determinable is allocated among the separate units of accounting using the relative selling price method. The applicable revenue recognition criteria in ASC 605 are applied to each of the separate units of accounting in determining the appropriate period and pattern of recognition. We determine the selling price of a unit of accounting following the hierarchy of evidence prescribed by ASC 605-25. Accordingly, we determine the estimated selling price for units of accounting within each arrangement using vendor specific objective evidence, or VSOE, of selling price, if available, third-party evidence, or TPE, of selling price if VSOE is not available, or best estimate of selling price, or BESP, if neither VSOE or TPE is available. We have only used BESP to estimate selling price, since we have not had VSOE or TPE of selling price for any units of accounting to date. Determining BESP for a unit of accounting requires significant judgment. In developing the BESP for a unit of accounting, we consider applicable market conditions and relevant entity-specific factors, including factors that were contemplated in negotiating the applicable agreement and estimated costs. We validate BESP for units of accounting by evaluating whether changes in the key assumptions used by us to determine the BESP will have a significant effect on the allocation of arrangement consideration between multiple units of accounting.

Pattern of Recognition

We will recognize the arrangement’s consideration allocated to each unit of accounting when all of the revenue recognition criteria in ASC 605 are satisfied for that particular unit of accounting. We will recognize revenue associated with licenses, license options, or the discount related to a license option upon (i) delivery of the license or (ii) the earlier of exercise or expiration of the license option, if the underlying license has standalone value from the other deliverables to be provided after delivering that license. If the license does not have standalone value, the amounts allocated to the license will be combined with the related undelivered items as a single unit of accounting.

We will recognize the amounts associated with collaboration research and development services, joint research committees, or other services ratably over the associated period of performance. If there is no discernible pattern of performance or objectively measurable performance measures do not exist, then we recognize revenue under the arrangement on a straight-line basis over the period that we are expected to complete our performance obligations. Conversely, if the pattern of performance in which the service is provided to the collaboration partner can be determined and objectively measureable performance exists, then we would recognize revenue under the arrangement using the proportional performance method. Revenue to be recognized would be limited to the lesser of the cumulative amount of payments received or the cumulative revenue earned determined using the straight line method or proportional performance, as applicable, as of the period end date.

Recognition of Milestones and Royalties

At the inception of an arrangement that includes milestone payments, we evaluate whether each milestone is substantive and at risk to both parties on the basis of the contingent nature of the milestone. This evaluation includes an assessment of whether: (1) the consideration is commensurate with either our performance to achieve the milestone or the enhancement of the value of the delivered item(s) as a result of a specific outcome resulting from our performance to achieve the milestone, (2) the consideration relates solely to past performance, and (3) the consideration is reasonably relative to all of the deliverables and payment terms within the arrangement. We evaluate factors such as clinical, regulatory, commercial, and other risks that must be overcome to achieve the respective

milestones and the level of effort and investment required to achieve the respective milestones in making this assessment. There is considerable judgment involved in determining whether a milestone satisfies all of the criteria required to conclude that a milestone is substantive. In accordance with ASC Topic 605-28, *Revenue Recognition—Milestone Method*, or ASC 605-28, a clinical or regulatory milestone that is considered substantive will be recognized as revenue in its entirety upon successful accomplishment of the milestone, assuming all other revenue recognition criteria are met. Milestones that are not considered substantive would be recognized as revenue over the remaining period of performance, assuming all other revenue recognition criteria are met. Revenue from a commercial milestone payment will be accounted for as royalties and recorded as revenue upon achievement of the milestone, assuming all other revenue recognition criteria are met.

We will recognize royalty revenue in the period of sale of the related product(s), based on the underlying contract terms, provided that the reported sales are reliably measurable, we have no remaining performance obligations, and assuming all other revenue recognition criteria are met.

Prepaid and Accrued Research and Development Expenses

As part of the process of preparing our consolidated financial statements, we are required to estimate our prepaid and accrued research and development expenses. This process involves reviewing open contracts and purchase orders, communicating with our personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of the actual cost. The majority of our service providers invoice us monthly in arrears for services performed. We make estimates of our prepaid and accrued research and development expenses as of each balance sheet date in our consolidated financial statements based on facts and circumstances known to us at that time. We confirm the accuracy of our estimates with the service providers and make adjustments if necessary. Examples of estimated prepaid and accrued research and development expenses include expenses for:

- CROs in connection with clinical studies;
- investigative sites in connection with clinical studies;
- vendors in connection with preclinical development activities; and
- vendors related to product manufacturing, development and distribution of clinical materials.

We base our expenses related to clinical studies on our estimates of the services received and efforts expended pursuant to contracts with multiple CROs that conduct and manage clinical studies on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. The scope of services under these contracts can be modified and some of the agreements may be cancelled by either party upon written notice. There may be instances in which payments made to our vendors will exceed the level of services provided and result in a prepayment of the clinical expense. Payments under some of these contracts depend on factors such as the successful enrollment of subjects and the completion of clinical study milestones. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from our estimate, we adjust the accrual or prepaid accordingly.

Although we do not expect our estimates to be materially different from amounts actually incurred, if our estimates of the status and timing of services performed differ from the actual status and timing of services performed we may report amounts that are too high or too low in any particular period. To date, there have been no material differences between our estimates and the amount actually incurred.

Stock-Based Compensation

Stock-Based Awards

We issue stock-based awards to employees and non-employees, generally in the form of stock options, restricted stock, RSUs and shares of common stock. We account for our stock-based compensation awards in accordance with Financial Accounting Standards Board, (FASB) ASC Topic 718, *Compensation—Stock Compensation*, or ASC 718. ASC 718 requires all stock-based payments to employees, including grants of employee stock options and restricted stock and modifications to existing stock awards, to be recognized in the statements of operations and comprehensive loss based on their fair values. We account for stock-based awards to non-employees in accordance with ASC Topic 505-50, *Equity-Based-Payments to Non-Employees*, or ASC 505-50, which requires the fair value of the award to be re-measured at fair value until a performance commitment is reached or counterparty performance is complete. Described below is the methodology we have utilized in measuring stock-based compensation expense. Stock option, common stock and restricted stock values are determined based on the quoted market price of our comparable public companies.

We estimate the fair value of our stock-based awards of options to purchase shares of common stock to employees and non-employees using the Black-Scholes option pricing model, which requires the input of highly subjective assumptions, including (a) the expected

stock price volatility, (b) the calculation of the expected term of the award, (c) the risk-free interest rate and (d) expected dividends. Due to the lack of company-specific historical and implied volatility data for trading our stock in the public market, we have based our estimate of expected volatility on the historical volatility of a group of similar companies that are publicly traded. The historical volatility is calculated based on a period of time commensurate with the expected term assumption. The computation of expected volatility is based on the historical volatility of a representative group of companies with similar characteristics to our company, including stage of product development and life science industry focus. We are a company in the product development stage with no revenue and the representative group of companies has certain similar characteristics. We believe the group selected has sufficient similar economic and industry characteristics, and includes companies that are most representative of our company. We use the simplified method as prescribed by the SEC Staff Accounting Bulletin No. 107, *Share-Based Payment*, to calculate the expected term for options granted to employees as we do not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term. The expected term is applied to the stock option grant group as a whole, as we do not expect substantially different exercise or post-vesting termination behavior among our employee population. For options granted to non-employees, we utilize the contractual term of the arrangement as the basis for the expected term assumption. The risk-free interest rate is based on a treasury instrument whose term is consistent with the expected life of the stock options. The expected dividend yield is assumed to be zero as we have never paid dividends and have no current plans to pay any dividends on our common stock, similar to our peer group. We estimate grant date fair value of restricted stock awards with corresponding promissory notes using the Black-Scholes option pricing model. The grant date fair value of restricted stock awards and awards of common stock has been based on the estimated value of our common stock at the date of grant.

Our stock-based awards are subject to either service or performance-based vesting conditions. Compensation expense related to awards to employees with service-based vesting conditions is recognized on a straight-line basis based on the grant date fair value over the associated service period of the award, which is generally the vesting term. Consistent with the guidance in ASC 505-50, compensation expense related to awards to non-employees with service-based vesting conditions is recognized on a straight-line basis based on the then-current fair value at each financial reporting date prior to the measurement date over the associated service period of the award, which is generally the vesting term. Compensation expense related to awards to employees with performance-based vesting conditions is recognized based on the grant date fair value over the requisite service period using the accelerated attribution method to the extent achievement of the performance condition is probable. Consistent with the guidance in ASC 505-50, compensation expense related to awards to non-employees with performance-based vesting conditions is recognized based on the then-current fair value at each financial reporting date prior to the measurement date over the requisite service period using the accelerated attribution method to the extent achievement of the performance condition is probable.

We are also required to estimate forfeitures at the time of grant, and revise those estimates in subsequent periods if actual forfeitures differ from our estimates. We use historical data to estimate pre-vesting forfeitures and record stock-based compensation expense only for those awards that are expected to vest. To the extent that actual forfeitures differ from our estimates, the difference is recorded as a cumulative adjustment in the period the estimates were revised. Stock-based compensation expense recognized in the consolidated financial statements is based on awards that are ultimately expected to vest.

Stock-based compensation expense totaled approximately $1.6 million and $1.2 million for the three months ended September 30, 2016 and 2015, respectively, and approximately $4.1 million and $3.4 million for the nine months ended September 30, 2016, respectively.

We expect the impact of our stock-based compensation expense for stock options and restricted stock granted to employees and non-employees to grow in future periods due to the potential increases in the fair value of our common stock and the increase in the number of grants as a result of an increase in headcount.

Emerging Growth Company Status

The JOBS Act permits an “emerging growth company” to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies. We chose to “opt out” of this provision and, as a result, we will comply with new or revised accounting standards as required when they are adopted. This decision to opt out of the extended transition period under the JOBS Act is irrevocable.

Results of Operations

Comparison of the Three Months Ended September 30, 2016 and 2015

	Three Months Ended		Increase (Decrease)
	September 30, 2016	September 30, 2015	
	(In Thousands)		
Operating expenses:			
Research and development	$ 31,238	$ 15,604	$ 15,634
General and administrative	4,944	$ 4,074	870
Total operating expenses	36,182	19,678	16,504
Loss from operations	(36,182)	(19,678)	16,504
Other income, net	(126)	203	(329)
Net loss	$ (36,308)	$ (19,475)	$ 16,833

Research and Development Expenses. Research and development expenses were $31.2 million for the three months ended September 30, 2016, compared to $15.6 million for the three months ended September 30, 2015, an increase of $15.6 million. The increase was primarily due to the following:

	(in millions)
Vadadustat development	$ 14.6
Manufacture of drug substance	0.8
Regulatory and other clinical and non-clinical activities	(1.3)
Total increase related to the continued development of vadadustat	14.1
Headcount, consulting and facilities	1.3
Other	0.2
Total net increase	$ 15.6

General and Administrative Expenses. General and administrative expenses were $4.9 million for the three months ended September 30, 2016, compared to $4.1 million for the three months ended September 30, 2015. The increase of $0.9 million was primarily due to an increase in costs to support our Phase 3 program, including headcount and compensation-related costs, and associated facility-related costs.

Other Income, Net. Other expense, net, was $0.1 million for the three months ended September 30, 2016 and other income, net, was $0.2 million for the three months ended September 30, 2015. Other expense, net for the three months ended September 30, 2016 is primarily comprised of interest income offset by expenses related to the write-off of capitalized software. Other income, net for the three months ended September 30, 2015, is primarily comprised of $0.1 million of interest income and $0.1 million of reimbursements under a services agreement for consulting services.

Comparison of the Nine Months Ended September 30, 2016 and 2015

	Nine Months Ended		Increase (Decrease)
	September 30, 2016	September 30, 2015	
	(In Thousands)		
Operating expenses:			
Research and development	$ 82,350	$ 28,772	$ 53,578
General and administrative	16,066	12,691	3,375
Total operating expenses	98,416	41,463	56,953
Loss from operations	(98,416)	(41,463)	56,953
Other income, net	531	604	(73)
Net loss	$ (97,885)	$ (40,859)	$ 57,026

Research and Development Expenses. Research and development expenses were $82.3 million for the nine months ended September 30, 2016, compared to $28.8 million for the nine months ended September 30, 2015, an increase of $53.6 million. The increase was primarily due to the following:

	(in millions)
Vadadustat development	$ 49.3
Manufacture of drug substance	2.4
Regulatory and other clinical and non-clinical activities	(3.1)
Total increase related to the continued development of vadadustat	48.6
Headcount, consulting and facilities	4.6
Other	0.4
Total net increase	$ 53.6

General and Administrative Expenses. General and administrative expenses were $16.1 million for the nine months ended September 30, 2016, compared to $12.7 million for the nine months ended September 30, 2015. The increase of $3.4 million was primarily due to an increase in costs to support our Phase 3 program, including headcount and compensation-related costs, and associated facility-related costs as well as commercial planning costs.

Other Income, Net. Other income, net, was $0.5 million for the nine months ended September 30, 2016, compared to $0.6 million for the nine months ended September 30, 2015. Other income, net for the nine months ended September 30, 2016 is primarily comprised of interest income partially offset by expenses related to the write-off of capitalized software. Other income, net for the nine months ended September 30, 2015, is primarily comprised of $0.3 million of interest income and $0.3 million of reimbursements under a services agreement for consulting services.

Liquidity and Capital Resources

We have incurred losses and cumulative negative cash flows from operations since our inception in February 2007, and as of September 30, 2016, we had an accumulated deficit of $259.3 million. We anticipate that we will continue to incur losses for at least the next several years. We expect that our research and development and general and administrative expenses will continue to increase and, as a result, we will need additional capital to fund our operations, which we may raise through a combination of equity offerings, debt financings, other third-party funding, marketing and distribution arrangements and other collaborations, strategic alliances and licensing arrangements.

We have funded our operations principally through equity offerings. As of September 30, 2016, we had cash and cash equivalents and available for sale securities of approximately $161.3 million. Cash in excess of immediate requirements is invested in accordance with our investment policy, primarily with a view to liquidity and capital preservation. Accordingly, available for sale securities, consisting principally of corporate and government debt securities stated at fair value, are also available as a source of liquidity.

Cash Flows

The following table sets forth the primary sources and uses of cash for each of the periods set forth below:

	Nine Months Ended	
	September 30, 2016	**September 30, 2015**
	(In Thousands)	
Net cash provided by (used in):		
Operating activities	$ (37,764)	$ (29,495)
Investing activities	(9,601)	(15,326)
Financing activities	63,417	78,753
Net increase in cash and cash equivalents	$ 16,052	$ 33,932

Operating Activities. The net cash used in operating activities was $37.8 million for the nine months ended September 30, 2016 and consisted primarily of a net loss of $97.9 million adjusted for non-cash items, including stock-based compensation expense of $4.1 million, amortization of premium/discount on investments of $0.4 million, depreciation and amortization of $0.2 million, loss on disposal of property and equipment of $0.3 million and a net increase in operating assets and liabilities of $55.1 million. The significant items in the change in operating assets and liabilities include an increase in deferred revenue of $40.0 million attributable

to payments made to us pursuant to our collaboration with MTPC, an increase in deferred rent of $2.2 million and an increase in accounts payable and accrued expenses of approximately $14.2 million partially offset by a decrease of approximately $1.3 million in prepaid expenses and other current assets. The net increase in accounts payable and accrued expenses is primarily driven by clinical and non-clinical study costs associated with vadadustat and AKB-6899.

The net cash used in operating activities was $29.5 million for the nine months ended September 30, 2015 and consisted primarily of a net loss of $40.9 million adjusted for non-cash items, including stock-based compensation expense of $3.4 million and amortization of premium/discount on investments of $0.4 million and a net increase in operating assets and liabilities of $7.5 million. The significant items in the change in operating assets and liabilities include an increase in accounts payable and accrued expenses of approximately $7.3 million and a decrease in prepaid expenses and other current assets of $0.2 million. The increase in accounts payable and accrued expenses is primarily driven by accrued clinical and non-clinical study costs associated with vadadustat and AKB-6899. The decrease in prepaid expenses and other current assets is primarily related to prepaid clinical and non-clinical study costs associated with vadadustat and AKB-6899.

Investing Activities. Net cash used in investing activities for the nine months ended September 30, 2016 was $9.6 million and was comprised primarily of purchases of available for sale securities of $132.1 million and purchases of equipment of $2.6 million, offset by proceeds from the maturities of available for sale securities of $125.1 million.

Net cash used in investing activities for the nine months ended September 30, 2015 was $15.3 million and was comprised primarily of purchases of available for sale securities of $64.5 million and purchases of equipment of $0.3 million, offset by proceeds from the maturities of available for sale securities of $49.5 million.

Financing Activities. Net cash provided by financing activities for the nine months ended September 30, 2016 was $63.4 million and consisted primarily of net proceeds from the public issuance of common stock, proceeds from the exercise of stock options and proceeds from the sale of stock under our employee stock purchase plan.

Net cash provided by financing activities for the nine months ended September 30, 2015 was $78.8 million and consisted primarily of net proceeds from the issuance of common stock in connection with our follow-on public offering and sales of common stock pursuant to our ATM facility.

Operating Capital Requirements

To date, we have not generated any revenue from product sales. We do not know when, or if, we will generate revenue from product sales. We do not expect to generate significant revenue from product sales unless and until we obtain regulatory approval of and commercialize one of our current or future product candidates. We anticipate that we will continue to generate losses for the foreseeable future, and we expect the losses to increase as we continue the development of, and seek regulatory approvals for, our product candidates, and begin to commercialize any approved products. We are subject to all risks incident to the development and commercialization of novel therapeutics, and we may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. We expect to incur additional costs associated with operating as a public company, and we anticipate that we will need substantial additional funding in connection with our continuing operations.

We ended the third quarter of 2016 with cash, cash equivalents and available for sale securities of $161.3 million and we expect our cash resources to fund our current operating plan through the second quarter of 2017. However, we do not currently estimate that these funds will enable us to complete our Phase 3 development of vadadustat, including both the PRO2TECT and INNO2VATE clinical programs. We have based these estimates on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect. We intend to secure a geographic collaboration for the development and commercialization of vadadustat in Europe and other regions outside of the United States with a goal of providing funds sufficient to enable us to complete our Phase 3 development of vadadustat, including both the PRO_2TECT and $INNO_2$VATE clinical programs. However, there can be no assurance that our development milestones will be achieved, that we will be able to secure a second geographic collaboration for the development and commercialization of vadadustat outside the United States or that we will secure other sources of financing to complete our Phase 3 development of vadadustat.

We will require additional capital for the further development of our existing product candidates and will need to raise additional funds sooner to pursue development activities related to additional product candidates. If and until we can generate a sufficient amount of revenue from our products, we expect to finance future cash needs through public or private equity, debt offerings, or strategic transactions. Additional funds may not be available to us on acceptable terms or at all. If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of one or more of our product candidates. If we raise additional funds through the issuance of additional debt or equity securities, it could result in dilution to our existing stockholders or increased fixed payment obligations, and any such securities may have rights senior to those of our common stock. If we incur indebtedness, we could become subject to covenants that would restrict our operations and potentially impair our competitiveness, such as limitations on our ability to incur additional debt,

limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. Any of these events could significantly harm our business, financial condition and prospects.

Our forecast of the period of time through which our financial resources will be adequate to support our operations is a forward-looking statement and involves risks and uncertainties, and actual results could vary as a result of a number of factors. We have based this estimate on assumptions that may be substantially different than actual results, and we could utilize our available capital resources sooner than we currently expect. Our future funding requirements, both near- and long-term, will depend on many factors including, but not limited to, those described under Part II, Item 1A. Risk Factors of this Quarterly Report on Form 10-Q.

If we cannot expand our operations or otherwise capitalize on our business opportunities because we lack sufficient capital, our business, financial condition and results of operations could be materially adversely affected.

Contractual Obligations and Commitments

There have been no material changes to our contractual obligations from those described in our Annual Report on Form 10-K that was filed with the SEC on March 14, 2016.

Off-Balance Sheet Arrangements

As of September 30, 2016 we did not have any off-balance sheet arrangements as defined in the rules and regulations of the SEC.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risk related to changes in interest rates. As of September 30, 2016 and December 31, 2015, we had cash and cash equivalents and available-for-sale securities of $161.3 million and $138.5 million, respectively, primarily money market mutual funds consisting of U.S. government debt securities, certificates of deposit and corporate debt securities. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates, particularly because our investments are in short-term securities. Our investments are subject to interest rate risk and will fall in value if market interest rates increase. Due to the short-term duration of our investment portfolio and the low risk profile of our investments, an immediate 100 basis point change in interest rates would not have a material effect on the fair market value of our portfolio.

Item 4. Controls and Procedures

Management's Evaluation of our Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Securities Exchange Act of 1934 is (1) recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms and (2) accumulated and communicated to our management, including our principal executive officer and principal financial officer, to allow timely decisions regarding required disclosure.

As of September 30, 2016, our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934). Our 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. Our principal executive officer and principal financial officer have concluded based upon the evaluation described above that, as of September 30, 2016, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

During the quarter ended September 30, 2016, there have been no changes in our internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15(d)-15(f) promulgated under the Securities Exchange Act of 1934, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Part II. Other

Item 1. Legal Proceedings

Shareholder Litigation

In September 2015, a purported securities class action lawsuit was filed against us, including our Chief Executive Officer, our Chief Financial Officer, and members of our Board of Directors, in the Business Litigation Section of the Suffolk County Superior Court of Massachusetts. The complaint is brought on behalf of an alleged class of those who purchased our common stock pursuant or traceable to our initial public offering, and purports to allege claims arising under Sections 11, 12(a)(2) and 15 of the Securities Act of 1933, as amended. The complaint generally alleges that the defendants violated the federal securities laws by, among other things, making material misstatements or omissions concerning the Phase 2b clinical study of vadadustat. The complaint seeks, among other relief, unspecified compensatory damages, rescission of certain stock purchases, attorneys' fees, and costs. In October 2015, we removed the case to the United States District Court for the District of Massachusetts, and the plaintiff filed a motion to remand the case back to the Business Litigation Section of the Suffolk County Superior Court of Massachusetts. The plaintiff's motion to remand was granted in April 2016. The plaintiff filed an amended complaint in the Suffolk County Superior Court on August 15, 2016, and we served our memorandum in support of our motion to dismiss the amended complaint on October 14, 2016. We believe such claims are without merit and we will engage in a vigorous defense of such litigation.

Opposition Proceeding Against Our '005 Patent

In July 2011, a third party filed an opposition to our issued European Patent No. 2044005, or the '005 Patent. During the oral proceedings, which took place on April 10, 2013, the Opposition Division of the European Patent Office maintained the '005 Patent on the basis of the third auxiliary request filed during the oral proceedings. This decision resulted in the maintenance of a claim directed to a compound chosen from a group of eight compounds, including vadadustat, as well as claims to compositions and methods for treating various diseases, including, but not limited to, anemia. Both parties have appealed the decision of the Opposition Division and final resolution of the opposition proceedings will likely take a year or more. We cannot be assured of the breadth of the claims that will remain in the '005 Patent or that the patent will not be revoked in its entirety.

Opposition and Invalidity Proceedings Against FibroGen Inc.

We have had a number of positive developments in our opposition and invalidity proceedings against FibroGen, Inc., or FibroGen. With regard to the opposition that we filed in Europe against FibroGen's European Patent No. 1463823, or the '823 patent, an oral proceeding took place March 8 and 9, 2016. Following the oral proceeding, the European Opposition Division ruled that the patent as granted did not meet the requirements for patentability under the European Patent Convention and, therefore, revoked the patent in its entirety. FibroGen has appealed that decision. Likewise, with regard to the invalidity proceeding that we filed in Japan against certain claims of FibroGen's Japanese Patent No. 4804131, or the '131 patent, which is the Japanese counterpart to the '823 patent, the Japan Patent Office, or JPO, issued a preliminary decision finding all of the challenged claims to be invalid. FibroGen subsequently amended the claims and the JPO accepted the amendments. The resulting FibroGen Japanese '131 patent does not cover vadadustat or any pyridine carboxamide compounds. To date, FibroGen has been unsuccessful in its attempts to obtain a patent in the United States covering the same claim scope as it obtained initially in Europe and Japan in the '823 and '131 patents. In the event FibroGen were to obtain such a patent in the United States, we may decide to challenge them like we have done in Europe and Japan.

On May 13, 2015, May 20, 2015 and July 6, 2015 we filed oppositions to FibroGen's European Patent Nos. 2322153, 2322155, and 163333, or the '153 patent, the '155 patent, and the '333 patent, respectively, requesting the patents be revoked in their entirety. These related patents claim, among other things, various compounds that either stabilize HIFα or inhibit a HIF hydroxylase or a HIF prolyl hydroxylase for treating or preventing various conditions, including, *inter alia*, iron deficiency, microcytosis associated with iron deficiency, anemia of chronic disease, anemia wherein the subject has a transferrin saturation of less than 20%, anemia refractory to treatment with exogenously administered erythropoietin, or EPO, and microcytosis in microcytic anemia. Oppositions to the '155 patent and to the '153 patent were also filed by Glaxo Group Limited and by Bayer Intellectual Property GmbH, Bayer Pharma Aktiengesellschaft, and Bayer Animal Health GmbH. While, for the reasons set forth in our oppositions, we believe that the '153 patent, the '155 patent, and the '333 patent should be revoked in their entirety, the ultimate outcomes of the oppositions remains uncertain. If the European Patent Office decides not to revoke the '153 patent, the '155 patent, or the '333 patent in their entirety, or only certain claims of those patents, and any surviving claims are determined to encompass our intended use of our lead product candidate, we may not be able to commercialize our lead product candidate in the European Union for its intended use, which could materially adversely affect our business, operating results and financial condition.

Item 1A. Risk Factors

The following risk factors and other information included in this Quarterly Report on Form 10-Q should be carefully considered. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may also adversely affect our business. Please reference our "Cautionary Note Regarding Forward-Looking Statements," which identifies certain forward-looking statements contained in this report that are qualified by these risk factors. If any of the following risks occur, our business, financial condition, results of operations and future growth prospects could be materially and adversely affected.

Risks Related to our Financial Position and Need for Additional Capital

We have incurred significant losses since inception and anticipate that we will continue to incur significant losses for the foreseeable future and may never achieve or maintain profitability.

We have incurred net losses each year since our inception, including net losses of $97.9 million for the nine months ended September 30, 2016, and $40.9 million for the nine months ended September 30, 2015. As of September 30, 2016, we had an accumulated deficit of $259.3 million. To date, we have not commercialized any products or generated any revenue from the sale of products, and we do not expect to generate any product revenue in the foreseeable future. We do not know whether or when we will generate revenue or become profitable.

We have devoted most of our financial resources to research and development, including our clinical and preclinical development activities. To date, we have financed our operations primarily through our initial public offering, completed in March 2014, our follow-on offerings completed in April 2015 and January 2016, our at-the-market offerings in 2015 and 2016 and private placements of our preferred stock. The amount of our future net losses will depend, in part, on the rate of our future expenditures, and our financial position will depend, in part, on our ability to obtain funding through equity or debt financings or strategic collaboration. Our lead product candidate, vadadustat, recently commenced Phase 3 development, and our other product candidate, AKB-6899, is expected to begin clinical development in 2017. Therefore, we expect that it will be several years, if ever, before we have a product candidate ready for commercialization. Even if we obtain regulatory approval to market vadadustat, our future revenue will depend upon the size of any markets in which vadadustat has received approval, our ability to achieve sufficient market acceptance, the availability and extent of reimbursement from third-party payors and other factors.

We expect to continue to incur significant expenses and increased operating losses for the foreseeable future. We anticipate that our expenses will increase significantly if and as we:

- conduct our Phase 3 development program of vadadustat for the treatment of anemia secondary to CKD, including the PRO_2TECT and $INNO_2$VATE programs;
- commence clinical development of AKB-6899 or other product candidates;
- seek regulatory approvals for our product candidates that successfully complete clinical studies;
- have our product candidates manufactured for clinical trials and for commercial sale;
- establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain marketing approval;
- initiate additional preclinical, clinical or other studies of vadadustat, AKB-6899 and other product candidates that we may develop or acquire;
- seek to discover and develop additional product candidates;
- acquire or in-license other commercial products, product candidates and technologies;
- make royalty, milestone or other payments under any future in-license agreements;
- maintain, protect and expand our intellectual property portfolio;
- attract and retain skilled personnel; and
- continue to create additional infrastructure to support our operations as a public company.

Because of the numerous risks and uncertainties associated with pharmaceutical product development, we are unable to accurately predict the timing or amount of increased expenses or when, if at all, we will be able to achieve profitability. If we are required by the FDA, EMA, or other regulatory authorities to perform studies in addition to, different from or larger than those currently expected, or

if there are any delays in completing our clinical trials or the development of any of our product candidates, our expenses could increase.

The net losses we incur may fluctuate significantly from quarter to quarter and year to year, such that a period-to-period comparison of our results of operations may not be a good indication of our future performance. In any particular quarter or quarters, our operating results could be below the expectations of securities analysts or investors, which could cause our stock price to decline.

To become and remain profitable, we must succeed in developing and commercializing our product candidates, which must generate significant revenue. This will require us to be successful in a range of challenging activities, including completing preclinical testing and clinical trials of our product candidates, discovering or acquiring additional product candidates, obtaining regulatory approval for these product candidates and manufacturing, marketing and selling any products for which we may obtain regulatory approval. We are only in the preliminary stages of most of these activities. We may never succeed in these activities and, even if we do, may never generate revenue that is significant enough to achieve profitability.

Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable could depress the value of our company and could impair our ability to raise capital, expand our business, maintain our research and development efforts, diversify our product offerings or even continue our operations. A decline in the value of our company could cause our stockholders to lose all or part of their investment.

We will require substantial additional financing. A failure to obtain this necessary capital when needed could force us to delay, limit, reduce or terminate our product development or commercialization efforts.

As of September 30, 2016, our cash and cash equivalents and available-for-sale securities were $161.3 million. We believe that we will continue to expend substantial resources for the foreseeable future developing vadadustat, AKB-6899 and any other product candidates that we may develop or acquire. These expenditures will include costs associated with research and development, potentially obtaining regulatory approvals and having our products manufactured, as well as marketing and selling products approved for sale, if any. In addition, other unanticipated costs may arise as a result of our decision to include certain elements in our programs. Because the outcome of our current and anticipated clinical trials is highly uncertain, we cannot reasonably estimate the actual amount of funding necessary to successfully complete the development and commercialization of our product candidates.

Our future capital requirements depend on many factors, including:

- the results of our meetings with the FDA and the EMA and other regulatory authorities and the consequential effect on study design, study size and resulting operating costs;
- the size, rate of progress, results and costs of initiating and completing our global Phase 3 development of vadadustat;
- difficulties or delays in enrolling patients in our clinical trials;
- significant costs associated with our Phase 3 clinical studies of vadadustat for the treatment of anemia secondary to CKD, we expect the cost of the Phase 3 program to be in the range of $80,000 to $85,000 per patient and we plan to enroll approximately 3,100 patients in PRO_2TECT and approximately 2,600 patients in $INNO_2$VATE, aggregating in the range of $456.0 million to $484.5 million for the total program;
- if Japanese subjects are not included in either $INNO_2$VATE or PRO_2TECT, the amount of development funding received from our collaboration partner could differ materially;
- assuming favorable Phase 3 clinical results, the timing of, and the costs involved in, obtaining regulatory approvals for vadadustat in dialysis and non-dialysis indications, including to fund the preparation and filing of regulatory submissions for vadadustat with the FDA, the EMA and other regulatory authorities, and whether we will seek regulatory approval for both indications simultaneously;
- the cost, timing and outcome of our efforts to obtain marketing approval for vadadustat in the United States, Europe and in other jurisdictions;
- the scope, progress, results and costs of additional preclinical, clinical, or other studies for additional indications for vadadustat, AKB-6899 and other product candidates that we may develop or acquire;
- the timing of, and the costs involved in, obtaining regulatory approvals for AKB-6899 if clinical studies are successful;
- the cost and timing of future commercialization activities for our products, if any of our product candidates are approved for marketing, including product manufacturing, marketing, sales and distribution costs;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- the cost of having our product candidates manufactured for clinical trials and in preparation for commercialization;

- our ability to establish and maintain strategic collaborations, licensing or other arrangements and the financial terms of such agreements and the level and timing of funding for these agreements;
- the costs involved in preparing, filing and prosecuting patent applications and maintaining, defending and enforcing our intellectual property rights, including litigation costs, and the outcome of such litigation; and
- the extent to which we acquire or in-license other products, product candidates or technologies.

We ended the third quarter of 2016 with cash, cash equivalents and available for sale securities of $161.3 million and we expect our cash resources to fund our current operating plan through the second quarter of 2017. However, we do not currently estimate that these funds will enable us to complete our Phase 3 development of vadadustat, including both the PRO2TECT and INNO2VATE clinical programs. We have based these estimates on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect. We intend to secure a geographic collaboration for the development and commercialization of vadadustat in Europe and other regions outside of the United States with a goal of providing funds sufficient to enable us to complete our Phase 3 development of vadadustat, including both the PRO2TECT and INNO2VATE clinical programs. However, there can be no assurance that our development milestones will be achieved, that we will be able to secure a second geographic collaboration for the development and commercialization of vadadustat outside the United States or that we will secure other sources of financing to complete our Phase 3 development of vadadustat.

We will require additional capital for the further development of our existing product candidates and will need to raise additional funds sooner to pursue development activities related to additional product candidates. If and until we can generate a sufficient amount of revenue from our products, we expect to finance future cash needs through public or private equity, debt offerings, or strategic transactions. There can be no assurance that additional funds will be available to us on acceptable terms or at all. If we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of one or more of our product candidates. If we raise additional funds through the issuance of additional debt or equity securities, it could result in dilution to our existing stockholders or increased fixed payment obligations, and any such securities may have rights senior to those of our common stock. If we incur indebtedness, we could become subject to covenants that would restrict our operations and potentially impair our competitiveness, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. Any of these events could significantly harm our business, financial condition and prospects.

Raising additional capital may cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights to product candidates on unfavorable terms to us.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through a combination of equity offerings, debt financings and license, development and commercialization agreements with collaborators. To the extent that we raise additional capital through the sale of equity or convertible debt securities, the ownership interests of our common stockholders will be diluted, and the terms may include liquidation or other preferences and anti-dilution protections that adversely affect the rights of our common stockholders. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take certain actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional funds through strategic collaborations with third parties, we may have to relinquish valuable rights to our product candidates, future revenue streams, research programs or product candidates or grant licenses on terms that are not favorable to us. If we are unable to raise additional funds through equity or debt financing when needed, we may be required to delay, limit, reduce or terminate our product development or commercialization efforts for vadadustat, AKB-6899 or any other product candidates that we develop or acquire, or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Our limited operating history may make it difficult for shareholders to evaluate the success of our business to date and to assess our future viability.

We commenced active operations in 2007, and our operations to date have been limited to organizing and staffing our company, business planning, raising capital, identifying potential product candidates, undertaking preclinical studies and conducting clinical trials. We currently have two product candidates. Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of risk. Only a small percentage of biopharmaceutical development programs ultimately result in commercial products or even product candidates and a number of events could delay our development efforts and negatively impact our ability to obtain regulatory approval for, and to manufacture, market and sell, a biopharmaceutical product. We have not yet demonstrated our ability to successfully complete Phase 3 clinical trials, obtain regulatory approvals, manufacture a commercial scale product, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization.

In addition, as a relatively young business, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors. We will need to expand our capabilities to support commercial activities. We may not be successful in adding such capabilities.

Risks Related to our Business and the Clinical Development, Regulatory Review and Approval of Vadadustat and AKB-6899

We depend heavily on the success of one product candidate, vadadustat, which is in Phase 3 development. Even if we obtain favorable clinical results in our Phase 3 studies, we may not be able to obtain regulatory approval for, or successfully commercialize, vadadustat.

We currently have only one product candidate, vadadustat, in clinical development, and our business depends almost entirely on the successful clinical development, regulatory approval and commercialization of that product candidate, which may never occur. We currently have no drug products for sale, generate no revenue from sales of any drugs, and may never be able to develop marketable drug products. Vadadustat, which is in Phase 3 development, will require substantial additional clinical development, testing, manufacturing process development, and regulatory approval before we are permitted to commence its commercialization. We expect to commence a Phase 1 study of our other product candidate, AKB-6899, in 2017. The clinical trials of our product candidates are, and the manufacturing and marketing of our product candidates will be, subject to extensive and rigorous review and regulation by numerous government authorities in the United States and in other countries where we intend to test and, if approved, market any product candidates. Before obtaining regulatory approval for the commercial sale of any product candidate, we must demonstrate through extensive preclinical testing and clinical trials that the product candidate is safe and effective for use in each target indication. This process can take many years. Of the large number of drugs in development in the United States, only a small percentage successfully complete the FDA regulatory approval process and are commercialized. Accordingly, even if we are able to obtain the requisite capital to continue to fund our development and clinical programs, we may be unable to successfully develop or commercialize vadadustat.

We are not permitted to market vadadustat in the United States until we receive approval from the FDA, or in any jurisdiction outside of the United States until we receive the requisite approval from regulatory authorities in such jurisdiction. As a condition to receiving regulatory approval for vadadustat, we must complete Phase 3 studies and any additional non-clinical or clinical studies required by the FDA. Vadadustat may not be successful in clinical trials or receive regulatory approval. Further, vadadustat may not receive regulatory approval even if it is successful in clinical trials. Obtaining approval of an NDA is a complex, lengthy, expensive and uncertain process that typically takes many years following the completion of clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, the safety concerns associated with injectable rESAs and the black box warnings in their prescribing information may affect the FDA's review of the safety results of compounds of this class, including vadadustat. Further, the policies or regulations, or the type and amount of clinical data necessary to gain approval, may change during the course of a product candidate's clinical development and may vary among jurisdictions. We have not obtained regulatory approval for any product candidate and it is possible that vadadustat will never obtain regulatory approval. The FDA may delay, limit or deny approval of vadadustat for many reasons, including, among others:

- we may not be able to demonstrate that vadadustat is safe and effective in treating anemia secondary to CKD to the satisfaction of the FDA;
- the results of our clinical trials may not meet the level of statistical or clinical significance required by the FDA for marketing approval;
- the FDA may disagree with the number, design, size, conduct or implementation of our clinical trials;
- the FDA may not approve the formulation, labeling or specifications we request for vadadustat;
- the FDA may approve vadadustat for use only in a small patient population;
- the FDA may require that we conduct additional clinical trials;
- the contract research organizations, or CROs, that we retain to conduct our clinical trials may not perform effectively or take actions outside of our control that materially adversely impact our clinical trials;
- we may fail to perform in accordance with the FDA's good clinical practice, or GCP, requirements;
- the FDA may disagree with inclusion of data obtained from certain regions outside the United States to support the NDA for potential reasons such as differences in clinical practice from United States standards;
- the FDA may disagree with our interpretation of data from our nonclinical studies and clinical trials;

- the FDA may not approve the manufacturing processes or facilities of third-party manufacturers with whom we contract; or
- the policies or regulations of the FDA may significantly change in a manner that renders our clinical data insufficient for approval, or requires us to amend or submit new clinical protocols.

In addition, similar reasons may cause the EMA or other regulatory authorities to delay, limit or deny approval of vadadustat outside the United States.

Any of these factors, many of which are beyond our control, could jeopardize our ability to obtain regulatory approval for and successfully market vadadustat. Because our business is almost entirely dependent upon vadadustat, any such setback in our pursuit of regulatory approval would have a material adverse effect on our business and prospects.

Alternatively, even if we obtain regulatory approval, that approval may be for indications or patient populations that are not as broad as we intend or desire or may require labeling that includes significant use or distribution restrictions or safety warnings. We may also be required to perform additional, unanticipated clinical trials to obtain approval or be subject to additional post-marketing testing requirements to maintain regulatory approval. In addition, regulatory authorities may withdraw their approval of a product or require a risk evaluation and mitigation strategy, or REMS, for a product, which could impose restrictions on its distribution. Any of the foregoing scenarios could materially harm the commercial prospects for vadadustat or our other product candidates.

We have not yet obtained agreement with all regulatory authorities regarding the design of our Phase 3 studies.

We have obtained alignment with both FDA and EMA on vadadustat's global Phase 3 program in both non-dialysis and dialysis patients with anemia related to CKD; however, we have not yet obtained alignment with all regulatory authorities globally on the design of these studies. A regulatory authority may suggest we include, or we may choose to include, certain elements in our Phase 3 development program, such as any or all of the following:

- a larger number of subjects in the program;
- certain dosing requirements;
- more subjects from certain geographic regions than currently planned;
- a longer course of treatment than our current expectations;
- additional or different endpoints from those currently planned; or
- the simultaneous submission of Phase 3 data from our studies in dialysis and non-dialysis patients.

If we choose to change some or all of these elements in our Phase 3 development programs, the costs of our vadadustat development program could increase materially and the potential market introduction of vadadustat could be delayed or we could risk not obtaining regulatory authority approval even if the Phase 3 trials meet their primary endpoints. The regulatory authorities also may require that we conduct additional clinical, nonclinical or manufacturing validation studies and submit that data before they will consider an NDA, Marketing Authorization Application or other application for regulatory approval. Furthermore, regulatory authorities may differ in terms of their requirements for our Phase 3 program, which would make it difficult for us to conduct a global Phase 3 program and to use the results from such program to support regulatory approval in multiple jurisdictions.

We cannot predict what additional requirements may be imposed by any regulatory authorities or how such requirements might delay or increase costs for our planned Phase 3 development program. Because our business is almost entirely dependent upon the successful development, regulatory approval, and commercialization of vadadustat, any such delay or increase in costs would have an adverse effect on our business.

We may find it difficult to enroll patients in our clinical studies, which could delay or prevent clinical studies of our product candidates.

Identifying and qualifying patients to participate in clinical studies of our product candidates is critical to our success. The timing of our clinical studies depends on the speed at which we can recruit patients to participate in testing our product candidates. Patients may be unwilling to participate in our clinical studies for vadadustat because of concerns from adverse events observed with injectable rESAs, other investigational agents and commercial products in CKD or for other reasons, including competitive clinical studies for similar patient populations. In addition, patients currently receiving treatment with injectable rESAs may be reluctant to participate in a clinical trial with an investigational drug. Finally, competition for clinical trial sites may limit our access to subjects appropriate for studies of vadadustat. As a result, the timeline for recruiting patients, conducting studies and obtaining regulatory approval of potential products may be delayed. These delays could result in increased costs, delays in advancing our development of vadadustat or termination of the clinical studies altogether.

We may not be able to identify, recruit and enroll a sufficient number of patients, or those with required or desired characteristics, to complete our clinical studies in a timely manner. Patient enrollment is affected by many factors, including:

- severity of the disease under investigation;
- design of the study protocol;
- size and nature of the patient population;
- eligibility criteria for, and design of, the study in question;
- perceived risks and benefits of the product candidate under study;
- proximity and availability of clinical study sites for prospective patients;
- availability of competing therapies and clinical studies and clinicians' and patients' perceptions as to the potential advantages of vadadustat in relation to available therapies or other products in development;
- efforts to facilitate timely enrollment in clinical studies;
- patient referral practices of physicians; and
- ability to monitor patients adequately during and after treatment.

We may not be able to initiate or continue clinical studies if we cannot enroll a sufficient number of eligible patients to participate in the clinical studies required by regulatory agencies. If we have difficulty enrolling a sufficient number of patients to conduct our clinical studies as planned, we may need to delay, limit or terminate on-going or planned clinical studies, any of which would have an adverse effect on our business.

We may not be able to conduct clinical trials in some jurisdictions outside of the United States.

We currently expect to seek regulatory approval of vadadustat for the treatment of anemia secondary to CKD in markets outside the United States, including the European Union and Japan. Our ability to successfully initiate, enroll and complete a clinical study in any country outside of the United States is subject to numerous risks unique to conducting business in international markets, including:

- difficulty in establishing or managing relationships with qualified CROs, physicians and clinical trial sites;
- different local standards for the conduct of clinical studies; and
- the potential burden of complying with a variety of laws, medical standards and regulatory requirements, including the regulation of pharmaceutical and biotechnology products and treatments.

Data obtained from studies conducted in the United States may not be accepted by the EMA and other regulatory authorities outside of the United States. Also, certain jurisdictions require data from studies conducted in their country in order to obtain approval in that country.

If we fail to successfully meet requirements for the conduct of clinical trials outside of the United States, we may be delayed in obtaining, or be unable to obtain, regulatory approval for vadadustat in countries outside of the United States.

Regulatory authorities outside of the United States will require compliance with numerous and varying regulatory requirements. The approval procedures vary among jurisdictions and may involve requirements for additional testing, and the time required to obtain approval may differ from that required to obtain FDA approval. In addition, in many countries outside the United States, a drug product must be approved for reimbursement before it can be approved for sale in that country. In some cases, the price that we intend to charge for our drug product is also subject to approval. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one regulatory authority outside of the United States does not ensure approval by regulatory authorities in other countries or by the FDA. However, the failure to obtain approval in one jurisdiction may negatively impact our ability to obtain approval in another jurisdiction. The regulatory approval process in countries outside of the United States may include all of the risks associated with obtaining FDA approval and, in some cases, additional risks. We may not obtain such regulatory approvals on a timely basis, if at all. We may not be able to file for regulatory approvals and may not receive the necessary approvals to commercialize our product candidates in any market.

Clinical drug development is a lengthy and expensive process with an uncertain outcome, and positive results from the clinical studies of vadadustat thus far are not necessarily predictive of the results of any future clinical studies of vadadustat. If we cannot replicate the positive results observed to date in our Phase 3 clinical studies, we may be unable to successfully develop, obtain regulatory approval for and commercialize vadadustat.

Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. Success in preclinical studies may not be predictive of similar results in humans during clinical trials, and successful results from early or small clinical trials may not be replicated in later and larger clinical trials. For example, our encouraging preclinical and clinical results for vadadustat thus far do not ensure that the results of any future clinical trials will demonstrate similar results. Our vadadustat Phase 3 development program will enroll a larger number of subjects and will treat subjects for longer periods than our prior trials, which will result in a greater likelihood that adverse events may be observed. Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials after achieving positive results in early stage development, and we may face similar setbacks. If the results of our ongoing or future clinical trials for vadadustat are inconclusive with respect to efficacy, if we do not meet our clinical endpoints with statistical significance, or if there are safety concerns or adverse events, we may be prevented from or delayed in obtaining marketing approval for vadadustat.

We could encounter delays if a clinical trial is suspended or terminated by us, by the relevant independent institutional review boards at the sites at which such trials are being conducted, by the Data Safety Monitoring Board, or DSMB, for such trial or by the FDA or other regulatory authorities. Such suspension or termination may be due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, critical findings resulting from inspection of clinical trial operations, clinical trial site or manufacturing facilities by the FDA or other regulatory authorities, the imposition of a clinical hold, unforeseen safety issues or adverse side effects, changes in laws or regulations, or lack of adequate funding to continue the clinical trial. Any delays in completing our clinical trials will increase our costs, slow down our product candidate development and approval process and jeopardize our ability to commence product sales and generate revenue. Any of these occurrences may harm our business, financial condition and prospects significantly.

Even if we receive regulatory approval for our product candidates, such products will be subject to ongoing regulatory review, which may result in significant additional expense. Additionally, our product candidates, if approved, could be subject to labeling and other restrictions, and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our products.

Any regulatory approvals that we receive for our product candidates may be subject to limitations on the approved indicated uses for which the product may be marketed or other conditions of approval, or contain requirements for potentially costly post-marketing studies and surveillance to monitor the safety and efficacy of the product. In addition, if the FDA approves any of our product candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for the product will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, as well as continued compliance with current Good Manufacturing Practices, or cGMPs, and GCPs for any clinical trials that we conduct post-approval.

Post-approval discovery of previously unknown problems with an approved drug product, including adverse events of unanticipated severity or frequency or relating to manufacturing operations or processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of the drug product, withdrawal of the drug product from the market, or drug product recalls;
- fines, warning letters or clinical holds;
- refusal by the FDA or other regulatory authorities to approve pending applications or supplements to approved applications filed by us, or suspension or revocation of product approvals;
- product seizure or detention, or refusal to permit the import or export of products;
- a Risk Evaluation and Mitigation Strategy (REMS) program; and
- injunctions or the imposition of civil or criminal penalties.

The FDA’s policies may change and additional government regulations may be enacted. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability, which would adversely affect our business.

Risks Related to our Reliance on Third Parties

We rely on third parties to conduct preclinical and clinical studies for our product candidates. If they do not properly and successfully perform their obligations to us, we may not be able to obtain regulatory approvals for our product candidates.

We are currently relying, and expect to continue to rely, on third parties, such as CROs, clinical data management organizations, medical institutions and clinical investigators, to conduct our current and future clinical trials, including our Phase 3 development program for vadadustat. We compete with many other companies for the resources of these third parties. The third parties on whom we rely may terminate their engagement with us, and having to enter into alternative arrangements would delay development and commercialization of our product candidates.

We entered into an agreement with Quintiles, Inc. to be our primary CRO for the PRO_2TECT and $INNO_2$VATE programs. If Quintiles cannot perform effectively or terminates their engagement with us, the progress of our Phase 3 clinical studies may be impacted and we may incur significant added costs in identifying, qualifying and contracting with a new CRO.

Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our responsibilities. For example, the FDA and equivalent regulatory authorities outside of the United States require compliance with regulations and standards, including GCP requirements, for designing, conducting, monitoring, recording, analyzing and reporting the results of clinical trials to ensure that the data and results are credible and accurate and that the rights, integrity and confidentiality of study subjects are protected. Although we rely on third parties to conduct our clinical trials, we are responsible for ensuring that each of these clinical trials is conducted in accordance with its general investigational plan and protocol in compliance with legal and regulatory requirements. Regulatory authorities enforce these GCP requirements through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of our CROs or clinical trial sites fail to comply with applicable GCP requirements, the clinical data generated in our clinical trials may be deemed unreliable and the FDA, EMA or other regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials comply with GCP requirements. In addition, our clinical trials must be conducted with product that meets certain specifications and is manufactured under applicable cGMP regulations. Failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process.

If these third parties do not successfully carry out their duties under their agreements, if the quality or accuracy of the data they obtain is compromised due to their failure to adhere to clinical trial protocols or to regulatory requirements, or if they otherwise fail to comply with clinical trial protocols or meet expected deadlines, the clinical trials of our product candidates may not meet regulatory requirements. If clinical trials do not meet regulatory requirements or if these third parties need to be replaced, preclinical development activities or clinical trials may be extended, delayed, suspended or terminated. If any of these events occur, we may not be able to obtain regulatory approval of our product candidates on a timely basis or at all.

We also expect to rely on other third parties to store and distribute drug supplies for our clinical trials. Any performance failure on the part of our distributors could delay clinical development or marketing approval of our product candidates or commercialization of our products, resulting in additional losses and depriving us of potential product revenue. In addition, we will be using an active comparator for our PRO_2TECT clinical program. If our distributors are unable to obtain sufficient supply of the active comparator for any reason, or supply active comparator to clinical trial sites in a timely manner, our clinical trials may be extended, delayed, suspended or terminated.

We intend to rely on third parties to conduct some or all aspects of our product manufacturing, and these third parties may not perform satisfactorily.

We do not have any manufacturing facilities and do not expect to independently manufacture our product candidates for research and preclinical and clinical studies. We currently rely, and expect to continue to rely, on third parties to manufacture and supply drug product for our vadadustat clinical trials, and we expect to rely on third parties for the manufacture of clinical and commercial quantities of all of our product candidates. This reliance on third parties increases the risk that we will not have sufficient quantities of our product candidates or such quantities at an acceptable cost or quality, which could delay, prevent or impair our development or commercialization efforts.

Also, these third parties may terminate their engagement with us. We entered into an agreement with Evonik Corporation, or Evonik, for the manufacture of the drug substance for the Phase 3 development program of vadadustat. If Evonik cannot perform as agreed or terminates their engagement with us, we may be required to find replacement manufacturers. We may incur significant delays and added costs in identifying, qualifying and contracting with any such replacement, as well as producing the drug substance. We also have an agreement in place with Gregory Pharmaceutical Holdings (d/b/a UPM Pharmaceuticals Inc., or UPM) for the manufacture of finished drug product for the Phase 3 development program. Although we believe that there are several other manufacturers who also could manufacture our drug product if UPM cannot perform as agreed or terminates their engagement with us, we may incur significant delays and added costs in identifying, qualifying, and contracting with another manufacturer. Also, if we choose to engage

a second source for the manufacture of drug substance or drug product, we may incur additional costs. In addition, we have to enter into technology transfer agreements and share our know-how with such third-party manufacturers, which can be time-consuming and may result in delays. These delays could result in a suspension of our clinical trials or, if vadadustat is approved and marketed, a failure to satisfy patient demand.

Reliance on third-party manufacturers entails risks to which we would not be subject if we manufactured the product candidates ourselves, including:

- the potential inability to negotiate manufacturing agreements with third parties under commercially reasonable terms;
- reduced control as a result of using third-party manufacturers for all aspects of manufacturing activities, including regulatory compliance and quality assurance;
- the potential loss of drug substance or drug product due to the actions of the third-party manufacturer;
- termination or nonrenewal of manufacturing agreements with third parties in a manner or at a time that is costly or damaging to us;
- the possible misappropriation of our proprietary information, including our trade secrets and know-how; and
- disruptions to the operations of our manufacturers or suppliers caused by conditions unrelated to our business or operations, including the bankruptcy of our manufacturers or suppliers or a catastrophic event affecting our manufacturers or suppliers.

Any of these events could lead to clinical study delays or failure to obtain regulatory approval, or affect our ability to successfully commercialize future products. Some of these events could be the basis for FDA action, including injunction, recall, seizure or total or partial suspension of production.

The facilities and processes used by our contract manufacturers to manufacture our product candidates will be inspected by the FDA prior to or after we submit our NDA to the FDA. We do not control the manufacturing process of, and are completely dependent on, our contract manufacturers for compliance with cGMP requirements for manufacture of both drug substance and finished drug product. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA, we will not be able to secure and/or maintain regulatory approval for our product candidates. In addition, we have no control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA, EMA or other regulatory authorities do not approve these facilities for the manufacture of our product candidates or if they withdraw any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates, if approved. Moreover, our failure, or the failure of our contract manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or products, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect the supply of our products or product candidates.

In addition, our product candidates and any products that we may develop may compete with other product candidates and products for access to manufacturing facilities. Certain of these manufacturing facilities may be contractually prohibited from manufacturing our product candidates or products due to exclusivity provisions in agreements with our competitors. There are a limited number of manufacturers that operate under cGMP regulations and are capable of manufacturing for us.

Our current and anticipated future dependence upon others for the manufacture of our product candidates or products may adversely affect our future profit margins and our ability to commercialize any products that receive marketing approval on a timely and competitive basis.

If we are unable to manufacture our product candidates in sufficient quantities and at sufficient yields, we may experience delays in product development, clinical trials, regulatory approval and commercial distribution.

Completion of our clinical trials and commercialization of our product candidates require access to facilities to manufacture our product candidates at sufficient yields and at clinical and commercial scale. We have limited experience manufacturing, or managing third parties in manufacturing, any of our product candidates in the volumes that will be necessary to support large-scale clinical trials or commercial sales. Efforts to establish these capabilities may not meet initial expectations as to scheduling, scale-up, reproducibility, yield, purity, cost, potency or quality.

Our reliance on contract manufacturers may adversely affect our operations or result in unforeseen delays or other problems beyond our control. Because of contractual restraints and the limited number of contract manufacturers with the expertise, required regulatory approvals and facilities to manufacture our bulk drug substance and drug product on a commercial scale, replacement of a

manufacturer may be expensive and time-consuming and may cause interruptions in the production of our product candidates. A contract manufacturer may also encounter difficulties in production. These problems may include:

- difficulties with production costs, scale-up and yields;
- availability of raw materials and supplies;
- quality control and assurance;
- capacity constraints;
- shortages of qualified personnel;
- compliance with strictly enforced federal, state and international regulations that vary in each country where a product might be sold; and
- lack of capital funding.

Any delay or interruption in our supply of product candidates or products could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We may not be successful in establishing and maintaining strategic collaborations which could adversely affect our ability to develop and commercialize our product candidates, negatively impacting our operating results.

We plan to commercialize vadadustat ourselves in the United States and have entered into a collaboration agreement with MTPC to develop and commercialize vadadustat in Japan and certain other Asian countries. We will likely seek one or more strategic collaborators to commercialize vadadustat in additional markets. We face competition in seeking appropriate collaborators for our product candidates, and the negotiation process is time-consuming and complex. In order for us to successfully collaborate with third parties on our product candidates, potential collaborators must view these product candidates as economically valuable. Even if we are successful in our efforts to establish strategic collaborations, the terms that we agree upon may not be favorable to us, and we may not be able to maintain such strategic collaborations if, for example, development or approval of a product is delayed or sales of an approved product are disappointing. Any delay in entering into strategic collaboration agreements related to our product candidates could delay the development and commercialization of our product candidates and reduce their competitiveness even if they reach the market.

In addition, our strategic collaborators may terminate any agreements they enter into with us, and we may not be able to adequately protect our rights under these agreements. Furthermore, our strategic collaborators will likely negotiate for certain rights to control decisions regarding the development and commercialization of our product candidates, if approved, and may not conduct those activities in the same manner as we do.

If we fail to maintain our current collaboration with MTPC or other strategic collaborations related to our product candidates, we will bear all of the risk and costs related to the development and commercialization of any such product candidate, and we may need to seek additional financing, hire additional employees and otherwise develop expertise. This could negatively affect the development and commercialization of any such product candidate.

Risks Related to our Intellectual Property

If our efforts to protect our proprietary technologies are not adequate, we may not be able to compete effectively in our market. We are currently involved in an opposition proceeding involving one of our European patents, and the outcome of that proceeding may affect our ability to establish a competitive advantage in the market or successfully commercialize our lead product candidate in the European Union.

We rely upon a combination of patents, trade secret protection and confidentiality agreements to protect the intellectual property related to our technologies. We will only be able to protect our product candidates, proprietary technologies and their uses from unauthorized use by third parties to the extent that valid and enforceable patents or trade secrets cover them. Any disclosure to or misappropriation by third parties of our confidential proprietary information could enable competitors to quickly duplicate or surpass our technological achievements, thus eroding our competitive position in the market.

In July 2011, a third party filed an opposition to one of our issued European patents, European Patent No. 2044005, or the ’005 Patent. During the oral proceedings, which took place on April 10, 2013, the Opposition Division of the European Patent Office decided to maintain certain claims of the patent directed to a compound chosen from a group of eight compounds, including vadadustat, as well as claims to compositions and methods for treating various diseases including, but not limited to, anemia. Both parties have appealed the decision of the Opposition Division and final resolution of the opposition proceeding will likely take a year or more. We cannot be assured of the breadth of the claims that will remain in the ’005 Patent or that the patent will not be revoked in its entirety. If the

European Patent Office decides to narrow the scope of the claims or revoke the ’005 Patent, we may not be able to establish a competitive advantage in the European Union in our market or successfully commercialize our product candidates in the European Union, which could materially adversely affect our business, operating results and financial condition.

Composition-of-matter patents on the active pharmaceutical ingredient are generally considered to be the strongest form of intellectual property protection for pharmaceutical products, as such patents provide protection without regard to any method of use. Method-of-use patents protect the use of a product for the specified method. A method-of-use patent does not prevent a competitor from making and marketing a product that is identical to our product for an indication that is outside the scope of the patented method. Moreover, even if competitors do not actively promote their product for our targeted indications, physicians may prescribe these products “off-label.” Although off-label prescriptions may infringe or contribute to the infringement of method-of-use patents, the practice is common and such infringement is difficult to prevent or prosecute.

The strength of patents in the biotechnology and pharmaceutical field involves complex legal and scientific questions and can be uncertain. The patent applications that we own or license may fail to result in issued patents in the United States or in other countries. Our competitors have and we expect that they will continue to undertake formal efforts to oppose the issuance of claims in our patent applications. We do not control decisions made by the United States Patent and Trademark Office, or US PTO, or equivalent bodies outside the United States. Even if our patents do successfully issue, third parties may challenge the validity, enforceability, inventorship, or scope thereof, which may result in such patents being narrowed, invalidated or held unenforceable. Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property or prevent others from designing around our claims. If the breadth or strength of protection provided by the patents and patent applications we hold with respect to our product candidates is threatened, it could dissuade companies from collaborating with us to develop, and threaten our ability to commercialize, our product candidates. Further, if we encounter delays in our clinical trials, the period of time during which we could market our product candidates under patent protection would be reduced. Since patent applications in the United States and most other countries are confidential for a period of time after filing, we cannot be certain that we were the first to file any patent application related to our product candidates. Furthermore, for applications in which all claims are entitled to a priority date before March 16, 2013, an interference proceeding can be provoked by a third-party or instituted by the US PTO to determine who was the first to invent any of the subject matter covered by the patent claims of our applications. For applications containing a claim not entitled to priority before March 16, 2013, there is greater level of uncertainty in the patent law with the passage of the America Invents Act (2011), which brings into effect significant changes to the U.S. patent laws and which introduces new procedures for challenging pending patent applications and issued patents. A primary change under this reform is creating a “first to file” system in the United States. This will require us to be cognizant of the time from invention to filing of a patent application.

In addition to the protection afforded by patents, we seek to rely on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable, processes for which patents are difficult to enforce and any other elements of our drug discovery and development processes that involve proprietary know-how, information or technology that is not covered by patents. Although we require all of our employees to assign their inventions to us, and require all of our employees, consultants, advisors and any third parties who have access to our proprietary know-how, information or technology to enter into confidentiality agreements, we cannot be certain that our trade secrets and other confidential or proprietary information will not be disclosed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. Furthermore, the laws of some countries do not protect proprietary rights to the same extent or in the same manner as the laws of the United States. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the United States and abroad. If we are unable to prevent unauthorized material disclosure of our intellectual property to third parties, we will not be able to establish or maintain a competitive advantage in the market, which could materially adversely affect our business, operating results and financial condition.

Our reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor will discover them or that our trade secrets will be misappropriated or disclosed.

Because we rely on third parties to research, develop and manufacture our product candidates, we must, at times, share trade secrets with them. We seek to protect our proprietary technology in part by entering into confidentiality agreements and, if applicable, services agreements, material transfer agreements, consulting agreements, research agreements or other similar agreements with our advisors, employees, third-party contractors and consultants prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information, including our trade secrets. Despite the contractual provisions employed when working with third parties, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors, are inadvertently incorporated into the technology of others, or are disclosed or used in violation of these agreements. Given that our proprietary position is based, in part, on our know-how and trade secrets, a competitor’s discovery of our trade secrets or other unauthorized use or disclosure would impair our competitive position and may have a material adverse effect on our business.

In addition, these agreements typically restrict the ability of our advisors, employees, third-party contractors and consultants to publish data potentially relating to our trade secrets, although our agreements may contain certain limited publication rights. For example, any

academic institution that we may collaborate with will usually expect to be granted rights to publish data arising out of such collaboration. We often grant such rights, provided that we are notified in advance and given the opportunity to delay publication for a limited time period in order for us to secure patent protection of intellectual property rights arising from the collaboration and remove confidential or trade secret information from any such publication. In the future, we may also conduct joint research and development programs that may require us to share trade secrets under the terms of our research and development or similar agreements. Despite our efforts to protect our trade secrets, our competitors may discover our trade secrets, either through breach of our agreements with third parties, independent development or publication of information by any of our third-party collaborators. A competitor's discovery of our trade secrets would impair our competitive position and have an adverse impact on our business.

Third-party claims of intellectual property infringement may be costly and time consuming, and may delay or harm our drug discovery and development efforts.

Our commercial success depends in part on our avoiding infringement of the patents and proprietary rights of third parties. The pharmaceutical and biotechnology industries are characterized by extensive litigation over patent and other intellectual property rights. We may become a party to, or be threatened with, future adversarial litigation or other proceedings regarding intellectual property rights with respect to our drug candidates. As the pharmaceutical and biotechnology industries expand and more patents are issued, the risk increases that our drug candidates may give rise to claims of infringement of the patent rights of others.

While our product candidates are in preclinical studies and clinical trials, we believe that the use of our product candidates in these preclinical studies and clinical trials in the United States falls within the scope of the exemptions provided by 35 U.S.C. Section 271(e), which provides that it shall not be an act of infringement to make, use, offer to sell, or sell within the United States or import into the United States a patented invention solely for uses reasonably related to the development and submission of information to the FDA. As our product candidates progress toward commercialization, the possibility of a patent infringement claim against us increases. We attempt to ensure that our product candidates and the methods we employ to manufacture them, as well as the methods for their use which we intend to promote, do not infringe other parties' patents and other proprietary rights. There can be no assurance they do not, however, and competitors or other parties may assert that we infringe their proprietary rights in any event.

Third parties may hold or obtain patents or other intellectual property rights and allege in the future that the use of our product candidates infringes these patents or intellectual property rights, or that we are employing their proprietary technology without authorization. For example, we are aware of certain patents that have been acquired by FibroGen directed to certain heterocyclic carboxamide compounds that are described as inhibitors of prolyl-4-hydroxylase. Those patents, however, are believed to have expired as of December 2014.

We do not believe that there are any currently issued U.S. patents that conflict with our intellectual property rights; nor do we make any admission that any of such patents are valid, enforceable or infringed. Under U.S. law, a party may be able to patent a discovery of a new way to use a previously known compound, even if such compound itself is patented, provided the newly discovered use is novel and nonobvious. Such a method-of-use patent, however, if valid, only protects the use of a claimed compound for the specified methods claimed in the patent. This type of patent does not prevent persons from using the compound for any previously known use of the compound. Further, this type of patent does not prevent persons from making and marketing the compound for an indication that is outside the scope of the patented method. We are not aware of any valid U.S. patents issued to FibroGen, or any other person, that claim methods of using any of our product candidates for purposes of inhibiting hypoxia-inducible factor prolyl hydroxylases, or HIF-PHs, for the treatment of anemia secondary to CKD.

FibroGen has also filed other patent applications in the U.S. and other countries directed to purportedly new methods of using such previously known heterocyclic carboxamide compounds for purposes of treating or affecting specified conditions, and some of these applications have since issued as patents. To the extent any such patents issue or have been issued, we may initiate opposition or other legal proceedings with respect to such patents. We have discussed the status of the opposition proceedings against FibroGen's European '823, '153,'155 and '333 patents above in Item 1. Legal Proceedings.

There may be patents of third parties, including others owned by FibroGen, of which we are currently unaware with claims to compounds, materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our drug candidates. Also, because patent applications can take many years to issue, there may be currently pending patent applications which may later result in issued patents that our product candidates may infringe.

Third parties, including FibroGen, may in the future claim that our product candidates and other technologies infringe upon their patents and may challenge our ability to commercialize vadadustat. Parties making claims against us may seek and obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize vadadustat or AKB-6899. If any third-party patents were held by a court of competent jurisdiction to cover the manufacturing process of any of our product candidates, any molecules formed during the manufacturing process or any final product itself, the holders of any such patents may be able to block our ability to commercialize such product candidate unless we obtained a license under the applicable patents, or until such patents expire or they are finally determined to be held invalid or unenforceable. Similarly, if any third-party patent were held by

a court of competent jurisdiction to cover aspects of our formulations, processes for manufacture or our intended methods of use, including patient selection methods, the holders of any such patent may be able to block or impair our ability to develop and commercialize the applicable product candidate unless we obtained a license or until such patent expires or is finally determined to be held invalid or unenforceable. We may also elect to enter into a license in order to settle litigation or in order to resolve disputes prior to litigation. Furthermore, even in the absence of litigation, we may need to obtain licenses from third parties to advance our research or allow commercialization of our product candidates. Should a license to a third-party patent become necessary, we cannot predict whether we would be able to obtain a license or, if a license were available, whether it would be available on commercially reasonable terms. If such a license is necessary and a license under the applicable patent is unavailable on commercially reasonable terms, or at all, our ability to commercialize our product candidates may be impaired or delayed, which could in turn significantly harm our business.

Further, defense of infringement claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, pay royalties or redesign our products, which may be impossible or require substantial time and monetary expenditure.

We are currently involved in opposition and invalidity proceedings and may in the future be involved in lawsuits or administrative proceedings to challenge the patents of our competitors or to protect or enforce our patents, which could be expensive, time consuming, and unsuccessful.

We are currently involved in five opposition proceedings in the European Patent Office. These proceedings may be ongoing for a number of years and may involve substantial expense and diversion of employee resources from our business. In addition, we may become involved in additional opposition proceedings or other legal or administrative proceedings in the future. For more information, see the other risk factors under "Risks Related to Intellectual Property" and Item 1 – Legal Proceedings.

Competitors may infringe our patents or misappropriate our trade secrets or confidential information. To counter infringement or unauthorized use, we may be required to file infringement or misappropriation claims, which can be expensive and time-consuming. We may not be able to prevent infringement of our patents or misappropriation of our trade secrets or confidential information, particularly in countries where the laws may not protect those rights as fully as in the United States. In addition, in an infringement proceeding, a court may decide that a patent of ours is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or defense proceedings could put one or more of our patents at risk of being invalidated, held unenforceable, or interpreted narrowly and could put our patent applications at risk of not issuing. In addition, there may be a challenge or dispute regarding inventorship or ownership of patents or applications currently identified as being owned by or licensed to us. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business.

Various administrative proceedings are also available for challenging patents, including interference, reexamination, *inter partes* review, and post-grant review proceedings before the US PTO or oppositions and other comparable proceedings in foreign jurisdictions. Interference proceedings provoked by third parties or brought by the US PTO may be necessary to determine the priority of inventions with respect to our patents or patent applications. An unfavorable outcome could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms or at all. Even if we are successful, participation in interference or other administrative proceedings before the US PTO or a foreign patent office may result in substantial costs and distract our management and other employees.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation and some administrative proceedings, there is a risk that some of our confidential information could be compromised by disclosure. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees on any issued patent are due to be paid to the US PTO and foreign patent agencies in several stages over the lifetime of the patent. The US PTO and various foreign governmental patent agencies also require compliance with a number of procedural, documentary, fee payment (such as annuities) and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which non-compliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent

or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. In such an event, our competitors might be able to enter the market, which would have a material adverse effect on our business.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties.

We have received confidential and proprietary information from potential collaborators, prospective licensees and other third parties. In addition, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies. We may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed confidential information of these third parties or our employees' former employers. We may also be subject to claims that former employees, collaborators or other third parties have an ownership interest in our patents or other intellectual property. We may be subject to ownership disputes in the future arising, for example, from conflicting obligations of consultants or others who are involved in developing our drug candidates. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against these claims, litigation could result in substantial cost and be a distraction to our management and employees.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting and defending patents on our product candidates in all countries throughout the world would be prohibitively expensive. Consequently, the breadth of our intellectual property rights in some countries outside the United States may be less extensive than those in the United States. In addition, the laws of some countries do not protect intellectual property rights to the same extent as laws in the United States. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our inventions in and into the United States or other countries. Competitors may use our technologies in countries where we have not obtained patent protection to develop their own products and, further, may infringe our patents in territories where we have patent protection, but enforcement is not as strong as in the United States. These products may compete with our products and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in certain countries. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property, particularly those relating to pharmaceutical and biotechnology products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in countries outside of the United States could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Risks Related to Commercialization

Our future commercial success depends upon attaining significant market acceptance of our product candidates, if approved, among physicians, patients, third-party payors and others in the medical community.

Even if we obtain marketing approval for vadadustat, AKB-6899 or any other product candidates that we may develop or acquire in the future, these product candidates may not gain market acceptance among physicians, third-party payors, patients and others in the medical community. In addition, market acceptance of any approved products depends on a number of other factors, including:

- the safety and efficacy of the product, as demonstrated in clinical trials;
- the clinical indications for which the product is approved and the product label approved by regulatory authorities, including any warnings that may be required on the label;
- acceptance by physicians and patients of the product as a safe and effective treatment and the willingness of the target patient population to try new therapies and of physicians to prescribe new therapies;
- the cost, safety and efficacy of the product in relation to alternative treatments;
- the timing of product launch relative to competing products;
- the availability of adequate coverage and reimbursement by third-party payors and government authorities;

- the ability to contract with dialysis providers;
- relative convenience and ease of administration;
- the prevalence and severity of adverse side effects;
- the effectiveness of our sales and marketing efforts; and
- the restrictions on the use of our products together with other medications, if any.

Also, two of the largest operators of dialysis clinics in the United States, DaVita, Inc., or DaVita, and Fresenius Medical Care, or Fresenius, account for more than half of the injectable rESA sales in the U.S. dialysis market. We believe that it may be challenging to enter into long or short-term supply agreements with DaVita, Fresenius or other operators of dialysis clinics.

Market acceptance is critical to our ability to generate significant revenue. In addition, any product candidate, if approved and commercialized, may be accepted in only limited capacities or not at all. If any approved products are not accepted by the market to the extent that we expect, we may not be able to generate significant revenue and our business would suffer.

If we are unable to establish sales, marketing and distribution capabilities or to enter into agreements with third parties to market and sell our product candidates, we may not be successful in commercializing our product candidates if and when they are approved.

We do not have a sales or marketing infrastructure and we have not yet sold, marketed or distributed any of our products. To achieve commercial success for any product for which we obtain marketing approval, we will need to establish a sales and marketing organization or make arrangements with third parties to perform these services.

There are risks involved with establishing our own sales, marketing and distribution capabilities. For example, recruiting and training a sales force are expensive and time consuming and could delay any product launch. If the commercial launch of a product candidate for which we recruit a sales force and establish marketing capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel.

Factors that may inhibit our efforts to commercialize our products on our own include:

- our inability to recruit, train and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to and educate physicians regarding our products;
- our inability to effectively manage a geographically dispersed sales and marketing team;
- the lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines; and
- unforeseen costs and expenses associated with creating a sales and marketing organization.

If we are unable to establish our own sales, marketing and distribution capabilities and have to enter into arrangements with third parties to perform these services, our profitability, if any, is likely to be lower than if we were to market, sell and distribute any products that we develop ourselves. In addition, we may not be successful in entering into arrangements with third parties to sell, market and distribute our product candidates or may be unable to do so on terms that are favorable to us. We likely will have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively. If we do not establish sales, marketing and distribution capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates.

Coverage and reimbursement may be limited or unavailable in certain market segments for any approved products, which could make it difficult for us to sell our products profitably.

Market acceptance and sales of any approved products will depend significantly on the availability of adequate coverage and reimbursement from third-party payors and may be affected by existing and future healthcare reform measures. Government authorities and third-party payors decide which drugs they will pay for and establish formularies and reimbursement levels. Coverage and reimbursement by a third-party payor 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 coverage and reimbursement approval for a product from a government or other third-party 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 our products to the payor. Additionally, we may be required to enter into contracts with third-party payors to obtain favorable formulary status. We may not be able to agree upon commercially reasonable terms with such third-party payors or provide data sufficient to gain acceptance with respect to coverage and reimbursement. We cannot be sure that coverage or adequate reimbursement will be available for any of our product candidates. Even if we obtain coverage for our product candidates, third-party payors may not establish adequate reimbursement amounts, which may reduce the demand for, or the price of, our products. If reimbursement is not available or limited, we may not be able to commercialize certain of our products. In addition, in the United States third-party payors are increasingly attempting to contain healthcare costs by limiting both coverage and the level of reimbursement of new drugs. As a result, significant uncertainty exists as to whether and how much third-party payors will provide reimbursement for newly approved drugs, which in turn will put pressure on the pricing of drugs.

In addition, if vadadustat is used in an outpatient dialysis facility, such facilities often receive fixed reimbursement for all dialysis services furnished to patients with end-stage renal disease, or ESRD. For example, Medicare payments to ESRD facilities for such services are based on a prospective payment system known as the basic case-mix adjusted composite payment system. These payments cover a bundle of items and services routinely required for dialysis treatments furnished to Medicare beneficiaries in Medicare-certified ESRD facilities or at their home, including the cost of certain routine drugs such as vadadustat if approved. We may be unable to sell vadadustat, if approved, to dialysis providers on a profitable basis if third-party payors reduce their current levels of payment or if our costs of production increase faster than increases in reimbursement levels. Patient and provider access to adequate coverage and reimbursement by government and private insurance plans is central to the acceptance of any products for which we receive regulatory approval.

Price controls may be imposed, which may adversely affect our future profitability.

In some countries, particularly member states of the European Union, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after receipt of marketing approval for a product. In addition, there can be considerable pressure by governments and other stakeholders on prices and reimbursement levels, including as part of cost containment measures. Political, economic and regulatory developments may further complicate pricing negotiations, and pricing negotiations may continue after reimbursement has been obtained. Reference pricing used by various European Union member states and parallel distribution, or arbitrage between low-priced and high-priced member states, can further reduce prices. In some countries, we may be required to conduct a clinical trial or other studies that compare the cost-effectiveness of our product candidates to other available products in order to obtain or maintain reimbursement or pricing approval. Publication of discounts by third-party payors or government authorities may lead to further pressure on the prices or reimbursement levels within the country of publication and other countries. If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business could be adversely affected.

The impact of recent healthcare reform and other changes in the healthcare industry and in healthcare spending is currently unknown, and may adversely affect our business model.

Our revenue prospects could be affected by changes in healthcare spending and policy in the United States and abroad. We operate in a highly regulated industry and new laws, regulations or judicial decisions, or new interpretations of existing laws, regulations or decisions, related to healthcare availability or method of delivery or payment for healthcare products and services could negatively impact our business, operations and financial condition.

In the United States, the Medicare Prescription Drug, Improvement and Modernization Act of 2003, also called the MMA, changed the way Medicare covers and pays for pharmaceutical products. The legislation expanded Medicare coverage for drug purchases by the elderly and introduced a new reimbursement methodology based on average sales prices for physician-administered drugs. In addition, this legislation provided authority for limiting the number of drugs that will be covered in any therapeutic class. As a result of this legislation and the expansion of federal coverage of drug products, we expect that there will be additional pressure to reduce costs. For example, the Centers for Medicare and Medicaid Services, or CMS, has enacted regulations that reduced capitated payments to dialysis providers. These cost reduction initiatives and other provisions of this legislation could decrease the scope of coverage and the price that we receive for any approved products and could seriously harm our business. While the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policies and payment limitations in setting their own reimbursement rates, and any reduction in reimbursement that results from the MMA may cause a similar reduction in payments from private payors. Similar regulations or reimbursement policies may be enacted in international markets which could similarly impact our business.

In addition, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively PPACA, was enacted in 2010 with a goal of reducing the cost of healthcare and substantially changing the way healthcare is financed by both government and private insurers. The PPACA, among other things, increases the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extends the rebate program to individuals enrolled in Medicaid managed care organizations, establishes annual fees and taxes on manufacturers of certain branded prescription drugs, and creates a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D. In addition, other legislative changes have been proposed and adopted in the United States since the PPACA was enacted. On August 2, 2011, the Budget Control Act of 2011 created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers of up to 2% per fiscal year, which went into effect on April 1, 2013.

It is likely that federal and state legislatures within the United States and governments in other countries will continue to consider changes to existing healthcare legislation. We cannot predict the reform initiatives that may be adopted in the future or whether initiatives that have been adopted will be repealed or modified. 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 obtain coverage and reimbursement approval for a product;
- our ability to generate revenue and achieve or maintain profitability; and
- the level of taxes that we are required to pay.

If our product candidates obtain marketing approval, we will be subject to healthcare laws, regulation and enforcement and our failure to comply with those laws could have a material adverse effect on our results of operations and financial conditions.

If we obtain approval for any of our product candidates and begin commercializing them, our operations may be directly, or indirectly through our customers, subject to additional healthcare regulation and enforcement by the federal government, states and governments outside of the United States in which we conduct our business. The laws that may affect our ability to operate include:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons from knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, to induce, or in return for, the purchase or recommendation of an item or service reimbursable under a federal healthcare program, such as the Medicare and Medicaid programs;
- federal civil and criminal false claims laws and civil monetary penalty laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payors that are false or fraudulent;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created new federal criminal statutes that prohibit executing a scheme to defraud any healthcare benefit program and making false statements relating to healthcare matters;
- HIPAA as amended by the Health Information Technology and Clinical Health Act, or HITECH, and its implementing regulations, which imposes certain requirements relating to the privacy, security, and transmission of individually identifiable health information

- the federal physician "sunshine" requirements under PPACA, which requires manufacturers of drugs, devices, biologics, and medical supplies to report annually to CMS information related to payments and other transfers of value to physicians, other healthcare providers, and teaching hospitals, and ownership and investment interests held by physicians and other healthcare providers and their immediate family members;
- state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws, that may apply to items or services reimbursed by any third-party payor, including commercial insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the applicable compliance guidance promulgated by the federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available, it is possible that some of our business activities could be subject to challenge under one or more of such laws. In addition, recent healthcare reforms have strengthened these laws. For example, the PPACA, among other things, amends the intent requirement of the federal anti-kickback and criminal healthcare fraud statutes. A person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it. The PPACA also amended the False Claims Act, such that violations of the anti-kickback statute are now deemed violations of the False Claims Act. To constitute a false claim prior to this amendment, an anti-kickback violation had to be accompanied by a false statement, such as false certification of compliance.

If our operations are found to be in violation of any of such laws or any other governmental regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, the curtailment or restructuring of our operations, the exclusion from participation in federal and state healthcare programs and imprisonment, any of which could materially adversely affect our ability to operate our business and our financial results.

We face substantial competition, which may result in others discovering, developing or commercializing products before, or more successfully than, we do.

The development and commercialization of new drug products is highly competitive. Our future success depends on our ability to demonstrate and maintain a competitive advantage with respect to the development and commercialization of our product candidates. Our objective is to develop and commercialize new products with superior efficacy, convenience, tolerability and/or safety. In many cases, the products that we commercialize will compete with existing, market-leading products.

If vadadustat is approved and launched commercially, competing drugs may include EPOGEN® and Aranesp®, commercialized by Amgen, Procrit® and Eprex®, commercialized by Johnson & Johnson, and Mircera®, commercialized by Roche Holding Ltd., or Roche. We may face competition from potential new anemia therapies. There are several other HIF product candidates in various stages of active development for anemia indications that may be in direct competition with vadadustat if and when they are approved and launched commercially. These candidates are being developed by such companies as FibroGen, in collaboration with AstraZeneca PLC in the United States and China and with Astellas Pharma Inc. in Europe and Asia, Japan Tobacco International, GlaxoSmithKline plc and Bayer HealthCare AG. FibroGen is currently in Phase 3 clinical development of its product candidate, FG-4592 (roxadustat), and GlaxoSmithKline plc recently commenced Phase 3 studies of its product candidate, GSK-1278863 (daprodustat). Some of these product candidates may enter the market as early as 2017. In addition, certain companies are developing potential new therapies for renal-related diseases that could potentially reduce rESA utilization and thus limit the market for vadadustat if and when it is approved and launched commercially. Other new therapies are in development for the treatment of conditions inclusive of renal anemia, like sotatercept from Acceleron Pharma Inc., that may impact the market for anemia-targeted treatment.

Since rESAs are biologic products, the introduction of biosimilars into the rESA market in the United States will constitute additional competition for vadadustat if we are able to obtain approval for and commercially launch our product. A biosimilar product is a follow-on version of an existing, branded biologic product. The patents for the existing, branded product must expire in a given market before biosimilars may enter that market without risk of being sued for patent infringement. In addition, an application for a biosimilar product cannot be approved by the FDA until 12 years after the existing, branded product was approved under a Biologics License Application, or BLA. The patents for epoetin alfa, an rESA, expired in 2004 in the European Union, and the remaining patents expired between 2012 and 2015 in the United States. Several biosimilar versions of rESAs are available for sale in the European Union and biosimilar versions of rESAs are currently being studied in clinical trials in the United States.

Many of our potential competitors have significantly greater financial, manufacturing, marketing, drug development, technical and human resources than we do. Large pharmaceutical companies, in particular, have extensive experience in clinical testing, obtaining regulatory approvals, recruiting patients and manufacturing pharmaceutical products. Large and established companies such as Amgen and Roche, among others, compete in the market for drug products to treat anemia. In particular, these companies have greater

experience and expertise in conducting pre-clinical testing and clinical trials, obtaining regulatory approvals to market products, manufacturing such products on a broad scale and marketing approved products. These companies also have significantly greater research and marketing capabilities than we do and may also have products that have been approved or are in late stages of development, and have collaborative arrangements in our target markets with leading companies and research institutions. Established pharmaceutical companies may also invest heavily to accelerate discovery and development of novel compounds or to in-license novel compounds that could make the product that we develop obsolete. As a result of all of these factors, our competitors may succeed in obtaining patent protection and/or FDA approval or discovering, developing and commercializing products before, or more effectively than, we do. In addition, any new product that competes with an approved product must demonstrate compelling advantages in efficacy, convenience, tolerability and safety in order to overcome price competition and be commercially successful. If we are not able to compete effectively against potential competitors, our business will not grow and our financial condition and operations will suffer.

Our products may cause undesirable side effects or have other properties that delay or prevent their regulatory approval or limit their commercial potential.

Undesirable side effects caused by our products or even competing products in development that utilize a common mechanism of action could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in the denial of regulatory approval by the FDA or other regulatory authorities and potential product liability claims. In our Phase 2b study of vadadustat for the treatment of anemia secondary to CKD in patients not on dialysis, the incidence of the most common treatment emergent adverse events were well balanced overall between the vadadustat and placebo treatment groups. There was a higher incidence of serious adverse events (SAEs) reported in the vadadustat treatment group, the most common being renal-related. Serious adverse events deemed to be possibly or probably related to vadadustat could have a material adverse effect on the development of our product candidates and our business as a whole. Our understanding of adverse events in future clinical trials of our product candidates may change as we gather more information, and additional unexpected adverse events may be observed in future clinical trials.

If we or others identify undesirable side effects caused by our product candidates either before or after receipt of marketing approval, a number of potentially significant negative consequences could result, including:

- our clinical trials may be put on hold;
- patient recruitment could be slowed, or enrolled patients may not want to complete the clinical trial;
- we may be unable to obtain regulatory approval for our product candidates or regulatory authorities may withdraw approvals of product candidates;
- regulatory authorities may require additional warnings on the label;
- a medication guide outlining the risks of such side effects for distribution to patients may be required;
- we could be sued and held liable for harm caused to patients; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of our products and could substantially increase commercialization costs.

Risks Related to our Business and Industry

If we fail to attract and keep senior management and key personnel, we may be unable to successfully develop our products, conduct our clinical trials and commercialize our product candidates.

Recruiting and retaining qualified scientific, clinical, medical, manufacturing and sales and marketing personnel will also be critical to our success. We are highly dependent on certain members of our senior management. The loss of the services of our executives, senior managers or other key employees could impede the achievement of our research, development and commercialization objectives and seriously harm our ability to successfully implement our business strategy. Furthermore, replacing executives and other key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize products. We may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the intense competition among numerous biopharmaceutical companies for similar personnel.

We also experience competition for the hiring of personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may become employed by companies other than us and may have

commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to continue to attract and retain high quality personnel, our ability to grow and pursue our business strategy will be limited.

Our employees, independent contractors, principal investigators, CROs, consultants and vendors may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements and insider trading.

We are exposed to the risk that our employees, independent contractors, principal investigators, CROs, consultants and vendors may engage in fraudulent conduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or unauthorized activities that violate applicable laws, including (1) FDA and other healthcare authorities' regulations, including those laws that require the reporting of true, complete and accurate information to regulatory authorities, and those prohibiting the promotion of unapproved drugs or approved drugs for an unapproved use, (2) quality standards, including Good Laboratory Practices (GLP), GCP and GMP, (3) federal and state healthcare fraud and abuse laws and regulations, (4) anti-bribery and anti-corruption laws, such as the U.S. Foreign Corrupt Practices Act, that prohibit the making of improper payments to foreign officials for the purposes of obtaining any business advantage, (5) laws that require the reporting of true and accurate financial information and data and (6) securities laws and regulations. Specifically, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. It is not always possible to identify and deter misconduct by employees and third parties, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, or if any such action is instituted against our employees, consultants, vendors or principal investigators, those actions could have a significant impact on our business, including the imposition of civil, criminal and administrative penalties, damages, monetary fines, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

We may encounter difficulties in managing our growth and expanding our operations successfully.

As we seek to advance our product candidates through clinical trials and commercialization, we will need to expand our clinical, medical, regulatory, manufacturing, marketing and sales capabilities or contract with third parties to provide these capabilities for us. As our operations expand, we expect that we will need to manage additional relationships with various strategic collaborators, suppliers and other third parties. Future growth will impose significant added responsibilities on members of management. Our future financial performance and our ability to commercialize vadadustat, if approved, and any other product candidates and to compete effectively will depend, in part, on our ability to manage any future growth effectively. To that end, we must be able to manage our development efforts and clinical trials effectively and hire, train, integrate and retain additional personnel. We may not be able to accomplish these tasks, and our failure to accomplish any of them could prevent us from successfully growing our company.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our product candidates.

We face an inherent risk of product liability as a result of the clinical testing of our product candidates and will face an even greater risk if we commercialize any products. For example, we may be sued if any product we develop allegedly causes injury or is found to be otherwise unsuitable during product testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability and breach of warranties. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our product candidates. Even a successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, product liability claims may result in:

- decreased demand for any product candidates or products that we may develop;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- significant costs to defend the related litigation;
- a diversion of management's time and our resources;
- substantial monetary awards to study participants or patients;
- product recalls or withdrawals, or labeling, marketing or promotional restrictions;

- loss of revenue;
- the inability to commercialize any product candidates that we may develop; and
- a decline in our stock price.

Failure to obtain and retain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims could prevent or inhibit the commercialization of products we develop. We currently carry product liability insurance that we believe is appropriate for our stage of development and may need to obtain higher levels prior to marketing any of our product candidates. Although we maintain product liability insurance, any claim that may be brought against us could result in a court judgment or settlement in an amount that is not covered, in whole or in part, by our insurance or that is in excess of the limits of our insurance coverage. Our insurance policies also have various exclusions, and we may be subject to a product liability claim for which we have no coverage. We will have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could harm our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including chemicals and biological materials. Our operations also produce hazardous waste products. We generally contract with third parties for the use and disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from the use of hazardous materials by our employees or consultants, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties for failure to comply with such laws and regulations.

Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological, hazardous or radioactive materials.

In addition, we may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Our failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Risks Related to our Common Stock

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012. As a result, we intend to continue to take advantage of certain reduced disclosure requirements.

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;
- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and obtaining shareholder approval of any golden parachute payments not previously approved.

Investors may find our common stock less attractive if we continue to rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile. In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of these accounting standards until they would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this exemption and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

We could be an emerging growth company for up to five years from our initial public offering in March 2014, although circumstances could cause us to lose that status earlier, including if the market value of our common stock held by non-affiliates exceeds $700 million as of any June 30 before that time or if we have total annual gross revenue of $1 billion or more during any fiscal year

before that time, in which cases we would no longer be an emerging growth company as of the following December 31 or, if we issue more than $1 billion in non-convertible debt during any three-year period before that time, we would cease to be an emerging growth company immediately.

Our stock price has been and may continue to be volatile, and, as a result you may not be able to resell your shares at or above the public offering price.

Our stock price has been and may continue to be volatile. Since our initial public offering in March 2014, the price of our common stock as reported on The NASDAQ Global Market has ranged from a low of $5.91 on August 25, 2015 to a high of $31.00 on June 20, 2014. The market price of shares of our common stock could be subject to wide fluctuations in response to many risk factors listed in this section, and others beyond our control.

In addition, the stock market has recently experienced significant volatility, particularly with respect to pharmaceutical, biotechnology and other life sciences company stocks. The volatility of pharmaceutical, biotechnology and other life sciences company stocks often does not relate to the operating performance of the companies represented by the stock. As we operate in a single industry, we are especially vulnerable to the factors listed above to the extent that they affect our industry, markets or products. In the past, securities class action litigation has often been initiated against companies following periods of volatility in their stock price, and such an action has recently been filed against us. This type of litigation could result in substantial costs and divert our management’s attention and resources, and could also require us to make substantial payments to satisfy judgments or to settle litigation.

We and certain of our directors and executive officers are currently subject to securities class action litigation in connection with our initial public offering, which could result in substantial costs and divert management's attention.

A purported securities class action was filed against us and certain of our directors and executive officers alleging violation of federal securities laws. We believe such claims are without merit, and will engage in a vigorous defense of such litigation. In connection with such litigation, we could incur substantial costs and such costs and any related settlements or judgments may not be covered by insurance. We could also suffer an adverse impact on our reputation and a diversion of management's attention and resources, which could have a material adverse effect on our business.

Our principal stockholders and management own a significant percentage of our stock and will be able to exercise significant influence over matters subject to stockholder approval.

Our executive officers, directors and principal stockholders, together with their respective affiliates, collectively own a significant percentage of our stock. Accordingly, these stockholders will be able to exert a significant degree of influence over our management and affairs and over matters requiring stockholder approval, including the election of our Board of Directors and approval of significant corporate transactions. This concentration of ownership could have the effect of entrenching our management and/or the Board of Directors, delaying or preventing a change in our control or otherwise discouraging a potential acquirer from attempting to obtain control of us, which in turn could have a material and adverse effect on the fair market value of our common stock.

Provisions in our charter documents and Delaware law may have anti-takeover effects that could discourage an acquisition of us by others, even if an acquisition would be beneficial to our stockholders, and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our Amended and Restated Certificate of Incorporation and Amended and Restated By-Laws contain provisions that may have the effect of discouraging, delaying or preventing a change in control of us or changes in our management. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, because our Board of Directors is responsible for appointing the members of our management team, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our Board of Directors. Among other things, these provisions:

- authorize “blank check” preferred stock, which could be issued by our Board of Directors without stockholder approval and may contain voting, liquidation, dividend and other rights superior to our common stock;
- create a classified Board of Directors whose members serve staggered three-year terms;
- specify that special meetings of our stockholders can be called only by our Board of Directors pursuant to a resolution adopted by a majority of the total number of directors;
- prohibit stockholder action by written consent;
- establish an advance notice procedure for stockholder approvals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to our Board of Directors;

- provide that our directors may be removed only for cause;
- provide that vacancies on our Board of Directors may be filled only by a majority of directors then in office, even though less than a quorum;
- require a supermajority vote of the holders of our common stock or the majority vote of our Board of Directors to amend our Amended and Restated By-Laws; and
- require a supermajority vote of the holders of our common stock to amend the classification of our Board of Directors into three classes and to amend certain other provisions of our Amended and Restated Certificate of Incorporation.

These provisions, alone or together, could delay or prevent hostile takeovers and changes in control or changes in our management.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

Any provision of our Amended and Restated Certificate of Incorporation, our Amended and Restated By-Laws or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our common stock, and could also affect the price that some investors are willing to pay for our common stock.

Our ability to use net operating losses to offset future taxable income may be subject to certain limitations.

In general, under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, a corporation that undergoes an "ownership change" is subject to limitations on its ability to utilize its pre-change net operating losses, or NOLs, to offset future taxable income. Our existing NOLs may be subject to substantial limitations arising from previous ownership changes and our ability to utilize NOLs could be further limited by Section 382 of the Code. Future changes in our stock ownership, many of which are outside of our control, could result in an ownership change under Section 382 of the Code. Our NOLs may also be impaired under state law. Accordingly, we may not be able to utilize a material portion of our NOLs. Furthermore, our ability to utilize our NOLs is conditioned upon our attaining profitability and generating U.S. federal taxable income. As described above under "—Risks related to our financial position and need for additional capital," we have incurred significant net losses since our inception and anticipate that we will continue to incur significant losses for the foreseeable future; thus, we do not know whether or when we will generate the U.S. federal taxable income necessary to utilize our NOLs. A full valuation allowance has been provided for the entire amount of our NOLs.

Our Amended and Restated Certificate of Incorporation designates the state or federal courts located in the State of Delaware as the sole and exclusive forum for certain types of actions and proceedings that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our Amended and Restated Certificate of Incorporation provides that, subject to limited exceptions, the state and federal courts located in the State of Delaware will be the sole and exclusive forum for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (3) any action asserting a claim against us arising pursuant to any provision of the Delaware General Corporation Law, our Amended and Restated Certificate of Incorporation or our Amended and Restated By-Laws or (4) any other action asserting a claim against us that is governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and to have consented to the provisions of our Amended and Restated Certificate of Incorporation described above. This choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and employees. Alternatively, if a court were to find these provisions of our Amended and Restated Certificate of Incorporation inapplicable to, or unenforceable with respect to, one or more of the specified types of actions or proceedings, we may incur additional costs associated with resolving such matters in other jurisdictions, which could adversely affect our business and financial condition.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Recent Sales of Unregistered Securities

During the quarter ended September 30, 2016, we did not have any sales of unregistered securities.

Item 3. Defaults upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

The following disclosure is provided in accordance with and in satisfaction of the requirements of Item 2.02 " *Results of Operations and Financial Condition* " of Form 8-K:

On November 9, 2016, Akebia announced its financial results for the quarter ended September 30, 2016 and commented on certain corporate accomplishments and plans. The full text of the press release issued in connection with the announcement is furnished as Exhibit 99.1 hereto.

The information furnished in Item 5 (including Exhibit 99.1) shall not be deemed "filed" for purposes of Section 18 of the Exchange Act, or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such a filing.

Item 6. Exhibits.

Exhibits

10.1	Third Amendment to Office Lease Agreement Between Jamestown Premier 245 First, LLC and Akebia Therapeutics, Inc., dated July 25, 2016.
31.1	Certification of Principal Executive Officer Required Under Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended.
31.2	Certification of Principal Financial Officer Required Under Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended.
32.1	Certification of Principal Executive Officer and Principal Financial Officer Required Under Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. 1350.
99.1	Press Release issued by Akebia Therapeutics, Inc. on November 9, 2016 (furnished herewith).
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

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.

AKEBIA THERAPEUTICS, INC.

Date: November 9, 2016

By: /s/ John P. Butler
John P. Butler
Chief Executive Officer and President

Date: November 9, 2016

By: /s/ Jason A. Amello
Jason A. Amello
Senior Vice President, Chief Financial Officer and Treasurer

Exhibit 10.1

THIRD AMENDMENT TO LEASE

This Third Amendment to Lease (this "**Third Amendment**") is entered into as of July 25, 2016, (the "**Execution Date**") by and between **JAMESTOWN PREMIER 245 FIRST, LLC**, a Delaware limited liability company (the "**Landlord**"), and **AKEBIA THERAPEUTICS, INC.**, a Delaware corporation (the "**Tenant**").

WHEREAS, Landlord's predecessor and Tenant entered into that certain Office Lease Agreement dated as of December 3, 2013, as amended by a First Amendment to Lease dated as of December 15, 2014 (the "**First Amendment**") and a Second Amendment to Lease dated as of November 23, 2015 (the "**Second Amendment**") (as amended, the "**Lease**") for the lease of certain premises containing a total of 39,411 rentable square feet of office space (the "**Existing Premises**") on the eleventh (11th) and fourteenth (14th) floors of the Office Building located at 245 First Street, Cambridge, MA 02142 (the "**Office Building**") located in Cambridge Science Center (the "**Property**"), consisting of the Office Building and a second building referred to as the "**Science Building**". The Science Building and Office Building are collectively referred to as the "**Buildings**" and in this Third Amendment, the Science Building is also referred to as the "**Building**". The "**Rentable Square Footage of the Buildings**" is deemed to be 297,632 square feet. The "**Rentable Square Footage of the Science Building**" is deemed to be 132,928 square feet, and "**Rentable Square Footage of the Office Building**" is deemed to be 164,704 square feet;

WHEREAS, Tenant desires to lease approximately 5,951 rentable square feet of office, research, development, and laboratory space (the "**First Floor Premises**") as shown on Exhibit A, Third Amendment, attached hereto and incorporated herein, located on the first (1st) floor of the Science Building with an appurtenant right, in common with others, to use the PH neutralization room (the "**PH System Room**") that contains the PH systems of other tenants, including Tenant, on the first (1st) floor of the Science Building; and to pay a Tank Fee (as hereinafter defined) for its use of the PH System Room.

WHEREAS, Landlord and Tenant desire to amend the Lease to reflect (i) the expansion of the Existing Premises to include the First Floor Premises and (ii) Tenant's appurtenant right to use the PH System Room.

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant agree that the Lease is hereby amended as follows:

1. Demise of First Floor Premises. Landlord hereby demises and leases to Tenant, and Tenant hereby hires and takes from Landlord, the First Floor Premises. Said demise and lease of the First Floor Premises shall be for a term (the "**First Floor Premises Term**") commencing on the date (the "**First Floor Premises Commencement Date**") that Landlord delivers the First Floor Premises to Tenant in the condition required hereunder and free of tenants and occupants, equipment (excluding laboratory equipment that are fixtures and are currently located in the First Floor Premises), and other personal property and broom clean,

which date is anticipated to occur on or about October 1, 2016 (the "**Estimated First Floor Premises Commencement Date**") and expiring on the date (the "**First Floor Premises Termination Date**") that is the last day of the sixtieth (60th) full calendar month after the First Floor Premises Rent Commencement Date, as hereinafter defined. The "**First Floor Premises Rent Commencement Date**" shall be the date that is the earlier of (i) the date Tenant occupies the First Floor Premises for the conduct of Tenant's business and (ii) the date that is two (2) months after the First Floor Premises Commencement Date. Landlord shall use all commercially reasonable efforts to deliver the First Floor Premises to Tenant on or before the Estimated First Floor Premises Commencement Date in the condition required hereunder; however, the failure of Landlord to do so shall in no way affect the validity of the Lease, this Third Amendment, or the obligations of Tenant hereunder, and Tenant shall not have any claim against Landlord by reason thereof. Notwithstanding the foregoing, if Landlord does not deliver the First Floor Premises to Tenant on or before December 1, 2016 (which date shall be extended automatically for such periods of time as Landlord is prevented from delivering the First Floor Premises by reason of causes beyond Landlord's reasonable control or any act or failure to act of Tenant which interferes with Landlord's ability to deliver the First Floor Premises, without limiting Landlord's other rights on account thereof, provided Landlord shall notify Tenant of any action or inaction of Tenant that is preventing Landlord from delivering the First Floor Premises) (the "**Outside Date**"), then Tenant shall be entitled to a credit (to be applied following the First Floor Premises Rent Commencement Date) in an amount equal to the product of: (i) $1,141.29 multiplied by (ii) the number of days that elapse after December 1, 2016, as the same may be extended as aforesaid, until the date Landlord delivers the First Floor Premises to Tenant. After the First Floor Premises Commencement Date, the First Floor Premises Rent Commencement Date, and the First Floor Premises Termination Date are determined, the parties shall, upon the written request of either party, execute an agreement confirming such dates.

Said lease of the First Floor Premises shall be upon all of the terms and conditions set forth in the Lease applicable to the Existing Premises, except to the extent inconsistent with the provisions set forth in this Third Amendment. Effective as of the First Floor Premises Commencement Date, (x) the "First Floor Premises" shall be included in the definition of "Premises" for all purposes of the Lease, (y) "**Tenant's First Floor Premises Building Pro Rata Share**" shall be 4.48% (i.e., a fraction, the numerator of which is the rentable area of the First Floor Premises, and the denominator of which is the Rentable Square Footage of the Science Building), and (z) "**Tenant's First Floor Premises Common Area Pro Rata Share**" shall be 2% (i.e., a fraction, the numerator of which is the rentable area of the First Floor Premises, and the denominator of which is the Rentable Square Footage of the Buildings).

A. Rent--First Floor Premises. Commencing on the First Floor Premises Rent Commencement Date, Tenant shall pay Base Rent and Additional Rent for the First Floor Premises as set forth below.

(i) Base Rent—First Floor Premises.

Lease Year*	Annual Base Rent	Monthly Base Rent	Per Rentable Square Foot
First Floor Premises Rent Commencement Date through the end of Lease Year 1	$416,570.00	$34,714.17	$70.00
Lease Year 2	$424,901.40	$35,408.45	$71.40
Lease Year 3	$433,411.33	$36,117.61	$72.83
Lease Year 4	$442,099.79	$36,841.65	$74.29
Lease Year 5	$450,966.78	$37,580.57	$75.78

*"**Lease Year**" shall be defined as a twelve-(12)-month period beginning on the First Floor Premises Rent Commencement Date or an anniversary of the First Floor Premises Rent Commencement Date, except that if the First Floor Premises Rent Commencement Date does not fall on the first day of a calendar month, then the first Lease Year shall begin on the First Floor Premises Rent Commencement Date and end on the last day of the month containing the first anniversary of the First Floor Premises Rent Commencement Date, and each succeeding Lease Year shall begin on the day following the last day of the prior Lease Year, and the monthly Base Rent for the first month of such Lease Year shall be appropriately prorated.

(ii) Expenses and Taxes—First Floor Premises. Commencing on the First Floor Premises Rent Commencement Date, Tenant shall pay, as Additional Rent, (x) Tenant's First Floor Premises Building Pro Rata Share of Expenses, (y) Tenant's First Floor Premises Common Area Pro Rata Share of Common Area Expenses, and (z) Tenant's First Floor Premises Common Area Pro Rata Share Taxes relating to or allocable to the Land, in accordance with the provisions of Exhibit B, Third Amendment, attached hereto and incorporated herein.

(iii) Electricity—First Floor Premises. Landlord shall provide electricity for lights and plugs in the First Floor Premises, which electricity shall be measured by a meter serving the First Floor Premises together with certain other premises on the first floor of the Building. Tenant agrees to pay Landlord, as Additional Rent, an annual charge for such electrical consumption (the "**Tenant Electricity Charge**") payable, on an estimated basis, in twelve (12) equal monthly installments, payable in advance on the first day of each calendar month during the Term hereof, in an amount reasonably estimated by Landlord. The actual Tenant Electricity Charge shall be calculated by multiplying the total annual amount billed to such meter by the applicable utility company by a fraction, the numerator of which is the number of rentable square feet in the First Floor Premises, and the denominator of which is the number of rentable square feet in all areas served by such meter, including the First Floor Premises, which were occupied during the period covered by each such bill (appropriately pro-rated to reflect any partial occupancy). Following the end of each calendar year (or partial calendar year), Landlord shall furnish to Tenant a comparative statement showing Tenant's actual

consumption of electric energy and the amounts paid by Tenant for such electricity on an estimated basis during such year. Based on Tenant's actual usage, any underpayment by Tenant shall be promptly adjusted by payment to Landlord within thirty (30) days of the balance of any underpayment for such year, and any overpayment by Tenant shall be applied as a credit to the next succeeding monthly installment of the Tenant Electricity Charge.

Notwithstanding the foregoing, upon prior written notice to Landlord, Tenant shall have the right, at its sole cost and expense, to install a submeter in the First Floor Premises to measure the electrical consumption in the First Floor Premises.

(iv) Other Utilities. Tenant shall pay directly to the proper authorities charged with the collection thereof, all charges for (i) telephone (Tenant shall be responsible for installing high-speed fiber data service from the first floor communications closet to the First Floor Premises), and (ii) other separately metered or check metered utilities or services used or consumed on the First Floor Premises, including, without limitation, HVAC provided to the First Floor Premises, whether called charge, tax, assessment, fee or otherwise, including, without limitation, all such charges to be paid as the service from time to time becomes due. In the event Tenant desires to establish gas service in connection with Tenant's use of the First Floor Premises, Tenant shall arrange to install, at Tenant's sole cost and expense, a check meter(s) and any other related infrastructure improvements necessary to provide such gas service, subject to Landlord's approval thereof.

B. First Floor Premises Condition/Tenant's First Floor Premises Work.

(i) Except for Landlord's obligation to provide Landlord's First Floor Premises Contribution, as hereinafter defined, the First Floor Premises shall be leased by Tenant "as-is" and "where is", in the condition in which the First Floor Premises is in as of the Execution Date, and in the condition in which Landlord is required to deliver the First Floor Premises to Tenant under this Third Amendment, and as further provided in this paragraph, and without Landlord or Landlord's agents having made any representations or warranties with respect to the First Floor Premises or the Science Building or the Property except as expressly set forth herein. Except for Landlord's obligations to provide Landlord's First Floor Premises Contribution and to deliver the First Floor Premises in the condition required by this Third Amendment, Landlord has no obligation to perform any work, supply any materials, incur any expense or make any alterations, additions or improvements to the First Floor Premises. Notwithstanding the foregoing, Landlord agrees that as of the First Floor Premises Commencement Date, (x) Landlord shall deliver the First Floor Premises to Tenant decontaminated by a Certified Industrial Hygienist free of any Hazardous Materials (as hereinafter defined) and provide written evidence of such decontamination, (y) the roof of the Building shall be watertight, and (z) the common building systems (including the HVAC, electrical, life safety and plumbing systems, the Acid Neutralization Tank and Emergency Generator) of the Science Building shall be in good working order.

(ii) Tenant's First Floor Premises Work. Tenant shall perform the leasehold improvements to prepare the First Floor Premises for Tenant's occupancy ("**Tenant's First Floor Premises Work**") in accordance with plans and specifications ("**Tenant's First Floor Premises Plans**"), which shall be submitted to Landlord for its approval. Tenant's First

Floor Premises Work shall be performed, and Landlord's approval of Tenant's First Floor Premises Plans shall be delivered, in accordance with Section 9.03 of the Lease except that (i) after Landlord's initial approval of Tenant's First Floor Premises Plans, Landlord's approval shall only be required for material changes to Tenant's First Floor Premises Plans, and (ii) Landlord shall provide its approval (or disapproval) of Tenant's First Floor Premises Plans within the Initial Submittal Response Period, as hereinafter defined, after receipt thereof (and with respect to any material changes to Tenant's First Floor Premises Plans, or resubmissions of Tenant's First Floor Premises Plans following Landlord's disapproval thereof, within the Resubmittal Response Period, as hereinafter defined, after receipt thereof) and any disapproval shall be accompanied by a detailed written explanation for the basis of such disapproval. For the purposes of this Section 1.B(ii):

(1) the "**Initial Submittal Response Period**" shall be defined as ten (10) Business Days, except that if, in Landlord's reasonable judgment, Tenant's First Floor Premises Plans must be reviewed by a third party engineer or consultant (e.g., because Tenant's First Floor Premises Work, as shown on Tenant's First Floor Premises Plans, affect the structure or systems of the Science Building), then the Initial Submittal Respond Period shall be fifteen (15) Business Days;

(2) the "**Resubmittal Response Period**" shall be defined as five (5) Business Days, except that if, in Landlord's reasonable judgment, Tenant's First Floor Premises Plans must be reviewed by a third party engineer or consultant (e.g., because Tenant's First Floor Premises Work, as shown on Tenant's First Floor Premises Plans, affect the structure or systems of the Science Building), then the Resubmittal Response Period shall be ten (10) Business Days.

(iii) Except for Landlord's First Floor Premises Contribution, Tenant's First Floor Premises Work shall be performed at Tenant's sole cost and expense, using Building standard methods, materials, and finishes. Notwithstanding anything to the contrary contained in the Lease, Tenant shall be permitted to use its own general contractor and subcontractors to perform Tenant's First Floor Premises Work, which general contractor and subcontractors shall be subject to Landlord's prior approval, which shall not be unreasonably withheld, conditioned or delayed.

C. Landlord's First Floor Premises Contribution. Landlord shall, in the manner hereinafter set forth, provide Tenant with Landlord's First Floor Premises Contribution to be used to pay for Permitted Costs, as hereinafter defined, incurred by Tenant in connection with Tenant's First Floor Premises Work. Landlord's First Floor Premises Contribution shall not exceed $89,265.00 (i.e., $15.00 per rentable square foot of the First Floor Premises) ("**Maximum Contribution**"). "**Permitted Costs**" shall be defined as Hard Costs and Soft Costs, each as hereinafter defined. "**Hard Costs**" shall be defined as the cost of acquisition, installation, and performance of leasehold improvements, demolition, and building permits. "**Soft Costs**" shall include the costs of furniture, fixtures and equipment installed by Tenant in the First Floor Premises, fees of any owner's construction representative, architectural and design fees, data/telecom cabling, and moving costs. "**Landlord's First Floor Premises Contribution**" shall be the lesser of (i) the actual Permitted Costs incurred by Tenant and (ii) the Maximum Contribution. Landlord shall receive a construction management fee equal to one

percent (1%) of the Hard Costs of Tenant's First Floor Premises Work. Such fee shall be deducted from Landlord's First Floor Premises Contribution. In addition to Landlord's First Floor Premises Contribution, Landlord shall provide Tenant with a "test fit" allowance of up to ten cents ($0.10) per rentable square foot of the First Floor Premises (i.e., a maximum of $595.10), which test fit allowance shall be used solely to reimburse Tenant for any expenses incurred in connection with the preparation of "test fit" plans and drawings in connection with the preparation of the First Floor Premises Plans.

(i) Disbursement Procedures. Provided there shall then exist no Default (as said term is defined in Section 18 of the Lease) beyond any applicable notice and cure period under the Lease at the time that Tenant submits any Requisition (as defined in Section 8 of the Second Amendment) of Landlord's First Floor Premises Contribution, Landlord shall pay the cost of the work shown on each Requisition submitted by Tenant to Landlord within twenty (20) days of submission thereof by Tenant to Landlord. If requested by Tenant at the time of Tenant's submission of such Requisition, Landlord shall make such payment directly to Tenant's contractor. If Landlord declines to fund any Requisition on the basis of a Default of Tenant under the Lease, provided that the Lease is in full force and effect and Tenant cures such Default in accordance with the terms and conditions of the Lease, then, subject to the provisions set forth herein, Tenant shall have the right to resubmit such declined Requisition, and Landlord shall pay any amounts properly due under such resubmitted Requisition.

(ii) Each Tenant Requisition shall be accompanied by the following: (1) a detailed breakdown of the costs of Tenant's First Floor Premises Work for which Tenant is seeking payment, (2) a copy of each Application for Payment (substantially on the standard AIA form) from Tenant's contractor for all contractor charges included in the Requisition, (3) copies of invoices for any architectural fees and other costs not covered by a contractor's Application for Payment that are included in Tenant's Requisition, (4) a certification by an appropriate officer of Tenant or by Tenant's architect that all of the construction work to be paid for with Landlord's First Floor Premises Contribution has been completed in a good and workmanlike manner, in accordance with Tenant's First Floor Premises Plans, as the case may be, (5) executed waivers of mechanic's or material supplier's liens from contractors who have performed work in excess of $10,000.00 (in such form as Landlord shall reasonably require) waiving, releasing and relinquishing all liens, claims and rights to lien under applicable laws on account of any labor, materials and/or equipment furnished by any party through the date of Tenant's Requisition (provided that any such waiver may be conditioned upon receipt of the amount requested for such party in Tenant's Requisition), and (6) a certification by an appropriate officer of Tenant that Tenant has made (or upon receipt of the amount requested in the Tenant's Requisition shall make) full payment for all of the work and other costs of Tenant's First Floor Premises Work, as the case may be, covered by the Requisition. Upon the earlier to occur of the date that is (A) fifteen (15) days following Substantial Completion (as hereinafter defined), or (B) the date of submission of a Requisition for the final ten percent (10%) of Landlord's First Floor Premises Contribution (the "**Final Requisition**"), in addition to delivering the documentation required in subclauses (1) through (6) above, such Final Requisition shall also be accompanied by all items required to be delivered by Tenant pursuant to Section 9.03 of the Lease. For the purposes of this Third Amendment, "**Substantial Completion**" shall mean that Tenant's First Floor Premises Work is completed in such a fashion as to enable Tenant, upon furnishing the same, to open for business in the normal course.

D. Conditions to Payment of Landlord's First Floor Premises Contribution. Notwithstanding anything to the contrary herein contained:

(i) Except with respect to work and/or materials previously paid for by Tenant, as evidenced by paid invoices and written lien waivers provided to Landlord, Landlord shall have the right with respect to any Tenant contractor or vendor that has filed a lien against the Property for work performed, or claimed to be performed, which has not been discharged or bonded over to Landlord's reasonable satisfaction in accordance with Section 12 of the Lease, to have Landlord's First Floor Premises Contribution paid to both Tenant and such contractor or vendor jointly, or directly to such contractor or vendor.

(ii) Landlord shall have no obligation to pay Landlord's First Floor Premises Contribution in respect of any Requisition submitted after the date (the "**Outside Requisition Date**") that is twelve (12) months after the First Floor Premises Rent Commencement Date.

(iii) Tenant shall not be entitled to any unused portion of Landlord's First Floor Premises Contribution provided, however, that notwithstanding the foregoing, Tenant shall be entitled to apply up to twenty percent (20%) of the Landlord's First Floor Contribution towards Base Rent due hereunder.

(iv) Tenant may not use more than $13,389.75 of Landlord's First Floor Premises Contribution to pay for Soft Costs.

(v) If Landlord fails timely to pay any portion of Landlord's First Floor Premises Contribution when properly due to Tenant, and if Landlord fails to cure such failure within twenty (20) days after notice from Tenant, Tenant shall have the right to offset such past due amount from the next installment(s) of Base Rent and other charges due under the Lease.

E. First Floor Premises--Cleaning. Tenant shall be responsible, at its sole cost and expense, for janitorial and trash removal services and other biohazard disposal services for the First Floor Premises, including the laboratory areas thereof. Such services shall be performed by licensed (where required by law or governmental regulation), insured and qualified contractors approved in advance, in writing, by Landlord (which approval shall not be unreasonably withheld, delayed or conditioned) and on a sufficient basis to ensure that the First Floor Premises is at all times kept neat and clean.

F. First Floor Premises--Maintenance and Repairs by Tenant. Tenant shall keep the First Floor Premises neat and clean and free of insects, rodents, vermin and other pests and in the same repair, order and condition as on the First Floor Premises Commencement Date, including without limitation the entire interior of the First Floor Premises, all electronic, phone and data cabling and related equipment that is installed by or for the exclusive benefit of the Tenant (whether located in the First Floor Premises or other portions of the Science Building), all fixtures, equipment and lighting therein, electrical equipment wiring, doors, nonstructural walls, windows and floor coverings, reasonable wear and tear and damage by Casualty excepted. Tenant shall be solely responsible, at Tenant's sole cost and expense, for the proper maintenance

of the Science Building systems, life safety, sanitary, electrical, heating, air conditioning, plumbing, security or other systems and of all equipment and appliances located within and/or exclusively serving the First Floor Premises. Tenant agrees to provide regular maintenance by a contract with a reputable qualified service contractor for the heating and air conditioning equipment servicing the First Floor Premises. Such maintenance contract and contractor shall be subject to Landlord's reasonable approval. Tenant, at Landlord's request, shall at reasonable intervals provide Landlord with copies of such contract and maintenance and repair records and/or reports. Landlord hereby agrees to provide access to those areas of the Building located outside the First Floor Premises, which are necessary for Tenant to perform its maintenance obligations hereunder.

G. First Floor Premises—Permitted Use. Subject to all applicable Law(s), including, without limitation, Environmental Laws (as hereinafter defined), Tenant may use the First Floor Premises for general office, research, development and laboratory use and other ancillary uses related to the foregoing in accordance with Section 5 of the Lease.

H. First Floor Premises—Hazardous Materials. Tenant shall not, without the prior review and approval of Landlord (which approval shall not be unreasonably withheld, conditioned or delayed), generate, produce, bring in, use, store, treat or dispose of any Hazardous Materials in or about or on the Buildings other than those Hazardous Materials set forth on Exhibit C, Third Amendment; provided that such Hazardous Materials set forth on Exhibit C, Third Amendment, shall only be generated, produced, brought upon, used, stored, treated or disposed of in the First Floor Premises. If Tenant desires to generate, produce, bring in, use, store, treat or dispose of any Hazardous Materials in or about the Buildings other than those Hazardous Materials set forth in Exhibit C, Third Amendment, Tenant shall request Landlord's consent thereto in writing ("**Tenant's Request**") setting forth the name(s) of such Hazardous Materials, the anticipated quantities of such Hazardous Materials, and the intended use of such Hazardous Materials, and Landlord shall use commercially reasonable efforts to respond to Tenant's Request within five (5) Business Days of receipt thereof. If Landlord shall fail to respond to Tenant's Request within such five-(5)-Business-Day period, then Tenant may, after the expiration of such five-(5)-Business-Day period, give Landlord another request ("**Second Request**") therefor, which shall state in bold face, capital letters at the top thereof: "**WARNING: SECOND REQUEST. FAILURE TO RESPOND TO THIS REQUEST WITHIN THREE (3) BUSINESS DAYS SHALL RESULT IN DEEMED APPROVAL THEREOF**." If Landlord does not respond within three (3) Business Days after receipt of the Second Request, then Landlord's consent to Tenant's Request shall be deemed to have been granted. From time to time at Landlord's request, Tenant shall execute affidavits, representations and the like concerning Tenant's best knowledge and belief regarding the presence or absence of Hazardous Materials on the Premises or the Property, and shall provide copies of all required permits for Tenant's activities in the Premises. Furthermore, upon written request from Landlord from time to time, Tenant shall provide Landlord with a list detailing the types and amounts of all Hazardous Materials being generated, produced, brought upon, used, stored, treated or disposed of by or on behalf of Tenant in or about or on the First Floor Premises, the Buildings, or Property, and upon Landlord's written request (not to be made more frequently that quarterly), copies of any reasonable manifests or other federal, state or municipal filings by Tenant with respect to such Hazardous Materials used in the First Floor Premises`.

2. PH System Room. In connection with Tenant's lease of the First Floor Premises, Tenant shall have the appurtenant right, in common with other laboratory tenants of the Building, to use the PH System Room solely for the operation of the Acid Neutralization Tank (defined below) and for no other purpose, for a term commencing on the First Floor Premises Commencement Date and expiring on First Floor Premises Termination Date, as the same may be extended pursuant to Section 4 of this Third Amendment. For avoidance of doubt, the PH System Room shall not be considered a part of the Premises, and Tenant shall have no occupancy rights with respect to the PH System Room.

A. Tank Fee. Commencing on the First Floor Premises Rent Commencement Date, Tenant shall pay, as Additional Rent, a "**Tank Fee**" for its use of the PH System Room as set forth below. The Tank Fee shall be paid at the same time and in the same manner as Annual Base Rent and shall be subject to the terms and conditions set forth in Section 5.4 of the Lease.

Lease Year	Annual License Fee	Monthly License Fee
First Floor Premises Rent Commencement Date through the end of Lease Year 1	$3,150.00	$262.50
Lease Year 2	$3,213.00	$267.75
Lease Year 3	$3,277.35	$273.11
Lease Year 4	$3,343.05	$278.59
Lease Year 5	$3,410.10	$284.18

B. Condition of PH System Room. The PH System Room shall be used by Tenant "as-is" and "where is", in the condition in which the PH System Room is in as of the First Floor Premises Commencement Date, and without Landlord or Landlord's agents having made any representations or warranties with respect to the PH System Room or the Science Building or the Property except as expressly set forth herein. Except as otherwise expressly provided in this Third Amendment, Landlord has no obligation to perform any work, supply any materials, incur any expense or make any alterations, additions or improvements to the PH System Room. Tenant shall have no right to make any improvements to the PH System Room.

C. Acid Neutralization Tank. As of the Execution Date, there is an acid neutralization tank (the "**Acid Neutralization Tank**") that is located in the PH System Room on the first (1st) floor of the Science Building, which shall be connected to the First Floor Premises. Tenant shall have the appurtenant right, throughout the First Floor Premises Term, to use the Acid Neutralization Tank in accordance with applicable Law(s). Tenant shall obtain, and maintain, all governmental permits and approvals necessary for Tenant's use of the Acid Neutralization Tank. Landlord shall maintain all permits and approvals necessary for the operation of the Acid Neutralization Tank and the connection to the MWRA (as such term is

defined herein) system. In addition to paying the Tank Fee, Tenant shall be responsible for paying, as Additional Rent, Tenant's Tank Costs Share, as hereinafter defined, of all costs, charges and expenses incurred from time to time in connection with or arising out of the operation, use, maintenance, repair or replacement of the Acid Neutralization Tank, including all clean-up costs relating to the Acid Neutralization Tank (collectively, "**Tank Costs**") unless caused by the negligence or willful misconduct of Landlord. As used herein, as of the Execution Date, "**Tenant's Tank Costs Share**" shall mean fifty percent (50%). Tenant shall indemnify, save, defend (at Landlord's option and with counsel reasonably acceptable to Landlord) and hold Landlord harmless from and against any and all claims and sums paid in settlement of claims that arise during or after the First Floor Premises Term as a result of Tenant's improper use of the Acid Neutralization Tank, except to the extent such claims result from the negligence or willful misconduct of Landlord or any other party using the Acid Neutralization Tank. This indemnification by Tenant includes costs incurred in connection with any investigation of site conditions or any clean-up, remediation, removal or restoration required by any governmental authority to the extent caused by Tenant's improper use of the Acid Neutralization Tank. In the event Landlord deems it necessary to replace the Acid Neutralization Tank, the cost of purchasing and installing such replacement acid neutralization tank shall be amortized over the useful life of the new acid neutralization tank at an interest rate of eight percent (8%) and the annual amortization of such amount shall be included in Tank Costs from and after the date of such replacement.

D. Chemical Safety Program. Tenant shall establish and maintain a chemical safety program administered by a licensed, qualified individual in accordance with the requirements of the Massachusetts Water Resources Authority ("**MWRA**") and any other applicable governmental authority. Tenant shall be solely responsible for all costs incurred in connection with such chemical safety program, and Tenant shall provide Landlord with such documentation as Landlord may reasonably require evidencing Tenant's compliance with the requirements of (a) the MWRA and any other applicable governmental authority with respect to such chemical safety program and (b) this Section 2.D. Tenant shall provide all such information regarding Tenant's activities in the First Floor Premises as may reasonably be necessary in order for Landlord to obtain and maintain during the First Floor Premises Term (i) any permit required by the MWRA ("**MWRA Permit**") and (ii) a wastewater treatment operator license from the Commonwealth of Massachusetts with respect to Tenant's use of the Acid Neutralization Tank serving the Science Building. Tenant shall not introduce anything into the Acid Neutralization Tank serving the Science Building (x) in violation of the terms of the MWRA Permit, (y) in violation of applicable Law(s) or (z) that would interfere with the proper functioning of the Acid Neutralization Tank.

E. Surrender of First Floor Premises. Prior to the expiration of the First Floor Premises Term (or within thirty (30) days after any earlier termination), Tenant shall clean and otherwise decommission all interior surfaces (including floors, walls, ceilings, and counters), piping, supply lines, waste lines, acid neutralization systems and plumbing in and/or exclusively serving the First Floor Premises, and all exhaust or other ductwork in and/or exclusively serving the First Floor Premises, in each case which has carried or released or been contacted by any Hazardous Materials or other chemical or biological materials used in the operation of the First Floor Premises, and shall otherwise clean the First Floor Premises so as to permit the Surrender Plan (defined below) to be issued. At least thirty (30) days prior to the expiration of the First

Floor Premises Term (or, if applicable, within five (5) Business Days after any earlier termination of the Lease), Tenant shall deliver to Landlord a reasonably detailed narrative description of the actions proposed (or required by any applicable Law(s)) to be taken by Tenant in order to render the First Floor Premises (including any Alterations permitted or required by Landlord to remain therein) free of Hazardous Materials (other than any Hazardous Materials that may have been present therein as of the First Floor Premises Commencement Date) and otherwise released for unrestricted use and occupancy including without limitation, causing the First Floor Premises to be decommissioned in accordance with the regulations of the U.S. Nuclear Regulatory Commission and/or the Massachusetts Department of Public health (the "**MDPH**"), if applicable, for the control of radiation, and cause the First Floor Premises to be released for unrestricted use by the Radiation Control Program of the MDPH (the "**Surrender Plan**"). The Surrender Plan (i) shall be accompanied by a current list of (A) all Required Permits held by or on behalf of any Tenant Party with respect to Hazardous Materials in, on, under, at or about the First Floor Premises, and (B) Tenant's Hazardous Materials, and (ii) shall be subject to the review and approval of Landlord's environmental consultant. In connection with review and approval of the Surrender Plan, upon request of Landlord, Tenant shall deliver to Landlord or its consultant such additional non-proprietary information concerning the use of and operations within the First Floor Premises as Landlord shall reasonably request. On or before the expiration of the First Floor Premises Term (or within thirty (30) days after any earlier termination of the Lease, during which period Tenant's use and occupancy of the First Floor Premises shall be governed by Section 22 of the Lease), Tenant shall deliver to Landlord a certification from a third party certified industrial hygienist reasonably acceptable to Landlord certifying that the First Floor Premises do not contain any Hazardous Materials, and evidence that the approved Surrender Plan shall have been satisfactorily completed by a contractor reasonably acceptable to Landlord, and Landlord shall have the right, subject to reimbursement at Tenant's expense as set forth below, to cause Landlord's environmental consultant to inspect the First Floor Premises and perform such additional procedures as may be deemed reasonably necessary to confirm that the First Floor Premises are, as of the expiration of the First Floor Premises Term (or, if applicable, the date which is thirty (30) days after any earlier termination of the Lease), free of Hazardous Materials (other than any Hazardous Materials that may have been present therein as of the First Floor Premises Commencement Date) and otherwise available for unrestricted use and occupancy as aforesaid. Landlord shall have the unrestricted right to deliver the Surrender Plan and any report by Landlord's environmental consultant with respect to the surrender of the First Floor Premises to third parties; provided, however, that if the Surrender Plan contains any confidential information as reasonably determined by Tenant, Landlord shall not be entitled to share the Surrender Plan with any consultants, advisors, or any other person or entity without such person or entity being subject to and bound by a commercially reasonable Confidentiality and Non-Disclosure Agreement in favor of Tenant. Such third parties and the Landlord shall be entitled to rely on the Surrender Plan. If Tenant shall fail to prepare or submit a Surrender Plan reasonably approved by Landlord, or if Tenant shall fail to complete the reasonably approved Surrender Plan, or if such Surrender Plan, whether or not reasonably approved by Landlord, shall fail to adequately address the use of Hazardous Materials by any of the Tenant Related Parties in, on, at, under or about the Premises, Landlord shall have the right to take any such actions as Landlord may deem reasonable or appropriate to assure that the First Floor Premises and the Property are surrendered in the condition required hereunder, the cost of which actions shall be

reimbursed by Tenant as Additional Rent upon demand. Tenant's obligations under this Section 2.E shall survive the expiration or earlier termination of the First Floor Premises Term.

3. Landlord Addresses. Effective as of the date hereof, Landlord's notice addresses set forth in Section 1.12 of the Lease, as amended by Section 9 of the First Amendment, shall be deleted in their entirety, and the following addresses shall be substituted therefor:

Jamestown Premier 245 First, LLC
c/o Jamestown LP
675 Ponce de Leon Avenue, 7th Floor
Atlanta, GA 30308
Attn: Managing Director/Asset Management

and

Jamestown Premier 245 First, LLC
c/o Jamestown LP
Chelsea Market
75 Ninth Avenue, 5th Floor
New York, NY 10011
Attn: Asset Manager/245 First Street, Cambridge, Massachusetts

With a copy to:

Goulston & Storrs PC
400 Atlantic Avenue
Boston, MA 02110-3333
Attn: Amy Moody McGrath, Esq.

4. Extension Option—First Floor Premises.

A. Grant of Option; Conditions. Tenant shall have the right to extend the First Floor Premises Term (the "**First Floor Premises Extension Option**") for one (1) additional period of two (2) years commencing on the day following the First Floor Premises Termination Date and ending on the second (2nd) anniversary of the First Floor Premises Termination Date (the "**First Floor Premises Option Term**"), if:

(i) Landlord receives an unconditional notice of exercise ("**Extension Notice**") not later than twelve (12) full calendar months prior to the expiration of the First Floor Premises Term and not earlier than eighteen (18) full calendar months prior to the expiration of the First Floor Premises Term; and

(ii) No Default of Tenant exists at the time that Tenant delivers its Extension Notice or at the time Tenant delivers its Acceptance Notice (as defined below), if any; and

(iii) No more than thirty (30%) percent of the First Floor Premises is sublet (other than pursuant to a Business Transfer, as defined in Article 11 of the Lease) at the

time that Tenant delivers its Extension Notice or at the time Tenant delivers its Acceptance Notice, if any; and

(iv) The Lease has not been assigned (other than pursuant to a Business Transfer, as defined in Article 11 of the Lease) prior to the date that Tenant delivers its Extension Notice or prior to the date Tenant delivers its Acceptance Notice, if any.

B. Terms Applicable to the First Floor Premises during the First Floor Premises Option Term. The initial Base Rent rate per rentable square foot for the First Floor Premises during the First Floor Premises Option Term shall equal the Prevailing Market rate (hereinafter defined) per rentable square foot for the First Floor Premises. Base Rent during the First Floor Premises Option Term shall increase, if at all, in accordance with the increases assumed in the determination of Prevailing Market rate. Base Rent attributable to the First Floor Premises shall be payable in monthly installments in accordance with the terms and conditions of Article 4 of the Lease.

Tenant shall pay Additional Rent on account of Expenses, Common Area Expenses, and Taxes for the First Floor Premises during the First Floor Premises Option Term in accordance with the terms of Exhibit B, Third Amendment.

C. Procedure for Determining Prevailing Market. Within thirty (30) days after receipt of Tenant's Extension Notice (but no sooner than twelve (12) months prior to the expiration of the First Floor Premises Term), Landlord shall advise Tenant of the applicable Base Rent rate for the First Floor Premises for the First Floor Premises Option Term. Tenant, within fifteen (15) Business Days after the date on which Landlord advises Tenant of the applicable Base Rent rate for the First Floor Premises Option Term, shall either (x) give Landlord written notice that Tenant accepts Landlord's Base Rent for the First Floor Premises Option Term ("**Acceptance Notice**") or (y) if Tenant disagrees with Landlord's determination, provide Landlord with written notice of rejection (the "**Rejection Notice**"). If Tenant fails to provide Landlord with either an Acceptance Notice or a Rejection Notice within such fifteen-(15)-Business-Day period, Tenant shall be deemed to have provided a Rejection Notice. If Tenant provides Landlord with an Acceptance Notice, Landlord and Tenant shall enter into the Extension Amendment (as defined below) upon the terms and conditions set forth herein and in Landlord's notice as to Base Rent for the First Floor Premises Option Term. If Tenant provides, or is deemed to have provided, Landlord with a Rejection Notice, Landlord and Tenant shall work together in good faith to agree upon the Prevailing Market rate for the First Floor Premises during the First Floor Premises Option Term. Upon agreement, Landlord and Tenant shall enter into the Extension Amendment in accordance with the terms and conditions hereof. Notwithstanding the foregoing, if Landlord and Tenant fail to agree upon the Prevailing Market rate within thirty (30) days after the date Tenant provides (or is deemed to have provided) Landlord with the Rejection Notice, then the Prevailing Market rate shall be determined in accordance with the arbitration procedures described in Section D below.

D. Arbitration Procedure.

(1) If Landlord and Tenant have failed to reach agreement as to the Prevailing Market rate within thirty (30) days after the date (or deemed date) of the Rejection

Notice, then, within ten (10) days after the expiration of such thirty-(30)-day period, Landlord and Tenant shall each simultaneously submit to the other, in a sealed envelope, its good faith estimate of the Prevailing Market rate for the First Floor Premises during the First Floor Premises Option Term (collectively referred to as the "**Estimates**"). If the higher of such Estimates is not more than 105% of the lower of such Estimates, then Prevailing Market rate shall be the average of the two Estimates. If the Prevailing Market rate is not resolved by the exchange of Estimates, then, within ten (10) days after the exchange of Estimates, Landlord and Tenant shall each select an appraiser to determine which of the two Estimates most closely reflects the Prevailing Market rate for the First Floor Premises during the First Floor Premises Option Term. Each appraiser so selected shall be certified as an MAI appraiser or as an ASA appraiser and shall have had at least five (5) years' experience within the previous ten (10) years as a real estate appraiser working in the Kendall Square area of Cambridge, with working knowledge of current rental rates and practices. For purposes hereof, an "**MAI**" appraiser means an individual who holds an MAI designation conferred by, and is an independent member of, the American Institute of Real Estate Appraisers (or its successor organization, or in the event there is no successor organization, the organization and designation most similar), and an "**ASA**" appraiser means an individual who holds the Senior Member designation conferred by, and is an independent member of, the American Society of Appraisers (or its successor organization, or, in the event there is no successor organization, the organization and designation most similar).

(2) Upon selection, Landlord's and Tenant's appraisers shall work together in good faith to agree upon which of the two Estimates most closely reflects the Prevailing Market rate for the First Floor Premises. The Estimate chosen by such appraisers shall be binding on both Landlord and Tenant as the Base Rent rate for the First Floor Premises during the First Floor Premises Option Term. If either Landlord or Tenant fails to appoint an appraiser within the ten-(10)-day period referred to above, which failure continues for more than five (5) days after notice thereof to the failing party, the appraiser appointed by the other party shall be the sole appraiser for the purposes hereof. If the two appraisers cannot agree upon which of the two Estimates most closely reflects the Prevailing Market within twenty (20) days after their appointment, then, within ten (10) days after the expiration of such twenty-(20)-day period, the two appraisers shall select a third appraiser meeting the aforementioned criteria. Once the third appraiser (i.e., arbitrator) has been selected as provided for above, then, as soon thereafter as practicable but in any case within fourteen (14) days, the arbitrator shall make his determination of which of the two Estimates most closely reflects the Prevailing Market rate, and such Estimate shall be binding on both Landlord and Tenant as the Prevailing Market rate for the First Floor Premises for the purpose of determining Base Rent for the First Floor Premises Option Term. If the arbitrator believes that expert advice would materially assist him, he may retain one or more qualified persons to provide such expert advice. The parties shall share equally in the costs of the arbitrator and of any experts retained by the arbitrator. Any fees of any appraiser, counsel or experts engaged directly by Landlord or Tenant, however, shall be borne by the party retaining such appraiser, counsel or expert.

(3) If the Prevailing Market rate has not been determined by the commencement of Tenant's obligation to pay Base Rent and other charges payable under the Lease based upon such Prevailing Market rate, Tenant shall pay Base Rent upon the terms and conditions in effect during the last month of the First Floor Premises Term until such time as the Prevailing Market rate has been determined. Upon such determination, the Base Rent for the

First Floor Premises shall be retroactively adjusted to the commencement of the First Floor Premises Option Term for the First Floor Premises.

E. Extension Amendment. If Tenant is entitled to and properly exercises its First Floor Premises Option Term, Landlord shall prepare an amendment (the "**Extension Amendment**") to reflect changes in the Base Rent, Term, and Termination Date as expressly provided herein and other mutually agreeable appropriate terms. The Extension Amendment shall be sent to Tenant within a reasonable time after final determination of the Prevailing Market rate applicable during the First Floor Premises Option Term, and if the terms and provisions of the Extension Amendment are reasonably acceptable to Tenant, then Tenant shall execute and return the Extension Amendment to Landlord within fifteen (15) Business Days after Tenant's receipt of same, but an otherwise valid exercise of the First Floor Premises Extension Option shall be fully effective whether or not the Extension Amendment is executed.

F. Prevailing Market. For purposes hereof, "**Prevailing Market**" shall mean the arms' length fair market annual rental rate per rentable square foot under direct leases entered into on or about the date as of which the Prevailing Market is being determined hereunder (i.e., in connection with the Tenant's First Floor Premises Extension Option, such date shall be the commencement of the First Floor Premises Option Term), and for space comparable to the First Floor Premises in the Science Building and science buildings comparable to the Science Building in the Kendall Square area of Cambridge, taking into account all relevant factors including proximity to public transportation and retail amenities, and age and quality of finish, and tenant improvement allowance, if any.

5. Loading Dock. Tenant shall have the right to use the common loading dock shown on the attached Exhibit A-2, Third Amendment, on a non-discriminatory, first-come, first-served basis, twenty-four (24) hours per day, seven (7) days per week, it being understood that the use of the loading dock must be scheduled in advance with Landlord, but there shall be no charge for any such usage.

6. Parking. Notwithstanding anything to the contrary set forth in the Lease, effective as of the First Floor Premises Commencement Date (unless prior to the First Floor Premises Commencement Date, Tenant notifies Landlord in writing that Tenant elects to start on the First Floor Premises Rent Commencement Date) and continuing thereafter throughout the remainder of the First Floor Premises Term, Tenant shall have the right to five (5) additional unreserved parking spaces (at the ratio of 0.9 parking spaces per 1,000 rentable square feet of the First Floor Premises of 5,951 rentable square feet) ("**Tenant's Additional Parking Spaces**"). Tenant's right to use Tenant's Additional Parking Spaces shall be on a first-come, first-served basis at the then prevailing monthly parking rate, as adjusted from time to time in accordance with the published rates applicable to all tenants of the Buildings, and otherwise shall be on the terms and conditions set forth in Section 1 of Exhibit F to the Lease, except to the extent the same are inconsistent with the provisions of this Section 6. As of the Execution Date of this Third Amendment, the current monthly rate is $300.00 per unreserved parking space per month.

7. Security Deposit. Reference is made to the fact that Landlord is presently holding a Security Deposit in the total amount of $1,280,857.00 (the "**Total Security Deposit**"), of

which $1,155,512.00 is in the form of cash (the "**Cash Security Deposit**"), and $125,345.00 is in the form of a letter of credit (the "**Current Letter of Credit Security Deposit**").

With respect to the First Floor Premises, Landlord shall not require Tenant to provide any additional Security Deposit therefor; however, Landlord shall require that the Total Security Deposit be in the form of a letter of credit only. Therefore, on or before October 1, 2016, Tenant shall deliver to Landlord either (i) a new irrevocable letter of credit in the amount of $1,280,857.00 or (ii) an amendment to the Current Letter of Credit Security Deposit increasing the Current Letter of Credit Security Deposit by the amount of $1,155,512.00. Upon receipt of same, Landlord shall return the Cash Security Deposit to Tenant, and, if Tenant provides a new letter of credit in the amount of $1,280,857.00, Landlord shall also return the Current Letter of Credit Security Deposit to Tenant. Landlord shall continue to hold the Total Security Deposit to secure Tenant's obligations under the Lease, in accordance with the provisions of Section 6 of the Lease, as amended by Section 8 of the First Amendment, Section 14 of the Second Amendment, and this Section 7.

8. Intentionally Omitted.

9. Emergency Generator. Tenant shall have the right to use the existing generator on the Property that currently serves tenants located on the first floor of the Science Building (the "**Existing Generator**"). Landlord makes no representation whatsoever about the condition or functionality of the Existing Generator. Landlord shall, or shall arrange for a third party to, operate, maintain, and promptly repair the Existing Generator in good working condition, and Tenant shall reimburse Landlord for Tenant's pro rata share of all costs, charges and expenses incurred from time to time in connection with or arising out of the operation, use, maintenance, repair, and replacement of the Existing Generator, including, without limitation, electricity charges connected with the Existing Generator (collectively, "**Generator Costs**"). In the event Landlord deems it necessary to replace the Existing Generator, the cost of purchasing and installing such replacement generator shall be amortized over the useful life of the new generator at an interest rate of eight percent (8%) and the annual amortization of such amount shall be included in Generator Costs from and after the date of such replacement. Landlord and Tenant agree that Tenant's pro rata share of such costs is fifty percent (50%). Landlord shall use reasonable efforts to provide at least seven (7) days' prior written notice to Tenant before any scheduled Generator repair that will result in the Generator being offline for any amount of time. Tenant's use of the Existing Generator shall be limited to 2.2 watts per square foot or 12.9 kilowatts in total. In no event shall Landlord be liable to Tenant or any other party for any damages of any type, whether actual or consequential, suffered by Tenant or any such other person in the event that the Existing Generator fails or does not provide sufficient power provided, however, that Tenant shall have the rights set forth in Section 7.03 relating to the abatement of rent in the event of a Service Failure.

10. Hazardous Materials.

A. Prohibition

. Tenant shall not, without the prior written consent of Landlord, bring or permit to be brought or kept in or on the First Floor Premises or elsewhere in the Building or the Property (i) any inflammable, combustible or explosive fluid, material, chemical or substance (except for standard office

supplies stored in proper containers); and (ii) any Hazardous Material (hereinafter defined), other than the types and quantities of Hazardous Materials which are listed on Exhibit C, Third Amendment, attached hereto ("**Tenant's Hazardous Materials**"), provided that the same shall at all times be brought upon, kept or used in so-called 'control areas' within the First Floor Premises (the number and size of which shall be reasonably determined by Landlord) and in accordance with all applicable Environmental Laws and prudent environmental practice and (with respect to medical waste and so-called "biohazard" materials) good scientific and medical practice. Tenant shall be responsible for assuring that all laboratory uses are adequately and properly vented. Landlord shall have the right, from time to time, upon reasonable advance notice to inspect the Premises for compliance with the terms of this Section 10; provided, however, that no notice shall be required in case of emergency. Notwithstanding the foregoing, with respect to any of Tenant's Hazardous Materials which Tenant does not properly handle, store or dispose of in compliance with all applicable Environmental Laws, prudent environmental practice and (with respect to medical waste and so-called "biohazard materials") good scientific and medical practice, Tenant shall, upon written notice from Landlord, no longer have the right to bring such material into the Building or the Property until Tenant has demonstrated, to Landlord's reasonable satisfaction, that Tenant has implemented programs to thereafter properly handle, store or dispose of such material.

With respect to the laboratory portion of the First Floor Premises (the "**Secured Area**"), if Landlord must gain access to a Secured Area in a non-emergency situation, Landlord shall contact Tenant, and Landlord and Tenant shall arrange a mutually agreed upon time for Landlord to have such access. Landlord shall be accompanied by an employee of Tenant or a party designated by Tenant (the "**Escort**"). Tenant shall make an Escort available to Landlord during business hours. Landlord shall comply with all reasonable security measures of the Tenant pertaining to the Secured Area. If an emergency representing an imminent risk of injury to persons or material property damage in the Building or the Premises, including, without limitation, a suspected fire or flood, requires Landlord to gain access to the Secured Area, Landlord may enter the Secured Area without an Escort. If practicable under the circumstances, Landlord shall immediately notify (which may be oral notification) and request that Tenant make an Escort available to Landlord if time permits. In any event, if Tenant shall not make an Escort available to accompany Landlord, then Tenant hereby authorizes Landlord to enter the Secured Area forcibly or with a master key, and to enter without an Escort. In any such event, except to the extent resulting from Landlord's negligence or willful misconduct, Landlord shall have no liability whatsoever to Tenant, and Tenant shall pay all reasonable expenses incurred by Landlord in repairing or reconstructing any entrance, corridor, door or other portions of the Premises damaged as a result of a forcible entry by Landlord. Landlord shall have no obligation to provide either janitorial service or cleaning in the Secured Area unless Tenant shall make arrangements to have an Escort in the Secured Area at the time such service or cleaning is provided to the remainder of the Premises.

B. Environmental Laws. For purposes hereof, "**Environmental Laws**" shall mean all laws, statutes, ordinances, rules and regulations of any local, state or federal governmental authority having jurisdiction concerning environmental, health and safety matters,

including but not limited to any discharge by Tenant or its agents, employees, contractors, representatives or affiliates into the air, surface water, sewers, soil or groundwater of any Hazardous Material (hereinafter defined) whether within or outside the Premises, including, without limitation (a) the Federal Water Pollution Control Act, 33 U.S.C. Section 1251 et seq., (b) the Federal Resource Conservation and Recovery Act, 42 U.S.C. Section 6901 et seq., (c) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. Section 9601 et seq., (d) the Toxic Substances Control Act of 1976, 15 U.S.C. Section 2601 et seq., and (e) Chapter 21E of the General Laws of Massachusetts. Tenant, at its sole cost and expense, shall comply with (i) Environmental Laws, and (ii) any rules, requirements and safety procedures of the Massachusetts Department of Environmental Protection, the City of Cambridge and any insurer of the Building or the First Floor Premises with respect to Tenant's use, storage and disposal of any Hazardous Materials in the First Floor Premises.

C. Hazardous Material Defined. As used herein, the term "Hazardous **Material**" means asbestos, oil or any hazardous, radioactive or toxic substance, material or waste or petroleum derivative which is or becomes regulated by any Environmental Law, including without limitation live organisms, viruses and fungi, medical waste and any so-called "biohazard" materials. The term "Hazardous Material" includes, without limitation, oil and/or any material or substance which is (i) designated as a "hazardous substance," "hazardous material," "oil," "hazardous waste" or toxic substance under any Environmental Law.

D.Testing. If any Mortgagee or governmental authority requires testing to determine whether there has been any release of Hazardous Materials and such testing is required as a result of the acts or omissions of Tenant, then Tenant shall reimburse Landlord upon demand, as Additional Rent, for the reasonable costs thereof, together with interest at the Default Rate until paid in full. Tenant shall execute affidavits, certifications and the like, as may be reasonably requested by Landlord from time to time concerning Tenant's best knowledge and belief concerning the presence of Hazardous Materials in or on the First Floor Premises, the Building or the Property.

E. Indemnity; Remediation.

(i) Tenant hereby covenants and agrees to indemnify, defend and hold the Landlord Related Parties harmless from and against any and all claims against any of the Landlord Related Parties arising out of contamination of any part of the Property or other adjacent property, which contamination arises as a result of: (i) the presence of Hazardous Material in the Premises, the presence of which is caused by any act or omission of any of the Tenant Related Parties, or (ii) from a breach by Tenant of its obligations under this Section 10, except to the extent directly caused by Landlord's negligence or willful misconduct. This indemnification of the Landlord Related Parties by Tenant includes, without limitation, reasonable costs incurred in connection with any investigation of site conditions or any cleanup, remedial, removal or restoration work required by any federal, state or local governmental agency or political subdivision because of Hazardous Material present in the soil or ground water on or under the Building based upon the circumstances identified in the first sentence of this Section 10.E. The indemnification and hold harmless obligations of Tenant under this Section 10.E shall survive the expiration or any earlier termination of this Lease. Without limiting the foregoing, if the presence of any Hazardous Material in the Building or otherwise in the Property

is caused or permitted by any of the Tenant Related Parties and results in any contamination of any part of the Property or any adjacent property, Tenant shall promptly take all actions at Tenant's sole cost and expense as are necessary to return the Property and/or the Building or any adjacent property to their condition as of the date of this Lease, provided that Tenant shall first obtain Landlord's written approval of such actions, which approval shall not be unreasonably withheld, conditioned or delayed so long as such actions, in Landlord's reasonable discretion, would not potentially have any adverse effect on the Property, and, in any event, Landlord shall not withhold its approval of any proposed actions which are required by applicable Environmental Laws. The provisions of this Section 10.E shall survive the expiration or earlier termination of the Lease.

(ii) Without limiting the obligations set forth in Section 10.E. above, if any Hazardous Material not otherwise present in the First Floor Premises as of the First Floor Premises Commencement Date, is in, on, under, at or about the Building or the Property as a result of the acts or omissions of any of the Tenant Related Parties and results in any contamination of any part of the Property or any adjacent property that is in violation of any applicable Environmental Law or that requires the performance of any response action pursuant to any Environmental Law, Tenant shall promptly take all actions at Tenant's sole cost and expense as are necessary with respect to such Hazardous Material to comply with any Environmental Law; provided that Tenant shall first obtain Landlord's written approval of such actions, which approval shall not be unreasonably withheld, conditioned or delayed so long as such actions would not be reasonably expected to have an adverse effect on the market value or utility of the Property for the Permitted Uses, and in any event, Landlord shall not withhold its approval of any proposed actions which are required by applicable Environmental Laws (such approved actions, "**Tenant's Remediation**").

(iii) In the event that Tenant fails to complete Tenant's Remediation prior to the end of the Term, then, from and after the expiration of the Term:

(x) until the completion of Tenant's Remediation (as evidenced by the certification of Tenant's Licensed Site Professional (as such term is defined by applicable Environmental Laws), who shall be reasonably acceptable to Landlord) (the "**Remediation Completion Date**"), Tenant shall pay to Landlord, with respect to the portion of the Premises which reasonably cannot be occupied by a new tenant until completion of Tenant's Remediation, (A) Additional Rent on account of Operating Costs and Taxes and (B) Base Rent in an amount equal to the greater of (1) the Prevailing Market rental value of such portion of the Premises (determined in substantial accordance with the process described in Section 4.F above), and (2) Base Rent attributable to such portion of the Premises in effect immediately prior to the end of the Term; and

(y) Tenant shall maintain responsibility for Tenant's Remediation and Tenant shall complete Tenant's Remediation as soon as reasonably practicable in accordance with Environmental Laws, and Landlord shall provide access to Tenant to any portions of the Property necessary for Tenant to complete Tenant's remediation. If Tenant does not diligently pursue completion of Tenant's Remediation, Landlord shall have the right to either (A) assume control for overseeing Tenant's Remediation, in which event Tenant shall pay all reasonable costs and expenses of Tenant's Remediation (it being understood and agreed that all

costs and expenses of Tenant's Remediation incurred pursuant to contracts entered into by Tenant shall be deemed reasonable) within thirty (30) days of demand therefor (which demand shall be made no more often than monthly), and Landlord shall be substituted as the party identified on any governmental filings as the party responsible for the performance of such Tenant's Remediation or (B) require Tenant to maintain responsibility for Tenant's Remediation, in which event Tenant shall complete Tenant's Remediation as soon as reasonably practicable in accordance with Environmental Laws, it being understood that Tenant's Remediation shall not contain any requirement that Tenant remediate any contamination to levels or standards more stringent than those associated with the Property's current office, research and development, laboratory, and vivarium uses.

(z) The provisions of this Section 10.E shall survive the expiration or earlier termination of this Lease.

F.Disclosures. Prior to bringing any Hazardous Material into any part of the Property, Tenant shall deliver to Landlord the following information with respect thereto: (a) a description of handling, storage, use and disposal procedures; (b) all plans or disclosures and/or emergency response plans which Tenant has prepared, and all plans which Tenant is required to supply to any governmental agency or authority pursuant to any Environmental Laws; (c) copies of all Required Permits relating thereto; and (d) other information reasonably requested by Landlord.

G. Removal. Tenant shall be responsible, at its sole cost and expense, for Hazardous Material and other biohazard disposal services for the First Floor Premises. Such services shall be performed by contractors reasonably acceptable to Landlord and on a sufficient basis to ensure that the Premises are at all times kept neat, clean and free of Hazardous Materials and biohazards except in appropriate, specially marked containers reasonably approved by Landlord.

11. Medical Waste/Lab Standards.

A. Tenant shall, at Tenant's expense, be responsible for the separation of and disposal of all trash containing any medical waste and/or biohazard materials that is generated in the First Floor Premises from the typical trash found in typical offices (i.e., paper and any non-medical and/or biohazard materials) ("**Typical Office Trash**"). Tenant's contractor(s) shall dispose of all trash containing medical waste and biohazard materials in accordance with Applicable Requirements, as hereinafter defined, and shall not commingle it with Typical Office Trash. Without limiting the foregoing, Tenant shall be responsible, at its sole cost and expense, for the safe and complete disposal of all items that are by applicable law defined as medical waste and biohazard materials or items that have been exposed to medical waste and biohazard materials such as syringes, bandages, medical instruments, tissues, containers, receptacles, cotton packing, swabs, etc., as well as any and all potentially, possibly or actually contaminated, hazardous, diseased, infected or infectious material, substance or thing utilized or brought upon the First Floor Premises by Tenant or others.

B.Tenant's disposal of medical or other waste resulting from its operation of the First Floor Premises shall comply, without limitation, with the following: (i) all applicable

federal (including, without limitation, OSHA), state and local laws, regulations and rules, written policies, standards and guidance documents; (ii) all written instructions and guidelines given by the manufacturers of any processing systems and chemicals used in Tenant's operations within the First Floor Premises; and (iii) all written specifications and requirements with respect to the operation and maintenance of any sewage treatment plant serving the First Floor Premises and/or the Building. The aforementioned requirements are hereinafter collectively referred to as the "**Applicable Requirements**." Tenant is responsible for ascertaining all of the Applicable Requirements.

C. Tenant shall not be permitted to place any medical waste and biohazard materials receptacles or courier lock boxes (such as those used for the pick-up and delivery of samples or impressions, laboratory samples, or prosthetic dental devices) in any common areas of the Building.

12. Inapplicable/Deleted Lease Provisions.

A. Inapplicable Lease Provisions. The Base Rent Abatement Period set forth in Section 1.03, Section 1.04 (Tenant's Pro Rata Share), Section 1.05 (Base Year), Section 3.03 (Rent Abatement), Exhibit B (Expenses and Taxes),Exhibit C (Work Letter) and Exhibit C-1 (Space Plans) of the Lease; the Expansion Premises A Rent Credit portion of Section 1.A, Section 3 (Landlord's Work and Landlord's Contribution), Section 4 (Base Building) of the First Amendment, and Section 6 (Existing Premises Condition/Existing Premises Work), Section 7 (Second Amendment Premises Condition/Second Amendment Premises Work), Section 8 (Landlord's Base Contribution), Section 9 (Fit Plan Contributions/Space B Demolition Contribution), Section 10 (Heat Pump Replacement), and Section 11 (Extension Option) of the Second Amendment shall have no applicability with respect to the First Floor Premises and this Third Amendment.

B. Deleted Lease Provisions. All references in the Lease, including, without limitation, Section 26.05 thereof, to "Equity Office Properties Management Corp." or "Equity Office" are hereby deleted in their entirety and are of no further force and effect.

13. Broker. Landlord and Tenant warrant and represent that neither party has dealt with any broker in connection with the consummation of this Third Amendment, other than Newmark Grubb Knight Frank and Transwestern RBJ (collectively, the "**Broker**") and in the event of any brokerage claims or liens, other than by Broker, against Landlord or Tenant or the Science Building predicated upon or arising out of prior dealings with Tenant and Landlord with respect to this Third Amendment, Tenant and Landlord each agree to defend the same and indemnify and hold each other harmless against any such claim, and to discharge any such lien. Any commission due in connection with this Third Amendment shall be paid by Landlord pursuant to a separate agreement between Landlord and Broker.

14. Miscellaneous. Capitalized terms used and not otherwise defined herein shall have the meanings ascribed to such terms in the Lease. Except as amended hereby, the Lease is hereby ratified and confirmed.

[Signatures on following page]

EXECUTED under seal as of the date first above written.

LANDLORD:

JAMESTOWN PREMIER 245 FIRST, LLC,
a Delaware limited liability company

By: \s\ Renee J. Bergeron
Name: \s\ Renee J. Bergeron
Title: VP

TENANT:

AKEBIA THERAPEUTICS, INC.,
a Delaware corporation

By: \s\ John P. Butler
Name: \s\ John P. Butler
Title: President and Chief Executive Officer

By: \s\ Jason A. Amello
Name: \s\ Jason A. Amello
Title: SVP, Chief Financial Officer

EXHIBIT A, THIRD AMENDMENT

PLAN OF FIRST FLOOR PREMISES (5,951 RSF—FLOOR 1)

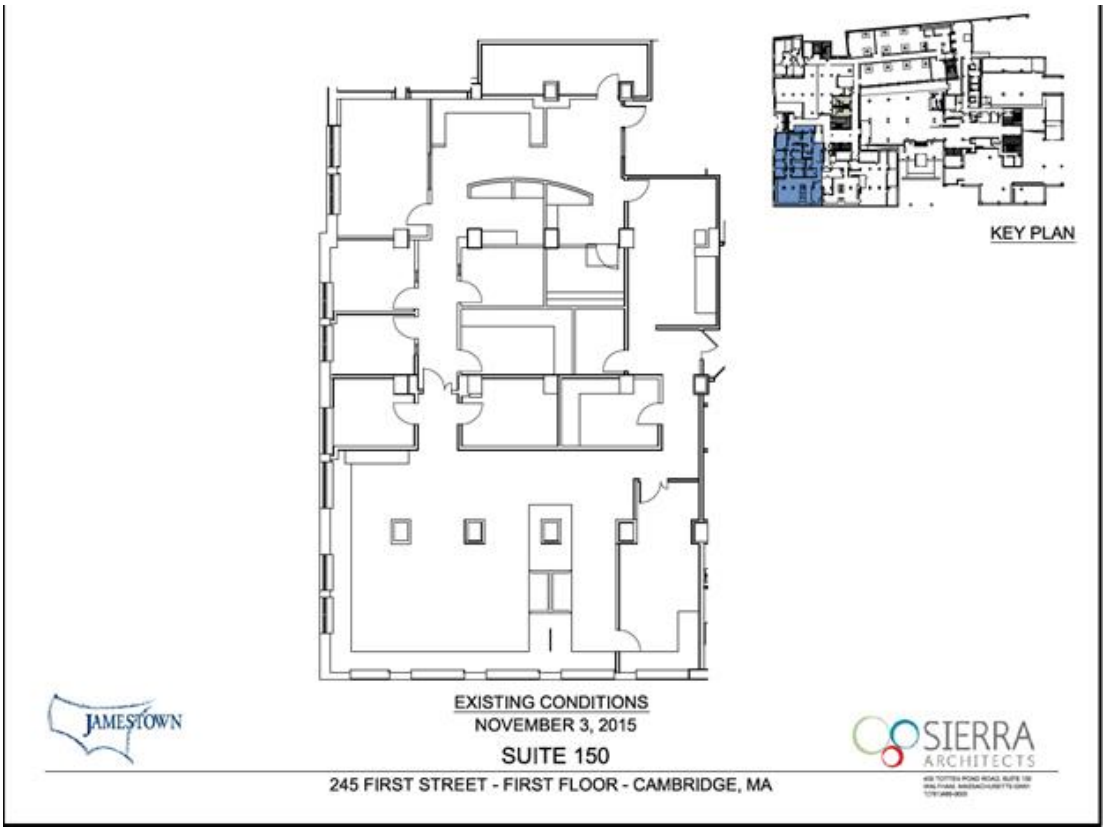

EXHIBIT A-1, THIRD AMENDMENT

LOCATION OF COMMON LOADING DOCK

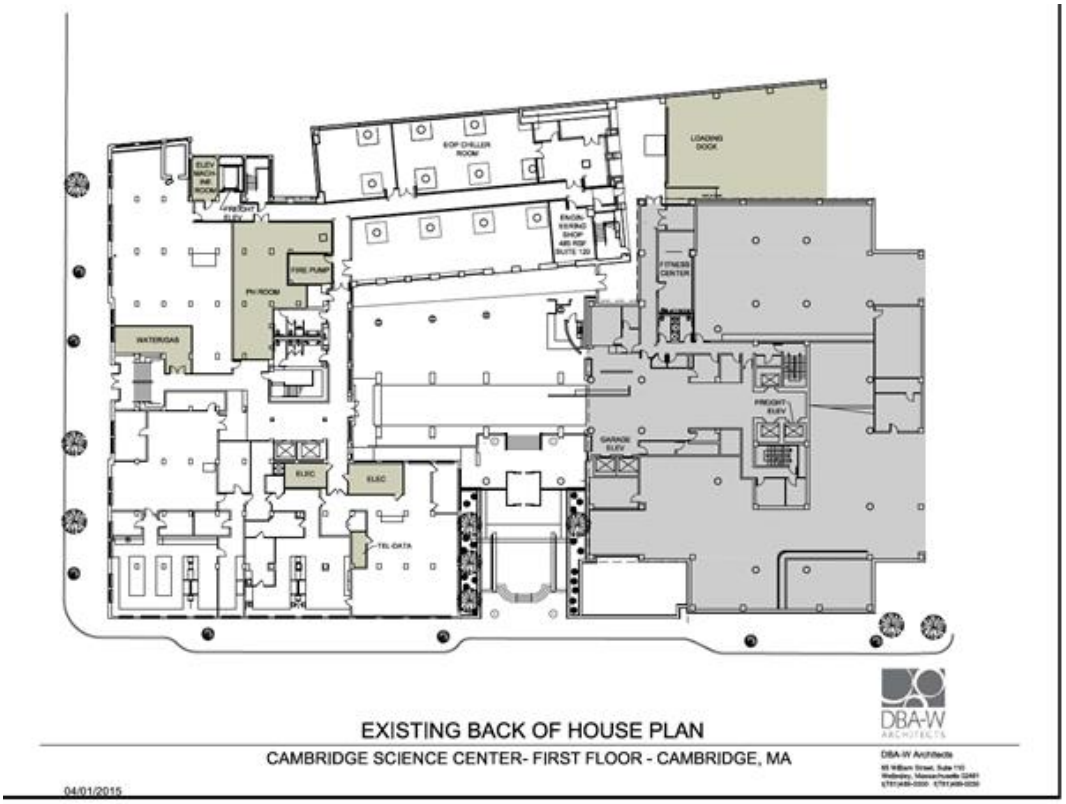

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EXHIBIT B, THIRD AMENDMENT

OPERATING COSTS AND TAXES

With respect to this Exhibit B, Third Amendment, all references herein to (i) "**Building**" shall be deemed to mean the "**Science Building**", and (ii) "**Term**" shall be deemed to mean "**First Floor Premises Term**".

A. Expenses.

(i) Expenses. "**Expenses**" means all costs and expenses incurred in each calendar year in connection with operating, maintaining, repairing, and managing the Building, including the Common Areas located within the Building, but excluding the Common Areas located in the Office Building and the shared Common Areas for both the Office Building and the Building. Landlord shall act in a commercially reasonable manner in incurring Expenses. Expenses include, without limitation: (a) all labor and labor related costs, including wages, salaries, bonuses, taxes, insurance, uniforms, training, retirement plans, pension plans and other employee benefits; (b) management fees in an amount equal to 3% of the gross revenues from the Building and the Property; (c) the cost of equipping, staffing and operating an on-site and/or off-site management office for the Building, provided if the management office services one or more other buildings or properties, the shared costs and expenses of equipping, staffing and operating such management office(s) shall be equitably prorated and apportioned between the Building and the other buildings or properties; (d) accounting costs for the Building; (e) the cost of services; (f) rental and purchase cost of parts, supplies, tools and equipment; (g) insurance premiums and deductibles; (h) electricity, gas and other utility costs attributable to the Building; (i) expenses of periodic routine testing to assure that the Premises and surrounding land are free of hazardous materials, agents or substances, and to assure compliance with codes, regulations and Laws; and (j) the amortized cost of capital improvements (as distinguished from replacement parts or components installed in the ordinary course of business) made subsequent to the First Floor Premises Commencement Date which are: (1) reasonably projected by Landlord to reduce current or future Expenses or (2) required under any Law that first becomes applicable to the Property after the Execution Date. The cost of capital improvements shall be amortized by Landlord over the lesser of the Payback Period (defined below) or the useful life of the capital improvement as reasonably determined by Landlord. The amortized cost of capital improvements may, at Landlord's option, include actual or imputed interest at the rate that Landlord would reasonably be required to pay to finance the cost of the capital improvement. "**Payback Period**" means the reasonably estimated period of time that it takes for the cost savings resulting from a capital improvement to equal the total cost of the capital improvement. Landlord, by itself or through an affiliate, shall have the right to directly perform, provide and be compensated for any services under the Lease. If Landlord incurs Expenses for the Building or Property together with one or more other buildings or properties, whether pursuant to a reciprocal easement agreement, common area agreement or otherwise, the shared costs and expenses shall be equitably prorated and apportioned between the Building and Property and the other buildings or properties. Expenses shall not include Excluded Costs (hereinafter defined).

(ii) Common Area Expenses. "**Common Area Expenses**" means all costs and expenses as set forth in Section 2.02 of Exhibit B to the Lease.

(iii) Excluded Costs. "**Excluded Costs**" shall be defined as (i) any mortgage charges (including interest, principal, points and fees); (ii) brokerage commissions; (iii) salaries of executives and owners not directly employed in the management/operation of the Property; (iv) the cost of work done by Landlord for a particular tenant; (v) the cost of items which, by generally accepted accounting principles, would be capitalized on the books of Landlord or are otherwise not properly chargeable against income, except to the extent permitted pursuant to Section A (i) or (ii) above; (vi) the costs of Landlord's Work and any contributions made by Landlord to any tenant of the Property in connection with the build-out of its premises; (vii) franchise or income taxes imposed on Landlord; (viii) costs paid directly by individual tenants to suppliers, including tenant electricity, telephone and other utility costs; (ix) increases in premiums for insurance when such increase is caused by the use of the Building by Landlord or any other tenant of the Building; (x) maintenance and repair of capital items not a part of the Building or the Property; (xi) depreciation of the Building; (xii) costs relating to maintaining Landlord's existence as a corporation, partnership or other entity; (xiii) advertising and other fees and costs incurred in procuring tenants; (xiv) the cost of any items for which Landlord is reimbursed by insurance, condemnation awards, refund, rebate or otherwise, and any expenses for repairs or maintenance to the extent covered by warranties, guaranties and service contracts; (xv) costs incurred in connection with any disputes between Landlord and its employees, between Landlord and Building management, or between Landlord and other tenants or occupants; and (xvi) costs incurred in connection with the clean-up, response action or remediation of Hazardous Materials at the Property; (xvii) costs incurred for the replacement of (i.e., as opposed to the maintenance and repair of) the Acid Neutralization Tank; (xviii) costs in connection with the leasing of space in the Building, including lease concessions, rental abatement and construction allowances granted to specific tenants; (xix) costs incurred with the sale, financing or refinancing of the Building, fines, interest and penalties incurred due to the late payment of taxes or expenses; (xx) costs incurred by Landlord in connection with the correction of defects in design and original construction of the Building or Property; the costs or expenses of any services or benefits provided generally to the other tenants in the Building and not provided or available to Tenant; sums (other than management fees, it being agreed that the management fees included in Building Operating Costs are as described above) paid to subsidiaries or other affiliates of Landlord for services on or to the Property, Building or the First Floor Premises, but only to the extent that the costs of such services exceed the competitive cost for such services rendered by persons or entities of similar skill, competence and experience; any general administrative expenses, which costs would not be chargeable to operating expenses of the Building in accordance with generally accepted accounting principles, consistently applied; or any penalties or damages that Landlord pays to Tenant under this Lease or to other tenants in the Building under their respective leases.

(iv) Payment of Expenses, Common Area Expenses, and Taxes. Tenant shall pay to Landlord, as Additional Rent, (x) Tenant's First Floor Premises Building Pro Rata Share of Expenses, (y) Tenant's First Floor Premises Common Area Pro Rata Share of Common Area Expenses, and (z) Tenant's First Floor Premises Common Area Pro Rata Share of Taxes, as provided in Section 1.01 of Exhibit B of the Lease, except that Landlord and Tenant hereby agree and acknowledge that with respect to the First Floor Premises (i) there is no Base Year for

Expenses, Common Area Expenses, and Taxes, and (ii) only with respect to the First Floor Premises, all references in Exhibit B of the Lease to "Base Year", "Expense Excess", "Tax Excess", and "Common Area Expense Excess" shall be deleted in their entirety and are of no further force and effect.

(v) Annual Reconciliation. Landlord shall reconcile Expenses and Common Area Expenses as provided in Section 1.02 of Exhibit B to the Lease.

(vi) Part Years. If the First Floor Premises Rent Commencement Date or the Termination Date occurs in the middle of a fiscal year, Tenant shall be liable for only that portion of the Expenses and Common Area Expenses with respect to such calendar year within the Term.

(vii) Gross-Up. "Gross up" of Tenant's First Floor Premises Building Pro Rata Share of Expenses and Tenant's First Floor Premises Common Area Pro Rata Share of Common Area Expenses shall be in accordance with Section 2.04 of Exhibit B to the Lease.

(viii) Audit Right. Tenant's audit right of Expenses and Common Area Expenses shall be as provided in Section 4 of Exhibit B of the Lease.

B. Taxes.

(i) Taxes. "**Taxes**" shall be as defined in Section 3 of Exhibit B to the Lease.

(ii) Payment of Taxes. Tenant shall pay to Landlord, as Additional Rent, Tenant's First Floor Premises Common Area Pro Rata Share of Taxes for each calendar year during the Term, as set forth in Sections 1 and 3 of Exhibit B to the Lease, as modified herein.

(iii) Effect of Abatements. Appropriate credit against Taxes shall be given for any refund obtained by reason of a reduction in any Taxes by the assessors or the administrative, judicial or other governmental agency responsible therefor after deduction of Landlord's expenditures for reasonable legal fees and for other reasonable expenses incurred in obtaining the Tax refund.

(iv) Part Years. If the First Floor Premises Rent Commencement Date or the Termination Date occurs in the middle of a Tax Period, Tenant shall be liable for only that portion of the Taxes, as the case may be, with respect to such Tax Period within the Term.

EXHIBIT C, THIRD AMENDMENT

TENANT'S HAZARDOUS MATERIALS

See attached list.

Tenant shall be required to provide Exhibit C to Landlord for Landlord's review prior to the First Floor Premises Commencement Date.

Exhibit 31.1

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John P. Butler, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Akebia Therapeutics, 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 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 15d-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 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 9, 2016

By: /s/ John P. Butler
John P. Butler
President, Chief Executive Officer and Director
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Jason A. Amello, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Akebia Therapeutics, 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 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 15d-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 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 9, 2016

By: /s/ Jason A. Amello
Jason A. Amello
Senior Vice President, Chief Financial Officer and Treasurer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002 (18 U.S.C. Section 1350

In connection with the accompanying Quarterly Report of Akebia Therapeutics, Inc. (the Company) on Form 10-Q for the fiscal quarter ended September 30, 2016 (the Report), I, John P. Butler, as Chief Executive Officer and President of the Company, and I, Jason A. Amello, as Senior Vice President, Chief Financial Officer and Treasurer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 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.

Date: November 9, 2016

By: /s/ John P. Butler
John P. Butler
President, Chief Executive Officer and Director
(Principal Executive Officer)

Date: November 9, 2016

By: /s/ Jason A. Amello
Jason A. Amello
Senior Vice President, Chief Financial Officer and Treasurer
(Principal Financial Officer)

Exhibit 99.1

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Akebia Announces Third Quarter 2016 Financial Results

-- Multiple Publications Highlight Vadadustat's Potential to Treat Renal Anemia and the Need for New Therapies for Chronic Kidney Disease --

-- Company Expands Leadership Team with Additional Expertise in HIF Biology and Clinical Development --

CAMBRIDGE, MA, November 9, 2016 -- Akebia Therapeutics, Inc. (NASDAQ:AKBA), a biopharmaceutical company focused on delivering innovative therapies to patients with kidney disease through the biology of hypoxia-inducible factor (HIF), today announced financial results for the third quarter ended September 30, 2016.

"This quarter, we continued to advance our Phase 3 program for vadadustat with the initiation of INNO2VATE for dialysis-dependent patients with anemia related to chronic kidney disease, our second potential indication. In addition, the Independent Data Monitoring Committee for the PRO2TECT program for non-dialysis patients met for the first time and recommended continuing the program without modification," said John P. Butler, President and Chief Executive Officer of Akebia. "Clinical results of vadadustat were published for the first time, and multiple publications highlighted the clinical need for new treatment options such as vadadustat. Importantly, we added significant depth to our management team to not only drive our Phase 3 program, but also to focus on building our pipeline. Our pursuit of a geographic collaboration for vadadustat remains a core focus, with the goal of providing a strong commercial partner and the resources to finance the balance of our Phase 3 program."

Third Quarter 2016 and Recent Corporate Highlights

- **Peer-Reviewed Publications Highlight Vadadustat's Potential and Need for New Treatment Options**
  Positive Phase 2b data were published in a peer-reviewed paper, titled "Vadadustat, a novel oral HIF stabilizer, provides effective anemia treatment in non-dialysis-dependent chronic kidney disease," in *Kidney International*. Two additional peer-reviewed publications emphasized the need for new treatment options for chronic kidney disease (CKD) patients currently being treated with erythropoiesis-stimulating agent (ESA). One study, published in *American Journal of Kidney Diseases*, highlighted that ESA hyporesponsiveness continues to be a potent prognostic marker for increased risk of death, despite dramatic changes in anemia management since 2011. Another study, published in *Journal of Nephrology*, confirmed that higher altitude is associated with higher hemoglobin levels and lower mortality despite lower utilization of ESA and intravenous iron. The study suggests that investigational treatments currently in development that simulate the body's natural response to higher altitude, such as vadadustat, may be beneficial for patients with renal anemia.

- **Independent Data Monitoring Committee for PRO2TECT Phase 3 Program Holds First Meeting**
  The Independent Data Monitoring Committee for Akebia's global Phase 3 PRO2TECT program held the initial meeting according to its charter and recommended continuing the studies without modification.
- **Abstracts Published Featuring Data from the Vadadustat Development Program**
  Abstracts were published featuring data from the vadadustat development program in both dialysis-dependent and non-dialysis dependent CKD patients, which will be presented at the upcoming ASN/ Kidney Week 2016 meeting from November 15-18, 2016.
- **Strengthened Senior Leadership Team with Key Hires**
  Karen Tubridy, PharmD, is joining Akebia as Senior Vice President, Chief Development Officer, with greater than 20 years of global drug development experience including translational research. Michael Rabinowitz, Ph.D., a highly experienced scientist and HIF biology expert who led the research team focused on leveraging HIF biology at Johnson & Johnson, has joined Akebia as Vice President, Research.

Mr. Butler added, "We were pleased to learn that the physician-scientists who discovered the HIF pathway and examined the body's physiologic response to changes in oxygen levels had recently received the 2016 Albert Lasker Basic Medical Research Award, a prestigious recognition of groundbreaking research. Their foundational work underscores the potential benefits of HIF-based therapies, such as vadadustat, which are being developed to exploit the same mechanism of action to treat renal anemia."

Financial Results

The company reported a net loss of ($36.3) million, or ($0.96) per share, for the third quarter of 2016. Net loss for the third quarter of 2015 was ($19.5) million or ($0.68) per share.

As previously reported, revenue recognition for the company's Collaboration Agreement with Mitsubishi Tanabe Pharma Corporation is expected to begin in 2017 when the scope of the Phase 3 program is agreed upon with Japanese regulatory authorities and when all revenue recognition criteria, as defined by accounting standards for the transaction, have been satisfied. Accordingly, the company did not record any revenue for the third quarter of 2016 and, as of September 30, 2016, the company had $40.0 million of deferred revenue.

Research and development expenses were $31.2 million for the third quarter of 2016, compared to $15.6 million for the third quarter of 2015. The increase is primarily attributable to external costs related to the PRO2TECT Phase 3 program, as well initiation costs of the INNO2VATE Phase 3 program. Research and development expenses increased due to additional headcount and compensation-related costs.

General and administrative expenses were $4.9 million for the third quarter of 2016, compared to $4.1 million for the third quarter of 2015. The increase is primarily due to an increase in costs to support the company's Phase 3 program, including headcount and compensation-related costs, and associated facility-related costs.

The company's cash used in operations during the third quarter of 2016 was $28.4 million, an increase of $19.4 million from the $9.0 million used in operations for the same period of 2015. The increase was primarily related to costs associated with the global Phase 3 program for vadadustat, which studies commenced during the fourth quarter of 2015 in non-dialysis CKD patients and in the third quarter of 2016 in patients undergoing dialysis. The company ended the third quarter of 2016 with cash, cash equivalents and available securities of $161.3 million, and continues to expect cash resources to fund the current operating plan through the second quarter of 2017.

About Akebia Therapeutics
Akebia Therapeutics, Inc. is a biopharmaceutical company headquartered in Cambridge, Massachusetts, focused on delivering innovative therapies to patients with kidney disease through hypoxia-inducible factor biology. Akebia's lead product candidate, vadadustat, is an oral therapy in development for the treatment of anemia related to chronic kidney disease in both non-dialysis and dialysis patients. Akebia has commenced its vadadustat Phase 3 Program, which includes the PRO2TECT studies for non-dialysis patients with anemia secondary to chronic kidney disease and the INNO2VATE studies for dialysis-dependent patients. For more information, please visit our website at www.akebia.com.

Forward-Looking Statements
This press release includes forward-looking statements. Such forward-looking statements include those about Akebia's strategy, future plans and prospects, including statements regarding the potential indications and benefits of vadadustat, the progress toward securing a geographic collaboration and the expected financial impact of such collaboration, planned presentations of data and potential revenue recognition in 2017. The words "anticipate," "appear," "believe," "estimate," "expect," "intend," "may," "plan," "predict," "project," "target," "potential," "will," "would," "could," "should," "continue," and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Each forward-looking statement is subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statement, including the risk that existing preclinical and clinical data may not be predictive of the results of ongoing or later clinical trials; the ability of Akebia to successfully complete the clinical development of vadadustat; the funding required to develop Akebia's product candidates and operate the company, and the actual expenses associated therewith; the cost of the Phase 3 studies of vadadustat and the availability of financing to cover such costs; the timing and content of decisions made by the FDA and other regulatory authorities; the rate of enrollment in clinical studies of vadadustat; the actual time it takes to initiate and complete clinical studies; the development plan for vadadustat in Japan; Akebia's ability to negotiate commercially reasonable terms with a geographic collaboration partner, including economics sufficient to fund the global Phase 3 program; the success of competitors in developing product candidates for diseases for which Akebia is currently developing its product candidates; and Akebia's ability to obtain, maintain and enforce patent and other intellectual property protection for vadadustat. Other risks and uncertainties include those identified under the heading "Risk Factors" in Akebia's Annual Report on Form 10-Q for the quarter ended September 30, 2016, and other filings that Akebia may make with the Securities and Exchange Commission in the future. Akebia does not undertake, and specifically disclaims, any obligation to update any forward-looking statements contained in this press release.

Akebia Contact
AJ Gosselin
Manager, Corporate Communications
617-276-2177
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Tables Follow:

AKEBIA THERAPEUTICS, INC.
Consolidated Statements of Operations
(in thousands except share and per share data)
(unaudited)

	Three Months Ended		Nine Months Ended	
	September 30, 2016	September 30, 2015	September 30, 2016	September 30, 2015
Operating expenses:				
Research and development	$ 31,238	$ 15,604	$ 82,350	$ 28,772
General and administrative	4,944	4,074	16,066	12,691
Total operating expenses	36,182	19,678	98,416	41,463
Operating loss	(36,182)	(19,678)	(98,416)	(41,463)
Other income, net	(126)	203	531	604
Net loss	$ (36,308)	$ (19,475)	$ (97,885)	$ (40,859)
Net loss per share applicable to common stockholders—basic and diluted	$ (0.96)	$ (0.68)	$ (2.61)	$ (1.62)
Weighted-average number of common shares used in net loss per share applicable to common stockholders—basic and diluted	37,897,902	28,784,231	37,528,869	25,175,077

AKEBIA THERAPEUTICS, INC.
Selected Balance Sheet Data
(in thousands)
(unaudited)

	September 30, 2016	December 31, 2015
Cash, cash equivalents and available for sale securities	$ 161,322	$ 138,454
Working capital	139,008	129,149
Total assets	169,118	142,940
Total stockholders' equity	100,710	130,998