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

Form 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the quarter ended June 30, 2017

☐ **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 001-37998

JOUNCE THERAPEUTICS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**45-4870634**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
780 Memorial Drive Cambridge, Massachusetts	**02139**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (857) 259-3840

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 Data 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 the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒

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

As of August 4, 2017, there were 32,194,213 shares of common stock, $0.001 par value per share, outstanding.

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References to Jounce

Throughout this Quarterly Report on Form 10-Q, the "Company," "Jounce," "Jounce Therapeutics," "we," "us," and "our," except where the context requires otherwise, refers to Jounce Therapeutics, Inc. and "our board of directors" refers to the board of directors of Jounce Therapeutics, Inc.

Cautionary Note Regarding Forward-Looking Statements and Industry Data

This Quarterly Report on Form 10-Q contains forward-looking statements that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this Quarterly Report on Form 10-Q, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management and expected market growth, are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important 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 the forward-looking statements.

The words "anticipate," "believe," "estimate," "anticipate," "expect," "intend," "may," "plan," "predict," "project," "would", "will," "target", "goal", "could," "should, "potential," "continue" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These forward looking statements include, among other things, statements about:

- the timing, progress, and results of preclinical studies and clinical trials for JTX-2011, JTX-4014 and any future product candidates we may develop, including statements regarding the timing of initiation and completion of studies or trials and related preparatory work, the period during which the results of the trials will become available, and our research and development programs;
- the timing, scope, or likelihood of regulatory filings and approvals, including timing of our Biologics License Application filing for, and final Food and Drug Administration approval of, JTX-2011 and JTX-4014;
- the timing, scope, or likelihood of foreign regulatory filings and approvals;
- our ability to use our Translational Science Platform to identify targets for additional product candidates and to match immunotherapies to select patient subsets;
- our ability to develop and advance any future product candidates into, and successfully complete, clinical studies;
- our ability to develop combination therapies, whether on our own or in collaboration with Celgene Corporation, or Celgene, and other third parties, for JTX-2011 and JTX-4014;
- our expectations regarding the size of the patient populations for JTX-2011 and JTX-4014, if approved for commercial use, and any additional product candidates we may develop;
- our commercialization and marketing capabilities and strategy;
- the pricing and reimbursement of JTX-2011, JTX-4014 and any additional product candidates we may develop, if approved;
- the implementation of our business model and our strategic plans for our business, JTX-2011, JTX-4014 and any additional product candidates we may develop, and our technology;
- the rate and degree of market acceptance and clinical utility of JTX-2011, JTX-4014 and any additional product candidates we may develop;
- the potential benefits of and our ability to maintain our collaboration with Celgene, and establish or maintain future collaborations or strategic relationships or obtain additional funding;
- our ability to retain the continued service of our key professionals and to identify, hire and retain additional qualified professionals;
- our intellectual property position, including the scope of protection we are able to establish and maintain for intellectual property rights covering JTX-2011, JTX-4014 and any additional product candidates we may develop, and our ability not to infringe, misappropriate or otherwise violate any third-party intellectual property rights;

- our competitive position, and developments and projections relating to our competitors and our industry;
- our expectations related to the use of proceeds;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- the impact of laws and regulations; and
- our expectations regarding the time during which we will be an emerging growth company under the Jumpstart our Business Startups Act of 2012.

There are a number of important risks and uncertainties that could cause our actual results to differ materially from those indicated by forward-looking statements. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in this Quarterly Report on Form 10-Q, particularly in the section entitled “Risk Factors” in Part II, Item IA that could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments that we may make.

You should read this Quarterly Report on Form 10-Q and the documents that we have filed as exhibits to this Quarterly Report on Form 10-Q completely and with the understanding that our actual future results may be materially different from what we expect. The forward-looking statements contained in this Quarterly Report on Form 10-Q are made as of the date of this Quarterly Report on Form 10-Q, and we do not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law.

This Quarterly Report on Form 10-Q includes industry and market data, which we obtained from our own internal estimates and research, as well as from industry and general publications and research, surveys, and studies conducted by third parties. Industry publications, studies, and surveys generally state that they have been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. While we believe that each of these studies and publications is reliable, we have not independently verified market and industry data from third-party sources. While we believe our internal company research is reliable and the market definitions are appropriate, neither such research nor these definitions have been verified by any independent source.

Website and Social Media Disclosure

From time to time, we may use our website (www.jouncetx.com), investor and media relations website (http://ir.jouncetx.com/phoenix.zhtml?c=254289&p=irol-news), Facebook page (https://www.facebook.com/jouncetx/), LinkedIn page (https://www.linkedin.com/company-beta/3494537/?pathWildcard=3494537) and Twitter feed (https://twitter.com/JounceTx) as channels for the distribution of information. The information we post through these channels may be deemed material. Accordingly, investors should monitor these channels, in addition to following our press releases, Securities and Exchange Commission filings and public conference calls and webcasts. The contents of our website and social media channels are not, however, a part of this report.

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

Jounce Therapeutics, Inc.
Condensed Consolidated Balance Sheets (unaudited)
(amounts in thousands, except par value amounts)

	June 30, 2017	December 31, 2016
Assets:		
Current assets:		
Cash and cash equivalents	$ 43,482	$ 44,848
Short-term investments	227,321	104,410
Prepaid expenses and other current assets	8,513	2,529
Total current assets	279,316	151,787
Property and equipment, net	15,507	7,241
Long-term investments	39,086	108,116
Other non-current assets	2,535	4,168
Total assets	$ 336,444	$ 271,312
Liabilities, convertible preferred stock, contingently redeemable common stock and stockholders' equity (deficit):		
Current liabilities:		
Accounts payable	$ 3,104	$ 3,511
Accrued expenses	6,411	5,855
Deferred rent and lease incentive, current	61	720
Deferred revenue, current—related party	69,235	80,544
Other current liabilities	49	43
Total current liabilities	78,860	90,673
Deferred rent and lease incentive, net of current portion	1,854	1,452
Deferred revenue, net of current portion—related party	77,990	107,260
Other non-current liabilities	41	56
Total liabilities	158,745	199,441
Commitments and contingencies		
Convertible preferred stock (Series A), $0.001 par value: No shares and 47,000 shares authorized, issued and outstanding at June 30, 2017 and December 31, 2016, respectively	—	47,112
Convertible preferred stock (Series B), $0.001 par value: No shares and 24,779 shares authorized, issued and outstanding at June 30, 2017 and December 31, 2016, respectively	—	55,849
Convertible preferred stock (Series B-1), $0.001 par value: No shares and 10,448 shares authorized, issued and outstanding at June 30, 2017 and December 31, 2016, respectively	—	36,077
Contingently redeemable common stock	2,191	1,921
Stockholders' equity (deficit):		
Preferred stock, $0.001 par value: 5,000 shares and no shares authorized at June 30, 2017 and December 31, 2016, respectively; no shares issued or outstanding at June 30, 2017 or December 31, 2016	—	—
Common stock, $0.001 par value: 160,000 shares and 29,810 shares authorized at June 30, 2017 and December 31, 2016, respectively; 32,181 and 2,518 shares issued at June 30, 2017 and December 31, 2016, respectively; 32,155 and 2,424 shares outstanding at June 30, 2017 and December 31, 2016, respectively	32	2
Additional paid-in capital	252,195	4,515
Accumulated other comprehensive loss	(552)	(433)
Accumulated deficit	(76,167)	(73,172)
Total stockholders' equity (deficit)	175,508	(69,088)
Total liabilities, convertible preferred stock, contingently redeemable common stock and stockholders' equity (deficit)	$ 336,444	$ 271,312

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

Jounce Therapeutics, Inc.
Condensed Consolidated Statements of Operations (unaudited)
(amounts in thousands, except per share amounts)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Revenue:				
Collaboration revenue—related party	$ 20,289	$ —	$ 40,578	$ —
Operating expenses:				
Research and development	17,188	6,490	32,147	14,745
General and administrative	6,129	5,872	11,706	8,518
Total operating expenses	23,317	12,362	43,853	23,263
Operating loss	(3,028)	(12,362)	(3,275)	(23,263)
Other income, net:				
Other income, net	752	13	1,384	24
Total other income, net	752	13	1,384	24
Loss before provision for income taxes	(2,276)	(12,349)	(1,891)	(23,239)
Provision for income taxes	1,104	—	1,104	—
Net loss	$ (3,380)	$ (12,349)	$ (2,995)	$ (23,239)
Reconciliation of net loss to net loss attributable to common stockholders:				
Net loss	$ (3,380)	$ (12,349)	$ (2,995)	$ (23,239)
Accrued dividends on Series A convertible preferred stock	—	(935)	(268)	(1,870)
Accrued dividends on Series B convertible preferred stock	—	(1,109)	(318)	(2,218)
Accrued dividends on Series B-1 convertible preferred stock	—	—	(208)	—
Net loss attributable to common stockholders	$ (3,380)	$ (14,393)	$ (3,789)	$ (27,327)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.11)	$ (7.23)	$ (0.14)	$ (14.05)
Weighted-average common shares outstanding, basic and diluted	32,144	1,991	27,867	1,945

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

Jounce Therapeutics, Inc.
Condensed Consolidated Statements of Comprehensive Loss (unaudited)
(amounts in thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Net loss	$ (3,380)	$ (12,349)	$ (2,995)	$ (23,239)
Other comprehensive loss:				
Unrealized loss on available-for-sale securities	(66)	—	(119)	—
Comprehensive loss	$ (3,446)	$ (12,349)	$ (3,114)	$ (23,239)

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

Jounce Therapeutics, Inc.
Condensed Consolidated Statements of Cash Flows (unaudited)
(amounts in thousands)

	Six Months Ended June 30,	
	2017	**2016**
Cash flow from operating activities:		
Net loss	$ (2,995)	$ (23,239)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation expense	2,389	1,095
Depreciation expense	2,591	912
Net amortization of premiums and discounts on investments	557	—
Changes in operating assets and liabilities:		
Prepaid taxes	(4,896)	—
Prepaid expenses and other current assets	(837)	(1,271)
Other non-current assets	(87)	1,102
Accounts payable	323	(700)
Accrued expenses and other current liabilities	1,786	(845)
Deferred revenue—related party	(40,579)	—
Deferred rent	(257)	(330)
Net cash used in operating activities	(42,005)	(23,276)
Cash flow from investing activities:		
Purchases of investments	(133,263)	—
Sales and maturities of investments	78,706	—
Purchases of property and equipment	(11,962)	(634)
Net cash used in investing activities	(66,519)	(634)
Cash flow from financing activities:		
Proceeds from initial public offering of common stock, net of issuance costs	107,008	—
Proceeds from exercise of stock options	150	42
Cash paid for issuance costs	—	(3)
Net cash provided by financing activities	107,158	39
Net decrease in cash and cash equivalents	(1,366)	(23,871)
Cash and cash equivalents, beginning of period	44,848	45,161
Cash and cash equivalents, end of period	$ 43,482	$ 21,290
Supplemental disclosure of non-cash activities:		
Purchases of property and equipment in accounts payable and accrued expenses	$ 767	$ 174
Issuance costs in accounts payable and accrued expenses	$ —	$ 27

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

Jounce Therapeutics, Inc.
Notes to Condensed Consolidated Financial Statements
(unaudited)

1. Nature of Business

Jounce Therapeutics, Inc. (the "Company") is a clinical stage immunotherapy company dedicated to transforming the treatment of cancer by developing therapies that enable the immune system to attack tumors and bring long-lasting benefits to patients. The Company is subject to a number of risks similar to those of other clinical stage immunotherapy companies, including dependence on key individuals; the need to develop commercially viable products; competition from other companies, many of which are larger and better capitalized; and the need to obtain adequate additional financing to fund the development of its products.

The Company's lead product candidate, JTX-2011, is a clinical stage monoclonal antibody that binds to and activates ICOS, a protein on the surface of certain T cells commonly found in many solid tumors. The Company submitted an Investigational New Drug Application for JTX-2011 to the Food and Drug Administration in July 2016 and began the Phase I portion of its JTX-2011 multi-arm Phase I/II clinical trial in patients with solid tumors in August 2016. In June 2017, the Company presented preliminary safety, pharmacodynamic and pharmacokinetic data from the Phase I portion of this clinical trial as well as the recommended dose for the Phase II monotherapy cohorts at the 2017 American Society of Clinical Oncology Annual Meeting.

In April 2017, the Company began the monotherapy cohorts of the Phase II portion of this clinical trial, which evaluate JTX-2011 as a monotherapy in at least three tumor-specific cohorts, including head and neck squamous cell cancer ("HNSCC"), non-small cell lung cancer ("NSCLC") and non-indication specific solid tumors. In July 2017, the Company began the combination cohorts of the Phase II portion of this clinical trial, which evaluate JTX-2011 in combination with nivolumab in at least six tumor types, including HNSCC, NSCLC, triple negative breast cancer, melanoma, gastric cancer and additional tumor types based on emerging science. The Company expects to provide preliminary efficacy data in the first half of 2018.

On February 1, 2017, the Company closed its initial public offering ("IPO") of 7,319,750 shares of the Company's common stock at a public offering price of $16.00 per share, including 954,750 shares of common stock issued upon the full exercise by the underwriters of their option to purchase additional shares. The gross proceeds from the IPO were $117.1 million and net proceeds were $106.4 million, after deducting underwriting discounts and commissions and other offering expenses paid by the Company.

Upon completion of the IPO, all outstanding preferred stock was automatically converted into an aggregate of 22.3 million shares of common stock. In connection with the IPO, the Board of Directors and the stockholders of the Company approved a one-for-3.69 reverse stock split of the Company's issued and outstanding common stock. The reverse stock split became effective on January 13, 2017. All share and per share amounts in the condensed consolidated financial statements have been retroactively adjusted for all periods presented to give effect to the reverse stock split, including reclassifying an amount equal to the reduction in par value to additional paid-in capital.

As of June 30, 2017, the Company had cash, cash equivalents, and investments of $309.9 million. The Company expects that its existing cash, cash equivalents, and investments will enable it to fund its expected operating expenses and capital expenditure requirements for at least 24 months from August 9, 2017, the filing date of this Quarterly Report on Form 10-Q. The Company expects to finance its future cash needs through a combination of equity or debt financings and collaboration arrangements, including cash inflows from its Master Research and Collaboration Agreement (the "Celgene Collaboration Agreement") with Celgene Corporation ("Celgene").

2. Basis of Presentation and Summary of Significant Accounting Policies

Basis of Presentation and Consolidation

The accompanying condensed consolidated financial statements as of June 30, 2017 and December 31, 2016, and for the three and six months ended June 30, 2017 and 2016, have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission (the "SEC") and generally accepted accounting principles in the United States of America ("GAAP") for condensed consolidated financial information. Accordingly, they do not include all of the information and footnotes required by GAAP for complete financial statements. In the opinion of management, these condensed consolidated financial statements reflect all normal recurring adjustments which are necessary for a fair presentation of the Company's financial position and results of its operations, as of and for the periods presented. These condensed consolidated financial statements should be read in conjunction with the

consolidated financial statements and notes thereto contained in the Company's Annual Report on Form 10-K for the year ended December 31, 2016 filed with the SEC on March 10, 2017 (the "Annual Report on Form 10-K").

The information presented in the condensed consolidated financial statements and related notes as of June 30, 2017, and for the three and six months ended June 30, 2017 and 2016, is unaudited. The December 31, 2016 condensed consolidated balance sheet included herein was derived from the audited financial statements as of that date, but does not include all disclosures, including notes, required by GAAP for complete financial statements.

Interim results for the six months ended June 30, 2017 are not necessarily indicative of the results that may be expected for the fiscal year ending December 31, 2017, or any future period.

The accompanying condensed consolidated financial statements include the accounts of Jounce Therapeutics, Inc. and its wholly owned subsidiary, Jounce Mass Securities, Inc., which was established in July 2016. All intercompany transactions and balances have been eliminated in consolidation.

Summary of Significant Accounting Policies

The significant accounting policies and estimates used in the preparation of the condensed consolidated financial statements are described in the Company's audited financial statements as of and for the year ended December 31, 2016, and the notes thereto, which are included in the Company's Annual Report on Form 10-K. There have been no material changes in the Company's significant accounting policies during the six months ended June 30, 2017.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. On an ongoing basis, the Company's management evaluates its estimates which include, but are not limited to, estimates related to accrued expenses, stock-based compensation expense, income taxes and the period of performance for units of accounting identified under the Celgene Collaboration Agreement. The Company bases its estimates on historical experience and other market specific or other relevant assumptions it believes to be reasonable under the circumstances. Actual results could differ from those estimates.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, *Revenue from Contracts with Customers (Topic 606)*, which supersedes all existing revenue recognition requirements, including most industry-specific guidance. The new standard requires a company to recognize revenue when it transfers goods or services to customers in an amount that reflects the consideration that the company expects to receive for those goods or services. This guidance was originally effective for interim and annual periods beginning after December 15, 2016 and allowed for adoption using a full retrospective method, or a modified retrospective method. Early adoption was originally not permitted. Subsequent to the issuance of ASU 2014-09, the FASB also issued the following updates related to Accounting Standards Codification ("ASC") 606, *Revenue from Contracts with Customers*:

- In August 2015, the FASB issued ASU 2015-14, Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date, whereby the effective date for the new revenue standard was deferred by one year. As a result of ASU 2015-14, the new revenue standard is now effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2017, and early adoption is now permitted for annual periods beginning after December 15, 2016, including interim periods within that annual period.
- In March 2016, the FASB issued ASU 2016-08, Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net), to clarify the implementation guidance on principal versus agent considerations.
- In April 2016, the FASB issued ASU 2016-10, Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing, to clarify the principle for determining whether a good or service is "separately identifiable" from other promises in the contract and to clarify the categorization of licenses of intellectual property.

- In May 2016, the FASB issued ASU 2016-12, Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Technical Expedients, to clarify guidance on transition, determining collectibility, non-cash consideration and the presentation of sales and other similar taxes.
- In December 2016, the FASB issued ASU 2016-20, Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers, that allows entities not to make qualitative disclosures about remaining performance obligations in certain cases, adds disclosure requirements for entities that elect certain optional exemptions and adds twelve additional technical corrections and improvements to the new revenue standard.

The Company currently anticipates adoption of ASC 606 effective January 1, 2018 under the modified retrospective method. The Company is in the process of determining the impact of ASC 606 on its financial statements, and the Company expects its analysis to be substantially completed by the third quarter of 2017. The adoption of ASC 606 may impact the timing of revenue recognized related to the $225.0 million upfront payment received under the Celgene Collaboration Agreement. The adoption of ASC 606 is also expected to have an impact on the Company's footnote disclosures and its internal controls over financial reporting.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*, which requires a lessee to recognize assets and liabilities on the balance sheet for operating leases and changes many key definitions, including the definition of a lease. The new standard includes a short-term lease exception for leases with a term of 12 months or less, as part of which a lessee can make an accounting policy election not to recognize lease assets and lease liabilities. Lessees will continue to differentiate between finance leases (previously referred to as capital leases) and operating leases using classification criteria that are substantially similar to the previous guidance. The new standard will be effective beginning January 1, 2019, and early adoption is permitted for public entities. The Company is currently evaluating the potential impact that ASU 2016-02 may have on the condensed consolidated financial statements.

In March 2016, the FASB issued ASU 2016-09, *Compensation—Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*. The new standard identifies areas for simplification involving several aspects of accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, an option to recognize gross stock-based compensation expense with actual forfeitures recognized as they occur, as well as certain classifications on the condensed consolidated statements of cash flows.

The Company adopted ASU 2016-09 effective January 1, 2017, and the Company has elected to apply the simplification guidance related to the accounting for forfeitures. Accordingly, the Company will recognize gross stock-based compensation expense with actual forfeitures recognized as they occur. This simplification guidance related to the accounting for forfeitures is applied using a modified retrospective transition method. As forfeitures previously estimated by the Company through the year ended December 31, 2016 were not material, there was not a material cumulative-effect adjustment to accumulated deficit upon adoption of this guidance. The adoption of ASU 2016-09 also requires all excess tax benefits and tax deficiencies related to share-based payments to be recorded in the condensed consolidated statements of operations. The adoption of ASU 2016-09 did not have a material impact on the Company's condensed consolidated financial statements as the expected increase in net deferred tax assets is expected to be offset by a corresponding increase in the deferred tax asset valuation allowance. The adoption of ASU 2016-09 is expected to impact the Company's future income tax footnote disclosures related to the presentation of these excess tax benefits and tax deficiencies.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*, which is intended to reduce diversity in practice in how entities present certain types of cash transactions in the statement of cash flows. This guidance also clarifies how the predominance principle should be applied when classifying cash receipts and cash payments that have attributes of more than one class of cash flows. This guidance will be effective for annual reporting periods beginning after December 15, 2017, including interim periods within those annual reporting periods, and early adoption is permitted. An entity that elects early adoption must adopt all of the amendments in the same period. The Company does not anticipate a material impact to the condensed consolidated financial statements as a result of the adoption of this guidance.

In November 2016, the FASB issued ASU 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash*, which will require entities to show the change in the total of cash, cash equivalents, restricted cash and restricted cash

equivalents within the statement of cash flows. As a result, entities will no longer separately present transfers between unrestricted cash and restricted cash. This guidance will be effective for annual reporting periods beginning after December 15, 2017, including interim periods within those annual reporting periods, and early adoption is permitted. The Company does not anticipate a material impact to the condensed consolidated financial statements as a result of the adoption of this guidance.

In May 2017, the FASB issued ASU 2017-09, *Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting*. This guidance is intended to provide clarity and reduce diversity in practice as to when changes to the terms or conditions of share-based payments are accounted for as modifications. Under this new guidance, entities will apply modification accounting if the fair value, vesting conditions or classification of the award changes. This guidance will be effective for annual reporting periods beginning after December 15, 2017, including interim periods within those annual reporting periods, and early adoption is permitted. The guidance per ASU 2017-09 is to be adopted prospectively to an award modified on or after the adoption date. The Company does not anticipate a material impact to the condensed consolidated financial statements as a result of the adoption of this guidance.

3. Celgene Collaboration Agreement

In July 2016, the Company entered into the Celgene Collaboration Agreement. The primary goal of the collaboration is to co-develop and co-commercialize innovative biologic immunotherapies that either activate or suppress the immune system by binding to targets identified by leveraging the Company's Translational Science Platform. Under the Celgene Collaboration Agreement, the Company granted Celgene exclusive options to develop and commercialize the Company's lead product candidate, JTX-2011, and up to four early-stage programs, consisting of targets to be selected from a pool of certain B cell, T regulatory cell and tumor-associated macrophage targets. Additionally, Celgene has an exclusive option to develop and commercialize the Company's product candidate JTX-4014, which, upon exercise of such option, will be a shared program that may be used by both parties in and outside of the collaboration. Prior to Celgene exercising any of its options, the Company is responsible for all research and development activities under the Celgene Collaboration Agreement.

The Company received a non-refundable upfront cash payment of $225.0 million upon the execution of the Celgene Collaboration Agreement. The Company also received $36.1 million from the sale of 10,448,100 shares of Series B-1 convertible preferred stock upon the execution of a Series B-1 Preferred Stock Purchase Agreement with Celgene, which shares converted into 2,831,463 shares of common stock upon the completion of the IPO. If Celgene elects to exercise any of the program options, Celgene will pay the Company an option-exercise fee of $10.0 million to $60.0 million that varies by program, with an aggregate of $182.5 million if Celgene exercises all six program options. The initial research term of the collaboration is four years, which can be extended, at Celgene's option, annually for up to three additional years for additional consideration that ranges from $30.0 million to $45.0 million per year, for an aggregate of $120.0 million if the term is extended for an additional three years.

Worldwide Development Cost and U.S. Operating Profit and Loss Sharing

Upon the exercise of each program option, the parties will enter into a co-development and co-commercialization agreement ("Co-Co Agreements") or, in the case of JTX-4014, a license agreement ("JTX-4014 License Agreement") that governs the development and commercialization of the applicable program. Although the agreements will not be executed unless and until Celgene exercises an option, the parties have agreed to the terms of the Co-Co Agreements and the JTX-4014 License Agreement as part of the Celgene Collaboration Agreement.

Under the Co-Co Agreements and the JTX-4014 License Agreement, the Company will share with Celgene the U.S. profits or losses and development costs on such collaboration program as follows:

- The Company will retain 60 percent of the U.S. operating profits or losses arising from commercialization of JTX-2011, with 40 percent allocated to Celgene.
- The Company will retain 25 percent of the U.S. operating profits or losses arising from commercialization of the first program (the "Lead Program"), other than JTX-2011 or JTX-4014, for which an IND application is filed under the collaboration, with 75 percent allocated to Celgene. Celgene has a one-time right to substitute and swap the economics and governance of this program with that of another program for which it exercises an option (other than JTX-2011 and JTX-4014).

- The Company and Celgene will equally share U.S. operating profits or losses arising from commercialization of up to three additional programs (other than JTX-2011, JTX-4014 or the Lead Program) (the "Other Programs").
- The Company and Celgene will share all development costs, other than for JTX-4014, in accordance with the applicable Co-Co Agreements, of which Celgene's portion of the costs range from 67 percent to 85 percent.

If Celgene exercises its option for a program other than JTX-4014, the Company will enter into a Co-Co Agreement, pursuant to which Celgene will have the exclusive right to develop and commercialize the products arising out of such collaboration program outside of the United States, and the Company will be eligible to receive tiered royalties ranging from a high single digit to mid-teen percentage rate on net product sales outside of the United States. Under each Co-Co Agreement, the Company will also have the right to opt out of profit sharing and instead receive milestones and royalties.

Furthermore, if Celgene exercises its option for JTX-4014, the Company will enter into the JTX-4014 License Agreement, pursuant to which Celgene and the Company will each have equal rights to develop and commercialize JTX-4014 in combination with other proprietary molecules in their or the Company's respective pipelines or in combination with products arising out of collaboration programs. Subject to terms specified in the license agreement for JTX-4014, the party owning the proprietary molecule that is combined with JTX-4014, if such molecule does not arise from a collaboration program with Celgene, will be solely responsible for all development and commercialization costs related to such combination. If JTX-4014 is combined with a product arising from a collaboration program, then the parties will share costs and, if co-packaged or co-formulated, profits or losses in accordance with the Co-Co Agreements for such other product.

Milestones and Royalties

Under the Co-Co Agreements and the JTX-4014 License Agreement, Celgene is required to pay the Company for specified development, regulatory and commercial milestones, if achieved, up to approximately $2.3 billion, across all collaboration programs. The development milestones are payable on initiation of certain clinical trials and range from $32.5 million to $105.0 million, per program, with an aggregate total of $290.0 million. The regulatory approval milestones are payable upon regulatory approval in the United States and outside the United States and range from $7.5 million to $50.0 million per milestone, with an aggregate total of $700.0 million. The commercial milestones are payable upon achievement of specified aggregate product sales outside the United States for each program and range from $40.0 million to $200.0 million per milestone, with an aggregate total of $1.270 billion. The Company is also eligible to receive royalties on product sales outside the United States ranging from high single digit to mid-teen royalties.

Exercise of Options

Celgene may exercise its option for a program at any time until the expiration of an option term for that program. For each program, the option term ends 45 to 60 days following Celgene's receipt of a data package that includes certain information relating to the program's research and development activities. The data package for a program may be delivered to Celgene after the applicable development milestone for such program has been achieved. Depending on the program, the applicable development milestone is (1) IND acceptance, (2) availability of certain Phase 1a data, or (3) availability of certain Phase I/II data. If Celgene fails to exercise its option during the option term for a program, the Company will continue to retain all rights to such program. If Celgene exercises its option for a program other than JTX-4014, then the Company will enter into a Co-Co Agreement with Celgene for such program in substantially the form attached to the agreement as an exhibit.

Under the co-development and co-commercialization agreement for JTX-2011 and one additional program for which Celgene opts in that is not JTX-4014, the Company will be responsible for leading development and commercialization activities in the United States and Celgene will be responsible for development and commercialization activities outside the United States. For all other additional programs for which Celgene opts in, other than JTX-4014, Celgene will lead development and commercialization activities worldwide.

If Celgene exercises its option for JTX-4014, the Company and Celgene will enter into a license agreement, in substantially the form attached to the agreement as an exhibit, pursuant to which the Company and Celgene will

both be able to equally access JTX-4014 for combinations within each other's portfolios and with other molecules that are subject to the agreement, subject to joint governance. Once Celgene opts in with respect to a given program, Celgene and the Company must each use commercially reasonable efforts to develop and commercialize the corresponding product in the United States.

Termination

At any point during the Celgene Collaboration Agreement, including during the research, development and clinical trial process, or during the term of the applicable co-development and co-commercialization or license agreement, respectively, Celgene can terminate the applicable agreement with the Company in its entirety, or with respect to any program under the Celgene Collaboration Agreement, upon 120 days' notice and can terminate the entire agreement with the Company in connection with a material breach of the agreement by the Company that remains uncured for 90 days.

Exclusivity

During the Celgene Collaboration Agreement's research term (i.e., for four years plus up to three one-year extensions that Celgene may elect), the Company may not alone, or with a third party, research, develop, manufacture or commercialize a biologic that binds to a defined pool of B cell, T regulatory cell or tumor-associated macrophage targets that meet certain criteria, termed an exclusive target, and inhibit, activate or otherwise modulate the activity of such exclusive target. In addition, if Celgene exercises its option for a program within the Celgene Collaboration Agreement, other than JTX-4014, then until termination or expiration of the applicable Co-Co Agreement for such program, the Company may not directly or indirectly research, develop, manufacture or commercialize, outside of the Celgene Collaboration Agreement, any biologic with specified activity against that program's collaboration target.

Accounting Analysis

The Celgene Collaboration Agreement includes six deliverables: (i) research and development services for the product candidate, JTX-2011 ("JTX-2011 Research Services") (ii) research and development services for the product candidate, JTX-4014 ("JTX-4014 Research Services") (iii) research and development services associated with the Lead Program and Other Programs ("Lead and Other Programs Research Services"), (iv) research and development services associated with target screening ("Target Screening Services"), (v) non-transferable, sub-licensable and non-exclusive licenses to use the Company's intellectual property and collaboration intellectual property to conduct research activities, on a program by program basis ("Research Licenses"), and (vi) participation in the joint steering committee ("JSC").

The six program options are considered substantive as the Company is at risk with regard to whether Celgene will exercise the options as a result of the significant uncertainties related to drug discovery, research and development as all options are for targets that have significant development risk. Additionally, there is also significant uncertainty regarding Celgene's exercise of the option for JTX-4014 because, although not a novel immunotherapy agent, it has significant development risk associated with the Company's ability to advance its development in a commercially viable manner in a short time frame. The research term extensions are also considered substantive options based upon the risk that Celgene will exercise the research term extension. In addition, there are substantial option exercise payments payable by Celgene upon exercise of each option that are not priced at a significant and incremental discount. Accordingly, the substantive options are not considered deliverables at the inception of the arrangement and the associated option exercise payments are not included in allocable arrangement consideration. The Company has also determined that any obligations which are contingent upon the exercise of a substantive option are not considered deliverables at the outset of the arrangement.

The Target Screening Services and participation in the JSC deliverables each have standalone value from the other undelivered elements and therefore are separate units of accounting. The Company determined that the research licenses for the JTX-2011 and JTX-4014 programs do not have value to Celgene on a standalone basis primarily as a result of the fact that the research licenses allow Celgene to evaluate the results of the research and development services performed by the Company and the right to perform its duties under the agreement, but do not provide Celgene with any commercialization rights. Therefore, the research licenses do not have value to Celgene without the performance of the JTX-2011 Research Services and JTX-4014 Research Services and therefore are not separable from the JTX-2011 Research Services and JTX-4014 Research Services. The JTX-2011 Research

Services are separate and distinct from the JTX-4014 Research Services, and therefore, the research license and the JTX-2011 Research Services are a separate combined unit of accounting and the research license and the JTX-4014 Research Services are a separate combined unit of accounting. The Lead and Other Programs Research Services deliverable does not include separate and distinct services and Celgene can use the Lead and Other Programs Research Services for its intended purpose without receipt of the research licenses that could be delivered for the Lead Program and Other Programs. The Lead and Other Programs Research Services therefore have been combined with the licenses that could be delivered for the Lead Program and Other Programs, which have an insignificant value, as a separate combined unit of accounting.

The allocable arrangement consideration consists of the upfront fee of $225.0 million. As described above, Celgene also purchased 10,448,100 shares of Series B-1 convertible preferred stock for gross proceeds of $36.1 million, which shares converted into 2,831,463 shares of common stock upon the completion of the IPO. The Company determined the shares of Series B-1 convertible preferred stock were sold at fair value. Therefore, the proceeds from the issuance of Series B-1 convertible preferred stock did not impact the arrangement consideration to be allocated to the units of accounting. The Company has allocated the allocable arrangement consideration based on the relative selling price of each unit of accounting. For all units of accounting, the Company determined the selling price using the best estimate of selling price (“BESP”). The Company determined the BESP based on internal estimates of the costs to perform the services, including expected internal and external costs for services and supplies, adjusted to reflect a reasonable profit margin. The total cost of the research and development services reflects the nature of the services to be performed and the Company’s best estimate of the length of time required to perform the services. The Company determined that the BESP of the participation in the JSC was insignificant and therefore no consideration was allocated to this unit of accounting. Similarly, given the limited use of the research licenses, which is only required in the event Celgene performs research activities under the Celgene Collaboration Agreement which is not expected to be significant, the Company determined the estimated selling price for the research licenses were also insignificant. Therefore, the total allocable arrangement consideration has been allocated to the JTX-2011 Research Services, the JTX-4014 Research Services, the Lead and Other Programs Research Services and the Target Screening Services.

The Company is recognizing the consideration allocated to each unit of accounting on a straight-line basis, as there is no discernible pattern or objective measure of performance of the services, over the estimated performance period. The estimated performance period reflects the Company’s estimate of the period over which it will perform the separate and distinct research and development services to deliver a pre-defined data package to Celgene for each program subject to an option. The performance periods for each unit of accounting range from twelve months to four years.

The Company evaluated the milestones in the Celgene Collaboration Agreement, the Co-Co agreements, and the JTX-4014 License Agreement to determine if they are substantive. In evaluating if a milestone is substantive, the Company assesses whether: (i) 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 the Company performance to achieve the milestone, (ii) the consideration relates solely to past performance and (iii) the consideration is reasonable relative to all of the deliverables and payment terms within the arrangement. All development and regulatory milestones in the Celgene Collaboration Agreement, the Co-Co agreements, and the JTX-4014 License Agreement are considered substantive on the basis of the contingent nature of the milestone, specifically reviewing factors such as the scientific, clinical, regulatory, and other risks that must be overcome to achieve the milestone as well as the level of effort and investment required. Accordingly, such amounts will be recognized in the period in which the associated milestone is achieved, assuming all other revenue recognition criteria are met. All commercial milestones will be accounted for in the same manner as royalties and recorded as revenue upon achievement of the milestone, assuming all other revenue recognition criteria are met.

During the six months ended June 30, 2017, under the Celgene Collaboration Agreement, the Company recognized $40.6 million of the $225.0 million upfront payment as revenue. As of June 30, 2017, the Company has $147.2 million of deferred revenue, which is classified as either current or net of current portion in the accompanying condensed consolidated balance sheets based on the period over which the revenue is expected to be recognized.

4. Fair Value Measurements

Fair value is an exit price, representing the amount that would be received from the sale of an asset or paid to transfer a liability in an orderly transaction between market participants. Fair value is determined based on observable and unobservable inputs. Observable inputs reflect readily obtainable data from independent sources, while unobservable inputs reflect certain market assumptions. As a basis for considering such assumptions, GAAP establishes a three-tier value hierarchy, which prioritizes the inputs used to develop the assumptions and for measuring fair value as follows: (Level 1) observable inputs such as quoted prices in active markets for identical assets; (Level 2) inputs other than the quoted prices in active markets that are observable either directly or indirectly; and (Level 3) unobservable inputs in which there is little or no market data, which requires the Company to develop its own assumptions. This hierarchy requires the Company to use observable market data, when available, and to minimize the use of unobservable inputs when determining fair value.

The Company measures the fair value of money market funds, U.S. Treasuries and government agency securities based on quoted prices in active markets for identical securities. Investments also include corporate debt securities which are valued either based on recent trades of securities in inactive markets or based on quoted market prices of similar instruments and other significant inputs derived from or corroborated by observable market data.

The carrying amounts reflected in the condensed consolidated balance sheets for cash, prepaid expenses and other current assets, accounts payable and accrued expenses approximate their fair values, due to their short-term nature.

Assets measured at fair value on a recurring basis as of June 30, 2017 were as follows (in thousands):

	June 30, 2017	Quoted prices in active markets for identical assets (level 1)	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)
Money market funds, included in cash equivalents	$ 43,482	$ 43,482	$ —	$ —
Investments:				
Corporate debt securities	83,750	—	83,750	—
U.S. Treasuries	125,385	125,385	—	—
Government agency securities	57,272	57,272	—	—
Totals	$ 309,889	$ 226,139	$ 83,750	$ —

Assets measured at fair value on a recurring basis as of December 31, 2016 were as follows (in thousands):

	December 31, 2016	Quoted prices in active markets for identical assets (level 1)	Significant other observable inputs (level 2)	Significant unobservable inputs (level 3)
Money market funds, included in cash equivalents	$ 44,848	$ 44,848	$ —	$ —
Investments:				
Corporate debt securities	92,408	—	92,408	—
U.S. Treasuries	120,118	120,118	—	—
Totals	$ 257,374	$ 164,966	$ 92,408	$ —

There were no changes in valuation techniques or transfers between the fair value measurement levels during the three or six months ended June 30, 2017 or during the year ended December 31, 2016. There were no liabilities measured at fair value on a recurring basis as of June 30, 2017 or December 31, 2016.

5. Investments

Short-term investments consist of investments with maturities greater than ninety days and less than one year from the balance sheet date. Long-term investments consist of investments with maturities of greater than one year that are not expected to be used to fund current operations. The Company classifies all of its investments as available-for-sale securities. Accordingly, these investments are recorded at fair value. Realized gains and losses,

amortization and accretion of discounts and premiums are included in other income, net. Unrealized gains and losses on available-for-sale securities are included in other comprehensive income (loss) as a component of stockholders' equity (deficit) until realized.

Cash and cash equivalents, short-term investments and long-term investments as of June 30, 2017 were comprised as follows (in thousands):

	June 30, 2017			
	Amortized cost	Unrealized gains	Unrealized losses	Fair value
Cash equivalents and short-term investments:				
Money market funds, included in cash equivalents	$ 43,482	$ —	$ —	$ 43,482
Corporate debt securities	76,883	1	(73)	76,811
U.S. Treasuries	125,749	—	(364)	125,385
Government agency securities	25,163	—	(38)	25,125
Total cash equivalents and short-term investments	271,277	1	(475)	270,803
Long-term investments:				
Corporate debt securities	6,950	—	(11)	6,939
Government agency securities	32,214	1	(68)	32,147
Total long-term investments	39,164	1	(79)	39,086
Total cash equivalents and investments	$ 310,441	$ 2	$ (554)	$ 309,889

Cash and cash equivalents, short-term investments and long-term investments as of December 31, 2016 were comprised as follows (in thousands):

	December 31, 2016			
	Amortized cost	Unrealized gains	Unrealized losses	Fair value
Cash equivalents and short-term investments:				
Money market funds, included in cash equivalents	$ 44,848	$ —	$ —	$ 44,848
Corporate debt securities	92,549	—	(141)	92,408
U.S. Treasuries	12,020	—	(18)	12,002
Total cash equivalents and short-term investments	149,417	—	(159)	149,258
Long-term investments:				
U.S. Treasuries	108,390	—	(274)	108,116
Total long-term investments	108,390	—	(274)	108,116
Total cash equivalents and investments	$ 257,807	$ —	$ (433)	$ 257,374

As of June 30, 2017 and December 31, 2016, the aggregate fair value of securities that were in an unrealized loss position for less than twelve months was $248.8 million and $192.3 million, respectively. The Company did not hold any securities in an unrealized loss position for more than twelve months as of June 30, 2017 or December 31, 2016. As of June 30, 2017, the Company did not intend to sell, and would not be more likely than not required to sell, the securities in an unrealized loss position before recovery of their amortized cost bases. Furthermore, the Company determined that there was no material change in the credit risk of these securities. As a result, the Company determined it did not hold any securities with any other-than-temporary impairment as of June 30, 2017.

There were no realized gains or losses on available-for-sale securities during the three or six months ended June 30, 2016. There were immaterial realized gains and losses on available-for-sale securities during the three and six months ended June 30, 2017.

6. Accrued Expenses

Accrued expenses as of June 30, 2017 and December 31, 2016 were comprised as follows (in thousands):

	June 30, 2017	December 31, 2016
Employee compensation and benefits	$ 1,995	$ 2,651
External research and professional services	3,413	1,923
Lab consumables and other	1,003	1,281
Total accrued expenses	$ 6,411	$ 5,855

7. Common Stock and Preferred Stock

Common Stock

The Company is authorized to issue 160.0 million shares of common stock. Holders of common stock are entitled to one vote per share. Holders of common stock are entitled to receive dividends, if and when declared by the Board of Directors.

Preferred Stock

Upon completion of the Company's IPO, all outstanding preferred stock was automatically converted into an aggregate of 22.3 million shares of common stock. The Company is also authorized to issue 5.0 million shares of undesignated preferred stock in one or more series. As of June 30, 2017, no shares of preferred stock were issued or outstanding.

Shares Reserved for Future Issuance

The Company has reserved for future issuance the following number of shares of common stock (in thousands):

	June 30, 2017	December 31, 2016
Shares reserved for Series A convertible preferred stock outstanding	—	12,737
Shares reserved for Series B convertible preferred stock outstanding	—	6,715
Shares reserved for Series B-1 convertible preferred stock outstanding	—	2,831
Shares reserved for vesting of restricted stock awards	26	94
Shares reserved for exercises of outstanding stock options	4,663	4,290
Shares reserved for future issuances under the 2017 Stock Incentive Plan	1,322	244
Total shares reserved for future issuance	6,011	26,911

8. Stock-based Compensation

2013 Stock Option and Grant Plan

In February 2013, the Company adopted the 2013 Stock Option and Grant Plan (the "2013 Plan"), as amended and restated, under which it could grant incentive stock options ("ISOs"), non-qualified stock options and restricted stock awards to eligible employees, officers, directors, and consultants. The 2013 Plan was subsequently amended in January 2015, April 2015, July 2015, March 2016 and October 2016 to allow for the issuance of additional shares of common stock.

2017 Stock Option and Incentive Plan

In January 2017, the Company's Board of Directors adopted and the Company's stockholders approved the 2017 Stock Option and Incentive Plan (the "2017 Plan"), which became effective immediately prior to the effectiveness of the Company's IPO. Upon the adoption of the 2017 Plan, no further awards will be granted under the 2013 Plan.

The 2017 Plan provides for the grant of ISOs, non-qualified stock options, restricted stock awards, restricted stock units, stock appreciation rights and other stock-based awards. The Company's employees, officers, directors and consultants and advisors are eligible to receive awards under the 2017 Plan. The Company registered on a Registration Statement on Form S-8 1,753,758 shares of common stock under the 2017 Plan, which is comprised of (i) 1,510,000 shares of common stock reserved for issuance under the 2017 Plan, plus (ii) 243,758 shares of common stock originally reserved for issuance under the 2013 Plan that became available for issuance under the 2017 Plan upon the completion of the Company's IPO. The 2017 Plan also provides that an additional number of shares will automatically be added to the shares authorized for issuance under the 2017 Plan on January 1, 2018 and each January 1 thereafter. The number of shares added each year will be equal to the lesser of (i) 4% of the outstanding shares on the immediately preceding December 31st or (ii) such amount as determined by the Compensation Committee of the Board of Directors.

The terms of stock options and restricted stock awards, including vesting requirements, are determined by the Board of Directors, subject to the provisions of the 2017 Plan. Stock options and restricted stock awards granted by the Company to employees and directors generally vest ratably over four years. Awards granted to new employees vest ratably over four years with 25% vesting on the first anniversary of employment and the remaining 75% vesting ratably, on a quarterly or monthly basis, over the remaining three years. Awards granted to non-employees generally vest monthly over one year. No restricted stock awards were issued during the three or six months ended June 30, 2017 or 2016. No stock options were issued to non-employees during the three or six months ended June 30, 2017 or 2016.

As of June 30, 2017, there were 1.3 million shares available for future issuance under the 2017 Plan.

2017 Employee Stock Purchase Plan

In January 2017, the Board of Directors adopted and the Company's stockholders approved the 2017 Employee Stock Purchase Plan (the "2017 ESPP"), which became effective upon the closing of the Company's IPO. The Company reserved 302,000 shares of common stock for future issuance under the 2017 ESPP. No offering periods under the 2017 ESPP had been initiated as of June 30, 2017.

Founder Awards

From December 2012 to February 2013, the Company issued 1.4 million shares of restricted stock to non-employee founders (the "Founders"). Of the total restricted stock awarded to the Founders, 1.0 million shares vested over one to four years, based on each Founder's continued service relationship with the Company in varying capacity as advisors, as prescribed by the grantee's individual restricted stock purchase agreements. The remaining 0.4 million shares vested upon the determination by the Board of Directors of a Founder's achievement of certain performance objectives, as set forth in the agreements. These performance criteria were linked to certain milestones specific to the Company's research and development goals, including but not limited to preclinical and clinical development milestones related to the Company's product candidates. As of June 30, 2017, all restricted stock awards issued to Founders were vested.

Restricted stock awards granted to two Founders contain options that enable the Founders to sell their vested shares back to the Company at fair value upon both (i) the termination of the consulting agreement between the Founder and the Company for any reason and (ii) the determination by the Founder's employer that the ownership of the restricted stock is in violation of the employer's conflict of interest policy. The occurrence of these events was determined to be outside of the Founders' and the Company's control. As such, these restricted stock awards have been recorded on the condensed consolidated balance sheet as contingently redeemable common stock, residing in temporary equity, in accordance with the classification guidance of ASC 718, *Compensation—Stock Compensation* and ASC 480, *Distinguishing Liabilities from Equity*. Further, in accordance with the measurement guidance of ASC 480, these restricted stock awards are not remeasured until such time as the contingent events become probable. In June 2017, the restricted stock purchase agreements related to the two Founders were amended such that these options expired on July 26, 2017.

Stock-based Compensation Expense

Total stock-based compensation expense recognized in the condensed consolidated statements of operations for the three and six months ended June 30, 2017 and 2016 was as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Research and development	$ 611	$ 505	$ 1,550	$ 810
General and administrative	425	150	839	285
Total stock-based compensation expense	$ 1,036	$ 655	$ 2,389	$ 1,095

Restricted Stock Activity

Pursuant to restricted stock agreements originally issued under the terms of the 2013 Plan, the Company, at its discretion, has the option to repurchase unvested shares at the initial purchase price if the employees or non-employees terminate their service relationship with the Company. The shares are recorded in stockholders' equity (deficit) as they vest.

The following table summarizes changes in unvested restricted stock for the six months ended June 30, 2017 (in thousands, except per share amounts):

	Shares	Weighted-average grant date fair value per share
Unvested restricted stock as of December 31, 2016	94	$ 0.07
Issued	—	$ —
Vested	(67)	$ 0.08
Repurchased	(1)	$ 0.37
Unvested restricted stock as of June 30, 2017	26	$ 0.02

As of June 30, 2017, there was unrecognized stock-based compensation expense related to unvested restricted stock awards of less than $0.1 million, which the Company expects to recognize over a weighted-average period of approximately 1.7 years.

The aggregate fair value of restricted stock awards that vested during the three months ended June 30, 2017 and 2016, based upon the fair values of the stock underlying the restricted stock awards on the day of vesting, was $0.2 million and $0.4 million, respectively. The aggregate fair value of restricted stock awards that vested during the six months ended June 30, 2017 and 2016 was $1.1 million and $0.7 million, respectively.

Stock Option Activity

The fair value of stock options during the three and six months ended June 30, 2017 and 2016 was calculated on the date of grant using the following weighted-average assumptions:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2017	2016	2017	2016
Risk-free interest rate	2.0%	1.5%	2.1%	1.5%
Expected dividend yield	—%	—%	—%	—%
Expected term (in years)	6.1	6.1	6.1	6.1
Expected volatility	73.6%	70.5%	73.6%	69.5%

Using the Black-Scholes option pricing model, the weighted-average grant date fair value of stock options granted during the three months ended June 30, 2017 and 2016 was $15.33 per share and $2.66 per share, respectively. The weighted-average grant date fair value of stock options granted during the six months ended June 30, 2017 and 2016 was $12.05 per share and $2.60 per share, respectively.

The following table summarizes changes in stock option activity during six months ended June 30, 2017 (in thousands, except per share amounts):

	Options	Weighted-average exercise price	Weighted average remaining contractual term (in years)	Aggregate intrinsic value
Outstanding at December 31, 2016	4,290	$ 3.95	8.7	$ 29,269
Granted	537	$ 18.26		
Exercised	(60)	$ 2.49		
Cancelled or forfeited	(104)	$ 6.24		
Outstanding at June 30, 2017	4,663	$ 5.56	8.2	$ 41,720
Vested and expected to vest at June 30, 2017	4,663	$ 5.56	8.2	$ 41,720
Exercisable at June 30, 2017	1,675	$ 1.97	7.6	$ 20,199

The aggregate intrinsic value of stock options exercised during the three months ended June 30, 2017 and 2016 was $0.2 million and $0.2 million, respectively. The aggregate intrinsic value of stock options exercised during the six months ended June 30, 2017 and 2016 was $1.0 million and $0.3 million, respectively.

As of June 30, 2017, there was unrecognized stock-based compensation expense related to unvested stock options of $13.3 million, which the Company expects to recognize over a weighted-average period of approximately 2.6 years.

9. Income Taxes

Net operating loss (“NOL”) and tax credit carryforwards are subject to review and possible adjustment by the Internal Revenue Service (“IRS”) and may become subject to an annual limitation in the event of certain cumulative changes in the ownership interest of significant shareholders over a three-year period in excess of 50% as defined under Sections 382 and 383 in the Internal Revenue Code (the “IRC”). This could limit the amount of tax attributes that can be utilized annually to offset future taxable income or tax liabilities. The amount of the annual limitation is determined based on the Company's value immediately prior to the ownership change. An IRC Section 382 study, completed in August 2016, identified three previous ownership changes for purposes of IRC Section 382. As a result of these ownership changes, the Company's NOL and tax credit carryforwards allocable to the periods preceding each such ownership change are subject to limitations under IRC Section 382. Subsequent ownership changes may further affect the limitation in future years.

Pursuant to IRS Revenue Procedure 2004-34, the Company will recognize additional revenue for income tax purposes during the year ended December 31, 2017 related to the upfront cash payment that was received upon the execution of the Celgene Collaboration Agreement in July 2016. As the revenue to be recognized for income tax purposes is expected to exceed the Company’s eligible NOL and tax credit carryforwards generated since inception, as limited by IRC Section 382, the Company expects to incur approximately $16.0 million to $18.0 million in federal and state tax liabilities during the year ended December 31, 2017. The Company’s overall provision for income taxes of $1.1 million for the three and six months ended June 30, 2017 is less than the estimated federal and state tax liabilities due to the tax benefit the Company is able to recognize related to deferred tax assets that the Company has concluded it will more likely than not realize in future periods.

10. Related-party Transactions

In July 2016, the Company entered into the Celgene Collaboration Agreement and a Series B-1 Preferred Stock Purchase Agreement with Celgene. Under the Celgene Collaboration Agreement, the Company received a non-refundable upfront payment of $225.0 million. Under the Series B-1 Preferred Stock Purchase Agreement, Celgene purchased 10,448,100 shares of Series B-1 preferred stock for $36.1 million. These shares of Series B-1 preferred

stock converted into 2,831,463 shares of common stock upon the completion of the Company's IPO. In addition, an affiliate of Celgene purchased 625,000 shares of the Company's common stock in the IPO at the public offering price of $16.00 per share for a total of $10.0 million.

11. Net Loss per Share

For purposes of the diluted net loss per share calculation, convertible preferred stock, outstanding stock options and unvested restricted common stock are considered to be potentially dilutive securities, but are excluded from the calculation of diluted net loss per share because their effect would be anti-dilutive and therefore, basic and diluted net loss per share were the same for all periods presented.

The following potentially dilutive securities have been excluded from the calculation of diluted net loss per share because including them would have had an anti-dilutive effect (in common stock equivalent shares):

	Three and Six Months Ended June 30,	
	2017	2016
Series A convertible preferred stock	—	12,737
Series B convertible preferred stock	—	6,715
Outstanding stock options	4,663	3,178
Unvested restricted common stock	26	466
Total	4,689	23,096

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

The following discussion and analysis of our financial condition and results of operations should be read together with our condensed consolidated financial statements and related notes appearing elsewhere in this Quarterly Report on Form 10-Q and our Annual Report on Form 10-K for the year ended December 31, 2016 that was filed with the United States Securities and Exchange Commission, or the SEC, on March 10, 2017. In addition to historical information, this discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of certain factors. We discuss factors that we believe could cause or contribute to these differences below and elsewhere in this Quarterly Report on Form 10-Q, including those factors set forth in the section entitled "Cautionary Note Regarding Forward-Looking Statements and Industry Data" and in the section entitled "Risk Factors" in Part II, Item 1A.

Overview

We are a clinical stage immunotherapy company dedicated to transforming the treatment of cancer by developing therapies that enable the immune system to attack tumors and provide long-lasting benefits to patients. Through the use of our Translational Science Platform, we first focus on specific cell types within tumors to prioritize targets, and then identify related biomarkers designed to match the right therapy to the right patient. Our strategy is to create immunotherapies targeting a variety of the diverse cellular components of the immune system, as well as non-immune cells resident within the tumor, all of which can vary greatly among tumors within and across indications. This may provide benefit to patients with tumors across the spectrum from highly inflamed, or hot, to poorly inflamed, or cold, and especially those not well served by current therapies. We believe the early identification of potential predictive biomarkers to prospectively enrich for biomarker positive cancer patients, from across many indications, may lead to shortened development timelines for our new immunotherapies. Our approach is designed to lead to a larger effect size by first identifying and then focusing on a smaller biomarker positive study population. Through this two-pronged approach, we believe our Translational Science Platform enables us to effectively and efficiently identify and develop new cancer immunotherapies.

- Our lead product candidate, JTX-2011, is a monoclonal antibody that binds to and activates ICOS, a protein on the surface of certain T cells commonly found in many solid tumors. Our preclinical data demonstrates that JTX-2011 stimulates a significant T cell immune response against solid tumors. We submitted our Investigational New Drug Application, or IND, for JTX-2011 to the Food and Drug Administration, or FDA, in July 2016 and began the Phase I portion of our JTX-2011 multi-arm Phase I/II clinical trial in patients with solid tumors in August 2016. In June 2017, we presented preliminary safety, pharmacodynamic and pharmacokinetic data from the Phase I portion of this clinical trial as well as the recommended dose for the Phase II monotherapy cohorts at the 2017 American Society of Clinical Oncology Annual Meeting.

  In April 2017, we began the monotherapy cohorts of the Phase II portion of this clinical trial, which evaluate JTX-2011 as a monotherapy in at least three tumor-specific cohorts, including head and neck squamous cell cancer, or HNSCC, non-small cell lung cancer, or NSCLC, and non-indication specific solid tumors. In July 2017, we began the combination cohorts of the Phase II portion of this clinical trial, which evaluate JTX-2011 in combination with nivolumab in at least six tumor types, including HNSCC, NSCLC, triple negative breast cancer, melanoma, gastric cancer and additional tumor types based on emerging science. We expect to provide preliminary efficacy data in the first half of 2018.

  We believe JTX-2011 has the potential to act both as a single agent and more importantly in combination with other therapies, such as anti-PD-1 antibodies, to offer treatment alternatives to patients who otherwise lack an effective response to currently approved therapies. We are also conducting IND enabling studies for JTX-4014, an anti-PD-1 antibody that, assuming continued successful development, we may use in future combinations with JTX-2011 as well as for use in combination with other future product candidates, as we believe combination therapy has the potential to be a mainstay of cancer immunotherapy.
- We are discovering and developing immunotherapies beyond the currently approved products targeting T effector cells. To do so, we are leveraging our Translational Science Platform to systematically and comprehensively interrogate cell types within the human tumor microenvironment, or TME, to enable us to develop therapies with the potential to benefit patients with tumors across the spectrum from hot to cold tumor characteristics. This includes focusing on adaptive and innate immune cells, such as B and T regulatory cells, and immunosuppressive macrophages, respectively. Therapies targeting these cell types and cell subsets may have the potential to complement existing approaches that focus on T effector cells and thereby benefit many patients who do not respond to the currently approved T effector cell-focused

immunotherapies. In addition, we are discovering and developing multiple approaches, including targeting stromal cells, with the potential to convert cold tumors to hot tumors, thereby making the tumors more amenable to immunotherapy, perhaps in combination approaches.

Immunotherapies are increasingly recognized as a critical component of cancer therapy and are beginning to fundamentally change the paradigm for treating patients. Fewer than half of all cancer patients respond to single agent immunotherapies. Combination therapies are beginning to yield greater responses than single agent therapies, yet there is still significant unmet medical need among large patient populations across most solid tumor indications. In addition, there is a significant number of patients with tumors that lack, or have low levels of, immune cell infiltrate where additional approaches may be required to fully realize the benefit of immunotherapy agents. We believe targeting novel immune mechanisms in combination with identifying and using predictive biomarkers may best address these areas of unmet need.

Our Translational Science Platform utilizes a suite of integrated technologies to comprehensively profile the cellular and molecular characteristics within thousands of human solid tumors, providing critical information about the TME that we believe will allow us to identify and guide new immunotherapies more efficiently through development. We utilize a systematic approach to match targets to defined patient populations, as well as niche indications and/or niche subsets within indications, which we believe are more likely to benefit from these therapies. Building on our biomarker-driven strategy, we aim to establish complementary diagnostics and/or companion diagnostics for each of our product candidates to identify the right patients for treatment.

In July 2016, we entered into a Master Research and Collaboration Agreement, or the Celgene Collaboration Agreement, and a Series B-1 Preferred Stock Purchase Agreement with Celgene Corporation, or Celgene. Under the terms of these agreements, we received a $225.0 million upfront cash payment and $36.1 million from the sale of 10,448,100 shares of our Series B-1 convertible preferred stock which shares converted into 2,831,463 shares of common stock upon the completion of our initial public offering, or IPO, in 2017.

Under the Celgene Collaboration Agreement, we granted Celgene exclusive options to develop and commercialize our lead product candidate, JTX-2011, and up to four early-stage programs, or the Lead Program and Other Programs, consisting of targets to be selected from a pool of certain B cell, T regulatory cell and tumor-associated macrophage targets. Additionally, Celgene has an exclusive option to develop and commercialize our product candidate JTX-4014, which, upon exercise of such option, will be a shared program that may be used by both parties in and outside of the collaboration. Prior to Celgene exercising any of its options, we are responsible for all research and development activities under the Celgene Collaboration Agreement.

Upon the exercise of each program option, the parties will enter into a co-development and co-commercialization agreement, or the Co-Co Agreements, or, in the case of JTX-4014, a license agreement, or the JTX-4014 License Agreement, that governs the development and commercialization of the applicable program. Although the agreements will not be executed unless and until Celgene exercises an option, the parties have agreed to the terms of the Co-Co Agreements and the JTX-4014 License Agreement as part of the Celgene Collaboration Agreement. Under the Co-Co Agreements and the JTX-4014 License Agreement, we will share with Celgene the United States profits or losses and development costs on such collaboration program.

If Celgene exercises its option for a program other than JTX-4014, we will enter into a Co-Co Agreement pursuant to which Celgene will have the exclusive right to develop and commercialize the products arising out of such collaboration program outside of the United States, and we will be eligible to receive tiered royalties ranging from a high single digit to mid-teen percentage rate on net product sales outside of the United States. Under each Co-Co Agreement, we will also have the right to opt out of profit sharing and instead receive milestones and royalties.

Furthermore, if Celgene exercises its option for JTX-4014, we will enter into the JTX-4014 License Agreement, pursuant to which Celgene and we will each have equal rights to develop and commercialize JTX-4014 in combination with other proprietary molecules in their or our respective pipelines or in combination with products arising out of collaboration programs. Subject to terms specified in the license agreement for JTX-4014, the party owning the proprietary molecule that is combined with JTX-4014, if such molecule does not arise from a collaboration program with Celgene, will be solely responsible for all development and commercialization costs related to such combination. If JTX-4014 is combined with a product arising from a collaboration program, then the parties will share costs and, if co-packaged or co-formulated, profits or losses in accordance with the Co-Co Agreements for such other product.

Celgene may extend the initial four-year research term of the collaboration for up to three additional one-year periods upon payment of an extension fee for each additional year. Additionally, under the terms of the agreement,

if Celgene exercises all of its options, all programs meet all milestones, including regulatory approvals in the United States and outside the United States, and Celgene extends the initial four year research term for three additional years, we are eligible to earn up to approximately $2.6 billion in clinical, regulatory, and/or commercialization milestone payments, option-exercise fees and research term extension fees.

The development milestones are payable on initiation of certain clinical trials and range from $32.5 million to $105.0 million, per program, with an aggregate total of $290.0 million. The regulatory approval milestones are payable upon regulatory approval in the United States and outside the United States and range from $7.5 million to $50.0 million per milestone, with an aggregate total of $700.0 million. The commercial milestones are payable upon achievement of specified aggregate product sales outside the United States for each program and range from $40.0 million to $200.0 million per milestone, with an aggregate total of $1.270 billion. We are also eligible to receive royalties on product sales outside the United States ranging from high single digit to mid-teen royalties. If Celgene elects to exercise any of the program options, Celgene will pay us an option-exercise fee of $10.0 million to $60.0 million that varies by program, with an aggregate of $182.5 million if Celgene exercises all six program options. The initial research term of the collaboration is four years, which can be extended, at Celgene's option, annually for up to three additional years for additional consideration that ranges from $30.0 million to $45.0 million per year, for an aggregate of $120.0 million if the term is extended for an additional three years.

Since inception, our operations have focused on organizing and staffing our Company, business planning, raising capital, developing our Translational Science Platform and conducting research, preclinical studies and clinical trials. We do not have any products approved for sale. From inception through June 30, 2017, we have recognized a total of $77.8 million in collaboration revenue under the Celgene Collaboration Agreement. We are subject to a number of risks comparable to those of other similar companies, including dependence on key individuals; the need to develop commercially viable products; competition from other companies, many of which are larger and better capitalized; and the need to obtain adequate additional financing to fund the development of our products. We have funded our operations through June 30, 2017 primarily through private placements of our preferred stock, the upfront payment received under the Celgene Collaboration Agreement and proceeds received from our IPO.

On February 1, 2017, we closed our IPO of 7,319,750 shares of our common stock at a public offering price of $16.00 per share, including 954,750 shares of our common stock issued upon the full exercise by the underwriters of their option to purchase additional shares. The gross proceeds from the IPO were $117.1 million, and net proceeds were $106.4 million, after deducting underwriting discounts and commissions and other offering expenses paid by us.

Due to our significant research and development expenditures, we have generated substantial operating losses in each annual period since our inception. We have incurred an accumulated deficit of $76.2 million through June 30, 2017. We expect to incur substantial additional losses in the future as we expand our research and development activities. We anticipate that our expenses will increase significantly in connection with our ongoing activities, as we:

- complete our multi-arm Phase I/II clinical trial with our lead product candidate, JTX-2011;
- complete our IND enabling activities for JTX-4014 and advance this program into clinical trials for use in combination with JTX-2011 and other potential product candidates;
- continue to develop and identify potential predictive biomarkers and complementary diagnostics and/or companion diagnostics for JTX-2011 and other potential product candidates;
- continue to develop and enhance our Translational Science Platform and advance our early stage pipeline of immunotherapy programs including early research activities under our Celgene collaboration into later stages of development;
- increase our headcount to support our Celgene collaboration efforts and to expand our clinical development team; and
- incur additional costs and headcount associated with operating as a public company.

Financial Operations Overview

Revenue

To date, we have not generated any revenue from product sales and do not expect to generate any revenue from product sales for the foreseeable future. For the six months ended June 30, 2017, we recognized $40.6 million of

collaboration revenue under the Celgene Collaboration Agreement. As of June 30, 2017, we had not received any milestone or royalty payments under the Celgene Collaboration Agreement.

In the future, we will continue to generate revenue from the Celgene Collaboration Agreement and may generate revenue from product sales or other collaboration agreements, strategic alliances and licensing arrangements. We expect that our revenue will fluctuate from quarter-to-quarter and year-to-year as a result of the timing and amount of license fees, milestones, reimbursement of costs incurred and other payments and product sales, to the extent any are successfully commercialized. If we fail to complete the development of our product candidates in a timely manner or obtain regulatory approval for them, our ability to generate future revenue, and our results of operations and financial position, would be materially adversely affected.

Operating Expenses

Research and Development

Research and development expenses represent costs incurred by us for the discovery, development and manufacture of JTX-2011, JTX-4014 and our discovery programs and include: external research and development expenses incurred under arrangements with third parties, academic and non-profit institutions and consultants, salaries and personnel-related costs, including non-cash stock-based compensation expense, license fees to acquire in-process technology and other expenses, which include direct and allocated expenses for laboratory, facilities and other costs.

We use our employee and infrastructure resources across multiple research and development programs directed toward developing our Translational Science Platform and for identifying and developing product candidates. We manage certain activities such as contract research and manufacture of JTX-2011, JTX-4014 and our discovery programs through our third-party vendors.

At this time, we cannot reasonably estimate or know the nature, timing and estimated costs of the efforts that will be necessary to complete the development of our product candidates. We are also unable to predict when, if ever, material net cash inflows will commence from sales of our product candidates. This is due to the numerous risks and uncertainties associated with developing such product candidates, including the uncertainty of:

- addition and retention of key research and development personnel;
- establishing an appropriate safety profile with IND-enabling toxicology studies;
- the cost to acquire or make therapies to study in combination with our immunotherapies;
- successful enrollment in and completion of clinical trials;
- establishing agreements with third-party manufacturers for clinical supply for our clinical trials and commercial manufacturing, if our product candidates are approved;
- receipt of marketing approvals from applicable regulatory authorities;
- commercializing products, if and when approved, whether alone or in collaboration with others;
- the cost to develop complementary diagnostics and/or companion diagnostics as needed for each of our development programs;
- the costs associated with the development of any additional product candidates we acquire through third-party collaborations or identify through our Translational Science Platform;
- the terms and timing of any collaboration, license or other arrangement, including the terms and timing of any milestone payments thereunder;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity for our products if and when approved; and
- continued acceptable safety profiles of the products following approval.

A change in the outcome of any of these variables with respect to the development of any of our product candidates would significantly change the costs, timing and viability associated with the development of that product candidate. We plan to increase our research and development expenses for the foreseeable future as we continue the enhancement of our Translational Science Platform, our collaboration with Celgene and continue to progress our pipeline. At this time, due to the inherently unpredictable nature of preclinical and clinical development and given the early stage of our programs and/or product candidates, we do not track all of our internal research and

development expenses on a program-by-program basis as they primarily relate to personnel, early research, and consumable costs, which are deployed across multiple projects under development. Also, due to the early stage of our programs and product candidates, we cannot reasonably estimate the costs we will incur and the timelines that will be required to complete development, obtain marketing approval, and commercialize our products, if and when approved. A portion of our research and development costs are external costs, which we do track on a program-by-program basis following the program's nomination to the development candidate stage. We began incurring such external costs for JTX-2011 in early 2015 and JTX-4014 in early 2016. Included below are external research and development as well as external clinical and regulatory costs for JTX-2011, JTX-4014 and pre-development candidates:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	2017	2016	2017	2016
JTX-2011	$ 7,302	$ 968	$ 12,484	$ 4,444
JTX-4014	712	155	1,658	235
Pre-development candidates	370	614	706	841
Total external research and development and clinical and regulatory costs	$ 8,384	$ 1,737	$ 14,848	$ 5,520

Research and development activities account for a significant portion of our operating expenses. We expect our research and development expenses to increase over the next several years as we continue to implement our business strategy, which includes advancing JTX-2011 through Phase I/II clinical trials, manufacturing pre-commercial clinical trial and preclinical study materials, completing IND enabling studies for JTX-4014, expanding our research and development efforts, seeking regulatory approvals for any product candidates that successfully complete clinical trials, accessing and developing additional product candidates, and costs associated with hiring additional personnel to support our research and development efforts. In addition, product candidates in later stages of clinical development generally incur higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. As such, we expect our research and development expenses to increase as our product candidates advance into later stages of clinical development.

General and Administrative

General and administrative expenses consist of salaries and personnel-related costs, including non-cash stock-based compensation expense, for our personnel in executive, legal, finance and accounting, human resources and other administrative functions, fees paid for accounting and tax services, consulting fees, facility costs not otherwise included in research and development expenses and non-litigation legal costs. Non-litigation legal costs include general corporate and patent legal fees and related costs.

We anticipate that our general and administrative expenses will increase in the future to support our continued research and development activities and the increased costs of operating as a public company. These increases will likely include costs related to additional personnel, outside consultants, attorneys, and accountants, among other expenses.

Other Income, Net

Other income, net, consists primarily of interest and investment income on our cash, cash equivalents and investments.

Provision for Income Taxes

We will recognize additional revenue for income tax purposes during the year ended December 31, 2017 related to the upfront cash payment that was received upon the execution of the Celgene Collaboration Agreement in July 2016. This revenue is expected to exceed our eligible net operating loss, or NOL, and tax credit carryforwards generated since inception. Accordingly, we expect to incur approximately $16.0 million to $18.0 million in federal and state tax liabilities during the year ended December 31, 2017. Our overall income tax provision of $1.1 million for the three and six months ended June 30, 2017 is less than the estimated federal and state tax liabilities as a result of the tax benefit we are able to recognize related to deferred tax assets that we have concluded we will more likely than not realize in future periods.

Results of Operations

Comparison of the Three Months Ended June 30, 2017 and 2016

The following table summarizes our results of operations for the three months ended June 30, 2017 and 2016, along with the changes in those items in dollars:

	Three Months Ended June 30,		
(in thousands)	**2017**	**2016**	**$ Change**
Revenue:			
Collaboration revenue—related party	$ 20,289	$ —	$ 20,289
Operating expenses:			
Research and development	17,188	6,490	10,698
General and administrative	6,129	5,872	257
Total operating expenses	23,317	12,362	10,955
Other income, net	752	13	739
Loss before provision for income taxes	(2,276)	(12,349)	10,073
Provision for income taxes	1,104	—	1,104
Net loss	$ (3,380)	$ (12,349)	$ 8,969

Collaboration Revenue

Collaboration revenue for the three months ended June 30, 2017 was solely related to the amortization of the $225.0 million upfront payment received under our Celgene Collaboration Agreement that was executed in July 2016.

Research and Development

The following table summarizes our research and development expenses for three months ended June 30, 2017 and 2016:

	Three Months Ended June 30,		
(in thousands)	**2017**	**2016**	**$ Change**
Employee compensation	$ 4,323	$ 2,478	$ 1,845
External research and development	4,288	1,318	2,970
External clinical and regulatory	4,096	419	3,677
Lab consumables	1,982	1,185	797
Consulting research	288	319	(31)
Facility costs	1,776	559	1,217
Other research	435	212	223
Total research and development expenses	$ 17,188	$ 6,490	$ 10,698

Research and development expenses increased by $10.7 million from $6.5 million for the three months ended June 30, 2016 to $17.2 million for the three months ended June 30, 2017. The increase in research and development expenses was primarily attributable to the following:

- $1.8 million of increased employee compensation costs due to increased headcount, of which $0.1 million related to increased stock-based compensation expense;
- $3.0 million of increased external research and development costs, primarily attributable to the manufacture of pre-commercial clinical trial materials and related activities for JTX-2011 and increased IND enabling activities related to JTX-4014;
- $3.7 million of increased clinical and regulatory costs related to our JTX-2011 Phase I/II clinical trial, which commenced enrollment in August 2016;
- $0.8 million of increased lab consumables costs attributable to our increased headcount and our general research and development activities; and

- $1.2 million of increased facility costs, including expenses associated with the exit of our previous corporate headquarters, increased rent expense related to our new corporate headquarters, depreciation and maintenance costs.

General and Administrative

The following table summarizes our general and administrative expenses for the three months ended June 30, 2017 and 2016:

	Three Months Ended June 30,		
(in thousands)	**2017**	**2016**	**$ Change**
Employee compensation	$ 2,124	$ 1,419	$ 705
Consulting	592	447	145
Legal fees	262	1,062	(800)
Facility costs	1,657	423	1,234
Write-off of IPO costs	—	2,045	(2,045)
Other	1,494	476	1,018
Total general and administrative expenses	$ 6,129	$ 5,872	$ 257

General and administrative expenses increased by $0.3 million from $5.9 million for the three months ended June 30, 2016 to $6.1 million for the three months ended June 30, 2017. The increase in general and administrative expenses was primarily attributable to the following:

- $0.7 million of increased employee compensation costs due to increased headcount, of which $0.3 million related to increased stock-based compensation expense, as well as increased recruiting costs;
- $1.2 million of increased facility costs, including expenses associated with the exit of our previous corporate headquarters, increased rent expense related to our new corporate headquarters, depreciation and maintenance costs; and
- $1.0 million of increased other costs attributable to operating as a public company as well as increased headcount.

These increases were offset by the following decreases:

- $0.8 million of decreased legal fees due to non-litigation related legal costs incurred in the second quarter of 2016 in connection with our business development activities; and
- $2.0 million of legal and accounting costs written off in the second quarter of 2016 as a result of the postponement of our IPO. The IPO was originally postponed for a period significantly in excess of 90 days, and as a result, the previously-capitalized costs were written off to general and administrative expenses.

Other Income, net

Other income, net, increased by $0.7 million from less than $0.1 million for the three months ended June 30, 2016 to $0.8 million for the three months ended June 30, 2017. The change in other income, net is attributable to increased interest and investment income on our cash, cash equivalents and investments as a result of the investment of the upfront payment received under the Celgene Collaboration Agreement and the net proceeds received from our IPO.

Provision for Income Taxes

We recorded a provision for federal and state income taxes of $1.1 million for the three months ended June 30, 2017 related to the recognition of revenue for income tax purposes of the upfront cash payment that was received upon the execution of the Celgene Collaboration Agreement in July 2016.

Comparison of the Six Months Ended June 30, 2017 and 2016

The following table summarizes our results of operations for the six months ended June 30, 2017 and 2016, along with the changes in those items in dollars:

	Six Months Ended June 30,		
(in thousands)	**2017**	**2016**	**$ Change**
Revenue:			
Collaboration revenue—related party	$ 40,578	$ —	$ 40,578
Operating expenses:			
Research and development	32,147	14,745	17,402
General and administrative	11,706	8,518	3,188
Total operating expenses	43,853	23,263	20,590
Other income, net	1,384	24	1,360
Loss before provision for income taxes	(1,891)	(23,239)	21,348
Provision for income taxes	1,104	—	1,104
Net loss	$ (2,995)	$ (23,239)	$ 20,244

Collaboration Revenue

Collaboration revenue for the six months ended June 30, 2017 was solely related to the amortization of the $225.0 million upfront payment received under our Celgene Collaboration Agreement that was executed in July 2016.

Research and Development

The following table summarizes our research and development expenses for six months ended June 30, 2017 and 2016:

	Six Months Ended June 30,		
(in thousands)	**2017**	**2016**	**$ Change**
Employee compensation	$ 9,109	$ 4,791	$ 4,318
External research and development	7,510	4,593	2,917
External clinical and regulatory	7,338	927	6,411
Lab consumables	3,664	2,266	1,398
Consulting research	449	638	(189)
Facility costs	3,273	1,125	2,148
Other research	804	405	399
Total research and development expenses	$ 32,147	$ 14,745	$ 17,402

Research and development expenses increased by $17.4 million from $14.7 million for the six months ended June 30, 2016 to $32.1 million for the six months ended June 30, 2017. The increase in research and development expenses was primarily attributable to the following:

- $4.3 million of increased employee compensation costs due to increased headcount, of which $0.7 million related to increased stock-based compensation expense;
- $2.9 million of increased external research and development costs, primarily attributable to the manufacture of pre-commercial clinical trial materials and related activities for JTX-2011 and increased IND enabling activities related to JTX-4014;
- $6.4 million of increased clinical and regulatory costs related to our JTX-2011 Phase I/II clinical trial, which commenced enrollment in August 2016;
- $1.4 million of increased lab consumables costs attributable to our increased headcount and our general research and development activities; and
- $2.1 million of increased facility costs, including expenses associated with the exit of our previous corporate headquarters, increased rent expense related to our new corporate headquarters, depreciation and maintenance costs.

General and Administrative

The following table summarizes our general and administrative expenses for the six months ended June 30, 2017 and 2016:

	Six Months Ended June 30,		
(in thousands)	**2017**	**2016**	**$ Change**
Employee compensation	$ 4,408	$ 2,659	$ 1,749
Consulting	962	628	334
Legal fees	649	1,439	(790)
Facility costs	2,976	867	2,109
Write-off of IPO costs	—	2,045	(2,045)
Other	2,711	880	1,831
Total general and administrative expenses	$ 11,706	$ 8,518	$ 3,188

General and administrative expenses increased by $3.2 million from $8.5 million for the six months ended June 30, 2016 to $11.7 million for the six months ended June 30, 2017. The increase in general and administrative expenses was primarily attributable to the following:

- $1.7 million of increased employee compensation costs due to increased headcount, of which $0.6 million related to increased stock-based compensation expense, as well as increased recruiting costs;
- $2.1 million of increased facility costs, including expenses associated with the exit of our previous corporate headquarters, increased rent expense related to our new corporate headquarters, depreciation and maintenance costs; and
- $1.8 million of increased other costs attributable to operating as a public company as well as increased headcount.

These increases were offset by the following decreases:

- $0.8 million of decreased legal fees due to non-litigation related legal costs incurred in the second quarter of 2016 in connection with our business development activities; and
- $2.0 million of legal and accounting costs written off in the second quarter of 2016 as a result of the postponement of our IPO. The IPO was originally postponed for a period significantly in excess of 90 days, and as a result, the previously-capitalized costs were written off to general and administrative expenses.

Other Income, net

Other income, net, increased by $1.4 million from less than $0.1 million for the six months ended June 30, 2016 to $1.4 million for the six months ended June 30, 2017. The change in other income, net is attributable to increased interest and investment income on our cash, cash equivalents and investments as a result of the investment of the upfront payment received under the Celgene Collaboration Agreement and the net proceeds received from our IPO.

Provision for Income Taxes

We recorded a provision for federal and state income taxes of $1.1 million for the six months ended June 30, 2017 related to the recognition of revenue for income tax purposes of the upfront cash payment that was received upon the execution of the Celgene Collaboration Agreement in July 2016.

Liquidity and Capital Resources

Sources of Liquidity

We have funded our operations through June 30, 2017 primarily through gross proceeds from private placements of our convertible preferred stock of $139.1 million, a non-refundable upfront payment of $225.0 million received in connection with the Celgene Collaboration Agreement and net proceeds from our IPO of $106.4 million. As of June 30, 2017, we had cash, cash equivalents and investments of $309.9 million.

Funding Requirements

Our plan of operation is to continue implementing our business strategy, continue the research and development of our lead programs JTX-2011 and JTX-4014, continue to expand our research pipeline and our internal research and development capabilities, including the enhancement of our Translational Science Platform. At this time, due to the inherently unpredictable nature of preclinical and clinical development and given the early stage of our programs and product candidates, we cannot reasonably estimate the costs we will incur and the timelines that will be required to complete development, obtain marketing approval, and commercialize our products, if and when approved. For the same reasons, we are also unable to predict when, if ever, we will generate revenue from product sales or whether, or when, if ever, we may achieve profitability. Clinical and preclinical development timelines, the probability of success, and development costs can differ materially from expectations. In addition, we cannot forecast which products, if and when approved, may be subject to future collaborations, when such arrangements will be secured, if at all, and to what degree such arrangements would affect our development plans and capital requirements.

Due to our significant research and development expenditures, we have generated substantial operating losses since inception. We have incurred an accumulated deficit of $76.2 million through June 30, 2017. We expect to incur substantial additional losses in the future as we expand our research and development activities and continue to advance our programs. Based on our research and development plans, we expect that our existing cash, cash equivalents and investments of $309.9 million will enable us to fund our operating expenses and capital expenditure requirements for at least the next 24 months. However, we have based this estimate on assumptions that may prove to be incorrect, and we could exhaust our capital resources sooner than we expect. The timing and amount of our operating expenditures will depend largely on:

- the timing and progress of preclinical and clinical development activities;
- the cost to access, acquire, or make therapies to study in combination with our immunotherapies;
- successful enrollment in and completion of clinical trials;
- the cost to develop complementary diagnostics and/or companion diagnostics as needed for each of our development programs;
- our ability to establish agreements with third-party manufacturers for clinical supply for our clinical trials and, if our product candidate is approved, commercial manufacturing;
- the costs associated with the development of any additional product candidates we acquire through third-party collaborations or identify through our Translational Science Platform;
- our ability to maintain our current research and development programs and enhancement of our Translational Science Platform;
- addition and retention of key research and development personnel;
- our efforts to enhance operational, financial and information management systems, and hire additional personnel, including personnel to support development of our product candidates;
- the legal patent costs involved in prosecuting patent applications and enforcing patent claims and other intellectual property claims;
- the costs and ongoing investments to in-license or acquire additional technologies, including the in-license of intellectual property related to our potential product candidates, the effectiveness of which is subject to certain conditions; and
- the terms and timing of any collaboration, license or other arrangement, including the terms and timing of any milestone payments thereunder.

A change in the outcome of any of these or other variables with respect to the development of any of our product candidates could significantly change the costs and timing associated with the development of that product candidate. Furthermore, our operating plans may change in the future, and we may need additional funds to meet operational needs and capital requirements associated with such operating plans.

In addition to the variables described above, if and when any of our product candidates successfully complete development, we have incurred and will continue to incur substantial additional costs associated with regulatory filings, marketing approval, post-marketing requirements, maintaining our intellectual property rights, and regulatory protection, in addition to other costs. We cannot reasonably estimate these costs at this time.

Until such time, if ever, as we can generate substantial product revenue, we expect to finance our cash needs through a combination of equity or debt financings and collaboration arrangements including our Celgene Collaboration Agreement. We currently have no credit facility or committed sources of capital. To the extent that we raise additional capital through the future sale of equity or debt, the ownership interests of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our existing common stockholders. If we raise additional funds through the issuance of debt securities, these securities could contain covenants that would restrict our operations. We may require additional capital beyond our currently anticipated amounts. Additional capital may not be available on reasonable terms, or at all. If we raise additional funds through collaboration arrangements in the future, we may have to relinquish valuable rights to our technologies, future revenue streams or product candidates, or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce, or terminate development or future commercialization efforts, or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Cash Flows

The following table provides information regarding our cash flows for the six months ended June 30, 2017 and 2016:

	Six Months Ended June 30,	
(in thousands)	**2017**	**2016**
Net cash (used in) provided by:		
Operating activities	$ (42,005)	$ (23,276)
Investing activities	(66,519)	(634)
Financing activities	107,158	39
Net decrease in cash and cash equivalents	$ (1,366)	$ (23,871)

Cash Used in Operating Activities

Net cash used in operating activities for the six months ended June 30, 2017 was $42.0 million, compared to net cash used in operating activities of $23.3 million for the six months ended June 30, 2016. Cash used in operating activities increased by $18.7 million primarily due to an increase in our operating expenses during the six months ended June 30, 2017 as compared to the six months ended June 30, 2016. This increase in operating expenses was primarily due to our increased headcount and increased clinical and regulatory costs related to our JTX-2011 Phase I/II clinical trial.

Cash Used in Investing Activities

Net cash used in investing activities for the six months ended June 30, 2017 was $66.5 million, compared to net cash used in investing activities of $0.6 million for the six months ended June 30, 2016. Cash used in investing activities increased by $65.9 million primarily due to purchases of investments made using a portion of the net proceeds received from our IPO. In addition, purchases of property and equipment increased by $11.3 million during the six months ended June 30, 2017 as compared to the six months ended June 30, 2016 primarily due to leasehold improvements associated with our new corporate headquarters.

Cash Provided by Financing Activities

Net cash provided by financing activities for the six months ended June 30, 2017 was $107.2 million, compared to net cash provided by financing activities of less than $0.1 million for the six months ended June 30, 2016. Cash provided by financing activities increased by $107.1 million primarily due to the receipt of $106.4 million of net proceeds from our IPO, after deducting underwriting discounts and commissions and other offering expenses paid by us. A portion of these offering expenses were paid during the year ended December 31, 2016.

Contractual Obligations

On May 19, 2017, we entered into a Lease Termination Agreement and a Sublease Termination Agreement (collectively, the Lease Termination Agreements) with our landlord related to the leases for our former corporate headquarters in Cambridge, Massachusetts. As a result of the Lease Termination Agreements, rental payments for our former corporate headquarters ceased on May 31, 2017, with the exception of certain space that will be utilized through August 31, 2017. The Lease Termination Agreements required us to pay an aggregate early termination fee

of $0.7 million, which was paid in the second quarter of 2017. Accordingly, our contractual obligations as of June 30, 2017 are as follows:

(in thousands)	Total	Remainder of 2017	2018 and 2019	2020 and 2021	2022 and later
Operating lease obligations (1)	$ 35,017	$ 2,046	$ 8,403	$ 8,914	$ 15,654

(1) Represents future minimum lease payments under our non-cancellable operating leases as of June 30, 2017.

There have been no other material changes from the contractual obligations and commitments previously disclosed in our Annual Report on Form 10-K for the year ended December 31, 2016, which was filed with the SEC on March 10, 2017.

Off-Balance Sheet Arrangements

We did not have, during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined under applicable SEC rules.

Critical Accounting Policies and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our condensed consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States. The preparation of these condensed consolidated financial statements requires us to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. On an ongoing basis, we evaluate our estimates which include, but are not limited to, estimates related to accrued expenses, stock-based compensation expense, income taxes and the period of performance for units of accounting identified under the Celgene Collaboration Agreement. We base our estimates on historical experience and other market specific or other relevant assumptions we believe to be reasonable under the circumstances. Actual results could differ from those estimates.

During the six months ended June 30, 2017, there were no material changes to our critical accounting policies as reported in our Annual Report on Form 10-K for the year ended December 31, 2016, which was filed with the SEC on March 10, 2017.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

As of June 30, 2017, we had cash, cash equivalents and investments of $309.9 million. This amount was comprised of cash and cash equivalents of $43.5 million, short-term investments of $227.3 million and long-term investments of $39.1 million. Our cash and cash equivalents consist primarily of money market funds that are invested in U.S. Treasury obligations. Our short-term investments consist of corporate debt securities and U.S. Treasury obligations with an original maturity greater than ninety days and less than one year from the balance sheet date. Our long-term investments consist of corporate debt securities, U.S. Treasury obligations and government agency securities with maturities of greater than one year that are not expected to be used to fund current operations. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates. Due to the short-term nature of our cash equivalents and short-term investments and our conservative long-term investment approach, a sudden change in interest rates would not be expected to have material effect on our business, financial condition or results of operations.

We are not currently exposed to significant market risk related to changes in foreign currency exchange rates; however, we have contracted with and may continue to contract with foreign vendors that are located in Europe. Our operations may be subject to fluctuations in foreign currency exchange rates in the future.

Inflation generally affects us by increasing our cost of labor. We do not believe that inflation had a material effect on our business, financial condition or results of operations during the three or six months ended June 30, 2017.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of June 30, 2017. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, or the

Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by the company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. 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 our management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of June 30, 2017, our Principal Executive Officer and Principal Financial and Accounting Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15(d)-15(f) under the Exchange Act) that occurred during the period covered by this Quarterly Report on Form 10-Q that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

We are not currently a party to any material legal proceedings.

Item 1A. Risk Factors

Our business is subject to numerous risks. The following important factors, among others, could cause our actual results to differ materially from those expressed in forward-looking statements made by us or on our behalf in this Quarterly Report on Form 10-Q and other filings with the Securities and Exchange Commission, or the SEC, press releases, communications with investors, and oral statements. Actual future results may differ materially from those anticipated in our forward-looking statements. We undertake no obligation to update any forward-looking statements, whether as a result of new information, future events, or otherwise.

Risks Related to Product Development and Regulatory Process

We are early in our development efforts. Our lead product candidate, JTX-2011, is in early-stage clinical development. If we are unable to advance JTX-2011 through clinical development, or advance JTX-4014 or any other future product candidates to clinical development, or obtain marketing approval and ultimately commercialize any product candidates or experience significant delays in doing so, our business will be materially harmed.

We are early in our development efforts, and our lead product candidate, JTX-2011, is still in the early stages of clinical development. We have invested substantially all of our efforts and financial resources in the identification of targets and preclinical and clinical development of monoclonal antibodies, or mAbs, including the development of our lead product candidate, JTX-2011, and JTX-4014. We began a multi-arm Phase I/II clinical trial for JTX-2011 in August 2016.

Our other efforts have been invested in early stage, preclinical programs. Our ability to generate product revenues, which we do not expect will occur for many years, if ever, will depend heavily on the successful development and eventual commercialization of JTX-2011, JTX-4014 or any other future product candidates, which may never occur. We currently generate no revenues from sales of any products, and we may never be able to develop or commercialize a marketable product. JTX-2011, JTX-4014 and any other future product candidates will require additional preclinical and clinical development, management of clinical, preclinical and manufacturing activities, marketing approval in the United States and other markets, demonstrating effectiveness to pricing and reimbursement authorities, obtaining sufficient manufacturing supply for both clinical development and commercial production, building of a commercial organization, and substantial investment and significant marketing efforts before we generate any revenues from product sales. In addition, our product development programs contemplate the development of complementary diagnostics and/or companion diagnostics, which are assays or tests to identify an appropriate patient population. Complementary diagnostics and companion diagnostics are subject to regulation as medical devices and, if there are no adequate complementary diagnostics and/or companion diagnostics currently on the market for our product candidates, we may elect to advance a diagnostic and that diagnostic would have to be approved or cleared for marketing by the United States Food and Drug Administration, or FDA, or comparable foreign regulatory agencies before we could commercialize it. The success of JTX-2011, JTX-4014 and any other future product candidates will depend on several factors, including the following:

- successful completion of preclinical studies of JTX-4014 and any future product candidates;
- successful completion of non-clinical toxicology studies that may be required for regulatory approval of JTX-2011;
- acceptance of Investigational New Drug applications, or INDs, for our planned clinical trials or future clinical trials;
- successful enrollment and completion of clinical trials;
- demonstration that the combination of JTX-2011 with JTX-4014 provides the same clinical benefit as JTX-2011 combined with nivolumab;
- demonstration of a benefit/risk profile for JTX-2011 and future products that is sufficient to support a successful Biologics License Application, or BLA;

- successful development and marketing approval and clearance of complementary diagnostics and/or companion diagnostics for use with JTX-2011, JTX-4014 or any other future product candidates, if applicable;
- receipt and maintenance of marketing approvals from applicable regulatory authorities;
- approval by national pricing and reimbursement agencies (such as NICE, National Institute for Health Care and Excellence in the United Kingdom);
- establishing agreements with third-party manufacturers for clinical supply for our clinical trials and commercial manufacturing, if our product candidate is approved;
- obtaining and maintaining patent and trade secret protection or regulatory exclusivity for our product candidates;
- launching commercial sales of JTX-2011, JTX-4014 or any other future product candidates, if and when approved;
- acceptance of the product candidate or any other future product candidates, if and when approved, by patients, the medical community and third-party payors;
- effectively competing with other therapies;
- obtaining and maintaining healthcare coverage and adequate reimbursement;
- enforcing and defending intellectual property rights and claims;
- successful completion of clinical confirmatory trials to verify clinical benefit, if applicable; and
- maintaining a continued acceptable safety profile of the product candidates following approval.

If we do not achieve one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize JTX-2011, JTX-4014 or any other future product candidates, which would materially harm our business. If we do not receive marketing approvals for JTX-2011, JTX-4014 or any other future product candidates, we may not be able to continue our operations.

We rely on our Translational Science Platform to identify and develop product candidates. Our competitive position could be materially harmed if our competitors develop a platform similar to our Translational Science Platform and develop rival product candidates.

We rely on unpatented know-how, inventions and other proprietary information, to maintain our competitive position. We consider know-how to be our primary intellectual property with respect to our Translational Science Platform. Know-how can be difficult to protect. In particular, we anticipate that with respect to this platform, this know-how may over time be disseminated within the industry through independent development, the publication of journal articles describing the methodology, and the movement of skilled personnel.

We cannot rule out that our competitors may have or obtain the knowledge necessary to analyze and characterize tumors for the purpose of identifying and developing products that could compete with JTX-2011, JTX-4014 or any future product candidates we develop. Our competitors may also have significantly greater financial, product development, technical, and human resources and access to other human tumors than we do and may have significantly greater experience in using translational science methodology to identify and develop product candidates.

We may not be able to prohibit our competitors from using translational science methods to develop product candidates, including such methods that are the same as or similar to our own. If our competitors use translational science methods to identify and develop products that compete with JTX-2011, JTX-4014 or any future product candidates we develop, our ability to develop and market a promising product or product candidate may diminish substantially, which could have a material adverse effect on our business prospects, financial condition, and results of operations.

Clinical product development involves a lengthy and expensive process, with an uncertain outcome. We will incur additional costs in connection with, and may experience delays, in completing, or ultimately be unable to complete, the development and commercialization of JTX-2011, JTX-4014, any other future product candidates, and any complementary diagnostics and/or companion diagnostics.

Our lead product candidate is in early-stage clinical development and its risk of failure is high. It is impossible to predict when or if JTX-2011, JTX-4014 and any other future product candidates will prove effective and safe in humans and will receive marketing approval. Before obtaining marketing approval from regulatory authorities for the sale of JTX-2011, JTX-4014 or any other future product candidates, we must complete preclinical studies and then conduct extensive clinical trials to demonstrate the safety and efficacy of JTX-2011, JTX-4014 and any other future product candidates in humans. Clinical testing is expensive, difficult to design and implement, can take many years to complete and is uncertain as to outcome. A failure of one or more clinical trials can occur at any stage of testing. The outcome of preclinical development testing and early clinical trials may not be predictive of the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their product candidates. Our preclinical studies and clinical trials may not be successful.

We submitted our IND for JTX-2011 to the FDA in July 2016 and initiated our Phase I/II clinical trials in August 2016. Enrollment in our clinical trial in certain cohorts is being enriched for patients based on their having discernible levels of ICOS or related biomarkers within their tumors. The FDA or comparable foreign regulatory authorities could change their position on the acceptability of our trial designs or the clinical endpoints selected, which may require us to complete more preclinical studies or provide additional data before continuing clinical trials. In the event we are required to satisfy additional FDA requests, the completion of our clinical trials for JTX-2011 may be delayed. Successful completion of our clinical trials is a prerequisite to submitting a BLA to the FDA and a Marketing Authorization Application, or MAA, in Europe for JTX-2011, JTX-4014 and any other future product candidates and, consequently, the ultimate approval and commercial marketing of JTX-2011, JTX-4014 and our other future product candidates. We do not know whether any of our clinical trials will be completed on schedule, if at all.

We may experience delays in completing our preclinical studies and initiating or completing clinical trials, and we may experience numerous unforeseen events during, or as a result of, any potential future clinical trials that could delay or prevent our ability to receive marketing approval or commercialize JTX-2011, JTX-4014 and any other future product candidates, including:

- regulators or institutional review boards, or IRBs, or ethics committees may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- we may experience delays in reaching, or fail to reach, agreement on acceptable terms with prospective trial sites and prospective contract research organizations, or CROs, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- clinical trials of JTX-2011, JTX-4014 and any other future product candidates may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional preclinical studies or clinical trials or we may decide to abandon product development programs;
- the number of patients required for clinical trials of JTX-2011, JTX-4014 and any other future product candidates may be larger than we anticipate;
- it may be difficult to enroll a sufficient number of patients with a predictive biomarker or enrollment in these clinical trials may be slower than we anticipate or participants may drop out of these clinical trials or fail to return for post-treatment follow-up at a higher rate than we anticipate;
- our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all, or may deviate from the clinical trial protocol or drop out of the trial, which may require that we add new clinical trial sites or investigators;
- we may elect to, or regulators or IRBs or ethics committees may require that we or our investigators, suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements or a finding that the participants are being exposed to unreasonable and significant health risks;

- the cost of clinical trials of JTX-2011, JTX-4014 and any other future product candidates may be greater than we anticipate;
- the supply or quality of materials for JTX-2011, JTX-4014 and any other future product candidates or other materials necessary to conduct clinical trials of JTX-2011, JTX-4014 and any other future product candidates may be insufficient or inadequate;
- the size of the patient population required to validate our JTX-2011 predictive biomarker strategy may be larger than we anticipate;
- Competitors may obtain regulatory approval ahead of us for compounds similar to ours, preventing us from obtaining regulatory approval despite positive clinical data;
- JTX-2011, JTX-4014 and any other future product candidates may have undesirable side effects or other unexpected characteristics, causing us or our investigators, regulators or IRBs or ethics committees to suspend or terminate the trials, or reports may arise from preclinical or clinical testing of other similar cancer therapies that raise safety or efficacy concerns about JTX-2011, JTX-4014 and any other future product candidates; and
- the FDA or other regulatory authorities may require us to submit additional data or impose other requirements before permitting us to initiate a clinical trial.

We could encounter delays if a clinical trial is suspended or terminated by us, by the IRBs of the institutions in which such trials are being conducted or ethics committees, or by the FDA or other regulatory authorities, or recommended for suspension or termination by the Data Safety Monitoring Board, or DSMB, for such trial. Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, including those issues or effects seen in other drugs or drug candidates in the class to which our drug candidates belong, failure to demonstrate a benefit from using a product, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of marketing approval of JTX-2011, JTX-4014 and any other future product candidates. Further, the FDA or other regulatory authorities may disagree with our clinical trial design and our interpretation of data from clinical trials, or may change the requirements for approval even after it has reviewed and commented on the design for our clinical trials.

If we are required to conduct additional clinical trials or other testing of JTX-2011, JTX-4014 and any other future product candidates beyond those that we currently contemplate, if we are unable to successfully complete clinical trials of JTX-2011, JTX-4014 and any other future product candidates or other testing, if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, we may:

- be delayed in obtaining marketing approval for JTX-2011, JTX-4014 and any other future product candidates;
- not obtain marketing approval at all;
- obtain approval for indications or patient populations that are not as broad as intended or desired;
- be subject to post-marketing testing requirements; or
- have the product removed from the market after obtaining marketing approval.

Our product development costs will also increase if we experience delays in testing or marketing approvals. We do not know whether any of our clinical trials will need to be restructured, or will be completed on schedule, or will begin as planned, or at all. Significant preclinical study or clinical trial delays could also shorten any periods during which we may have the exclusive right to commercialize JTX-2011, JTX-4014 and any other future product candidates, or allow our competitors to bring products to market before we do, and impair our ability to successfully commercialize JTX-2011, JTX-4014 and any other future product candidates and may harm our business and results of operations. Any delays in our preclinical or future clinical development programs may harm our business, financial condition and prospects significantly.

If we encounter difficulties enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise be adversely affected.

The timely completion of clinical trials in accordance with their protocols depends, among other things, on our ability to enroll a sufficient number of patients who remain in the study until its conclusion. We may experience difficulties in patient enrollment in our clinical trials for a variety of reasons. The enrollment of patients depends on many factors, including:

- the patient eligibility criteria defined in the protocol;
- our ability to enroll sufficient number of patients with a predictive biomarker;
- the size of the patient population required for analysis of the trial's primary endpoints;
- the proximity of patients to study sites;
- the design of the trial;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- clinicians' and patients' perceptions as to the potential advantages of the product candidate being studied in relation to other available therapies, including any new products that may be approved for the indications we are investigating;
- our ability to obtain and maintain patient consents for participation in our clinical trials and, where appropriate, biopsies for future patient enrichment efforts; and
- the risk that patients enrolled in clinical trials will drop out of the trials before completion or, because they are late-stage cancer patients, will not survive the full terms of the clinical trials.

In addition, our clinical trials will compete with other clinical trials for product candidates that are in the same therapeutic areas as JTX-2011, JTX-4014 and any other future product candidates. This competition will reduce the number and types of patients available to us, because some patients who might have opted to enroll in our trials may instead opt to enroll in a trial conducted by one of our competitors. Since the number of qualified clinical investigators is limited, we expect to conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which will reduce the number of patients who are available for our clinical trials at such sites. Moreover, because JTX-2011, JTX-4014 and any other future product candidates represent a departure from more commonly used methods for cancer treatment, potential patients and their doctors may be inclined to use conventional therapies, such as chemotherapy, rather than enroll patients in our ongoing or any future clinical trial.

Delays in patient enrollment may result in increased costs or may affect the timing or outcome of the planned clinical trials, which could prevent completion of these trials and adversely affect our ability to advance the development of JTX-2011, JTX-4014 and any other future product candidates.

JTX-2011, JTX-4014 and any other future product candidate we develop may cause undesirable side effects or have other properties when used alone or in combination with other approved pharmaceutical products or investigational new drugs that could halt their clinical development, prevent their marketing approval, limit their commercial potential or result in significant negative consequences.

Undesirable or clinically unmanageable side effects could occur and cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of marketing approval by the FDA or comparable foreign regulatory authorities. Results of our trials could reveal a high and unacceptable severity and prevalence of side effects or unexpected characteristics.

For example, in the context of immunotherapies, in a Phase I clinical trial of TeGenero AG's product candidate TGN1412, when healthy volunteer subjects received the immunotherapy product candidate, they experienced cytokine release syndrome resulting in acute renal failure and acute respiratory distress syndrome requiring interventions such as dialysis and critical care support. Following this experience, regulatory agencies now ask for evaluation of immunomodulatory antibodies with a number of *in vitro* assays with human cells. While we have already evaluated JTX-2011 in these *in vitro* tests, our Phase I/II clinical trial of JTX-2011 has been ongoing for less than a year, and we have only preliminary safety data on the risk profile in humans.

In another immunotherapy trial, liver toxicity was observed when *ipilimumab* and *vemurafinib* were given in combination, causing the trial to be terminated early. It remains possible that new or more severe toxicities could be

seen if JTX-2011 or JTX-4014 is used in combination with other agents. Such toxicities, if observed, could affect or limit labeling, result in delay or denial of approval, or limit the overall market scope for JTX-2011 or JTX-4014.

If unacceptable toxicities arise in the development of JTX-2011, JTX-4014 and any other future product candidates, we or a future collaborator could suspend or terminate our trials, or the FDA or comparable foreign regulatory authorities could order us to cease clinical trials or deny approval of JTX-2011, JTX-4014 and any other future product candidates for any or all targeted indications. Treatment-related side effects could also affect patient recruitment or the ability of enrolled subjects to complete the trial, or result in potential product liability claims. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff, particularly outside of our existing or future collaborators as toxicities resulting from cancer immunotherapies are not normally encountered in the general patient population and by medical personnel. We expect to have to train medical personnel using JTX-2011 or JTX-4014 to understand the side effect profile of JTX-2011 or JTX-4014 for both our ongoing and planned clinical trials and upon commercialization of JTX-2011 or JTX-4014. Inadequate training in recognizing or managing the potential side effects of JTX-2011 or JTX-4104 could result in patient deaths. Any of these occurrences may prevent us from achieving or maintaining market acceptance of the affected product candidate and may harm our business, financial condition and prospects significantly.

Although JTX-2011, JTX-4014 and any other future product candidates will undergo safety testing to the extent possible and, where applicable, under such conditions discussed with regulatory authorities, not all adverse effects of drugs can be predicted or anticipated. Immunotherapy, and its method of action of harnessing the body's immune system, is powerful and could lead to serious side effects that we only discover in clinical trials. Unforeseen side effects from JTX-2011, JTX-4014 and any other future product candidates could arise either during clinical development or, if such side effects are more rare, after JTX-2011, JTX-4014 and any other future product candidates have been approved by regulatory authorities and the approved product has been marketed, resulting in the exposure of additional patients. Harnessing T cells to kill tumors is risky and may have unintended consequences. So far, we have only preliminary safety data for JTX-2011 in humans, and we cannot predict if future clinical trials of JTX-2011 or JTX-2014 will demonstrate safety in humans. If JTX-2011, JTX-4014 or any other future product candidates we develop fail to demonstrate safety and efficacy in clinical trials or do not gain marketing approval, we will not be able to generate revenue and our business will be harmed.

We may seek a Breakthrough Therapy Designation by the FDA for JTX-2011, JTX-4014 and any other future product candidates, and we may be unsuccessful. If we are successful, the designation may not lead to a faster development or regulatory review or approval process, and it does not increase the likelihood that JTX-2011, JTX-4014 and any other future product candidates will receive marketing approval.

We may seek a Breakthrough Therapy Designation for JTX-2011, JTX-4014 and any other future product candidates. A breakthrough therapy is defined as a drug that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over currently approved therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. For drugs that have been designated as breakthrough therapies, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control regimens. Drugs designated as breakthrough therapies by the FDA are also eligible for accelerated approval and priority review.

Designation as a breakthrough therapy is within the discretion of the FDA. Accordingly, even if we believe JTX-2011, JTX-4014 and any other future product candidates meet the criteria for designation as a breakthrough therapy, the FDA may disagree and instead determine not to make such designation. In any event, the receipt of a Breakthrough Therapy Designation for a product candidate may not result in a faster development process, review or approval compared to drugs considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if JTX-2011, JTX-4014 or any other future product candidates qualify as breakthrough therapies, the FDA may later decide that the drugs no longer meet the conditions for qualification and rescind the designation.

We may seek a Fast Track Designation by the FDA for JTX-2011, JTX-4014 or any other future product candidates, and we may be unsuccessful. If we are successful, the designation may not actually lead to a faster development or regulatory review or approval process.

We may seek Fast Track Designation for some of our product candidates, including JTX-2011 or JTX-4014. If a product is intended for the treatment of a serious or life-threatening condition and preclinical or clinical data demonstrate the potential to address an unmet medical need for this condition, the product sponsor may apply for

Fast Track Designation. The FDA has broad discretion whether or not to grant this designation, so even if we believe a particular product candidate is eligible for this designation, we cannot assure you that the FDA would decide to grant it. Even if we do receive Fast Track Designation, we may not experience a faster development process, review or approval compared to conventional FDA procedures. The FDA may rescind the Fast Track Designation if it believes that the designation is no longer supported by data from our clinical development program.

We may seek Orphan Drug Designation for JTX-2011, JTX-4014 and any other future product candidates, and we may be unsuccessful or may be unable to maintain the benefits associated with Orphan Drug Designation, including the potential for market exclusivity.

As part of our business strategy, we may seek Orphan Drug Designation for JTX-2011, JTX-4014 and any other future product candidates, and we may be unsuccessful. Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drugs for relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a drug as an orphan drug if it is a drug intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals annually in the United States, or a patient population greater than 200,000 in the United States where there is no reasonable expectation that the cost of developing the drug will be recovered from sales in the United States. In the United States, Orphan Drug Designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers.

Similarly, in Europe, the European Commission grants Orphan Drug Designation after receiving the opinion of the European Medicines Agency's, or EMA, Committee for Orphan Medicinal Products on an Orphan Drug Designation application. Orphan Drug Designation is intended to promote the development of drugs that are intended for the diagnosis, prevention or treatment of life-threatening or chronically debilitating conditions affecting not more than 5 in 10,000 persons in Europe and for which no satisfactory method of diagnosis, prevention, or treatment has been authorized (or the product would be a significant benefit to those affected). Additionally, designation is granted for drugs intended for the diagnosis, prevention, or treatment of a life-threatening, seriously debilitating or serious and chronic condition and when, without incentives, it is unlikely that sales of the drug in Europe would be sufficient to justify the necessary investment in developing the drug. In Europe, Orphan Drug Designation entitles a party to a number of incentives, such as protocol assistance and scientific advice specifically for designated orphan medicines, and potential fee reductions depending on the status of the sponsor.

Generally, if a drug with an Orphan Drug Designation subsequently receives the first marketing approval for the indication for which it has such designation, the drug is entitled to a period of marketing exclusivity, which precludes the EMA or the FDA from approving another marketing application for the same drug and indication for that time period, except in limited circumstances. The applicable period is seven years in the United States and ten years in Europe. The European exclusivity period can be reduced to six years if a drug no longer meets the criteria for Orphan Drug Designation or if the drug is sufficiently profitable such that market exclusivity is no longer justified.

Even if we obtain orphan drug exclusivity for a drug, that exclusivity may not effectively protect the drug from competition because different drugs can be approved for the same condition and the same drugs can be approved for different conditions but used off-label. Even after an orphan drug is approved, the FDA can subsequently approve the same drug for the same condition if the FDA concludes that the later drug is clinically superior in that it is shown to be safer, more effective or makes a major contribution to patient care. In addition, a designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. Moreover, orphan drug exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantity of the drug to meet the needs of patients with the rare disease or condition. Orphan Drug Designation neither shortens the development time or regulatory review time of a drug nor gives the drug any advantage in the regulatory review or approval process. While we may seek Orphan Drug Designation for applicable indications for JTX-2011, JTX-4014 and any other future product candidates, we may never receive such designations. Even if we do receive such designations, there is no guarantee that we will enjoy the benefits of those designations.

The marketing approval process is expensive, time consuming and uncertain and may prevent us or any of our existing or future collaboration partners from obtaining approvals for the commercialization of JTX-2011, JTX-4014 and any other future product candidates.

Among other things, the research, testing, manufacturing, labeling, approval and license maintenance, selling, import and export, marketing and distribution of biologic products are subject to extensive regulation by the FDA and comparable foreign regulatory authorities in other countries, where regulations differ from country to country.

Neither we nor any existing or future collaboration partner is permitted to market JTX-2011, JTX-4014 and any other future products in the United States until we receive approval of a BLA from the FDA. We have never submitted an application for, or received, marketing approval. Obtaining approval of a BLA can be a lengthy, expensive and uncertain process. In addition, failure to comply with FDA and other applicable U.S. and comparable foreign regulatory requirements may subject us to administrative or judicially imposed sanctions, including the following:

- untitled and warning letters;
- civil or criminal penalties and fines;
- injunctions;
- suspension or withdrawal of marketing approval;
- suspension of any ongoing clinical trials;
- product recalls;
- refusal to accept or approve BLAs or supplements thereto filed by us;
- restrictions on operations, including costly new manufacturing requirements; or
- seizure or detention of our products or import bans.

Prior to receiving approval to commercialize JTX-2011, JTX-4014 and any other products in the United States or abroad, we and any of our existing or future collaboration partners must demonstrate with substantial evidence from well-controlled clinical trials, and to the satisfaction of the FDA and comparable foreign regulatory authorities, that such product candidates are safe and effective for their intended uses. Results from preclinical studies and clinical trials can be interpreted in different ways. Even if we and any of our existing or future collaboration partners believe the preclinical or clinical data for JTX-2011, JTX-4014 and any other future product candidates are promising, such data may not be sufficient to support approval by the FDA and comparable foreign regulatory authorities. Administering JTX-2011, JTX-4014 and any other future product candidates to humans may produce undesirable side effects, which could interrupt, delay or cause suspension of clinical trials of JTX-2011, JTX-4014 and any other future product candidates and result in the FDA or other regulatory authorities denying approval of JTX-2011, JTX-4014 and any other future product candidates for any or all targeted indications.

Marketing approval of a BLA is not guaranteed, and the approval process is expensive and may take several years. The FDA also has substantial discretion in the approval process. Despite the time and expense exerted, failure can occur at any stage, and we could encounter problems that cause us to abandon or repeat clinical trials, or perform additional preclinical studies and clinical trials. The number of preclinical studies and clinical trials that will be required for FDA approval varies depending on the product candidate, the disease or condition that the product candidate is designed to address and the regulations applicable to any particular product candidate. The FDA can delay, limit or deny approval of a product candidate for many reasons, including, but not limited to, the following:

- a product candidate may not be deemed safe or effective;
- FDA officials may not find the data from preclinical studies and clinical trials sufficient;
- the FDA might not deem our or our third-party manufacturers' processes or facilities adequate for approval of our marketing applications; or
- the FDA may change its approval policies or adopt new regulations.

If JTX-2011, JTX-4014 and any other future product candidates fail to demonstrate safety and efficacy in clinical trials or do not gain marketing approval, our business will be harmed.

Even if we complete the necessary clinical trials, we cannot predict when or if we will obtain marketing approval to commercialize a product or the approval may be for a more narrow indication than we expect.

We cannot commercialize a product candidate until the appropriate regulatory authorities have reviewed and approved the product candidate. Even if JTX-2011, JTX-4014 or any of our other future product candidates demonstrate safety and efficacy in clinical trials, the regulatory agencies may not complete their review processes in a timely manner, or we may not be able to obtain marketing approval. Additional delays may result if an FDA Advisory Committee or other regulatory authority recommends non-approval or restrictions on approval. In addition, we may experience delays or rejections based upon additional government regulation from future legislation or administrative action, or changes in regulatory agency policy during the period of product development, clinical trials

and the review process. Regulatory agencies also may approve a product candidate for fewer or more limited indications than requested, in certain jurisdictions may not approve the price we intend to charge for JTX-2011, JTX-4014 or any other future products, may impose significant limitations in the form of narrow indications, warnings, precautions or contraindications with respect to conditions of use or may grant approval subject to the performance of costly post-marketing clinical trials. In addition, regulatory agencies may not approve the labeling claims that are necessary or desirable for the successful commercialization of JTX-2011, JTX-4014 and any future products. Any of the foregoing scenarios could materially harm the commercial prospects for JTX-2011, JTX-4014 and any future products.

Obtaining and maintaining marketing approval of JTX-2011, JTX-4014 or any other future product candidates in one jurisdiction does not mean that we will be successful in obtaining marketing approval of that product candidate in other jurisdictions.

Obtaining and maintaining marketing approval of JTX-2011, JTX-4014 and any other future product candidates in one jurisdiction does not guarantee that we will be able to obtain or maintain marketing approval in any other jurisdiction, while a failure or delay in obtaining marketing approval in one jurisdiction may have a negative effect on the marketing approval process in others. For example, even if the FDA grants marketing approval of a product candidate, comparable regulatory authorities in foreign jurisdictions must also approve the manufacturing, marketing and promotion of the product candidate in those countries. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the United States, including additional preclinical studies or clinical trials, as clinical trials conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. We may in the future conduct clinical trials for product candidates at sites outside the United States, and the FDA may not accept data from trials conducted in such locations. In many jurisdictions outside the United States, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we intend to charge for our products is also subject to approval.

Regulatory authorities in jurisdictions outside of the United States have requirements for approval of product candidates with which we must comply prior to marketing in those jurisdictions. Obtaining foreign marketing approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. If we fail to comply with the regulatory requirements in international markets and/or receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of JTX-2011, JTX-4014 and any other future product candidates will be harmed. If we obtain approval of JTX-2011, JTX-4014 and any other future product candidates and ultimately commercialize JTX-2011, JTX-4014 and any other future product candidates in foreign markets, we would be subject to separate risks and uncertainties, including the burden of complying with complex and changing foreign regulatory, tax, accounting and legal requirements and the reduced protection of intellectual property rights in some foreign countries.

Our failure to successfully identify, acquire, develop and commercialize additional products or product candidates could impair our ability to grow.

Although a substantial amount of our efforts will focus on the clinical testing and potential approval of our most advanced product candidate, JTX-2011, a key element of our long-term growth strategy is to acquire, develop and/or market additional products and product candidates. Research programs to identify product candidates require substantial technical, financial and human resources, whether or not any product candidates are ultimately identified. Our research programs may initially show promise in identifying potential product candidates, yet fail to yield product candidates for clinical development or commercialization for many reasons, including the following:

- our Translational Science Platform may not be successful in identifying additional product candidates;
- we may not be able or willing to assemble sufficient resources to acquire or discover additional product candidates;
- JTX-2011 may not succeed in clinical testing and JTX-4014 or any other future product candidates may not succeed in preclinical or clinical testing;
- a product candidate may on further study be shown to have harmful side effects or other characteristics that indicate it is unlikely to be effective or otherwise does not meet applicable regulatory criteria;
- competitors may develop alternatives that render JTX-2011, JTX-4014 and any other future product candidates obsolete or less attractive;

- product candidates we develop may nevertheless be covered by third-party patents or other exclusive rights;
- the market for a product candidate may change during our program so that the continued development of that product candidate is no longer reasonable;
- a product candidate may not be capable of being produced in commercial quantities at an acceptable cost, or at all; and
- a product candidate may not be accepted as safe and effective by patients, the medical community, or third-party payors, if applicable.

If any of these events occur, we may be forced to abandon our development efforts for a program or programs, or we may not be able to identify, discover, develop or commercialize additional product candidates, which would have a material adverse effect on our business and could potentially cause us to cease operations.

Because our internal research capabilities are limited, we may be dependent upon pharmaceutical and biotechnology companies, academic scientists, and other researchers to sell or license products or technology to us. The success of this strategy depends partly upon our ability to identify, select, and acquire promising pharmaceutical product candidates and products. The process of proposing, negotiating and implementing a license or acquisition of a product candidate or approved product is lengthy and complex. Other companies, including some with substantially greater financial, marketing and sales resources, may compete with us for the license or acquisition of product candidates and approved products. We have limited resources to identify and execute the acquisition or in-licensing of third-party products, businesses, and technologies and integrate them into our current infrastructure.

Moreover, we may devote resources to potential acquisitions or in-licensing opportunities that are never completed, or we may fail to realize the anticipated benefits of such efforts. Any product candidate that we acquire may require additional development efforts prior to commercial sale, including extensive clinical testing and approval by the FDA and comparable foreign regulatory authorities. All product candidates are prone to risks of failure typical of pharmaceutical product development, including the possibility that a product candidate will not be shown to be sufficiently safe and effective for approval by regulatory authorities. In addition, we cannot provide assurance that any products that we develop or approved products that we acquire will be manufactured profitably or achieve market acceptance.

If we fail to develop additional product candidates, our commercial opportunity will be limited.

We expect to initially develop our lead product candidate, JTX-2011. However, one of our strategies is to pursue clinical development of additional product candidates. Developing, obtaining marketing approval for, and commercializing additional product candidates will require substantial additional funding beyond our cash, cash equivalents and investments and are prone to the risks of failure inherent in medical product development. We cannot assure you that we will be able to successfully advance any of these additional product candidates through the development process.

Even if we obtain FDA approval to market additional product candidates for the treatment of cancer, we cannot assure you that any such product candidates will be successfully commercialized, widely accepted in the marketplace, or more effective than other commercially available alternatives. If we are unable to successfully develop and commercialize additional product candidates, our commercial opportunity will be limited.

Even if we receive marketing approval of JTX-2011, JTX-4014 or any other future product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our products, if approved.

Any marketing approvals that we receive for JTX-2011, JTX-4014 and any other future product candidates may be subject to limitations on the approved indicated uses for which the product may be marketed or the conditions of approval, or contain requirements for potentially costly post-market testing and surveillance to monitor the safety and efficacy of the product candidate. The FDA may also require a risk evaluation and mitigation strategy, or REMS, as a condition of approval of JTX-2011, JTX-4014 and any other future product candidates, which could include requirements for a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if the FDA or a comparable foreign regulatory authority approves JTX-2011, JTX-4014 and any other future product candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion, import and export and record keeping for JTX-2011, JTX-4014 and any other future product candidates will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with current good manufacturing practice, or cGMP, and good clinical practice, or GCP, for any clinical trials that we conduct post-approval. Later discovery of previously unknown problems with JTX-2011, JTX-4014 and any other future product candidates, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of JTX-2011, JTX-4014 and any other future product candidates, withdrawal of the product from the market, or product recalls;
- fines, untitled and warning letters, or holds on clinical trials;
- refusal by the FDA to approve pending applications or supplements to approved applications we filed or suspension or revocation of license approvals;
- product seizure or detention, or refusal to permit the import or export of JTX-2011, JTX-4014 and any other future product candidates; and
- injunctions or the imposition of civil or criminal penalties.

The FDA's and other regulatory authorities' policies may change and additional government regulations may be enacted that could prevent, limit or delay marketing approval of JTX-2011, JTX-4014 and any other future product candidates. 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 if we 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.

Even if JTX-2011, JTX-4014 and any other future product candidates receive marketing approval, they may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.

If JTX-2011, JTX-4014 and any other future product candidates receive marketing approval, whether as a single agent or in combination with other therapies, they may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors, and others in the medical community. For example, currently approved immunotherapies, and other cancer treatments like chemotherapy and radiation therapy, are well established in the medical community, and doctors may continue to rely on these therapies. If JTX-2011, JTX-4014 and any other future product candidates do not achieve an adequate level of acceptance, we may not generate significant product revenues and we may not become profitable. The degree of market acceptance of JTX-2011, JTX-4014 and any future products, if approved for commercial sale, will depend on a number of factors, including:

- efficacy and potential advantages compared to alternative treatments;
- the ability to offer our products, if approved, for sale at competitive prices;
- convenience and ease of administration compared to alternative treatments;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;

- the strength of marketing and distribution support;
- sufficient third-party coverage or reimbursement, including of combination therapies;
- adoption of a companion diagnostic and/or complementary diagnostic; and
- the prevalence and severity of any side effects.

Risks Related to Manufacturing, Commercialization and Reliance on Third Parties

We depend on our collaboration with Celgene and may depend on collaborations with additional third parties for the development and commercialization of our product candidates. If our collaborations are not successful, we may not be able to capitalize on the market potential of these product candidates.

In July 2016, we entered into a Master Research and Collaboration Agreement, or Celgene Collaboration Agreement, with Celgene Corporation, or Celgene, focused on developing and commercializing biologic immunotherapies. Under our Celgene Collaboration Agreement with Celgene, Celgene may exercise options granting it certain commercialization or licensing rights for JTX-2011, JTX-4014 and other product candidate programs from a pool of certain molecular targets. The collaboration involves a complex allocation of rights, provides for milestone payments to us based on the achievement of specified clinical development, regulatory and commercial milestones, provides for additional payments upon Celgene's election to exercise rights to commercialize additional product candidates or extend the research term, and provides us with profit-sharing and royalty-based revenue if certain product candidates are successfully commercialized. We cannot provide any assurance with respect to, or otherwise, the success of the collaboration.

We may form or seek other strategic alliances, joint ventures, or collaborations, or enter into additional licensing arrangements with third parties that we believe will complement or augment our development and commercialization efforts with respect to JTX-2011, JTX-4014 and any future product candidates that we may develop. Our likely collaborators for any collaboration arrangements include large and mid-size pharmaceutical companies, regional and national pharmaceutical companies and biotechnology companies. If we enter into any other arrangements with any third parties, we will likely have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of our product candidates, which could be more limiting than our existing arrangements with Celgene. Our ability to generate revenues from these arrangements, including our arrangement with Celgene, will depend on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements.

Collaborations involving our product candidates, including our collaboration with Celgene, pose the following risks to us:

- Collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations. For example, under our collaboration agreement with Celgene, development and commercialization plans and strategies for licensed programs will be conducted in accordance with a plan approved by the appropriate committee comprised of representatives from both us and Celgene.
- Collaborators, including Celgene, may not pursue development and commercialization of JTX-2011, JTX-4014 or any future product candidates or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in their strategic focus due to the acquisition of competitive products, availability of funding or other external factors such as a business combination that diverts resources or creates competing priorities.
- Collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial, abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing. For example, under our collaboration agreement with Celgene, at any point in the research, development and clinical trial process, or during the term of any applicable co-development and co-commercialization or license agreement, respectively, Celgene may terminate the applicable agreement upon 120 days' prior written notice with respect to any product candidate that is subject to the collaboration agreement without triggering a termination of the remainder of the collaboration and, under a co-development and co-commercialization agreement or a license agreement, it is possible for Celgene to terminate that agreement upon 120 days prior written notice at any point during the development or commercialization activities. If Celgene exercises any such termination right, we may not have sufficient resources to continue the research, development or commercialization of such product candidate.

- Collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products or product candidates.
- A collaborator with marketing and distribution rights to one or more products may not commit sufficient resources to their marketing and distribution.
- Collaborators may own or co-own intellectual property covering our products that results from our collaborating with them, and in such cases, we would not have the exclusive right to develop, commercialize, enforce, maintain or defend such intellectual property.
- Collaborators may not properly enforce, maintain or defend our intellectual property rights or may use our proprietary information in a way that gives rise to actual or threatened litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential litigation, or other intellectual property proceedings. For example, under certain limited circumstances, Celgene has the first right to enforce, maintain or defend our intellectual property rights under our collaboration arrangement with respect to certain licensed programs and, although we may have the right to assume the enforcement, maintenance and defense of our intellectual property rights if Celgene does not, our ability to do so may be compromised by Celgene's actions.
- Disputes may arise between a collaborator and us that cause the delay or termination of the research, development or commercialization of JTX-2011, JTX-4014 and any other future product candidates, or that result in costly litigation or arbitration that diverts management attention and resources. For example, although we and Celgene have agreed to the form of co-development and co-commercialization agreement and license agreement to be entered into should Celgene exercise its option for a program under the Celgene Collaboration Agreement, we may never come to agreement with Celgene on a final definitive agreement. Further, even if we do reach a definitive agreement, it may not be on terms that are as favorable to us as expected.
- Collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable product candidates. For example, Celgene can terminate its agreement with us, in its entirety or with respect to any program, upon 120 days' notice and can terminate the entire agreement with us in connection with a material breach of the agreement by us that remains uncured for 90 days. If Celgene exercises such termination right, we may not have sufficient resources to continue the development of such product candidate.
- Collaboration agreements may not lead to development or commercialization of product candidates in the most efficient manner or at all. If a present or future collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development or commercialization program under such collaboration could be delayed, diminished or terminated.
- Collaboration agreements may restrict our right to independently pursue new product candidates. For example, if Celgene exercises its option for a program within the collaboration other than JTX-4014, then until termination or expiration of the applicable co-development and co-commercialization agreement for such program, we may not directly or indirectly research, develop, manufacture or commercialize, outside of the collaboration, any biologic medicine or product candidate with specified activity against that program's collaboration target.

As a result, if we enter into additional collaboration agreements and strategic partnerships or license our intellectual property, products or businesses, we may not be able to realize the benefit of such transactions if we are unable to successfully integrate them with our existing operations and company culture, which could delay our timelines or otherwise adversely affect our business. We also cannot be certain that, following a strategic transaction or license, we will achieve the revenue or specific net income that justifies such transaction. Any delays in entering into new collaborations or strategic partnership agreements related to JTX-2011, JTX-4014 and any other future product candidates could delay the development and commercialization of JTX-2011, JTX-4014 and any other future product candidates in certain geographies for certain indications, which would harm our business prospects, financial condition, and results of operations.

We may seek to establish additional collaborations, and, if we are not able to establish them on commercially reasonable terms, we may have to alter our development and commercialization plans.

Our drug development programs and the potential commercialization of our product candidates will require substantial additional cash to fund expenses. For some of our product candidates, we may decide to collaborate with additional pharmaceutical and biotechnology companies for the development and potential commercialization

of those product candidates. Any of these relationships may require us to incur non-recurring and other charges, increase our near and long-term expenditures, issue securities that dilute our existing stockholders, or disrupt our management and business.

We face significant competition in seeking appropriate strategic partners and the negotiation process is time consuming and complex. Whether we reach a definitive agreement for other collaborations will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the progress of our clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge and industry and market conditions generally. The collaborator may also consider alternative product candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our product candidate. Further, we may not be successful in our efforts to establish a strategic partnership or other alternative arrangements for future product candidates because they may be deemed to be at too early of a stage of development for collaborative effort and third parties may not view them as having the requisite potential to demonstrate safety and efficacy.

We may also be restricted under existing collaboration agreements from entering into future agreements on certain terms with potential collaborators. For example, during the research term of our collaboration with Celgene, we may not directly or indirectly research, develop, manufacture or commercialize, except pursuant to the agreement, certain product candidates. In addition, if Celgene exercises its option for a program within the collaboration other than JTX-4014, then until termination or expiration of the applicable co-development and co-commercialization agreement for such program, we may not directly or indirectly develop, manufacture or commercialize, outside of the collaboration, any biologic medicine or product candidate with specified activity against that program's collaboration target.

Collaborations are complex and time-consuming to negotiate and document. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators.

We may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of the product candidate for which we are seeking to collaborate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop our product candidates or bring them to market and generate product revenue.

The market opportunities for JTX-2011, JTX-4014 and any other products, if and when approved, may be limited to those patients who are ineligible for established therapies or for whom prior therapies have failed, and may be small.

Cancer therapies are sometimes characterized as first-line, second-line, or third-line, and the FDA often approves new therapies initially only for third-line use. When cancer is detected early enough, first-line therapy, usually chemotherapy, hormone therapy, surgery, radiation therapy, and, increasingly, immunotherapies or a combination of these, is sometimes adequate to cure the cancer or prolong life without a cure. Second and third-line therapies are administered to patients when prior therapy is not effective. We expect to initially seek approval of JTX-2011, JTX-4014 and any other future product candidates as a therapy for patients who have received one or more prior treatments. Subsequently, for those products that prove to be sufficiently beneficial, if any, we would expect to seek approval potentially as a first-line therapy, but there is no guarantee that JTX-2011, JTX-4014 and any other future product candidates, even if approved, would be approved for first-line therapy, and, prior to any such approvals, we may have to conduct additional clinical trials.

Our projections of both the number of people who have the cancers we are targeting, as well as the subset of people with these cancers who have received one or more prior treatments, and who have the potential to benefit from treatment with JTX-2011, JTX-4014 and any other future product candidates, are based on our beliefs and estimates. These estimates have been derived from a variety of sources, including scientific literature, surveys of

clinics, patient foundations, and market research, and may prove to be incorrect. Further, new studies may change the estimated incidence or prevalence of these cancers. The number of patients may turn out to be lower than expected. Additionally, the potentially addressable patient population for JTX-2011, JTX-4014 and any other future product candidates may be limited or may not be amenable to treatment with JTX-2011, JTX-4014 and any other products, if and when approved. Even if we obtain significant market share for JTX-2011, JTX-4014 and any other products, if and when approved, because the potential target populations are small, we may never achieve profitability without obtaining marketing approval for additional indications, including to be used as first- or second-line therapy.

Exclusivity and other governance provisions within our collaboration agreement with Celgene may prevent us from pursuing alternative product candidates and exercising complete control over our product candidates' development.

During the research term in our collaboration agreement with Celgene, we may not alone, or with a third party, research, develop, manufacture or commercialize a biologic that binds to a pool of certain B cell, T regulatory cell or tumor-associated macrophage targets, other than PD-1, that meet certain criteria, termed an exclusive target, and inhibit, activate or otherwise modulate the activity of such exclusive target. In addition, if Celgene exercises its option for a program within the collaboration other than JTX-4014, then until termination or expiration of the applicable co-development and co-commercialization agreement for such program, we may not directly or indirectly research, develop, manufacture or commercialize, outside of the collaboration, any biologic with specified activity against that program's collaboration target. Further, our collaboration with Celgene is governed by the joint steering committee, or JSC, and a joint patent committee. The JSC may establish additional subcommittees, to oversee particular projects or activities. Subject to limitations specified in the agreement, if the applicable governance committee is unable to make a decision by consensus and the parties are unable to resolve the issue through escalation to specified senior executive officers of the parties, then we generally have final decision-making authority over research and development matters for programs prior to Celgene's exercise of its option to such program. If Celgene exercises its option for a program, final decision-making authority for that program is specified in the applicable co-development and co-commercialization agreement or license agreement. These exclusivity and governance provisions may inhibit our development efforts and may materially harm our business, financial condition, results of operations and prospects.

We rely and will rely on third parties to conduct our clinical trials for JTX-2011, JTX-4014 and any other future product candidates. If these third parties do not successfully carry out their contractual duties, comply with regulatory requirements or meet expected deadlines, we may not be able to obtain marketing approval for or commercialize JTX-2011, JTX-4014 and any other future product candidates and our business could be substantially harmed.

We do not have the ability to independently conduct clinical trials. We rely and will rely on medical institutions, clinical investigators, contract laboratories, and other third parties, such as CROs, to conduct or otherwise support clinical trials, including processing of human blood and tumor samples from the clinical trials, for JTX-2011, JTX-4014 and any other future product candidates. We rely and will rely heavily on these parties for execution of clinical trials for JTX-2011, JTX-4014 and any other future product candidates and control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our clinical trials is conducted in accordance with the applicable protocol, legal and regulatory requirements and scientific standards, and our reliance on these third parties including CROs will not relieve us of our regulatory responsibilities. For any violations of laws and regulations during the conduct of our clinical trials, we could be subject to untitled and warning letters or enforcement action that may include civil penalties up to and including criminal prosecution.

We and our clinical investigators and CROs are required to comply with regulations and requirements, including GCP, for conducting, monitoring, recording and reporting the results of clinical trials to ensure that the data and results are scientifically credible and accurate, and that the trial patients are adequately informed of the potential risks of participating in clinical trials and their rights are protected. These regulations are enforced by the FDA, the Competent Authorities of the Member States of the European Economic Area and comparable foreign regulatory authorities for any drugs in clinical development. The FDA enforces GCP requirements through periodic inspections of clinical trial sponsors, principal investigators and trial sites. If we or our clinical investigators or CROs fail to comply with applicable GCP, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that, upon inspection, the FDA will determine that any of our future clinical trials will comply with GCP. In addition, our clinical trials must be conducted with product candidates produced under cGMP regulations. Our failure or the failure of our clinical investigators or CROs to comply with

these regulations may require us to repeat clinical trials, which would delay the marketing approval process and could also subject us to enforcement action. We also are required to register certain ongoing clinical trials and provide certain information, including information relating to the trial's protocol, on a government-sponsored database, ClinicalTrials.gov, within specific timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

Although we designed the clinical trials for JTX-2011 and intend to design the clinical trials for JTX-4014 and any other future product candidates, clinical investigators or CROs will conduct all of the clinical trials. As a result, many important aspects of our development programs, including their conduct and timing, will be outside of our direct control. Our reliance on third parties to conduct future clinical trials will also result in less direct control over the management of data developed through clinical trials than would be the case if we were relying entirely upon our own staff. Communicating with outside parties can also be challenging, potentially leading to mistakes as well as difficulties in coordinating activities. Outside parties may:

- have staffing difficulties;
- fail to comply with contractual obligations;
- experience regulatory compliance issues;
- undergo changes in priorities or become financially distressed; or
- form relationships with other entities, some of which may be our competitors.

These factors may materially adversely affect the willingness or ability of third parties to conduct our clinical trials and may subject us to unexpected cost increases that are beyond our control. If the clinical investigators or CROs do not perform clinical trials in a satisfactory manner, breach their obligations to us or fail to comply with regulatory requirements, the development, marketing approval and commercialization of JTX-2011, JTX-4014 and any other future product candidates may be delayed, we may not be able to obtain marketing approval and commercialize JTX-2011, JTX-4014 and any other future product candidates, or our development program may be materially and irreversibly harmed. If we are unable to rely on clinical data collected by our clinical investigators and CROs, we could be required to repeat, extend the duration of, or increase the size of any clinical trials we conduct and this could significantly delay commercialization and require significantly greater expenditures.

If any of our relationships with these clinical investigators or third party CROs terminate, we may not be able to enter into arrangements with alternative clinical investigators or CROs. If clinical investigators or CROs do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain are compromised due to the failure to adhere to our clinical protocols, regulatory requirements or for other reasons, any clinical trials such clinical investigators or CROs are associated with may be extended, delayed or terminated, and we may not be able to obtain marketing approval for or successfully commercialize JTX-2011, JTX-4014 and any other future product candidates. As a result, we believe that our financial results and the commercial prospects for JTX-2011, JTX-4014 and any other future product candidates in the subject indication would be harmed, our costs could increase and our ability to generate revenue could be delayed.

We face significant competition and if our competitors develop and market products that are more effective, safer or less expensive than JTX-2011, JTX-4014 or any other future product candidates, our commercial opportunities will be negatively impacted.

The life sciences industry is highly competitive and subject to rapid and significant technological change. We are currently developing therapeutics that will compete with other products and therapies that currently exist or are being developed such as GlaxoSmithKline plc's anti-ICOS program. Products we may develop in the future are also likely to face competition from other products and therapies, some of which we may not currently be aware. We have competitors both in the United States and internationally, including major multinational pharmaceutical companies, established biotechnology companies, specialty pharmaceutical companies, universities and other research institutions. Many of our competitors have significantly greater financial, manufacturing, marketing, product development, technical and human resources than we do. Large pharmaceutical companies, in particular, have extensive experience in clinical testing, obtaining marketing approvals, recruiting patients and in manufacturing pharmaceutical 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 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 candidates that we develop obsolete. As a result of all of these

factors, our competitors may succeed in obtaining patent protection and/or marketing approval or discovering, developing and commercializing products in our field before we do.

There are a large number of companies developing or marketing treatments for cancer, including many major pharmaceutical and biotechnology companies. These treatments consist both of small molecule drug products, as well as biologics approaches to address cancer. These treatments are often combined with one another in an attempt to maximize the response rate. Our competitors fall primarily into the following groups of treatment:

- traditional cancer therapies, including chemotherapy;
- an anti-ICOS program (GSK 3359609) in Phase I clinical trials, being developed by GlaxoSmithKline plc for which patient enrollment began in the second quarter of 2016;
- approved immunotherapy antibodies, an approved anti-CTLA 4 antibody (Yervoy, marketed by Bristol Myers Squibb Company), approved anti-PD-1/anti-PD-L1 antibodies (Opdivo, Keytruda, Tecentriq, Bavencio and Imfinzi, marketed by Bristol Myers Squibb Company, Merck & Co., Genentech, Inc., Merck KGaA and Pfizer, Inc., and AstraZeneca PLC, respectively) and anti-PD-L1/anti-PD-L1 immunotherapy antibodies that are in clinical development;
- other agonist immunotherapy antibodies that are in clinical development; and
- therapies targeting macrophages, T regulatory cells and B cells that are in clinical development.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient, have a broader label, are marketed more effectively, are reimbursed or are less expensive than any products that we may develop. Our competitors also may obtain FDA, European Commission or other marketing approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. Even if JTX-2011, JTX-4014 and any other future product candidates achieve marketing approval, they may be priced at a significant premium over competitive products if any have been approved by then, resulting in reduced competitiveness.

In addition, our ability to compete in the future may be affected in many cases by insurers or other third-party payors seeking to encourage the use of biosimilar products. In March 2010, then-President Obama signed into law the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively, the Affordable Care Act, a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for health care and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms. The Affordable Care Act also created a new regulatory scheme authorizing the FDA to approve biosimilars. Under the Affordable Care Act, a manufacturer may submit an application for licensure of a biologic product that is “biosimilar to” or “interchangeable with” a previously approved biological product or “reference product,” without the need to submit a full package of preclinical and clinical data. Under this new statutory scheme, an application for a biosimilar product may not be submitted to the FDA until four years following approval of the reference product. The FDA may not approve a biosimilar product until 12 years from the date on which the reference product was approved. Even if a product is considered to be a reference product eligible for exclusivity, another company could market a competing version of that product if the FDA approves a full BLA for such product containing the sponsor’s own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of their product.

Smaller and other early stage companies may also prove to be significant competitors. These third parties compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. In addition, the biopharmaceutical industry is characterized by rapid technological change. If we fail to stay at the forefront of technological change, we may be unable to compete effectively. Technological advances or products developed by our competitors may render our technologies or product candidates obsolete, less competitive or not economical.

We may expend our limited resources to pursue a particular product candidate and fail to capitalize on product candidates that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and personnel resources, we are placing significant focus on the development of our product candidates JTX-2011 and JTX-4014. As a result, we may forgo or delay pursuit of opportunities with other future product candidates that later prove to have greater commercial potential. Our resource allocation

decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and other future product candidates for specific indications may not yield any commercially viable future product candidates. If we do not accurately evaluate the commercial potential or target market for a particular future product candidate, we may relinquish valuable rights to that future product candidates through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such future product candidates.

Because we rely on third-party manufacturing and supply partners, including a single supplier for some of our materials, our supply of research and development, preclinical and clinical development materials may become limited or interrupted or may not be of satisfactory quantity or quality.

We rely on third-party contract manufacturers to manufacture our preclinical and clinical trial product supplies. We do not own manufacturing facilities for producing such supplies. There can be no assurance that our preclinical and clinical development product supplies will not be limited, interrupted, or of satisfactory quality or continue to be available at acceptable prices. In particular, any replacement of our manufacturer could require significant effort and expertise because there may be a limited number of qualified replacements.

The manufacturing process for a product candidate is subject to FDA and comparable foreign regulatory authority review. Suppliers and manufacturers must meet applicable manufacturing requirements and undergo rigorous facility and process validation tests required by regulatory authorities in order to comply with regulatory requirements, such as cGMP. In the event that any of our manufacturers fails to comply with such requirements or to perform its obligations to us in relation to quality, timing or otherwise, or if our supply of components or other materials becomes limited or interrupted for other reasons, we may be forced to manufacture the materials ourselves, for which we currently do not have the capabilities or resources, or enter into an agreement with another third party, which we may not be able to do on reasonable terms, if at all. In some cases, the technical skills or technology required to manufacture JTX-2011, JTX-4014 or any other future product candidates may be unique or proprietary to the original manufacturer and we may have difficulty transferring such skills or technology to another third party and a feasible alternative may not exist. These factors would increase our reliance on such manufacturer or require us to obtain a license from such manufacturer in order to have another third party manufacture JTX-2011, JTX-4014 and any other future product candidates. If we are required to change manufacturers for any reason, we will be required to verify that the new manufacturer maintains facilities and procedures that comply with quality standards and with all applicable regulations and guidelines. The delays associated with the verification of a new manufacturer could negatively affect our ability to develop product candidates in a timely manner or within budget.

We expect to continue to rely on third-party manufacturers if we receive marketing approval for any product candidate. To the extent that we have existing, or enter into future, manufacturing arrangements with third parties, we will depend on these third parties to perform their obligations in a timely manner consistent with contractual and regulatory requirements, including those related to quality control and assurance. If we are unable to maintain third-party manufacturing for JTX-2011, JTX-4014 or obtain or maintain third-party manufacturing for any other future product candidates, or to do so on commercially reasonable terms, we may not be able to develop and commercialize JTX-2011, JTX-4014 or any other future product candidates successfully. We do not yet have sufficient information to reliably estimate the cost of the commercial manufacturing of JTX-2011, JTX-4014 or any other future product candidates, and the actual cost to manufacture JTX-2011, JTX-4014 or any other future product candidate could materially and adversely affect their commercial viability. As a result, we may never be able to develop a commercially viable product. Our or a third party's failure to execute on our manufacturing requirements, to do so on commercially reasonable terms and comply with cGMP could adversely affect our business in a number of ways, including:

- an inability to continue clinical trials of JTX-2011 or initiate or continue clinical trials of JTX-4014 or any other future product candidates under development;
- delay in submitting regulatory applications, or receiving marketing approvals, for JTX-2011, JTX-4014 or any other future product candidates;
- loss of the cooperation of an existing or future collaborator;
- subjecting third-party manufacturing facilities or our manufacturing facilities to additional inspections by regulatory authorities;
- requirements to cease distribution or to recall batches of JTX-2011, JTX-4014 and any other future product candidates; and

- in the event of approval to market and commercialize JTX-2011, JTX-4014 or any other future product candidates, an inability to meet commercial demands for our product or any other future product candidates.

Certain raw materials necessary for the manufacture of our JTX-2011, JTX-4014 product candidate under our current manufacturing process, such as growth media, resins and filters, are available from a single supplier. We do not have agreements in place that guarantee our supply or the price of these raw materials. Any significant delay in the acquisition or decrease in the availability of these raw materials could considerably delay the manufacture of JTX-2011, JTX-4014 and any other future product candidates, which could adversely impact the timing of any planned trials or the marketing approval of that product candidate.

Third-party manufacturers and any third-party collaborators may be unable to successfully scale-up manufacturing of JTX-2011, JTX-4014 or any other future product candidates in sufficient quality and quantity, which would delay or prevent us from developing JTX-2011, JTX-4014 or any other future product candidates and commercializing approved products, if any.

In order to conduct clinical trials of JTX-2011, JTX-4014 and any other future product candidates, we will need to work with third-party manufacturers to manufacture them in large quantities. Our manufacturing partners or our third-party collaborators may be unable to successfully increase the manufacturing capacity of JTX-2011, JTX-4014 and any other future product candidates in a timely or cost-effective manner, or at all. In addition, quality issues may arise during scale-up activities. If our manufacturing partners or collaborators are unable to successfully scale up the manufacture of JTX-2011, JTX-4014 or any other future product candidates in sufficient quality and quantity, the development, testing, and clinical trials of that product candidate may be delayed or infeasible, and marketing approval or commercial launch of any resulting product may be delayed or not obtained, which could significantly harm our business.

We are subject to manufacturing risks that could substantially increase our costs and limit the supply of our products.

The process of manufacturing our product or any other future product candidates is complex, highly regulated and subject to several risks, including those listed below.

- We do not have experience manufacturing drug products or drug substances. We use third-party manufacturers for manufacturing JTX-2011 for our Phase I/II study of JTX-2011. We will also need commercial scale manufacturing of JTX-2011, if and when approved, which would involve scaling-up our process, for later trials and commercial application. We may not succeed in the scaling up of our process. We may need a larger scale manufacturing process for JTX-2011 than what we have planned, depending on the dose and regimen that will be determined in our Phase I/II study. Any changes in our manufacturing processes as a result of scaling-up may result in the need to obtain additional marketing approvals. Difficulties in achieving commercial-scale production or the need for additional marketing approvals as a result of scaling up could delay the development and marketing approval of JTX-2011, JTX-4014 and any other future product candidates and ultimately affect our success.
- The process of manufacturing biologics, such as JTX-2011, JTX-4014 and any other future product candidates, is extremely susceptible to product loss due to contamination, equipment failure or improper installation or operation of equipment, vendor or operator error, inconsistency in yields, variability in product characteristics and difficulties in scaling the production process. Even minor deviations from normal manufacturing processes could result in reduced production yields, product defects and other supply disruptions. If microbial, viral or other contaminations are discovered in JTX-2011, JTX-4014 and any other future product candidates or in the manufacturing facilities in which JTX-2011, JTX-4014 and any other future product candidates are made, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination.
- The manufacturing facilities in which JTX-2011, JTX-4014 and any other future product candidates are made could be adversely affected by equipment failures, labor shortages, natural disasters, power failures and numerous other factors.
- Any adverse developments affecting manufacturing operations for JTX-2011, JTX-4014 and any other future product candidates, if any are approved, may result in shipment delays, inventory shortages, lot failures, product withdrawals or recalls, or other interruptions in the supply of our products. We may also have to take inventory write-offs and incur other charges and expenses for products that fail to meet specifications, undertake costly remediation efforts or seek more costly manufacturing alternatives.

- JTX-2011, JTX-4014 and any other future product candidates that have been produced and are stored for later use may degrade, become contaminated or suffer other quality defects, which may cause the affected product candidates to no longer be suitable for their intended use in clinical trials or other development activities. If the defective product candidates cannot be replaced in a timely fashion, we may incur significant delays in our development programs that could adversely affect the value of such product candidates.

We expect to develop JTX-2011, JTX-4014 and potentially future product candidates in combination with other drugs. If we are unable to enter into a strategic collaboration for, or if we are unable to purchase on commercially reasonable terms, an approved cancer drug to use in combination with our product candidates, we may be unable to develop or obtain approval for, JTX-2011, JTX-4014 and potentially future product candidates in combination with other drugs.

We intend to develop JTX-2011, JTX-4014 and future product candidates in combination with one or more currently approved cancer drugs. If the FDA or similar regulatory authorities outside of the United States revoke approval of any drugs we use in combination with JTX-2011, JTX-4014 or any other future product candidates, we will not be able to market any products in combination with such revoked drugs. We may also evaluate JTX-2011, JTX-4014 or any other future product candidates in combination with one or more other cancer drugs that have not yet been approved for marketing by the FDA or similar regulatory authorities outside of the United States. We will not be able to market and sell JTX-2011, JTX-4014 or any other future product candidates in combination with any such unapproved cancer drugs that do not ultimately obtain marketing approval.

If safety or efficacy issues arise with any of these drugs, we could experience significant regulatory delays, and the FDA or similar regulatory authorities outside of the United States may require us to redesign or terminate the applicable clinical trials. If the drugs we use are replaced as the standard of care for the indications we choose for JTX-2011, JTX-4014 or any other future product candidates, the FDA or similar regulatory authorities outside of the United States may require us to conduct additional clinical trials. In addition, if manufacturing or other issues result in a shortage of supply of the drugs with which we determine to combine with JTX-2011, JTX-4014 or any other future product candidates, we may not be able to complete clinical development of JTX-2011, JTX-4014 or any other future product candidates on our current timeline or at all.

Even if JTX-2011, JTX-4014 or any other future product candidates were to receive marketing approval or be commercialized for use in combination with other existing drugs, we would continue to be subject to the risks that the FDA or similar regulatory authorities outside of the United States could revoke approval of the drug used in combination with JTX-2011, JTX-4014 or any other future product candidates or that safety, efficacy, manufacturing or supply issues could arise with these existing drugs. Combination therapies are commonly used for the treatment of cancer, and we would be subject to similar risks if we develop any of our other product candidates for use in combination with other drugs or for indications other than cancer. This could result in our own products being removed from the market or being less successful commercially.

If the FDA or similar regulatory authorities outside of the United States do not approve these other drugs or revoke their approval of, or if safety, efficacy, manufacturing, or supply issues arise with, the drugs we choose to evaluate in combination with JTX-2011, JTX-4014 or any other future product candidates, we may be unable to obtain approval of or market JTX-2011, JTX-4014 or any other future product candidates.

We may form or seek strategic collaborations to evaluate and, if approved, market JTX-2011 and JTX-4014 in combination with another approved cancer drug. If we are unable to enter into a strategic collaboration on commercially reasonable terms or fail to realize the benefits of any such collaboration, we may be required to purchase an approved cancer drug to use in combination with JTX-2011 and JTX-4014. The failure to enter into a successful collaboration or the expense of purchasing an approved cancer drug may delay our development timelines, increase our costs and jeopardize our ability to develop JTX-2011 and JTX-4014 as a commercially viable drug.

We may develop complementary diagnostics and/or companion diagnostics for JTX-2011, JTX-4014 and any other product candidates we develop. If we are unable to successfully develop such companion diagnostics or complementary diagnostics, or experience significant delays in doing so, we may not realize the full commercial potential of JTX-2011, JTX-4014 or any other future product candidates.

Because we are focused on patient enrichment strategies, in which predictive biomarkers may be used to identify the right patients for our product candidates, we believe that our success may depend, in part, on our ability to develop complementary diagnostics and/or companion diagnostics, which are assays or tests to identify an

appropriate patient population for our product candidates. There has been limited success to date industry-wide in developing these types of complementary diagnostics and/or companion diagnostics. To be successful, we need to address a number of scientific, technical and logistical challenges. We have not yet initiated development of complementary diagnostics and/or companion diagnostics. We have little experience in the development of diagnostics and may not be successful in developing appropriate diagnostics to pair with any of our product candidates that receive marketing approval. Complementary diagnostics and/or companion diagnostics are subject to regulation by the FDA and similar regulatory authorities outside the United States as medical devices and require separate regulatory approval or clearance prior to commercialization. Given our limited experience in developing diagnostics, we expect to rely in part or in whole on third parties for their design and manufacture. If we, or any third parties that we engage to assist us, are unable to successfully develop complementary diagnostics and/or companion diagnostics for JTX-2011, JTX-4014 and any other future product candidates, or experience delays in doing so:

- the development of JTX-2011, JTX-4014 and any other future product candidates may be adversely affected if we are unable to appropriately select patients for enrollment in our clinical trials;
- JTX-2011, JTX-4014 and any other future product candidates may not receive marketing approval if safe and effective use of a product candidate depends on a complementary diagnostics and/or companion diagnostics and such diagnostic is not commercially available or otherwise approved or cleared by the appropriate regulatory authority; and
- we may not realize the full commercial potential of JTX-2011, JTX-4014 and any other future product candidates that receive marketing approval if, among other reasons, we are unable to appropriately identify, or it takes us longer to identify, patients who are likely to benefit from therapy with our products, if approved.

If any of these events were to occur, our business would be harmed, possibly materially.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of JTX-2011, JTX-4014 and any other future product candidates.

We face an inherent risk of product liability as a result of the clinical testing of JTX-2011, JTX-4014 and any other future product candidates and will face an even greater risk if we commercialize any products. For example, we may be sued if JTX-2011, JTX-4014 or any other future product candidates cause or are perceived to cause injury or are found to be otherwise unsuitable during clinical 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 or a 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 JTX-2011, JTX-4014 or any other future product candidates. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for JTX-2011, JTX-4014 and any other future product candidates;
- injury to our reputation;
- withdrawal of clinical trial participants;
- initiation of investigations by regulators;
- costs to defend the related litigation;
- a diversion of management’s time and our resources;
- substantial monetary awards to trial participants or patients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue;
- exhaustion of any available insurance and our capital resources;
- the inability to commercialize any product candidate; and
- a decline in our share price.

Our inability to obtain 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, alone or with corporate collaborators.

Insurance coverage is increasingly expensive. We may not be able to maintain insurance at a reasonable cost or in an amount adequate to satisfy any liability that may arise, if at all. Our insurance policy contains various exclusions, and we may be subject to a product liability claim for which we have no coverage. We may 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. Even if our agreements with any future corporate collaborators entitle us to indemnification against losses, such indemnification may not be available or adequate should any claim arise.

Even if we are able to commercialize any product candidates, such products may become subject to unfavorable pricing regulations, third-party coverage and reimbursement policies or healthcare reform initiatives, which would harm our business.

The regulations that govern marketing approvals, pricing and reimbursement for new products vary widely from country to country. Some countries require approval of the sale price of a product before it can be marketed. In many countries, the pricing review period begins after marketing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we might obtain marketing approval for a product candidate in a particular country, but then be subject to price regulations that delay our commercial launch of the product candidate, possibly for lengthy time periods, and negatively impact the revenues we are able to generate from the sale of the product candidate in that country. Adverse pricing limitations may hinder our ability to recoup our investment in one or more product candidates, even if JTX-2011, JTX-4014 or any other future product candidates obtain marketing approval.

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

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

Governments outside the United States tend to impose strict price controls, which may adversely affect our revenues, if any.

In some countries, particularly the countries in Europe, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some

countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies. If reimbursement of our products, if approved, is unavailable or more limited in scope or amount than we anticipate, or if pricing is set at even lower levels than we anticipate, our business could be harmed, possibly materially.

Adverse events in the field of immuno-oncology could damage public perception of JTX-2011, JTX-4014 and any other future product candidates and negatively affect our business.

The commercial success of our products will depend in part on public acceptance of the use of cancer immunotherapies. Adverse events in clinical trials of JTX-2011, JTX-4014 or any other future product candidates or in clinical trials of others developing similar products and the resulting publicity, as well as any other adverse events in the field of immuno-oncology that may occur in the future, including in connection with competitor therapies such as GlaxoSmithKline plc's anti-ICOS antibody, could result in a decrease in demand for JTX-2011, JTX-4014 or any other products that we may develop. If public perception is influenced by claims that the use of cancer immunotherapies is unsafe, whether related to our therapies or those of our competitors, our products may not be accepted by the general public or the medical community.

Future adverse events in immuno-oncology or the biopharmaceutical industry could also result in greater governmental regulation, stricter labeling requirements and potential regulatory delays in the testing or approvals of our products. Any increased scrutiny could delay or increase the costs of obtaining marketing approval for JTX-2011, JTX-4014 and any other future product candidates.

Healthcare legislative reform measures may have a material adverse effect on our business and results of operations.

In the United States, there have been and continue to be a number of legislative initiatives to contain healthcare costs. For example, in March 2010, the Affordable Care Act was passed, which substantially changes the way health care is financed by both governmental and private insurers, and significantly impacts the U.S. pharmaceutical industry. The Affordable Care Act, among other things, subjects biological products to potential competition by lower-cost biosimilars, addresses a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, 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 Affordable Care Act was enacted. In August 2011, the Budget Control Act of 2011, among other things, 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 2% per fiscal year. These reductions went into effect in April 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2025 unless additional congressional action is taken. In January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers.

Moreover, payment methodologies may be subject to changes in healthcare legislation and regulatory initiatives. For example, the Middle Class Tax Relief and Job Creation Act of 2012 required that the Centers for Medicare & Medicaid Services, or CMS, the agency responsible for administering the Medicare program, reduce the Medicare clinical laboratory fee schedule by 2% in 2013, which served as a base for 2014 and subsequent years. In addition, effective January 2014, CMS also began bundling the Medicare payments for certain laboratory tests ordered while a patient received services in a hospital outpatient setting.

As a result of the 2016 election in the United States, there is great political uncertainty concerning the fate of the Affordable Care Act and other healthcare laws. The current administration supports a repeal of the Affordable Care Act and an Executive Order has been signed commanding federal agencies to try to waive or delay requirements of the Affordable Care Act that impose economic or regulatory burdens on states, families, the health-care industry and others. The Executive Order also declares that the administration will seek the "prompt repeal" of the law and that the government should prepare to "afford the States more flexibility and control to create a more free and open

healthcare market." At this time, the immediate impact of the Executive Order is not clear. In addition, the United States Congress is expected to continue to draft legislation to repeal parts of the Affordable Care Act, but it is uncertain when such legislation would be passed and whether Congress would replace the law and what any replacement law would encompass. We cannot predict any initiatives that may be adopted in the future. We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for JTX-2011, JTX-4014 and any other future product candidates or complementary diagnostics or companion diagnostics or additional pricing pressures.

Our future relationships with customers and third-party payors in the United States and elsewhere may be subject, directly or indirectly, to applicable anti-kickback, fraud and abuse, false claims, transparency, health information privacy and security and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm, administrative burdens and diminished profits and future earnings.

Healthcare providers, physicians and third-party payors in the United States and elsewhere will play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our future arrangements with third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations, including, without limitation, the federal Anti-Kickback Statute and the federal False Claims Act, which may constrain the business or financial arrangements and relationships through which we sell, market and distribute any products for which we obtain marketing approval. In addition, we may be subject to transparency laws and patient privacy regulation by the U.S. federal and state governments and by governments in foreign jurisdictions in which we conduct our business. The applicable federal, state and foreign healthcare laws and regulations that may affect our ability to operate include:

- the federal Anti-Kickback Statute, which prohibits, among other things, knowingly and willfully soliciting, receiving, offering or paying any remuneration (including any kickback, bribe, or rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce, or in return for, either the referral of an individual, or the purchase, lease, order or recommendation of any good, facility, item or service for which payment may be made, in whole or in part, under a federal healthcare program, such as the Medicare and Medicaid programs. A person or entity can be found guilty of violating the statute without actual knowledge of the statute or specific intent to violate it. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act;
- 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 or approval from Medicare, Medicaid, or other third-party payors that are false or fraudulent or knowingly making a false statement to improperly avoid, decrease or conceal an obligation to pay money to the federal government;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters. Similar to the federal Anti-Kickback Statute, a person or entity can be found guilty of violating these statutes without actual knowledge of the statutes or specific intent to violate them;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, which impose requirements on certain covered healthcare providers, health plans and healthcare clearinghouses as well as their respective business associates that perform services for them that involve the use, or disclosure of, individually identifiable health information, relating to the privacy, security and transmission of individually identifiable health information without appropriate authorization;
- the federal legislation commonly referred to as the Physician Payments Sunshine Act, created under the Affordable Care Act, and its implementing regulations, which requires manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to CMS information related to

payments or other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members;

- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers; and
- analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers; state and foreign laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government or otherwise restrict payments that may be made to healthcare providers; state and foreign 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 and foreign laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of the statutory exceptions and regulatory safe harbors available under such laws, it is possible that some of our business activities could be subject to challenge under one or more of such laws. The scope and enforcement of each of these laws is uncertain and subject to rapid change in the current environment of healthcare reform, especially in light of the lack of applicable precedent and regulations. Federal and state enforcement bodies have recently increased their scrutiny of interactions between healthcare companies and healthcare providers, which has led to a number of investigations, prosecutions, convictions and settlements in the healthcare industry. Responding to investigations can be time- and resource-consuming and can divert management's attention from the business. Additionally, as a result of these investigations, healthcare providers and entities may have to agree to additional onerous compliance and reporting requirements as part of a consent decree or corporate integrity agreement. Any such investigation or settlement could increase our costs or otherwise have an adverse effect on our business.

If our operations are found to be in violation of any of the laws described above or any other government regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in federal and state healthcare programs and the curtailment or restricting of our operations, any of which could harm our ability to operate our business and our financial results. In addition, the approval and commercialization of JTX-2011, JTX-4014 and any other future product candidates outside the United States will also likely subject us to foreign equivalents of the healthcare laws mentioned above, among other foreign laws.

Risks Related to our Financial Position and Need for Additional Capital

We have incurred net losses in every year since our inception and anticipate that we will continue to incur substantial and increasing net losses in the foreseeable future.

We are a clinical stage biopharmaceutical company with a limited operating history, and we are early on in our development efforts. Investment in biopharmaceutical product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that any potential product candidate will fail to demonstrate adequate effect or an acceptable safety profile, gain marketing approval and become commercially viable. We have financed our operations primarily through the sale of equity securities, convertible debt securities and our collaboration with Celgene. Since our inception, most of our resources have been dedicated to the preclinical and clinical development of JTX-2011 and preclinical and planned clinical development of JTX-4014 and other discovery programs. The size of our future net losses will depend, in part, on our future expenses and our ability to generate additional revenue, if any. We have no products approved for commercial sale and have not generated any revenue from product sales to date, and we continue to incur significant research and development and other expenses related to our ongoing operations. As a result, we have incurred losses in each annual period since our inception. For the years ended December 31, 2016, 2015 and 2014, we reported net losses of $13.7 million, $28.5 million and $10.5 million, respectively. For the six months ended June 30, 2017, we reported a net loss of $3.0 million. As of June 30, 2017, we had an accumulated deficit of $76.2 million. We expect to continue to incur significant losses for the foreseeable future, and we expect these losses to increase as we continue our research and development of, and seek marketing approvals for, our product candidate and any additional product candidates we may develop.

Even if we succeed in receiving marketing approval for and commercialize our product candidate, we will continue to incur substantial research and development and other expenditures to develop and market additional potential products. We may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue. Our prior losses and expected future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital.

We have never generated any revenue from product sales and our ability to generate revenue from product sales and become profitable depends significantly on our success on a number of factors.

We have no products approved for commercial sale, have not generated any revenue from product sales, and do not anticipate generating any revenue from product sales until some time after we have received marketing approval for the commercial sale of a product candidate, if ever. Our ability to generate revenue and achieve profitability depends significantly on our success in many factors, including:

- completing research regarding, and preclinical and clinical development of, our product candidate, JTX-4014 and any other programs and product candidates;
- obtaining marketing approvals for JTX-2011, JTX-4014 and any future product candidates for which we complete clinical studies;
- developing a sustainable and scalable manufacturing process for JTX-2011, JTX-4014 and any future product candidates, including establishing and maintaining commercially viable supply and manufacturing relationships with third parties;
- launching and commercializing JTX-2011, JTX-4014 and any other future product candidates for which we obtain marketing approvals, either directly or with a collaborator or distributor;
- obtaining market acceptance of JTX-2011, JTX-4014 and any future product candidates as viable treatment options;
- addressing any competing technological and market developments;
- identifying, assessing, acquiring and developing new product candidates;
- negotiating favorable terms in any collaboration, licensing, or other arrangements into which we may enter;
- obtaining, maintaining, protecting, and expanding our portfolio of intellectual property rights, including patents, trade secrets, and know-how; and
- attracting, hiring, and retaining qualified personnel.

Even if our product candidates or any future product candidates that we develop are approved for commercial sale, we anticipate incurring significant costs associated with commercializing any approved product candidate. Our expenses could increase beyond expectations if we are required by the FDA or other regulatory agencies, domestic or foreign, to change our manufacturing processes or assays, or to perform clinical, nonclinical, or other types of studies in addition to those that we currently anticipate. If we are successful in obtaining marketing approvals to market JTX-2011, JTX-4014 or any other future product candidates, our revenue will be dependent, in part, upon the size of the markets in the territories for which we gain marketing approval, the accepted price for the product, the ability to get reimbursement at any price, and whether we own the commercial rights for that territory. If the number of our addressable disease patients is not as significant as we estimate, the indication approved by regulatory authorities is narrower than we expect, or the reasonably accepted patient population for treatment is narrowed by competition, physician choice or treatment guidelines, we may not generate significant revenue from sales of such products, even if approved. If we are not able to generate revenue from the sale of any approved products, we may never become profitable.

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

Our operations have consumed substantial amounts of cash since inception. As of June 30, 2017, our cash, cash equivalents and investments were $309.9 million. We expect to continue to spend substantial amounts to continue the clinical development of JTX-2011 and preclinical and clinical development of JTX-4014 and any future product candidates. If we are able to gain marketing approval of JTX-2011, JTX-4014 and any other future product candidates, we will require significant additional amounts of cash in order to launch and commercialize JTX-2011,

JTX-4014 and any other future product candidates to the extent that such launch and commercialization are not the responsibility of Celgene. In addition, other unanticipated costs may arise. Because the design and outcome of our planned and anticipated clinical trials are highly uncertain, we cannot reasonably estimate the actual amounts necessary to successfully complete the development and commercialization of JTX-2011, JTX-4014 and any other future product candidates. Our future capital requirements depend on many factors, including:

- the scope, progress, results and costs of researching and developing JTX-2011, JTX-4014 and any other future product candidates, and conducting preclinical studies and clinical trials;
- the timing of, and the costs involved in, obtaining marketing approvals for JTX-2011, JTX-4014 and any other future product candidates if clinical trials are successful;
- the success of our collaboration with Celgene;
- whether Celgene exercises its licensing and co-development options under our collaboration agreement with Celgene, each of which would trigger additional payments to us;
- the cost of commercialization activities for JTX-2011, JTX-4014 and any other future product candidates, if JTX-2011, JTX-4014 or any other future product candidates are approved for sale, including marketing, sales and distribution costs;
- the cost of manufacturing JTX-2011, JTX-4014 and any other future product candidates for clinical trials in preparation for marketing approval and in preparation for commercialization;
- our ability to establish and maintain strategic licensing or other arrangements and the financial terms of such agreements;
- the costs involved in preparing, filing, prosecuting, maintaining, expanding, defending and enforcing patent claims, including litigation costs and the outcome of such litigation;
- the timing, receipt, and amount of sales of, or royalties on, our future products, if any;
- the emergence of competing cancer therapies and other adverse market developments; and
- the requirement for and cost of developing complementary diagnostics and/or companion diagnostics.

We do not have any committed external source of funds or other support for our development efforts, other than our collaboration with Celgene, which is limited in scope and duration. We do not expect to receive any option exercise payments from Celgene until at least the first quarter of 2018, and we will not receive any milestone payments prior to Celgene exercising a licensing or co-development option. Until we can generate sufficient product and royalty revenue to finance our cash requirements, which we may never do, we expect to finance our future cash needs through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing or distribution arrangements. Based on our research and development plans, we expect that our existing cash, cash equivalents and investments will enable us to fund our operating expenses and capital expenditure requirements for at least 24 months from the filing date of this Quarterly Report on Form 10-Q.

If we raise additional capital through marketing and distribution arrangements or other collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish certain valuable rights to JTX-2011, JTX-4014 and any other future product candidates, technologies, future revenue streams or research programs or grant licenses on terms that may not be favorable to us. If we raise additional capital through public or private equity offerings, the terms of these securities may include liquidation or other preferences that adversely affect our stockholders' rights. If we raise additional capital through debt financing, we may be subject to covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we are unable to obtain adequate financing on favorable terms when needed, we may have to delay, reduce the scope of or suspend one or more of our clinical trials or research and development programs or our commercialization efforts.

Raising additional capital may cause dilution to our stockholders, restrict our operations or require us to relinquish rights to our technologies or JTX-2011, JTX-4014 and any other future product candidates.

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of private and public equity offerings, debt financings, collaborations, strategic alliances and licensing arrangements. To the extent that we raise additional capital through the sale of common stock or securities convertible or exchangeable into common stock, your ownership interest will be diluted. Debt financing, if

available, would increase our fixed payment obligations and may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

If we are unable to raise additional funds through equity or debt financings when needed, we may be required to grant rights to develop and market JTX-2011, JTX-4014 and any other future product candidates that we would otherwise prefer to develop and market ourselves.

Risks Related to Intellectual Property

If we are unable to obtain, maintain and protect our intellectual property rights for JTX-2011, JTX-4014 and any other future product candidates or if our intellectual property rights are inadequate, our competitive position could be harmed.

Our commercial success will depend in part on our ability to obtain and maintain patent and other intellectual property protection in the United States and other countries with respect to JTX-2011, JTX-4014 and any other future product candidates. We rely on trade secret, patent, copyright and trademark laws, and confidentiality, licensing and other agreements with employees and third parties, all of which offer only limited protection. We currently, or will in the future, seek to protect our proprietary position by filing and prosecuting patent applications in the United States and abroad related to JTX-2011, JTX-4014, any other future product candidates, and any future novel technologies that are important to our business.

The patent positions of biotechnology and pharmaceutical companies generally are highly uncertain, involve complex legal and factual questions and have in recent years been the subject of much litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our licensed patents and any patents we own in the future are highly uncertain. The steps we or our licensors have taken to protect our proprietary rights may not be adequate to preclude misappropriation of our proprietary information or infringement of our intellectual property rights, both inside and outside of the United States.

Further, the examination process may require us or our licensors to narrow the claims for our pending patent applications, which may limit the scope of patent protection that may be obtained if these applications issue. The scope of a patent may also be reinterpreted after issuance. The rights already granted under any of our licensed patents and those that may be granted under our future issued patents may not provide us with the proprietary protection or competitive advantages we are seeking. If we or our licensors are unable to obtain and maintain patent protection for JTX-2011, JTX-4014 or any other future product candidates, or if the scope of the patent protection obtained is not sufficient, our competitors could develop and commercialize products similar or superior to ours, and our ability to successfully commercialize JTX-2011, JTX-4014 and any other future product candidates and future technologies may be adversely affected. It is also possible that we or our licensors fail to identify patentable aspects of inventions made in the course of our development and commercialization activities before it is too late to obtain patent protection on them.

In addition, the patent prosecution process is expensive, time-consuming and complex, and we may not be able to file, prosecute, maintain, enforce or license all necessary or desirable patent applications at a reasonable cost or in a timely manner. Although we enter into non-disclosure and confidentiality agreements with parties who have access to confidential or patentable aspects of our research and development output, such as our employees, collaborators, and other third parties, any of these parties may breach the agreements and disclose such output before a patent application is filed, thereby jeopardizing our ability to seek patent protection. It is also possible that we will fail to identify patentable aspects of our research and development efforts in time to obtain patent protection.

As of August 4, 2017, with respect to JTX-2011 patent rights, we own three pending U.S. provisional patent applications, one pending U.S. non-provisional application, five foreign patent applications, and two pending Patent Cooperation Treaty, or PCT, patent applications within three patent families that cover compositions of matter and methods of use and ICOS-related biomarkers, and we do not own any issued patents. As of August 4, 2017 with respect to JTX-4014 patent rights, we own one pending U.S. provisional patent application that covers compositions of matter and methods of use, and we do not own any non-provisional applications or issued patents. These provisional patent applications are not eligible to become issued patents until, among other things, we file a non-provisional patent application within 12 months of filing of one or more of our related provisional patent applications. If we do not timely file any non-provisional patent applications, we may lose our priority date with respect to our provisional patent applications and any patent protection on the inventions disclosed in our provisional patent applications. While we intend to timely file non-provisional patent applications relating to our provisional patent applications, we cannot predict whether any of our future patent applications for JTX-2011, JTX-4014 or any other

future product candidates will result in the issuance of patents that effectively protect JTX-2011, JTX-4014 and any other future product candidates, or if any of our issued patents or if any of our licensor's issued patents will effectively prevent others from commercializing competitive products. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing or in some cases not at all until they are issued as a patent. Therefore, we or our licensors cannot be certain that we were the first to make the inventions claimed in our licensed patents, patents we own in the future, or pending patent applications, or that we or our licensors were the first to file for patent protection of such inventions.

Our pending applications cannot be enforced against third parties practicing the inventions claimed in such applications unless and until a patent issues from such applications. Because the issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, issued patents that we license from third parties or own in the future may be challenged in the courts or patent offices in the United States and abroad, including through opposition proceedings, derivation proceedings, *inter partes* review, *ex parte* reexam, post grant review, interference proceedings or litigation. Such proceedings may result in the loss of patent protection, the narrowing of claims in such patents or the invalidity or unenforceability of such patents, which could limit our ability to stop others from using or commercializing similar or identical products, or limit the duration of the patent protection for JTX-2011, JTX-4014 and any other future product candidates. Protecting against the unauthorized use of our or our licensor's patented inventions, trademarks and other intellectual property rights is expensive, time consuming, difficult and in some cases may not be possible. In some cases, it may be difficult or impossible to detect third-party infringement or misappropriation of our intellectual property rights, even in relation to issued patent claims, and proving any such infringement may be even more difficult. If we are unable to obtain, maintain, and protect our intellectual property our competitive advantage could be harmed, and it could result in a material adverse effect on our business, financial condition, and the results of operations and prospects.

If we are unable to protect the confidentiality of our proprietary information and know-how, the value of our technology and products could be adversely affected.

In addition to seeking patent protection, we also rely on other proprietary rights, including protection of trade secrets, know-how and confidential and proprietary information. To maintain the confidentiality of our trade secrets and proprietary information, we enter into confidentiality agreements with our employees, consultants, collaborators and other third parties who have access to our trade secrets. These agreements require that all confidential information developed by the individual or made known to the individual by us during the course of the individual's relationship with us be kept confidential and not disclosed to third parties. Our agreements with employees also provide that any inventions conceived by the individual in the course of rendering services to us shall be our exclusive property. However, we may not obtain these agreements in all circumstances, and individuals with whom we have these agreements may not comply with their terms. The assignment of intellectual property rights may not be self-executing or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. In addition, in the event of unauthorized use or disclosure of our trade secrets or proprietary information, these agreements, even if obtained, may not provide meaningful protection, particularly for our trade secrets or other confidential information. To the extent that our employees, consultants or contractors use technology or know-how owned by third parties in their work for us, disputes may arise between us and those third parties as to the rights in related inventions.

Adequate remedies may not exist in the event of unauthorized use or disclosure of our confidential information including a breach of our confidentiality agreements. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive, and time consuming, and the outcome is unpredictable. In addition, some courts in and outside of the United States are less willing or unwilling to protect trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor or other third party, we would have no right to prevent them from using that technology or information to compete with us. The disclosure of our trade secrets or the independent development of our trade secrets by a competitor or other third party would impair our competitive position and may materially harm our business, financial condition, results of operations and prospects.

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could harm our business.

Our commercial success depends on our ability and the ability of our current or future collaborators to develop, manufacture, market and sell JTX-2011, JTX-4014 and any other future product candidates, and to use our related proprietary technologies without infringing, misappropriating or otherwise violating the intellectual property and

proprietary rights of third parties. The biotechnology and pharmaceutical industries are characterized by extensive litigation regarding patents and other intellectual property rights. We may become party to, or threatened with, adversarial proceedings or litigation regarding intellectual property rights with respect to our current and any other future product candidates, including interference, proceedings, post-grant review, *inter partes* review, *ex parte* reexam and derivation proceedings before the U.S. Patent and Trademark Office, or USPTO. Third parties may assert infringement or other intellectual property claims against us based on existing patents or patents that may be granted in the future. For example, we are aware of third party patents generally directed to methods of treating certain indications with an anti-PD-1 monoclonal antibody that may be construed to cover one or more of our current and future product candidates. If we are found to infringe a third-party's intellectual property rights, and we are unsuccessful in demonstrating that such intellectual property rights are invalid or unenforceable, we could be required to obtain a license from such third party to continue developing, manufacturing and commercializing JTX-2011, JTX-4014 and any other future product candidates. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors and other third parties access to the same technologies licensed to us, and it could require us to make substantial licensing and royalty payments. We also could be forced, including by court order, to cease developing, manufacturing, and commercializing JTX-2011, JTX-4014 or any other future product candidates. In addition, in any such proceeding or litigation, we could be found liable for significant monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed a patent or other intellectual property right. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects. Any claims by third parties that we have misappropriated their confidential information or trade secrets could have a similar material adverse effect on our business.

In addition, we are testing JTX-2011, JTX-4014 and other future product candidates with other products that are covered by patents held by other companies or institutions. In the event that a labeling instruction is required in product packaging recommending that combination, we could be accused of, or held liable for, infringement of the third-party patents covering the product candidate or product recommended for administration with JTX-2011, JTX-4014 and any other future product candidates. In such a case, we could be required to obtain a license from the other company or institution to use the required or desired package labeling, which may not be available on commercially reasonable terms, or at all.

If we breach any of our license agreements or collaboration agreements, it could have a material adverse effect on our commercialization efforts for JTX-2011, JTX-4014 and any other future product candidates.

Our commercial success depends on our ability, and at times, the ability of our licensors and current or future collaborators to develop, manufacture, market, and sell JTX-2011, JTX-4014 and any other future product candidates, and use our licensors proprietary technologies without infringing the property rights of third parties. For example, we have entered into our Celgene Collaboration Agreement relating to JTX-2011, JTX-4014 and other product candidates, and an exclusive license agreement with Sloan Kettering Institute for Cancer Research, Memorial Sloan Kettering Cancer Center and Memorial Hospital for Cancer and The University of Texas MD Anderson Cancer Center related to certain uses of our JTX-2011, and we may enter into additional licenses in the future. These and other licenses may not provide exclusive rights to use such intellectual property and technology in all relevant fields of use and in all territories in which we may wish to develop or commercialize our products in the future. As a result, we may not be able to prevent competitors from developing and commercializing competitive products in territories included in all our licenses.

In addition, we may not have the right to control the preparation, filing, prosecution, maintenance, enforcement and defense of patents and patent applications covering the technology that we license from third parties. For example, under our Celgene Collaboration Agreement, under certain circumstances, Celgene has the first right to enforce, maintain or defend our intellectual property rights with respect to certain licensed programs. Therefore, we cannot be certain that these patents and patent applications will be prepared, filed, prosecuted, maintained, enforced, and defended in a manner consistent with the best interests of our business. If our licensors fail to prosecute, maintain, enforce and defend such patents, or lose rights to those patents or patent applications, the rights we have licensed may be reduced or eliminated and our right to develop and commercialize JTX-2011, JTX-4014 and any other future product candidates that are the subject of such licensed rights could be adversely affected. Furthermore, our owned and in-licensed patents may be subject to a reservation of rights by one or more third parties.

Certain of our license agreements also require us to meet development thresholds to maintain the license, including establishing a set timeline for developing and commercializing products. If we fail to comply with the obligations under our license agreements, including payment terms and diligence terms, our licensors may have the right to terminate our agreements, in which event we may not be able to develop, manufacture, market or sell the products

covered by our agreements or may face other penalties under our agreements. Such an occurrence could materially adversely affect the value of the product candidate being developed under any such agreement. Termination of our license agreements or reduction or elimination of our rights under them may result in our having to negotiate a new or reinstated agreement, which may not be available to us on equally favorable terms, or at all, which may mean we are unable to develop or commercialize the affected product candidate or cause us to lose our rights under this agreement, including our rights to intellectual property or technology important to our development programs. In addition, disputes may arise regarding intellectual property subject to a licensing agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- the sublicensing of patent and other rights under future collaborative development relationships;
- our diligence obligations under the license agreement and what activities satisfy those diligence obligations;
- the inventorship and ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners; and
- the priority of invention of patented technology.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on commercially acceptable terms, we may be unable to successfully develop and commercialize the affected product candidates, which could have a material adverse effect on our business, financial conditions, results of operations and prospects.

Further, the agreements under which we currently license intellectual property or technology from third parties are complex, and certain provisions in such agreements may be susceptible to multiple interpretations. The resolution of any contract interpretation disagreement that may arise could narrow what we believe to be the scope of our rights to the relevant intellectual property or technology, or increase what we believe to be our financial or other obligations under the relevant agreement, either of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

We may not be successful in obtaining necessary rights to JTX-2011, JTX-4014 and any other future product candidates we may develop, or obtain through acquisitions and in-licenses.

We currently have rights to intellectual property, through licenses from third parties, for certain uses of JTX-2011. Because JTX-2011, JTX-4014 and any other future product candidates may require the use of proprietary rights held by third parties, the growth of our business likely will depend, in part, on our ability to acquire, in-license or use these proprietary rights. We may be unable to acquire or in-license any compositions, methods of use, processes or other intellectual property rights from third parties that we identify as necessary for JTX-2011, JTX-4014 and other future product candidates. The licensing or acquisition of third-party intellectual property rights is a competitive area, and several more established companies may pursue strategies to license or acquire third-party intellectual property rights that we may consider attractive. These established companies may have a competitive advantage over us due to their size, capital resources and greater clinical development and commercialization capabilities. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. We also may be unable to license or acquire third-party intellectual property rights on terms that would allow us to make an appropriate return on our investment.

If we are unable to successfully obtain rights to required third-party intellectual property rights or maintain the existing intellectual property rights we have, we may have to abandon development or commercialization of the relevant program or product candidate or may be required to expend significant time and resources to redesign our technology, JTX-2011, JTX-4014, or other future product candidates or method for manufacturing them, all of which may not be feasible on a technical or commercial basis. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

Patent terms may be inadequate to protect our competitive position on our products for an adequate amount of time, and JTX-2011, JTX-4014 and any other future product candidates for which we intend to seek approval as biologic products may face competition sooner than anticipated.

Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. We expect to seek patent term adjustments or extensions of patent terms in the United States for our licensed patents

and any patents we own in the future and, if available, in other countries where that may be available when we are prosecuting patents. In the United States, the Drug Price Competition and Patent Term Restoration Act of 1984 permits a patent term extension of up to five years beyond the normal expiration of the patent, which is limited to the approved indication (or any additional indications approved during the period of extension). However, the applicable authorities, including the FDA and the USPTO in the United States, and any equivalent regulatory authority in other countries, may not agree with our assessment of whether such extensions are available, and may refuse to grant extensions to our patents, or may grant more limited extensions than we request. We may not be granted an extension because of, for example, failure to exercise due diligence during the testing phase or regulatory review process, failure to apply within applicable deadlines, failure to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. If we are unable to obtain patent term extension or the term of any such extension is less than we request, our competitors may be able to take advantage of our investment in development and clinical trials by referencing our clinical and preclinical data and launch their product earlier than might otherwise be the case, which could result in a material adverse effect on our business, financial condition, results of operation and prospects.

The Biologics Price Competition and Innovation Act of 2009, or BPCIA, established legal authority for the FDA to review and approve biosimilar biologics, including the possible designation of a biosimilar as "interchangeable" based on its similarity to an existing brand product. Under the BPCIA, an application for a biosimilar product cannot be approved by the FDA until 12 years after the original branded product was approved under a BLA. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty. While it is uncertain when such processes intended to implement BPCIA may be fully adopted by the FDA, any such processes could have a material adverse effect on the future commercial prospects for our biological products.

We intend to seek market exclusivity for our biological product candidate that is subject to its own BLA for 12 years in the United States, 10 years in Europe and other durations in other markets. However, the term of the patents that cover such product candidates may not extend beyond the applicable market exclusivity awarded by a particular country. For example, in the United States, if all of the patents that cover our particular biologic product expire before the 12-year market exclusivity expires, a third party could submit a marketing application for a biosimilar product four years after approval of our biologic product, and the FDA could immediately review the application and approve the biosimilar product for marketing 12 years after approval of our biologic. Alternatively, a third party could submit a BLA for a similar or identical product any time after approval of our biologic product, and the FDA could immediately review and approve the similar or identical product for marketing and the third party could begin marketing the similar or identical product upon expiry of all of the patents that cover our particular biologic product.

Additionally, there is a risk that this exclusivity could be shortened due to congressional action, potentially creating the opportunity for biosimilar competition sooner than anticipated. The extent to which a biosimilar, once approved, will be substituted for any one of our reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

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

Filing, prosecuting and defending patents on JTX-2011, JTX-4014 and all other future product candidates throughout the world would be prohibitively expensive, and our or our licensors' intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws and practices of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we and our licensors may not be able to prevent third parties from practicing our and our licensors' inventions in all countries outside the United States, or from selling or importing products made using our and our licensors' inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products, and may export otherwise infringing products to territories where we or our licensors have patent protection but where enforcement is not as strong as that in the United States. These products may compete with our products in jurisdictions where we do not have any issued patents and our patent claims or other intellectual property rights may not be effective or sufficient to prevent them from so competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, particularly those relating to biopharmaceuticals, which could make it difficult for us to stop the infringement of our or our licensor's patents or marketing of competing products in violation of our intellectual property and proprietary rights generally in those

countries. Proceedings to enforce our intellectual property and proprietary rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business, could put our and our licensors' patents at risk of being invalidated or interpreted narrowly and our and our licensors' patent applications at risk of not issuing and could provoke third parties to assert claims against us or our licensors. We or our licensors may not prevail in any lawsuits that we or our licensors initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property and proprietary rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property we develop or license.

In addition, the laws of certain foreign countries may not protect our rights to the same extent as the laws of the United States, and those foreign laws may also be subject to change. For example, methods of treatment and manufacturing processes may not be patentable in certain jurisdictions, and the requirements for patentability may differ in certain countries. Furthermore, generic and/or biosimilar product manufacturers or other competitors may challenge the scope, validity and enforceability of our or our licensors' patents, requiring us or our licensors to engage in complex, lengthy and costly litigation or proceedings.

Moreover, many countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. Many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of such patent. If we or any of our licensors is forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired and our business and results of operations may be adversely affected.

Generic or biosimilar product manufacturers may develop, seek approval for, and launch biosimilar versions or generic versions, respectively, of our products. The FDA has published draft guidance documents on biosimilar product development. For the FDA to approve a biosimilar product as interchangeable with a reference product, the agency must find that the biosimilar product can be expected to produce the same clinical results as the reference product and, for products administered multiple times, the biosimilar and the reference biologic may be switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic. If JTX-2011, JTX-4014 and any other future product candidates are approved by the FDA, the approval of a biosimilar product to one of our products could have a material impact on our business. In particular, a biosimilar product could be significantly less costly to bring to market and priced significantly lower than our products, if approved by the FDA.

Obtaining and maintaining 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.

The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payments and other similar provisions during the patent application process and to maintain patents after they are issued. For example, periodic maintenance fees, renewal fees, annuity fees and various other government fees on issued patents and patent applications often must be paid to the USPTO and foreign patent agencies over the lifetime of our licensed patents or any patents we own in the future. In certain circumstances, we rely on our licensing partners to take the necessary action to comply with these requirements with respect to our licensed intellectual property. While an unintentional lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance 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. If we fail to obtain and maintain the patents and patent applications covering our products or procedures, we may not be able to stop a competitor from marketing products that are the same as or similar to JTX-2011, JTX-4014 and any other future product candidates, which would have a material adverse effect on our business.

Changes to the patent law in the United States and other jurisdictions could diminish the value of patents in general, thereby impairing our ability to protect JTX-2011, JTX-4014 and any other future product candidates.

As is the case with other biopharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involves both technological and legal complexity and is therefore costly, time consuming and inherently uncertain. Changes in either the patent laws or interpretation of the patent laws in the United States could increase the uncertainties and costs. Recent patent reform legislation in the United States and other countries, including the Leahy-Smith America Invents Act, or the Leahy-Smith Act, signed into law in September 2011, could increase those uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications are prosecuted, redefine prior art and provide more efficient and cost-effective avenues for competitors to challenge the validity of patents. These include allowing third-party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, *inter partes* review, *ex parte* reexam, and derivation proceedings. After March 2013, under the Leahy-Smith Act, the United States transitioned to a first inventor to file system in which, assuming that the other statutory requirements are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed invention. However, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

The U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. Depending on future actions by the U.S. Congress, the U.S. courts, the USPTO and the relevant law-making bodies in other countries, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future.

We may become involved in lawsuits to protect or enforce our intellectual property, which could be expensive, time-consuming and unsuccessful and have a material adverse effect on the success of our business.

Competitors may infringe our licensed patents or any patent we own in the future or misappropriate or otherwise violate our intellectual property rights. We may also be required to defend against claims of infringement and our licensed patents and any patents we own in the future may become involved in priority or other intellectual property related disputes. To counter infringement or unauthorized use, litigation may be necessary in the future to enforce or defend our intellectual property rights, to protect our trade secrets or to determine the validity and scope of our own intellectual property rights or the proprietary rights of others. Also, third parties may initiate legal proceedings against us or our licensors to assert that we are infringing their intellectual property rights or to challenge the validity or scope of our owned or licensed intellectual property rights. These proceedings can be expensive and time consuming. Many of our current and potential competitors have the ability to dedicate substantially greater resources to conduct intellectual property related litigations or proceedings than we can. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing upon or misappropriating our intellectual property. Litigation and other intellectual property related proceedings could result in substantial costs and diversion of management resources, which could harm our business and financial results. In addition, in an infringement proceeding, a court may decide that a patent owned by or licensed to us is invalid or 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 other intellectual property related proceeding could put one or more of our patents at risk of being invalidated, held unenforceable or interpreted narrowly.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments in any such proceedings. If securities analysts or investors perceive these results to be negative, it could have a material adverse effect on the price of shares of our common stock. Any of the foregoing may have a material adverse effect on our business, financial condition, results of operations and prospects.

We may be subject to claims by third parties asserting that our collaborators, licensors, employees or we have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property.

Many of our employees, our collaborators' employees and our licensors' employees, including our senior management, are currently or previously were employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Some of these employees, including each member of our senior management, executed proprietary rights, non-disclosure and non-competition agreements, or similar agreements, in connection with such previous employment. Although we try to ensure that our employees do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or these employees have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such individual's current or former employer. Litigation may be necessary to defend against such claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel or sustain damages. Such intellectual property rights could be awarded to a third party, and we could be required to obtain a license from such third party to commercialize our technology or products. Such a license may not be available on commercially reasonable terms, or at all. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management. Any of the foregoing may have a material adverse effect on our business, financial condition, results of operations and prospects.

We may be subject to damages resulting from claims that we or our employees have wrongfully used or disclosed confidential information of third parties or are in breach of non-competition or non-solicitation agreements with our competitors.

We could in the future be subject to claims that we or our employees have inadvertently or otherwise used or disclosed alleged trade secrets or other confidential information of former employers or competitors. Although we try to ensure that our employees and consultants do not use the intellectual property, proprietary information, know-how or trade secrets of others in their work for us, we may in the future be subject to claims that we caused an employee to breach the terms of his or her non-competition or non-solicitation agreement, or that we or these individuals have, inadvertently or otherwise, used or disclosed the alleged trade secrets or other proprietary information of a former employer or competitor. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and could be a distraction to management. If our defenses to these claims fail, in addition to requiring us to pay monetary damages, a court could prohibit us from using technologies or features that are essential to JTX-2011, JTX-4014 and any other future product candidates, if such technologies or features are found to incorporate or be derived from the trade secrets or other proprietary information of the former employers. An inability to incorporate such technologies or features would have a material adverse effect on our business, and may prevent us from successfully commercializing JTX-2011, JTX-4014 and any other future product candidates. In addition, we may lose valuable intellectual property rights or personnel as a result of such claims. Moreover, any such litigation or the threat thereof may adversely affect our ability to hire employees or consultants. A loss of key personnel or their work product could hamper or prevent our ability to develop and commercialize JTX-2011, JTX-4014 and any other future product candidates, which would have an adverse effect on our business, results of operations and financial condition.

Issued patents covering JTX-2011, JTX-4014 and any other future product candidates could be found invalid or unenforceable if challenged in court or before the USPTO or comparable foreign authority.

If we or one of our licensing partners initiate legal proceedings against a third party to enforce a patent covering one of JTX-2011, JTX-4014 or any other future product candidates, the defendant could counterclaim that the patent covering our product candidate is invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent. Grounds for a validity challenge could be, among other things, an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, or non-enablement. Grounds for an unenforceability assertion could be, among other things, an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. Third parties may also raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include *inter partes* review, *ex parte* reexam, post-grant review, interference proceedings, derivation proceedings and equivalent proceedings in foreign jurisdictions, such as opposition proceedings. Such proceedings could result in revocation, cancellation or amendment to our patents in such a way that they no longer cover and protect JTX-2011, JTX-4014 and any other

future product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. For example, with respect to the validity of our licensed patents or any patents we obtain in the future, we cannot be certain that there is no invalidating prior art of which we, our or our licensing partner's patent counsel, and the patent examiner were unaware during prosecution. If a third party were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on JTX-2011, JTX-4014 and any other future product candidates. Such a loss of patent protection could have a material adverse impact on our business.

Risks Related to Employee Matters, Managing our Growth and Other Risks Related to our Business

We currently have no marketing and sales organization and have no experience in marketing products. If we are unable to establish marketing and sales capabilities or enter into agreements with third parties to market and sell JTX-2011, JTX-4014 and any other future product candidates, we may not be able to generate product revenue.

We currently have no sales, marketing, or distribution capabilities and have no experience in marketing products. If JTX-2011, JTX-4014 or any of our future product candidates receive appropriate regulatory approval, we intend to develop an in-house marketing organization and sales force, which will require significant capital expenditures, management resources and time. We will have to compete with other pharmaceutical and biotechnology companies to recruit, hire, train and retain marketing and sales personnel.

If we are unable or decide not to establish internal sales, marketing and distribution capabilities, we will pursue collaborative arrangements regarding the sales and marketing of our products; however, we cannot assure you that we will be able to establish or maintain such collaborative arrangements, or if we are able to do so, that they will have effective sales forces. Any revenue we receive will depend upon the efforts of such third parties, which may not be successful. We may have little or no control over the marketing and sales efforts of such third parties and our revenue from product sales may be lower than if we had commercialized JTX-2011, JTX-4014 and any other future product candidates ourselves. We also face competition in our search for third parties to assist us with the sales and marketing efforts of JTX-2011, JTX-4014 and any other future product candidates.

We cannot assure you that we will be able to develop in-house sales and distribution capabilities or establish or maintain relationships with third-party collaborators to commercialize any product in the United States or elsewhere.

We will need to grow the size of our organization, and we may experience difficulties in managing this growth.

As of June 30, 2017, we had108 full-time employees, including 81 employees engaged in research and development. As our development and commercialization plans and strategies develop, and as we transition into operating as a public company, we expect to need additional managerial, operational, sales, marketing, financial and other personnel. Future growth would impose significant added responsibilities on members of management, including:

- identifying, recruiting, integrating, maintaining and motivating additional employees;
- managing our internal development efforts effectively, including the clinical and FDA review process for JTX-2011, JTX-4014 and any other future product candidates, while complying with our contractual obligations to contractors and other third parties; and
- improving our operational, financial and management controls, reporting systems and procedures.

Our future financial performance and our ability to commercialize JTX-2011, JTX-4014 and any other future product candidates will depend, in part, on our ability to effectively manage any future growth, and our management may also have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities.

We currently rely, and for the foreseeable future will continue to rely, in substantial part on certain independent organizations, advisors and consultants to provide certain services, including substantially all aspects of marketing approval, clinical management, and manufacturing. We cannot assure you that the services of independent organizations, advisors and consultants will continue to be available to us on a timely basis when needed, or that we can find qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by consultants is compromised for any reason, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain marketing approval of JTX-2011, JTX-4014 and any other future product candidates or otherwise advance our business. We cannot assure you that

we will be able to manage our existing consultants or find other competent outside contractors and consultants on economically reasonable terms, or at all.

If we are not able to effectively expand our organization by hiring new employees and expanding our groups of consultants and contractors, we may not be able to successfully implement the tasks necessary to further develop and commercialize JTX-2011, JTX-4014 and any other future product candidates and, accordingly, may not achieve our research, development and commercialization goals.

We are highly dependent on our key personnel, and if we are not successful in attracting, motivating and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.

Our ability to compete in the highly competitive biotechnology and pharmaceutical industries depends upon our ability to attract, motivate and retain highly qualified managerial, scientific and medical personnel. We are highly dependent on our management, particularly our chief executive officer, Richard Murray, and our scientific and medical personnel. The loss of the services of any of our executive officers, key employees, and scientific and medical advisors, and our inability to find suitable replacements, could result in delays in product development and harm our business.

We conduct our operations at our facility in Cambridge, Massachusetts, in a region that is home to many other biopharmaceutical companies and many academic and research institutions. Competition for skilled personnel is intense and the turnover rate can be high, which may limit our ability to hire and retain highly qualified personnel on acceptable terms or at all. We expect that we will need to recruit talent from outside of our region, and doing so may be costly and difficult.

To induce valuable employees to remain at our Company, in addition to salary and cash incentives, we have provided restricted stock and stock option grants that vest over time. The value to employees of these equity grants that vest over time may be significantly affected by movements in our stock price that are beyond our control, and may at any time be insufficient to counteract more lucrative offers from other companies. Although we have employment agreements with our key employees, these employment agreements provide for at-will employment, which means that any of our employees could leave our employment at any time, with or without notice. We do not maintain “key man” insurance policies on the lives of all of these individuals or the lives of any of our other employees.

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 have a material adverse effect on the success of 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 and radioactive materials. Our operations also produce hazardous waste products. We generally contract with third parties for the 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 our use of hazardous materials, 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.

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.

Our internal computer systems, or those used by our CROs or other contractors or consultants, may fail or suffer security breaches.

Despite the implementation of security measures, our internal computer systems and those of our future CROs and other contractors and consultants are vulnerable to damage from computer viruses and unauthorized access. While we have not to our knowledge experienced any such material system failure or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our development programs and our business operations. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our marketing approval efforts and significantly increase our costs to recover or reproduce the data. Likewise, we rely on third parties for the manufacture of JTX-2011, JTX-4014 and any other future product candidates and to conduct clinical trials, and similar events relating to their computer

systems could also have a material adverse effect on our business. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development and commercialization of JTX-2011, JTX-4014 and any other future product candidates could be delayed.

We, or the third parties upon whom we depend, may be adversely affected by earthquakes or other natural disasters and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Earthquakes or other natural disasters could severely disrupt our operations, and have a material adverse effect on our business, results of operations, financial condition and prospects. If a natural disaster, power outage or other event occurred that prevented us from using all or a significant portion of our headquarters, that damaged critical infrastructure, such as the manufacturing facilities of our third-party contract manufacturers, or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible for us to continue our business for a substantial period of time. The disaster recovery and business continuity plans we have in place may prove inadequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which, could have a material adverse effect on our business.

Our employees, independent contractors, vendors, principal investigators, CROs and consultants 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, vendors, principal investigators, CROs and consultants may engage in fraudulent conduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violate the regulations of the FDA and comparable foreign regulatory authorities, including those laws requiring the reporting of true, complete and accurate information to such authorities; healthcare fraud and abuse laws and regulations in the United States and abroad; or laws that require the reporting of financial information or data accurately. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, 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. Activities subject to these laws also involve the improper use of information obtained in the course of clinical trials or creating fraudulent data in our preclinical studies or clinical trials, which could result in regulatory sanctions and cause serious harm to our reputation. We have adopted a code of conduct applicable to all of our employees, but it is not always possible to identify and deter misconduct by employees and other 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 comply with these laws or regulations. Additionally, we are subject to the risk that a person could allege such fraud or other misconduct, even if none occurred. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, 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.

If we engage in future acquisitions or strategic partnerships, this may increase our capital requirements, dilute our stockholders, cause us to incur debt or assume contingent liabilities, and subject us to other risks.

We have entered into a collaboration agreement with Celgene, and may evaluate various acquisitions and additional strategic partnerships, including licensing or acquiring complementary products, intellectual property rights, technologies, or businesses. Our relationship with Celgene and any potential acquisition or strategic partnership may entail numerous risks, including:

- increased operating expenses and cash requirements;
- the assumption of additional indebtedness or contingent liabilities;
- the issuance of our equity securities;

- assimilation of operations, intellectual property and products of an acquired company, including difficulties associated with integrating new personnel;
- the diversion of our management's attention from our existing product programs and initiatives in pursuing such a strategic merger or acquisition;
- retention of key employees, the loss of key personnel, and uncertainties in our ability to maintain key business relationships;
- risks and uncertainties associated with the other party to such a transaction, including the prospects of that party and their existing products or product candidates and marketing approvals; and
- our inability to generate revenue from acquired technology and/or products sufficient to meet our objectives in undertaking the acquisition or even to offset the associated acquisition and maintenance costs.

In addition, if we undertake acquisitions, we may issue dilutive securities, assume or incur debt obligations, incur large one-time expenses and acquire intangible assets that could result in significant future amortization expense. Moreover, we may not be able to locate suitable acquisition opportunities and this inability could impair our ability to grow or obtain access to technology or products that may be important to the development of our business.

Unstable market and economic conditions may have serious adverse consequences on our business, financial condition and stock price.

Global credit and financial markets have experienced extreme volatility and disruptions in the past several years, including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates and uncertainty about economic stability. We cannot assure you that deterioration in credit and financial markets and confidence in economic conditions will not occur. Our general business strategy may be adversely affected by any such economic downturn, volatile business environment or continued unpredictable and unstable market conditions. If the current equity and credit markets deteriorate, it may make any necessary debt or equity financing more difficult, more costly, and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and stock price and could require us to delay or abandon clinical development plans.

As of June 30, 2017, we had $309.9 million of cash, cash equivalents, and investments. While we are not aware of any downgrades, material losses, or other significant deterioration in the fair value of our cash equivalents or investments since June 30, 2017, we cannot assure you that deterioration of the global credit and financial markets would not negatively impact our current portfolio of cash equivalents or investments, or our ability to meet our financing objectives. Furthermore, our stock price may decline due, in part, to the volatility of the stock market and any future general economic downturn.

Risks Related to our Common Stock

Our ability to utilize our net operating loss carryforwards and certain other tax attributes has been limited by "ownership changes" and may be further limited.

Under Section 382 of the Internal Revenue Code of 1986, as amended, or the IRC, if a corporation undergoes an "ownership change" (generally defined as a greater than 50% change (by value) in the ownership of its equity over a three-year period), the corporation's ability to use its pre-change net operating loss, or NOL, carryforwards and certain other pre-change tax attributes to offset its post-change income may be limited. An IRC Section 382 study, completed in August 2016, identified three previous ownership changes for purposes of IRC Section 382. As a result of these ownership changes, our net operating loss and tax credit carryforwards allocable to the periods preceding each such ownership change are subject to limitations under IRC Section 382. We may experience ownership changes in the future as a result subsequent shifts in our stock ownership, some of which are outside our control. Our ability to utilize our net operating loss carryforwards is limited by our previous ownership changes and the rest may become subject to limitations by "ownership changes" in the future, which could result in increased tax liability to us.

As we expect to recognize revenue for income tax purposes in excess of eligible NOL and tax credit carryforwards generated since inception, as limited by IRC Section 382, we expect to incur approximately $16.0 million to $18.0 million in federal and state tax liabilities during the year ended December 31, 2017.

The price of our common stock may be volatile and fluctuate substantially, which could result in substantial losses for purchasers of our common stock.

Our stock price is likely to be volatile. The stock market in general and the market for biopharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. The market price for our common stock may be influenced by many factors, including:

- the success of competitive products or technologies;
- results of clinical trials of JTX-2011, JTX-4014 and any other future product candidates or those of our competitors;
- regulatory or legal developments in the United States and other countries;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- the level of expenses related to JTX-2011, JTX-4014 and any other future product candidates or clinical development programs;
- the results of our efforts to discover, develop, acquire or in-license additional product candidates or drugs;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- variations in our financial results or those of companies that are perceived to be similar to us;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors;
- general economic, industry and market conditions; and
- the other factors described in this “Risk factors” section.

An active trading market for our common stock may not be sustained.

Our shares of common stock began trading on the NASDAQ Global Select Market on January 27, 2017. Given the limited trading history of our common stock, there is a risk that an active trading market for our shares will not be sustained, which could put downward pressure on the market price of our common stock and thereby affect the ability of our stockholders to sell their shares.

We could be subject to securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because pharmaceutical companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management’s attention and resources, which could harm our business.

We do not intend to pay dividends on our common stock so any returns will be limited to the value of our stock.

We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to stockholders will therefore be limited to the appreciation of their stock.

We are an emerging growth company, and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our common stock less attractive to investors.

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, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding non-binding advisory votes on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could be an emerging growth company for up to five years following the year in which we completed our IPO, although

circumstances could cause us to lose that status earlier. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of the offering, (b) in which we have total annual gross revenue of at least $1.07 billion or (c) in which we are deemed to be a large accelerated filer, which requires the market value of our common stock that is held by non-affiliates to exceed $700.0 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

Even after we no longer qualify as an emerging growth company, we may still qualify as a “smaller reporting company” which would allow us to take advantage of many of the same exemptions from disclosure requirements including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements. We cannot predict if investors will find our common stock less attractive because we may 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.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, are subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. As a result, changes in rules of U.S. generally accepted accounting principles or their interpretation, the adoption of new guidance or the application of existing guidance to changes in our business could significantly affect our financial position and results of operations.

Our executive officers, directors, principal stockholders and their affiliates will continue to exercise significant influence over our Company, which will limit your ability to influence corporate matters and could delay or prevent a change in corporate control.

As of June 30, 2017, our executive officers and directors, combined with our stockholders who owned more than 5% of our outstanding common stock, and their affiliates, beneficially owned approximately 69% of our outstanding common stock. As a result, these stockholders, if they act together, will be able to influence our management and affairs and the outcome of matters submitted to our stockholders for approval, including the election of directors and any sale, merger, consolidation, or sale of all or substantially all of our assets. In addition, this concentration of ownership might adversely affect the market price of our common stock by:

- delaying, deferring or preventing a change of control of us;
- impeding a merger, consolidation, takeover or other business combination involving us; or
- discouraging a potential acquiror from making a tender offer or otherwise attempting to obtain control of us.

We are incurring and will continue to incur significantly increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives.

As a public company, we are incurring and will continue to incur significant legal, accounting and other expenses that we did not incur as a private company. We are subject to the reporting requirements of the Securities Exchange Act of 1934, which will require, among other things, that we file with the SEC annual, quarterly and current reports with respect to our business and financial condition. In addition, the Sarbanes-Oxley Act, as well as rules subsequently adopted by the SEC and NASDAQ to implement provisions of the Sarbanes-Oxley Act, impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Further, in July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, was enacted. There are significant corporate governance and executive compensation-related provisions in the Dodd-Frank Act that require the SEC to adopt additional rules and regulations in these areas such as “say on pay” and proxy access. Recent legislation permits emerging growth companies to implement many of these requirements over a longer period and up to five years from the pricing of our IPO. We intend to take advantage of this new legislation, but cannot guarantee that we will not be required to implement these requirements sooner than budgeted or planned and thereby incur unexpected expenses. Stockholder activism, the current political environment and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate.

We expect the rules and regulations applicable to public companies to substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly. If these requirements divert the attention of our management and personnel from other business concerns, they could have a material adverse effect on our business, financial condition and results of operations. We expect that we will need to hire additional accounting, finance and other personnel in connection with our efforts to comply with the requirements of being a public company, and our management and other personnel will need to devote a substantial amount of time towards maintaining compliance with these requirements. These requirements will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. The increased costs will decrease our net income or increase our net loss, and may require us to reduce costs in other areas of our business or increase the prices of our products or services. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain the same or similar coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

Certain stockholders hold a substantial number of shares of our common stock. If such stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market, the trading price of our common stock could decline.

In addition, shares of common stock that are either subject to outstanding options or reserved for future issuance under our stock incentive plans will become eligible for sale in the public market extent permitted by the provisions of various vesting schedules and Rule 144 and Rule 701 under the Securities Act of 1933, as amended, or the Securities Act, and, in any event, we have filed a registration statement permitting shares of common stock issued on exercise of options to be freely sold in the public market. If these additional shares of common stock are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

Certain holders of our common stock are entitled to rights with respect to the registration of their shares under the Securities Act. Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares held by affiliates. Any sales of securities by these stockholders who have exercised registration rights could have a material adverse effect on the trading price of our common stock.

Actual or potential sales of our common stock by our employees, including our executive officers, pursuant to pre-arranged stock trading plans could cause our stock price to fall or prevent it from increasing for numerous reasons, and actual or potential sales by such persons could be viewed negatively by other investors.

In accordance with the guidelines specified under Rule 10b5-1 of the Securities Exchange Act of 1934, as amended, and our policies regarding stock transactions, our employees, executive officers and directors may adopt stock trading plans pursuant to which they have arranged to sell shares of our common stock from time to time in the future. Generally, sales under such plans by our executive officers and directors require public filings. Actual or potential sales of our common stock by such persons could cause the price of our common stock to fall or prevent it from increasing for numerous reasons. For example, a substantial number of shares of our common stock becoming available (or being perceived to become available) for sale in the public market could cause the market price of our common stock to fall or prevent it from increasing. Also, actual or potential sales by such persons could be viewed negatively by other investors.

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or our guidance.

Our quarterly and annual operating results may fluctuate significantly in the future, which makes it difficult for us to predict our future operating results. From time to time, we may enter into license or collaboration agreements with other companies that include development funding and significant upfront and milestone payments and/or royalties, which may become an important source of our revenue. Accordingly, our revenue may depend on development funding and the achievement of development and clinical milestones under current and any potential future license and collaboration agreements and sales of our products, if approved. These upfront and milestone payments may vary significantly from period to period and any such variance could cause a significant fluctuation in our operating results from one period to the next.

In addition, we measure compensation cost for stock-based awards made to employees at the grant date of the award, based on the fair value of the award as determined by our board of directors, and recognize the cost as an expense over the employee's requisite service period. As the variables that we use as a basis for valuing these awards change over time, including our underlying stock price and stock price volatility, the magnitude of the expense that we must recognize may vary significantly.

Furthermore, our operating results may fluctuate due to a variety of other factors, many of which are outside of our control and may be difficult to predict, including the following:

- the timing and cost of, and level of investment in, research and development activities relating to our current and any future product candidates, which will change from time to time;
- our ability to enroll patients in clinical trials and the timing of enrollment;
- the cost of manufacturing our current and any future product candidates, which may vary depending on FDA guidelines and requirements, the quantity of production and the terms of our agreements with manufacturers;
- expenditures that we will or may incur to acquire or develop additional product candidates and technologies;
- the timing and outcomes of clinical studies for JTX-2011, JTX-4014 and any other future product candidates or competing product candidates;
- competition from existing and potential future products that compete with JTX-2011, JTX-4014 and any other future product candidates, and changes in the competitive landscape of our industry, including consolidation among our competitors or partners;
- any delays in regulatory review or approval of JTX-2011, JTX-4014 or any other future product candidates;
- the level of demand for JTX-2011, JTX-4014 and any other future product candidates, if approved, which may fluctuate significantly and be difficult to predict;
- the risk/benefit profile, cost and reimbursement policies with respect to our products candidates, if approved, and existing and potential future products that compete with JTX-2011, JTX-4014 and any other future product candidates;
- our ability to commercialize JTX-2011, JTX-4014 and any other future product candidates, if approved, inside and outside of the United States, either independently or working with third parties;
- the success of our collaboration with Celgene and our ability to establish and maintain other collaborations, licensing or other arrangements;
- our ability to adequately support future growth;
- potential unforeseen business disruptions that increase our costs or expenses;
- future accounting pronouncements or changes in our accounting policies; and
- the changing and volatile global economic environment.

The cumulative effect of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance. This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated revenue and/or earnings guidance we may provide.

If securities analysts do not publish research or reports about our business or if they publish negative evaluations of our stock, the price of our stock could decline.

The trading market for our common stock will rely, in part, on the research and reports that industry or financial analysts publish about us or our business. If few analysts commence coverage of us, the trading price of our stock would likely decrease. If one or more of the analysts covering our business downgrade their evaluations of our

stock, the price of our stock could decline. If one or more of these analysts cease to cover our stock, we could lose visibility in the market for our stock, which, in turn, could cause our stock price to decline.

We have broad discretion in how we use our cash, cash equivalents and investments, including the net proceeds from our IPO and may not use these financial resources effectively, which could affect our results of operations and cause our stock price to decline.

Our management has considerable discretion in the application of our cash, cash equivalents and investments, including the net proceeds from our IPO. We intend to use the cash, cash equivalents and investments to advance JTX-2011 through the completion of our multi-arm Phase I/II clinical study, to advance JTX-4014 through IND and planned clinical studies, to advance and expand our research and development pipeline, and for working capital and other general corporate purposes, which will include the hiring of additional personnel, capital expenditures, and the costs of operating as a public company. As a result, investors will be relying upon management's judgment with only limited information about our specific intentions for the use of the cash, cash equivalents and investments. We may use the cash, cash equivalents and investments for purposes that do not yield a significant return or any return at all for our stockholders. In addition, pending their use, we may invest the net proceeds from the offering in a manner that does not produce income or that loses value.

Anti-takeover provisions in our charter documents and under Delaware law could make an acquisition of us, which may be beneficial to our stockholders, more difficult 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 bylaws may delay or prevent an acquisition of us or a change in our management. These provisions include a classified board of directors, a prohibition on actions by written consent of our stockholders and the ability of our board of directors to issue preferred stock without stockholder approval. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which limits the ability of stockholders owning in excess of 15% of our outstanding voting stock to merge or combine with us. Although we believe these provisions collectively provide for an opportunity to obtain greater value for stockholders by requiring potential acquirors to negotiate with our board of directors, they would apply even if an offer rejected by our board were considered beneficial by some stockholders. In addition, 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, which is responsible for appointing the members of our management.

Our bylaws designate the Court of Chancery of 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 bylaws, provide that, unless we consent in writing to an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers and employees to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, our certificate of incorporation or our bylaws, or (iv) any action asserting a claim that is governed by the internal affairs doctrine, in each case subject to the Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein. Any person purchasing or otherwise acquiring any interest in any shares of our capital stock shall be deemed to have notice of and to have consented to this provision of our bylaws. 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 employees, which may discourage such lawsuits against us and our directors, officers and employees even though an action, if successful, might benefit our stockholders. Stockholders who do bring a claim in the Court of Chancery could face additional litigation costs in pursuing any such claim, particularly if they do not reside in or near the State of Delaware. The Court of Chancery may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments or results may be more favorable to us than to our stockholders. Alternatively, if a court were to find this provision of our amended and restated certificate of incorporation inapplicable to, or unenforceable in respect of, one or more of the specified types of actions or proceedings, we may incur additional costs, which could have a material adverse effect on our business, financial condition or results of operations.

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

Use of Proceeds from Registered Securities

On February 1, 2017, we completed our IPO. The offer and sale of the shares in the IPO were registered under the Securities Act pursuant to a registration statement on Form S-1 (File No. 333-215372), which was filed on December 30, 2016 and amended subsequently and declared effective on January 26, 2017. Following the sale of the shares in connection with the closing of our IPO, the offering terminated. We received aggregate net proceeds from the IPO of approximately $106.4 million, after deducting underwriting discounts and commissions and other offering expenses paid by us. No offering expenses were paid directly or indirectly to any of our directors or officers (or their associates) or persons owning ten percent or more of any class of our equity securities or to any other affiliates.

As of June 30, 2017, we consumed approximately $48.0 million of the net proceeds from the IPO, primarily to advance JTX-2011 through Phase I/II clinical trials, manufacturing pre-commercial clinical trial and preclinical study materials, for completing IND enabling activities for JTX-4014 and for working capital and general corporate purposes. We have invested the remaining net proceeds from the IPO in a variety of capital preservation investments, including money market funds, investment-grade corporate debt securities, U.S. Treasury obligations and government agency securities. There has been no material change in the planned use of proceeds from our IPO as described in our final prospectus filed with the SEC pursuant to Rule 424(b)(4) on January 27, 2017.

Item 6. Exhibits

The exhibits filed as part of this Quarterly Report on Form 10-Q are set forth on the Exhibit Index, which is incorporated herein by reference.

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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.

JOUNCE THERAPEUTICS, INC.

Date: August 9, 2017

By: /s/ Kim C. Drapkin
Kim C. Drapkin
Treasurer and Chief Financial Officer
(Principal Financial and Accounting Officer)

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EXHIBIT INDEX

Exhibit no.	Description of Exhibit
10.1	Lease Termination Agreement by and between Cambridge 1030 Mass Ave, LLC (as successor in interest to HCP/LFREP Ventures I, LLC) and Jounce Therapeutics, Inc., dated May 19, 2017 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K (File No. 001-37998) filed on May 23, 2017)
10.2	Sublease Termination Agreement by and between Manus Biosynthesis, Inc. and Jounce Therapeutics, Inc., dated May 19, 2017 (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K (File No. 001-37998) filed on May 23, 2017)
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1+	Certifications of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101*	The following materials from the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, formatted in eXtensible Business Reporting Language (XBRL): (i) Condensed Consolidated Balance Sheets, (ii) Condensed Consolidated Statements of Operations, (iii) Condensed Consolidated Statements of Comprehensive Loss, (iv) Condensed Consolidated Statements of Cash Flows and (v) Notes to Condensed Consolidated Financial Statements.

* Filed herewith.

\+ Furnished herewith.

Exhibit 31.1

CERTIFICATIONS

I, Richard Murray, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Jounce 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)) 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. 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

c. 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: August 9, 2017

By: /s/ Richard Murray

Richard Murray, Ph.D.
President, Chief Executive Officer and Director
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATIONS

I, Kim. C Drapkin, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Jounce 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)) 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. 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

c. 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: August 9, 2017

By: /s/ Kim C. Drapkin

Kim C. Drapkin
Treasurer and Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

**CERTIFICATIONS OF CEO AND CFO PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with this Quarterly Report on Form 10-Q of Jounce Therapeutics, Inc. (the "Company") for the period ended June 30, 2017, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of her or his knowledge:

(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: August 9, 2017 By: /s/ Richard Murray
Richard Murray, Ph.D.
President, Chief Executive Officer and Director
(Principal Executive Officer)

Date: August 9, 2017 By: /s/ Kim C. Drapkin
Kim C. Drapkin
Treasurer and Chief Financial Officer
(Principal Financial and Accounting Officer)