Aeglea BioTherapeutics, Inc.
Form 10-Q
August 09, 2016

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

x QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended June 30, 2016

OR

o 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: 001-37722

AEGLEA BIOTHERAPEUTICS, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware	46-4312787
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

901 S. MoPac Expressway

Barton Oaks Plaza One

Suite 250

Austin, TX 78746

(Address of principal executive offices including zip code)

Registrant's telephone number, including area code: (512) 942-2935

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 x No o

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 x No o

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

Large accelerated filer o	Accelerated filer o
Non-accelerated filer x (Do not check if a small reporting company)	Small reporting company o

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

As of August 8, 2016, the registrant had 13,411,772 shares of common stock, $0.0001 par value per share, outstanding.

AEGLEA BIOTHERAPEUTICS, INC.

QUATERLY REPORT ON FORM 10-Q

FOR THE QUARTER ENDED JUNE 30, 2016

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NOTE ABOUT FORWARD-LOOKING STATEMENTS

This quarterly report contains forward-looking statements. All statements other than statements of historical fact are "forward-looking statements" for purposes of this Quarterly Report on Form 10-Q. These forward-looking statements may include, but are not limited to, statements regarding our future results of operations and financial position, business strategy, market size, potential growth opportunities, clinical development activities, our ability to maintain and recognize the benefits of certain designations received by product candidates, the timing and results of clinical trials and potential regulatory approval and commercialization of product candidates. The words "believe," "may," "will," "potentially", "estimate", "continue", "anticipate," "predict," "target," "intend," "could," "would," "should," "project," "plan," similar expressions that convey uncertainty of future events or outcomes are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in "Risk Factors" and elsewhere in this quarterly report. Moreover, we operate in a very competitive and rapidly changing environment, and new risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this quarterly report may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this report to conform these statements to actual results or to changes in our expectations, except as required by law.

As used in this Quarterly Report on Form 10-Q, the terms "Aeglea," "the Company," "we," "us," and "our" refer to Aeglea BioTherapeutics, Inc. and, where appropriate, its consolidated subsidiaries, unless the context indicates otherwise.

PART I. – FINANCIAL INFORMATION

Item 1. Financial Statements
Aeglea BioTherapeutics, Inc.

Condensed Consolidated Balance Sheets

(Unaudited)

(In thousands, except share and per share amounts)

	June 30, 2016	December 31, 2015
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$70,628	$29,294
Marketable securities	2,947	3,768
Restricted cash	155	80
Accounts receivable - grant	1,625	1,697
Deferred offering costs	—	2,535
Prepaid expenses and other current assets	1,551	912
Total current assets	76,906	38,286
Property and equipment, net	377	348
Other non-current assets	18	20
TOTAL ASSETS	$77,301	$38,654
LIABILITIES, CONVERTIBLE PREFERRED STOCK, AND STOCKHOLDERS' EQUITY (DEFICIT)		
CURRENT LIABILITIES		
Accounts payable	$348	$176
Accrued and other current liabilities	3,013	2,347
Total current liabilities	3,361	2,523
Other non-current liabilities	16	27
TOTAL LIABILITIES	3,377	2,550
Commitments and Contingencies (Note 10 and 12)		
Series A convertible preferred stock, $0.0001 par value; no shares and 2,172,524 shares authorized as of June 30, 2016 and December 31, 2015, respectively; no shares and 2,172,520 shares issued and outstanding as of June 30, 2016 and December 31, 2015, respectively	—	13,573
Series B convertible preferred stock, $0.0001 par value; no shares and 5,008,210 shares authorized as of June 30, 2016 and December 31, 2015, respectively; no shares and 4,999,976 shares issued and outstanding as	—	44,738

of June 30, 2016 and December 31, 2015, respectively		
STOCKHOLDERS' EQUITY (DEFICIT)		
Preferred stock, $0.0001 par value; 10,000,000 shares and no shares authorized as of June 30, 2016 and December 31, 2015, respectively; no shares issued and outstanding as of June 30, 2016 and December 31, 2015, respectively	—	—
Common stock, $0.0001 par value; 500,000,000 shares and 25,000,000 shares authorized as of June 30, 2016 and December 31, 2015, respectively; 13,411,772 shares and 757,336 shares issued and outstanding as of June 30, 2016 and December 31, 2015, respectively	1	—
Additional paid-in capital	107,478	1,373
Accumulated other comprehensive income (loss)	1	(1)
Accumulated deficit	(33,556)	(23,579)
TOTAL STOCKHOLDERS' EQUITY (DEFICIT)	73,924	(22,207)
TOTAL LIABILITIES, CONVERTIBLE PREFERRED STOCK, AND STOCKHOLDERS' EQUITY (DEFICIT)	$77,301	$38,654

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

Aeglea BioTherapeutics, Inc.

Condensed Consolidated Statements of Operations

(Unaudited)

(In thousands, except share and per share amounts)

	Three Months Ended		Six Months Ended	
	June 30, 2016	2015	June 30, 2016	2015
Revenues:				
Grant	$1,373	$3,427	$2,232	$3,427
Operating expenses:				
Research and development	$4,420	$2,736	$8,017	$4,358
General and administrative	2,448	2,123	4,277	2,970
Total operating expenses	6,868	4,859	12,294	7,328
Loss from operations	(5,495)	(1,432)	(10,062)	(3,901)
Other income (expense):				
Interest income	74	5	100	6
Other expense, net	(9)	—	(15)	—
Total other income (expense)	65	5	85	6
Net loss	$(5,430)	$(1,427)	$(9,977)	$(3,895)
Deemed dividend to convertible preferred Stockholders	—	—	—	(228)
Net loss attributable to common stockholders	$(5,430)	$(1,427)	$(9,977)	$(4,123)
Net loss per share attributable to common stockholders, basic and diluted	$(0.46)	$(2.44)	$(1.61)	$(7.12)
Weighted-average common shares outstanding, basic and diluted	11,776,058	585,798	6,208,379	579,520

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

Aeglea BioTherapeutics, Inc.

Condensed Consolidated Statements of Comprehensive Loss

(Unaudited)

(In thousands)

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2016	2015	2016	2015
Net loss	$(5,430)	$(1,427)	$(9,977)	$(3,895)
Other comprehensive income (loss):				
Unrealized gain (loss) on marketable securities	(2)	—	2	—
Total comprehensive loss	$(5,432)	$(1,427)	$(9,975)	$(3,895)

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

Aeglea BioTherapeutics, Inc.

Condensed Consolidated Statements of Cash Flows

(Unaudited)

(In thousands)

	Six Months Ended June 30,	
	2016	2015
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	$(9,977)	$(3,895)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	62	35
Amortization of premium on marketable securities	14	—
Loss on disposal of property and equipment	—	2
Deferred rent	—	2
Amortization of lease allowance liability	(12)	(12)
Stock-based compensation	529	184
Research and development services settled with convertible preferred stock	50	540
Changes in operating assets and liabilities:		
Accounts receivable-grant	72	(3,427)
Prepaid expenses and other assets	(704)	(230)
Accounts payable	172	444
Accrued and other liabilities	1,174	19
Net cash used in operating activities	(8,620)	(6,338)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchases of property and equipment	(91)	(34)
Purchases of marketable securities	(2,940)	—
Proceeds from maturities of marketable securities	3,766	—
Increase in restricted cash	(75)	(10)
Net cash provided by (used in) investing activities	660	(44)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from issuance of convertible preferred stock, net of offering costs	—	43,684
Proceeds from initial public offering, net of (payments of) offering costs	49,294	(837)
Net cash provided by financing activities	49,294	42,847
NET INCREASE IN CASH	41,334	36,465
CASH		
Beginning of period	29,294	2,616
End of period	$70,628	$39,081
Supplemental Disclosure of Non-Cash Investing and Financing Information:		
Deemed dividend to Series A convertible preferred stockholders upon conversion from an LLC to corporation	$—	$228
Convertible preferred stock issued for research and development services to be	$—	$504

performed		
Conversion of Series A convertible preferred stock to common stock upon initial public offering	$13,573	$—
Conversion of Series B convertible preferred stock to common stock upon initial public offering	$44,738	$—
Unpaid amounts related to purchase of property and equipment	$—	$70

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

Aeglea BioTherapeutics, Inc.

Notes to Condensed Consolidated Financial Statements

1. The Company and Basis of Presentation

Aeglea BioTherapeutics, Inc. ("Aeglea" or the "Company") is an early-stage biotechnology company committed to developing enzyme-based therapeutics in the field of amino acid metabolism that it believes will transform the lives of patients with cancer and inborn errors of metabolism, a subset of rare genetic metabolic diseases. The Company was formed as a Limited Liability Company (LLC) in Delaware on December 16, 2013 under the name Aeglea BioTherapeutics Holdings, LLC ("Aeglea LLC") and was converted from a Delaware LLC to a Delaware corporation (the "LLC Conversion") on March 10, 2015. The Company operates in one segment and has its principal offices in Austin, Texas.

Initial Public Offering

On April 6, 2016, the Company's Registration Statement on Form S-1 (File No. 333-205001) relating to the initial public offering ("IPO") of its common stock was declared effective by the Securities and Exchange Commission ("SEC"). The IPO closed on April 12, 2016, and 5,481,940 shares of common stock were sold at a public offering price of $10.00 per share, including 481,940 shares of common stock issued upon the partial exercise by the underwriters of their option to purchase additional shares. The Company received $47.3 million in aggregate cash proceeds, net of underwriting discounts and commissions of $3.8 million and offering costs of $3.7 million incurred by the Company.

Immediately prior to the closing of the IPO, all shares of outstanding convertible preferred stock were automatically converted, at a ratio of one share of common stock for each share of convertible preferred stock, into 7,172,496 shares of common stock with the related carrying value of $58.3 million reclassified to common stock and additional paid-in capital.

In connection with the IPO, the Company amended its Restated Certificate of Incorporation (the "Public Certificate") to change the authorized capital stock to 510,000,000 shares of which 500,000,000 shares are designated as common stock and 10,000,000 shares are designated as preferred stock, all with a par value of $0.0001 per share. There are no shares of preferred stock outstanding as of June 30, 2016.

Reverse Stock Split

The Company's Board of Directors and stockholders approved a 1-for-10.5 reverse stock split of the Company's common stock and preferred stock. The reverse stock split became effective on March 28, 2016 upon filing an amended Restated Certificate of Incorporation (the "Split Certificate"). The Split Certificate remained in effect until closing of the IPO, at which time the company amended the Restated Certificate of Incorporation and filed the Public Certificate.

All share and per share amounts in the condensed consolidated financial statements and notes thereto have been retroactively adjusted for all periods presented to give effect to this reverse stock split, including reclassifying an amount equal to the reduction in par value of common stock to additional paid-in capital.

Liquidity

As of June 30, 2016, the Company had working capital of $73.5 million, an accumulated deficit of $33.6 million, and cash, cash equivalents, and marketable securities of $73.6 million. The Company has not generated any product revenues and has not achieved profitable operations. There is no assurance that profitable operations will ever be achieved, and, if achieved, could be sustained on a continuing basis. In addition, development activities, clinical and nonclinical testing, and commercialization of the Company's products will require significant additional financing.

The Company believes that its existing cash, cash equivalents, and marketable securities will be sufficient to enable the Company to continue as a going concern for at least 12 months beyond June 30, 2016. However, the Company will need to secure additional funding in the future, in order to carry out all of its planned research and development activities. If the Company is unable to obtain additional financing or generate license or product revenue, the lack of liquidity could have a material adverse effect on the Company's future prospects.

Unaudited Interim Financial Information

The interim condensed consolidated financial statements included in this document are unaudited. The unaudited interim financial statements have been prepared on the same basis as the annual financial statements and reflect, in the opinion of management, all adjustments of a normal and recurring nature that are necessary for the fair presentation of the Company's financial position as of June 30, 2016, and its results of operations and cash flows for the six months

ended June 30, 2016 and 2015. The results of operations for the six months ended June 30, 2016 are not necessarily indicative of the results to be expected for the year ending December 31, 2016 or for any other future annual or interim period. The December 31, 2015 balance sheet was derived from audited financial statements, but does not include all disclosures required by accounting principles generally accepted in the United States ("U.S. GAAP"). These financial statements should be read in conjunction with the audited financial statements included in the Company's Prospectus dated April 6, 2016 filed with the SEC pursuant to Rule 424(b)(4) (the "Prospectus").

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Such management estimates include those related to accruals of research and development related costs, fair values of preferred and common stock, stock-based compensation, and certain company income tax related items. Management bases its estimates on historical experience and on various other market-specific and relevant assumptions that management believes to be reasonable under the circumstances. Actual results could differ significantly from those estimates.

Risks and Uncertainties

The product candidates being developed by the Company require approvals from the U.S. Food and Drug Administration ("FDA") or foreign regulatory agencies prior to commercial sales. There can be no assurance that the Company's product candidates will receive the necessary approvals. If the Company is denied regulatory approval of its product candidates, or if such approvals are delayed, it may have a material adverse impact on the Company's business, results of operations and its financial position.

The Company is subject to a number of risks similar to other life science companies, including, but not limited to, risks related to the successful discovery and development of product candidates, raising additional capital, development of competing drugs and therapies, protection of proprietary technology and market acceptance of the Company's products. As a result of these and other factors and the related uncertainties, there can be no assurance of the Company's future success.

Cash and Cash Equivalents

The Company considers all highly liquid investments with original maturities of three months or less from the date of purchase to be cash equivalents. Cash equivalents consist of money market funds and debt securities and are stated at fair value.

Marketable Securities

All investments have been classified as available-for-sale and are carried at estimated fair value as determined based upon quoted market prices or pricing models for similar securities. Management determines the appropriate classification of its investments in debt securities at the time of purchase. Unrealized gains and losses are excluded from earnings and are reported as a component of accumulated comprehensive loss. Realized gains and losses and declines in fair value judged to be other than temporary, if any, on available-for-sale securities are included in other income (expense). The cost of securities sold is based on the specific-identification method. There were no realized

gains or losses on marketable securities for the six months ended June 30, 2016 and 2015. Interest on marketable securities is included in interest income.

Restricted Cash

Restricted cash consists of a money market account held by a financial institution as collateral for the Company's obligations under a corporate credit card agreement.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to a concentration of credit risk consist of cash, cash equivalents, marketable securities, and restricted cash. The Company's investment policy limits investments to high credit quality securities issued by the U.S. government, U.S. government-sponsored agencies and highly rated banks, subject to certain concentration limits and restrictions on maturities. The Company's cash, cash equivalents, marketable securities, and restricted cash are held by financial institutions in the United States that management believes are of high credit quality. Amounts on deposit may at times exceed federally insured limits. The Company has not experienced any losses on its deposits of cash and cash equivalents and its accounts are monitored by management to mitigate risk. The Company is exposed to credit risk in the event of default by the financial institutions holding its cash and cash equivalents and bond issuers to the extent recorded in the balance sheets.

Deferred Offering Costs

Deferred offering costs, which primarily consist of direct incremental legal, printing, and accounting fees relating to the Company's IPO of its common stock, are capitalized. At the closing of the IPO, the deferred offering costs were offset against the proceeds from the IPO and recorded to additional paid-in capital.

Property and Equipment

Property and equipment are stated at cost, net of accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets. Repairs and maintenance that do not extend the life or improve an asset are expensed as incurred. Upon retirement or sale, the cost of disposed assets and their related accumulated depreciation are removed from the balance sheet. Any gain or loss is credited or charged to operations.

The useful lives of the property and equipment are as follows:

Laboratory equipment	5 years
Furniture and office equipment	5 years
Computer equipment	3 years
Software	3 years
Leasehold improvements	Shorter of remaining lease term or estimated useful life

Impairment of Long-Lived Assets

Long-lived assets are reviewed for indications of possible impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability is measured by comparison of the carrying amounts to the future undiscounted cash flows attributable to these assets. An impairment loss is recognized to the extent an asset group is not recoverable, and the carrying amount exceeds the projected discounted future cash flows arising from these assets. There were no impairments of long-lived assets for the six months ended June 30, 2016 and 2015.

Accrued Research and Development Costs

The Company records the costs associated with research nonclinical studies, clinical trials, and manufacturing development as incurred. These costs are a significant component of the Company's research and development expenses, as a substantial portion of the Company's on-going research and development activities are conducted by third-party service providers, including contract research and manufacturing organizations.

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The Company accrues for expenses resulting from obligations under agreements with contract research organizations ("CROs"), contract manufacturing organizations ("CMOs"), and other outside service providers for which payment flows do not match the periods over which materials or services are provided to the Company. Accruals are recorded based on estimates of services received and efforts expended pursuant to agreements established with CROs, CMOs, and other outside service providers. These estimates are typically based on contracted amounts applied to the proportion of work performed and determined through analysis with internal personnel and external service providers as to the progress or stage of completion of the services. The Company makes significant judgments and estimates in determining the accrual balance in each reporting period. In the event advance payments are made to a CRO, CMO, or outside service provider, the payments will be recorded as a prepaid asset which will be amortized as the contracted services are performed. As actual costs become known, the Company adjusts its accruals. Inputs, such as the services performed, the number of patients enrolled, or the study duration, may vary from the Company's estimates, resulting in adjustments to research and development expense in future periods. Changes in these estimates that result in material changes to the Company's accruals could materially affect the Company's results of operations. The Company has not experienced any material deviations between accrued and actual research and development expenses.

Leases

The Company entered into a lease agreement for its office facilities. The lease is classified as an operating lease. The Company records rent expense on a straight-line basis over the term of the lease and, accordingly records the difference between cash rent payments and the recognition of rent expense as a deferred rent liability. Incentives granted under the Company's facilities leases, including allowances to fund leasehold improvements, are deferred and are recognized as adjustments to rental expense on a straight-line basis over the term of the lease.

Fair Value of Financial Instruments

The Company uses fair value measurements to record fair value adjustments to certain financial and non-financial assets and liabilities and to determine fair value disclosures. The accounting standards define fair value, establish a framework for measuring fair value, and require disclosures about fair value measurements. Fair value is defined as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities required to be recorded at fair value, the principal or most advantageous market in which the Company would transact are considered along with assumptions that market participants would use when pricing the asset or liability, such as inherent risk, transfer restrictions, and risk of nonperformance.

The accounting standard for fair value establishes a fair value hierarchy based on three levels of inputs, the first two of which are considered observable and the last unobservable, that requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. A financial instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement.

The three levels of inputs that may be used to measure fair value are as follows:

Level 1:Observable inputs, such as quoted prices in active markets for identical assets or liabilities.

Level 2: Observable inputs other than Level 1 prices, such as quoted prices for similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3: Valuations based on unobservable inputs to the valuation methodology and including data about assumptions market participants would use in pricing the asset or liability based on the best information available under the circumstances.

Financial instruments carried at fair value include cash, cash equivalents, and marketable securities. The carrying amount of accounts receivable, accounts payable and accrued liabilities approximate fair value due to their relatively

short maturities.

Convertible Preferred Stock

The Company recorded the issuance of all convertible preferred stock net of offering costs on the dates of issuance, which represented the carrying value. The conversion feature of the convertible preferred stock was subject to certain anti-dilution provisions, which if triggered, would have required the Company to seek shareholder approval to increase the number of shares of common stock authorized. In the event that the Company could not deliver the conversion shares

because it did not have an adequate number of common stock authorized, the convertible preferred stock would have been redeemable. Accordingly, the Company has classified the convertible preferred stock in temporary equity. The Company did not adjust the carrying value of the convertible preferred stock to their redemption values, since it was uncertain whether or when a redemption event would occur. The convertible preferred stock outstanding was automatically converted into shares of common stock immediately prior to the completion of the IPO in April 2016 (see Note 1).

Revenue Recognition

The Company's sole source of revenue is grant revenue related to a $19.8 million research grant received from the Cancer Prevention and Research Institute of Texas ("CPRIT"), covering a three year period from June 1, 2014 through May 31, 2017. Grant revenue is recognized when qualifying costs are incurred and there is reasonable assurance that the conditions of the award have been met for collection. Proceeds received prior to the costs being incurred or the conditions of the award being met are recognized as deferred revenue until the services are performed and the conditions of the award are met (see Note 6).

Research and Development Costs

Research and development costs are expensed as incurred. Research and development costs include, but are not limited to, salaries, benefits, travel, share-based compensation, consulting costs, contract research service costs, laboratory supplies, contract manufacturing costs, and costs paid to other third parties that conduct research and development activities on the Company's behalf. Amounts incurred in connection with license agreements are also included in research and development expense.

Certain research and development costs incurred were settled contractually by the Company issuing a variable number of the Company's shares determined by dividing the fixed monetary amount of costs incurred by the issuance-date fair value of the issuable shares. The Company recorded research and development expense for these costs and accrued for the fixed monetary amount as an accrued liability as the services were rendered until the amount was settled. In June 2015, the remaining Company obligation to settle these costs with Company shares was converted to a cash-based payment through a contract amendment with the service provider.

Advance payments for goods or services to be rendered in the future for use in research and development activities are recorded as a prepaid asset and expensed as the related goods are delivered or the services are performed.

Stock-Based Compensation

The Company recognizes the cost of stock-based awards granted to employees based on the estimated grant-date fair values of the awards. The value of the portion of the award that is ultimately expected to vest is recognized as expense ratably over the requisite service period. The Company recognizes the compensation costs for awards that vest over several years on a straight-line basis over the vesting period. The Company recognizes the cost of stock-based awards granted to nonemployees at their then-current fair values as services are performed, and are remeasured through the counterparty performance date.

Income Taxes

Effective January 1, 2015, the Company, for tax purposes, converted from a partnership to a corporation and continues to serve as a holding company for seven wholly-owned subsidiary corporations. Beginning with the year ended December 31, 2015, the Company will file a consolidated corporate federal income tax return. The Company and its subsidiaries use the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial statements and the tax bases of assets and liabilities. A valuation allowance is established against the deferred tax

assets to reduce their carrying value to an amount that is more likely than not to be realized. The deferred tax assets and liabilities are classified as noncurrent along with the related valuation allowance. Due to a lack of earnings history, the net deferred tax assets have been fully offset by a valuation allowance.

The Company recognizes benefits of uncertain tax positions if it is more likely than not that such positions will be sustained upon examination based solely on the technical merits, as the largest amount of benefits that is more likely than not be realized upon the ultimate settlement. The Company's policy is to recognize interest and penalties related to the unrecognized tax benefits as a component of income tax expense. To date, there have been no interest or penalties recognized in relation to the unrecognized tax benefits.

Comprehensive Loss

Comprehensive loss is the change in stockholders' equity (deficit) from transactions and other events and circumstances other than those resulting from investments by stockholders and distributions to stockholders. The Company's other comprehensive income (loss) is currently comprised of changes in unrealized gains and losses on available-for-sale securities.

Reclassification

Certain reclassifications have been made to prior period amounts to conform to current period presentation. These reclassifications did not have an impact on the Company's results of operations or financial position as of June 30, 2016 and December 31, 2015.

Recent Accounting Pronouncements

In August 2014, the FASB issued ASU 2014-15, Presentation of Financial Statements—Going Concern (Subtopic 205-40): Disclosure of Uncertainties About an Entity's Ability to Continue as a Going Concern, which will require management to assess, at each annual and interim reporting period, the entity's ability to continue as a going concern. The amendments in ASU 2014-15 do not have any application to an entity's financial statements, but only to disclosure in the related notes. ASU 2014-15 is effective for annual periods ending after December 15, 2016 and early application is permitted. The Company intends to apply ASU 2014-15 in the first quarter of 2017 and for the annual period ending December 31, 2016.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842), which establishes a comprehensive new lease accounting model. The new standard: (a) clarifies the definition of a lease; (b) requires a dual approach to lease classification similar to current lease classifications; and, (c) causes lessees to recognize leases on the balance sheet as a lease liability with a corresponding right-of-use asset for leases with a lease-term of more than twelve months. The new standard is effective for fiscal years and interim periods beginning after December 15, 2018 and requires modified retrospective application. Early adoption is permitted. The Company is currently evaluating the impact that the adoption of ASU 2016-02 will have on its consolidated financial statements.

In March 2016, the FASB issued ASU No. 2016-09, Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting. The standard is intended to simplify several areas of accounting for share-based compensation arrangements, including the income tax impact, classification of awards as either equity or liabilities, classification on the statement of cash flows and forfeitures. The standard is effective for fiscal years and interim periods beginning after December 15, 2016. Early adoption is permitted. The Company is currently evaluating the impact that the standard will have on its consolidated financial statements.

3. Cash Equivalents and Marketable Securities

The following tables summarize the estimated fair value of our cash equivalents and marketable securities and the gross unrealized gains and losses (in thousands):

	June 30, 2016			
	Amortized	Gross	Gross	Estimated

	Cost	Unrealized Gains	Unrealized Losses	Fair Value
Cash equivalents:				
Money market funds	$—	$ —	$ —	$ —
Reverse repurchase agreements	21,250	—	—	21,250
Total cash equivalents	21,250	—	—	21,250
Marketable securities:				
US government and agency securities	2,946	1	—	2,947
Total marketable securities	$2,946	$ 1	$ —	$ 2,947

	December 31, 2015			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Cash equivalents:				
Money market funds	$3,988	$ —	$ —	$ 3,988
Reverse repurchase agreements	16,250	—	—	16,250
Total cash equivalents	20,238	—	—	20,238
Marketable securities:				
US government and agency securities	3,769	—	(1)	3,768
Total marketable securities	$3,769	$ —	$ (1)	$ 3,768

All of the cash equivalents and marketable securities held as of June 30, 2016 and December 31, 2015 had maturities of less than one year.

As of June 30, 2016 and December 31, 2015, the Company held zero and five debt securities, respectively, that were in an unrealized loss position for less than one year. The aggregate fair value of debt securities in an unrealized loss position at December 31, 2015 was $2.5 million with no individual securities in a significant unrealized loss position. The Company evaluated its securities for other-than-temporary impairment and considered the decline in market value for the securities to be primarily attributable to current economic and market conditions and would not be required to sell the securities before recovery of the amortized cost basis. Based on this analysis, these marketable securities were not considered to be other-than-temporarily impaired as of December 31, 2015.

4. Accrued and Other Current Liabilities

Accrued and other current liabilities consist of the following (in thousands):

	June 30, 2016	December 31, 2015
Accrued compensation	$777	$ 571
Accrued contracted research and development costs	1,510	863
Accrued professional and consulting fees	639	863
Accrued other and other current liabilities	87	50
Total accrued and other current liabilities	$3,013	$ 2,347

5. Convertible Preferred Stock

On April 12, 2016, immediately prior to the closing of the IPO, all of the Company's outstanding convertible preferred stock was automatically converted into an aggregate total of 7,172,496 shares of common stock (see Note 1).

On March 10, 2015, the Company converted from a Delaware limited liability company into a Delaware corporation and changed the Company's name from Aeglea BioTherapeutics Holdings, LLC to Aeglea BioTherapeutics, Inc. In connection with the LLC Conversion, all of the Company's outstanding common shares and convertible preferred shares were converted into shares of common stock and convertible preferred stock. Upon the LLC Conversion, each then-outstanding Series A convertible preferred share was converted into one share of Series A convertible preferred stock, par value $0.0001 per share. The Company determined that the LLC Conversion resulted in a deemed dividend from stockholders of common stock to stockholders of Series A convertible preferred stock of $0.11 per share of Series A convertible preferred stock. The Company recorded $228,000 as an increase in the carrying amount of the Series A convertible preferred stock and as a reduction of additional paid-in capital. Such dividend was determined by comparing the fair value of the Series A convertible preferred shares immediately prior to the conversion to the fair value of the Series A convertible preferred stock issued in the conversion.

Also on March 10, 2015, the Company issued 4,929,948 shares of Series B convertible preferred stock, par value $0.0001 per share, at an issuance price equal to $8.93 per share and received gross proceeds of $44.0 million. In connection with the financing, the Company incurred total offering costs of $321,000.

6. Grant Revenues

In June 2015, the Company entered into a Cancer Research Grant Contract ("Grant Contract") with CPRIT, under which CPRIT awarded a grant not to exceed $19.8 million for use in developing cancer treatments by exploiting the metabolism of cancer cells. The Grant Contract covers a three year period from June 1, 2014 through May 31, 2017.

Upon commercialization of the product, the terms of the Grant Contract require the Company to pay tiered royalties in the low to mid-single digit percentages. Such royalties reduce to less than one percent after a mid-single-digit multiple of the grant funds have been paid to CPRIT in royalties.

The agreement includes reimbursement for qualified expenditures incurred and recognized in 2014. Upon execution of the Grant Contract, grant revenue was recognized for the accumulated qualified expenditures paid and recognized in the period from June 1, 2014 through June 30, 2015. The Company recognized grant revenue of $1.4 million and $3.4 million in the three months ended June 30, 2016 and 2015, respectively, and $2.2 million and $3.4 million in the six months ended June 30, 2016 and 2015, respectively, for qualified expenditures under the grant. As of June 30, 2016 and December 31, 2015, the Company had an outstanding grant receivable of $1.6 million and $1.7 million, respectively, for the grant expenditures that were paid but had not been reimbursed.

7. Stock-Based Compensation

2016 Equity Incentive Plan

On April 5, 2016, the day preceding the effectiveness of the Registration Statement, the 2016 Equity Incentive Plan (the "2016 Plan") became effective and serves as the successor to the 2015 Equity Incentive Plan (the "2015 Plan"). Under the 2016 Plan, the Company may grant stock options, stock appreciation rights, restricted stock awards, restricted stock units, performance awards, and stock bonuses. A total of 1,100,000 shares of common stock were reserved for issuance under the 2016 Plan. The shares reserved exclude shares of common stock reserved for issuance under the 2015 Plan. Shares totaling 509,869 that were remaining under the 2015 Plan were added to the shares initially reserved under the 2016 Plan upon its effectiveness. In addition, the number of shares of stock available for issuance under the 2016 Plan may be increased each January 1, beginning on January 1, 2017 and continuing through 2023, by 4% of the outstanding number of shares of the Company's common stock on the immediately preceding December 31 or such lesser number as determined by the Company's board of directors. No further stock option or other awards may be granted under the 2015 Plan.

2016 Employee Stock Purchase Plan

On April 6, 2016, upon the effectiveness of the Registration Statement, the 2016 Employee Stock Purchase Plan (the "2016 ESPP") became effective. A total of 165,000 shares of common stock were reserved for issuance under the 2016 ESPP. Eligible employees may purchase shares of common stock under the 2016 ESPP at 85% of the lower of the fair market value of the Company's common stock as of the first or the last day of each offering period. Employees are limited to contributing 15% of the employee's eligible compensation, and may not purchase more than $25,000 of stock during any calendar year or more than 2,000 shares during any one purchase period or a lesser amount determined by the board of directors. The 2016 ESPP will terminate ten years from the first purchase date under the plan, unless terminated earlier by the board of directors. As of June 30, 2016, no shares had been issued from the ESPP and 165,000 shares were available for issuance under the 2016 ESPP.

Stock Options

In May 2016, the Company's board of directors approved the modification of 542,392 outstanding stock options for 21 employees to align the vesting schedule of existing awards with the Company's planned vesting schedule for future awards. The result was an acceleration of vesting for the modified awards. Stock options with a five year vesting schedule and 25% vesting after year two and 6.25% quarterly thereafter were modified to a four year vesting schedule with 25% vesting after year one and 2.08% monthly thereafter. Stock options with a four year vesting schedule and 25% vesting after year one and 6.25% quarterly thereafter were modified to a similar four year vesting schedule with 25% vesting after year one and 2.08% monthly thereafter. The modified awards have service conditions only.

In accordance with ASC 718, the Company determined the fair value of the awards immediately before the modification and compared that amount to the then fair value of the modified awards. Given there was no incremental fair value in connection with the modification of the awards, the Company will continue to recognize the compensation expense originally estimated for the stock options at the date of grant over the modified service period. The Company

recognized $89,000 in cumulative expense as of the modification date related to changes in the service period for the modified awards.

During the three months ended June 30, 2016 and 2015, the Company issued an aggregate of 635,800 and 544,059 options, respectively, to purchase common stock under its equity incentive plans for an aggregate fair value of $3.4 million and $2.0 million , respectively.

During the six months ended June 30, 2016 and 2015, the Company issued an aggregate of 720,217 and 644,505 options, respectively, to purchase common stock under its equity incentive plans for an aggregate fair value of $3.7 million and $2.1 million, respectively.

Total stock-based compensation expense related to the Company's equity incentive plans and 2016 ESPP was as follows (in thousands):

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2016	2015	2016	2015
Research and development	$156	$72	$210	$86
General and administrative	233	74	319	98
Total stock-based compensation expense	$389	$146	$529	$184

The following table summarizes the weighted-average Black-Scholes option pricing model assumptions used to estimate the fair value of stock options granted under the 2016 Plan and 2015 Plan and the shares purchasable under the 2016 ESPP during the periods presented:

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2016	2015	2016	2015
2016 Plan and 2015 Plan				
Expected term	6.00	6.29	6.00	6.29
Expected volatility	87 %	87 %	87 %	87 %
Risk-free interest	1.29%	1.37%	1.29%	1.37%
Dividend yield	0 %	0 %	0 %	0 %
2016 ESPP				
Expected term	0.36	—	0.36	—
Expected volatility	85 %	—	85 %	—
Risk-free interest	0.36%	—	0.36%	—
Dividend yield	0 %	—	0 %	—

8. Fair Value Measurements

The Company measures and reports certain financial instruments as assets and liabilities at fair value on a recurring basis. The following tables sets forth the fair value of the Company's financial assets and liabilities at fair value on a recurring basis based on the three-tier fair value hierarchy (in thousands):

	June 30, 2016			
	Level 1	Level 2	Level 3	Total
Financial Assets				
Money market funds	$—	$—	$ —	$—
Reverse repurchase agreements	—	21,250	—	21,250
US government and agency securities	—	2,947	—	2,947
Total financial assets	$—	$24,197	$ —	$24,197

	December 31, 2015			
	Level 1	Level 2	Level 3	Total
Financial Assets				
Money market funds	$3,988	$—	$ —	$3,988
Reverse repurchase agreements	—	16,250	—	16,250
US government and agency securities	—	3,768	—	3,768
Total financial assets	$3,988	$20,018	$ —	$24,006

The Company measures the fair value of money market funds on quoted prices in active markets for identical asset or liabilities. The Level 2 assets include reverse repurchase agreements and U.S. government and agency securities and are valued based on quoted prices for similar assets in active markets and inputs other than quoted prices that are derived from observable market data.

The Company evaluates transfers between levels at the end of each reporting period. There were no transfers between Level 1 and Level 2 during the periods presented.

9. Net Loss Per Share Attributable to Common Stockholders

The Company computed net loss attributable per common stockholder using the two-class method required for participating securities through the date of the IPO. Immediately prior to the IPO, all outstanding convertible preferred stock was converted into common stock (see Note 5). The Company considered convertible preferred stock to be participating securities. In the event that the Company had paid out distributions, holders of convertible preferred stock would have participated in the distribution.

The two-class method is an earnings (loss) allocation method under which earnings (loss) per share is calculated for common stock and participating security considering a participating security's rights to undistributed earnings (loss) as if all such earnings (loss) had been distributed during the period. The convertible preferred stock did not have an obligation to fund losses and are therefore excluded from the calculation of basic net loss per share. Starting in the first quarter of 2015 in connection with the LLC Conversion, the Company's Series A and B convertible preferred stock were entitled to receive noncumulative dividends and in preference to any dividends on shares of the Company's common stock.

Basic and diluted net loss per share attributable to common stockholders is computed by dividing net loss attributable to common stock by the weighted-average number of common stock outstanding during the period. For net loss per share attributable to common stockholders for the three and six months ended June 30, 2015, the effect of the LLC Conversion is presented prospectively from January 1, 2015 as none of the losses for the three and six months ended June 30, 2015 were allocated to the members of Aeglea LLC. For periods in which the Company generated a net loss, the Company does not include the potential impact of dilutive securities in diluted net loss per share, as the impact of these items is anti-dilutive. Additionally, the convertible preferred stock dividend is included in the loss attributable to common stockholders.

The following weighted-average equity instruments were excluded from the calculation of diluted net loss per share because their effect would have been anti-dilutive for the periods presented:

	Three Months Ended		Six Months Ended	
	June 30, 2016	2015	June 30, 2016	2015
Series A convertible preferred stock	286,486	2,172,520	1,229,503	2,172,520
Series B convertible preferred stock	659,337	4,933,719	2,829,657	3,079,709
Unvested restricted common stock	106,055	166,956	111,345	173,234
Options to purchase common stock	1,031,128	554,138	843,975	328,545

10. Research and License Agreements

University Research Agreement

In December 2013, the Company entered into a research agreement with the University of Texas at Austin (the "University"). Under the terms of this research agreement, the Company engaged the University to perform certain

nonclinical research activities related to the systemic depletion of amino acids for cancer therapy and rare disease therapy.

Under the research agreement, the Company was required to pay the University an annual amount not to exceed $386,000 during the one year term of the agreement from the effective date. The term and maximum expenditure limitation were subsequently extended and increased through four subsequent amendments through August 31, 2016 for a combined $1.0 million under the agreement, including an amendment in January 2016 increasing the maximum expenditure limitation by $82,000 for equipment purchased by the University on behalf of the Company. The Company made no payments to the University under the research agreement in the three months ended June 30, 2016 and 2015 and made payments of $457,000 and $188,000 in the six months ended June 30, 2016 and 2015, respectively.

License Agreements

In December 2013, the Company entered into two license agreements with the University. Under the terms of each license agreement, the University granted the Company an exclusive worldwide license to develop, manufacture, and commercialize therapeutics related to the University's engineered cysteine/cystine degrading enzymes and engineered methionine degrading enzymes for use in the treatment of human diseases.

Under each license agreement, the Company paid the University an up-front fee of $10,000 in 2013 and will pay annual license fees increasing from $5,000 in 2016 to $25,000 in 2018 and thereafter. The Company may be required to make future payments of up to $6.4 million contingent upon attainment of various development and regulatory approval milestones for the licensed product in any country. The milestone payments are payable in various amounts upon the start of different phases of clinical trials, application for, and receipt of regulatory approval, with $5.0 million payable upon the receipt of regulatory approval and a $500,000 payment payable on final regulatory approval of a second indication. Additionally, upon commercial sales of the product, the Company will be required to pay to the University a single-digit royalty on net sales of the licensed products in any country or region, if such product sales are ever achieved.

11. Related Party Transactions

The spouse of the Company's Chief Executive Officer provides consulting services to the Company. Payments made to the spouse in consulting fees were $195,000 and $129,000 in the three months ended June 30, 2016 and 2015, respectively, and $324,000 and $222,000 in the six months ended June 30, 2016 and 2015, respectively. The costs were recorded in Research and Development expenses. As of June 30, 2016 and December 31, 2015, the Company had an outstanding liability to the related party of $90,000, and $129,000, respectively.

One of the founders, a non-employee member of the Company's Board of Directors, entered into a consulting agreement with the Company in 2014 under which the founder would receive $50,000 per year for a fixed number of hours of consulting and advisory services and receive 57,142 Common B shares (converted into 43,290 restricted stock awards and 13,852 stock options upon the LLC Conversion) with the vesting contingent on time and performance milestones being achieved. The Company paid $13,000 and $13,000 in the three months ended June 30, 2016 and 2015, respectively, and $25,000 and $25,000 in the six months ended June 30, 2016 and 2015, respectively, to the Founder under the consulting agreement. As of June 30, 2016 and December 31, 2015, the Company had no outstanding liability to the related party.

12. Commitments and Contingencies

The Company's lease agreement for office space commenced in January 2015 and expires three years after the commencement date.

Under the terms of the office lease agreement, the Company provided the lessor with a $54,000 security deposit. The lessor shall be entitled to retain all or any part of the security deposit for payment in the event of any uncured default by the Company under the terms of the lease. Provided that the Company is not in default under the lease beyond any applicable cure period, the security deposit requirement shall be reduced by $18,000 each year and returned to the Company.

The Company records rent expense on a straight-line basis over the effective term of the lease. Rent expense for the three months ended June 30, 2016 and 2015 was $35,000 and $35,000, respectively. Rent expense for the six months ended June 30, 2016 and 2015 was $70,000 and $70,000, respectively.

Indemnification

The Company indemnifies each of its officers and directors for certain events or occurrences, subject to certain limits, while the officer or director is or was serving at the Company's request in such capacity, as permitted under Delaware law and in accordance with its certificate of incorporation and subsidiaries' certificates of incorporation and bylaws. The term of the indemnification period lasts as long as an officer or a director may be subject to any proceeding arising out of acts or omissions of such officer or director in such capacity. The maximum amount of potential future indemnification is unlimited; however, the Company currently holds director and officer liability insurance. This insurance allows the transfer of risk associated with the Company's exposure and may enable it to recover a portion of any future amounts paid. The Company believes that the fair value of these indemnification obligations is minimal. Accordingly, it has not recognized any liabilities relating to these obligations for any period presented.

13. Subsequent Events

For its interim financial statements as of June 30, 2016 and for the six months then ended, the Company evaluated subsequent events through the date of issuance.

In August 2016, the Company amended the research agreement with the University of Texas at Austin. The scope and term under the agreement were extended through August 31, 2017 with a $750,000 increase in the maximum expenditure limitation.

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

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our unaudited condensed consolidated financial statements and related notes included in Part I, Item 1 of this Quarterly Report as well as the audited consolidated financial statements and notes and Management's Discussion and Analysis of Financial Condition and Results of Operations, included in our Prospectus dated April 6, 2016 filed with the SEC pursuant to Rule 424(b)(4), which we refer to as the "Prospectus". This discussion and other parts of this Quarterly Report contain forward-looking statements that involve risks and uncertainties, such as statements of our plans, objectives, expectations and intentions. Our actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in the section of this report entitled "Risk Factors."

Overview

We are a biotechnology company committed to developing enzyme-based therapeutics in the field of amino acid metabolism that we believe will transform the lives of patients with inborn errors of metabolism and cancer. Our recombinant human enzymes are designed to reduce the level of specific amino acids in the blood. In inborn errors of metabolism, or IEM, we are seeking to reduce the toxic levels of amino acids in patients. In oncology, we are seeking to reduce amino acid blood levels below the normal range where we believe we will be able to exploit the dependence of certain cancers on specific amino acids.

Our lead product candidate, AEB1102, is engineered to degrade the amino acid arginine and is being developed to treat two extremes of arginine metabolism, including arginine excess in patients with Arginase I deficiency, an IEM, as well as some cancers which have shown to have a metabolic dependence on arginine. AEB1102 has demonstrated the ability to reduce blood arginine levels in nonclinical and oncology clinical studies supporting its use as a potential treatment of both Arginase I deficiency and those cancers predicted to be dependent on arginine for survival.

We have initiated three Phase 1 clinical trials for AEB1102. In October 2015, we initiated enrollment for a dose escalation trial in patients with advanced solid tumors and intend to initiate expansion arms in different tumor types in 2017. In June 2016, we initiated a clinical trial for the treatment of Arginase I deficiency, a urea cycle disorder that results in elevated circulating levels of the amino acid arginine, with the intent to assess the safety, tolerability, pharmacokinetics, and pharmacodynamics of AEB1102 in patients with this IEM. In July 2016, we initiated a clinical trial in patients with relapsed refractory acute myeloid leukemia, or AML, and myelodysplastic syndrome, or MDS, in the United States and Canada. We expect to report topline clinical data in 2017.

Since inception, we have devoted substantially all of our efforts and resources to identifying and developing product candidates, conducting nonclinical studies, initiating and conducting clinical trials, recruiting personnel and raising capital. To date, we have financed our operations primarily through private placements of our preferred stock, the initial public offering, or IPO, of our common stock, completed on April 12, 2016, and collection of a research grant. In connection with the IPO, we sold 5,481,940 shares of common stock for aggregate proceeds of $47.3 million net of underwriting discounts and commissions and offering costs.

We have no recorded revenue from product sales and all of our revenue to date has been grant revenue. Since our inception, and through June 30, 2016, we have raised an aggregate of $109.5 million to fund our operations through sale and issuance of convertible preferred and common equity securities and collected $6.7 million in grant proceeds. As of June 30, 2016, we had cash, cash equivalents, and marketable securities of $73.6 million.

We have incurred net losses in each year since inception. Our net losses were $10.0 million and $3.9 million for the six months ended June 30, 2016 and 2015, respectively, and have resulted from costs incurred in connection with our research and development programs and from general and administrative expenses associated with our operations. As of June 30, 2016, we had an accumulated deficit of $33.6 million. We expect to continue to incur significant expenses

and operating losses over the next several years. Our net losses may fluctuate significantly from quarter to quarter and from year to year. We anticipate that our expenses will increase significantly as we continue our clinical and diagnostic development activities for our lead product candidate, AEB1102; concurrently develop our pipeline product candidates; expand and protect our intellectual property portfolio; and hire additional personnel. In addition, we expect to incur additional costs associated with operating as a public company.

Recent Developments

In July 2016, we initiated a Phase 1 trial of AEB1102 for the treatment of patients with relapsed refractory AML or MDS in the United States and Canada to assess the safety, tolerability, pharmacokinetics and pharmacodynamics of AEB1102. Based on data obtained in the Phase 1 trial of AEB1102 for the treatment of advanced solid tumors, the trial protocol was amended to increase the starting dose in patients with AML and MDS. Enrollment is expected to be completed in 2017.

In July 2016, we received Orphan Drug Designation from the European Commission for AEB1102 for the treatment of hyperargininemia secondary to Arginase I deficiency. The European Commission's Orphan Drug Designation provides benefits, such as protocol assistance, fee reductions and ten years of market exclusivity upon regulatory approval.

In June 2016, we initiated a Phase 1 study of AEB1102 for the treatment of patients with Arginase I deficiency to assess the safety, tolerability, pharmacokinetics and pharmacodynamics of AEB1102 in patents with this IEM. Enrollment is expected to be completed in 2016 with topline data expected in the first half of 2017.

In May 2016, we received Fast Track Designation from the U.S. Food and Drug Administration, or FDA, for AEB1102 for the treatment of hyperargininemia secondary to Arginase I deficiency. The FDA's Fast Track Designation is designed to facilitate drug development and expedite the review of drugs to treat serious conditions with an unmet medical need, such as hyperargininemia, which results from Arginase I deficiency. The advantages of Fast Track Designation include actions to potentially expedite development, including opportunities for frequent interactions with the FDA review team to discuss all aspects of development to support approval and eligibility for accelerated approval and priority review depending on clinical data at the time of a Biologics License Application, or BLA, submission.

Components of Operating Results

Revenue

To date, we have recognized revenue solely from a research grant from the Cancer Prevention and Research Institute of Texas, or CPRIT, and have not generated any revenue from the sale of any of our product candidates. Our ability to generate product revenues, which we do not expect will occur for several years, if ever, will depend heavily on the successful development, regulatory approval and eventual commercialization of our product candidates.

In June 2015, we entered into a grant agreement with CPRIT for $19.8 million covering a three year period from June 1, 2014 through May 31, 2017. The grant allows us to receive funds in advance of costs and allowable expenses being incurred. We record the revenue as qualifying costs are incurred and there is reasonable assurance that the conditions of the award have been met for collection. Proceeds received prior to the costs being incurred or the conditions of the award being met are recognized as deferred revenue until the services are performed and the conditions of the award are met.

On a quarterly basis, we are required to submit a financial reporting package outlining the nature and extent of reimbursable costs paid and requesting reimbursement under the grant. At the end of each period, expenses paid prior to reimbursement result in the recognition of a grant receivable.

Research and development expenses

Research and development expenses consist primarily of costs incurred for the discovery and development of our product candidates, most notably, our lead product candidate AEB1102. Since we currently do not have internal laboratory or manufacturing capabilities, we contract with external providers for nonclinical studies, clinical trials and

manufacturing services. Our research and development costs include:

- costs from acquiring clinical trial materials and services performed for contracted services with our strategic manufacturing partner;
- fees paid to clinical trial sites, clinical research organizations, contract research organizations, contract manufacturing organizations, nonclinical research companies, and academic institutions;
- employee and consultant-related expenses incurred, which include salaries, benefits, travel and share-based compensation; and
- expenses incurred under license agreements with third parties.

Research and development costs are expensed as incurred. Advance payments for goods or services to be rendered in the future for use in research and development activities are deferred and capitalized. The capitalized amounts are expensed as the related goods are delivered or the services are performed.

Research and development costs have historically represented the largest component of our total operating expenses. We plan to increase our research and development expenses for the foreseeable future as we continue the development of our product candidates.

Our expenditures on current and future nonclinical and clinical development programs are subject to numerous uncertainties in timing and cost to completion. The duration, costs, and timing of clinical trials and development of our product candidates will depend on a variety of factors, including:

- the scope, rate of progress, and expenses of our ongoing research activities as well as any additional clinical trials and other research and development activities;
- future clinical trial results;
- uncertainties in clinical trial enrollment rates or drop-out or discontinuation rates of patients;
- potential safety monitoring or other studies requested by regulatory agencies;
- significant and changing government regulation; and
- the timing and receipt of regulatory approvals, if any.

The process of conducting the necessary clinical research to obtain FDA and other regulatory approval is costly and time consuming and the successful development of our product candidates is highly uncertain. The risks and uncertainties associated with our research and development projects are discussed more fully in Part II, Item 1A of this Quarterly Report titled “Risk Factors.” As a result of these risks and uncertainties, we are unable to determine with any degree of certainty the duration and completion costs of our research and development projects, or if, when, or to what extent we will generate revenues from the commercialization and sale of any of our product candidates that obtain regulatory approval. We may never succeed in achieving regulatory approval for any of our product candidates.

General and administrative expenses

General and administrative expenses consist primarily of salaries and other related costs, including stock-based compensation, for personnel in executive, finance, accounting, and human resources functions. Other significant costs include legal fees relating corporate matters and fees for accounting and consulting services.

We expect that our general and administrative expenses will increase in the future to support our continued research and development activities, potential commercialization of our product candidates and the increased costs of operating as a public company. These increases will likely include increased costs related to the hiring of additional personnel and fees to outside consultants, lawyers and accountants, among other expenses. Additionally, we expect to incur increased costs associated with being a public company, including expenses related to services associated with maintaining compliance with NASDAQ listing rules and SEC requirements, insurance and investor relations costs.

Interest income

Interest income consists of interest earned on our cash, cash equivalents, and marketable securities.

Income taxes

Since inception in December 2013, through March 10, 2015, we were a Delaware LLC and elected to file as a partnership for federal and state income tax purposes through the year ended December 31, 2014. On March 10, 2015, we converted from a Delaware LLC to a Delaware corporation, and will file a corporate income tax return for the year ended December 31, 2015. For tax purposes, we elected to be treated as a corporation under Subchapter C of Chapter 1 of the United States Internal Revenue Code, effective January 1, 2015. We therefore, were subject to federal and

state tax expense beginning January 1, 2015.

We serve as a holding company for our seven wholly-owned subsidiary corporations. For the year ended December 31, 2016 and 2015, we and our seven wholly-owned subsidiaries will file a consolidated corporate federal income tax return. We use the asset and liability method of accounting for income taxes. Under this method, deferred tax

assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial statements and the tax bases of assets and liabilities. A valuation allowance is established against the deferred tax assets to reduce their carrying value to an amount that is more likely than not to be realized. The deferred tax assets and liabilities are classified as noncurrent along with the related valuation allowance. Due to our lack of earnings history, the net deferred tax assets have been fully offset by a valuation allowance.

We recognize benefits of uncertain tax positions if it is more likely than not that such positions will be sustained upon examination based solely on the technical merits, as the largest amount of benefits that is more likely than not to be realized upon the ultimate settlement. Our policy is to recognize interest and penalties related to the unrecognized tax benefits as a component of income tax expense. To date, there have been no interest or penalties recognized in relation to the unrecognized tax benefits.

Critical Accounting Policies and Estimates

Our condensed consolidated financial statements are prepared in accordance with U.S. generally accepted accounting principles (GAAP). The preparation of these condensed consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, costs and expenses, and related disclosures. These estimates form the basis for judgments we make about the carrying values of our assets and liabilities, which are not readily apparent from other sources. We base our estimates and judgments on historical experience and on various other assumptions that we believe are reasonable under the circumstances. On an ongoing basis, we evaluate our estimates and assumptions. Our actual results may differ from these estimates under different assumptions or conditions.

Our critical accounting policies are those policies which require the most significant judgments and estimates in the preparation of our consolidated financial statements. We believe that the assumptions and estimates associated with our most critical accounting policies are those relating to accrued research and development costs and stock-based compensation.

There have been no significant changes in our critical accounting policies and estimates as compared to the critical accounting policies and estimates disclosed in Management’s Discussion and Analysis of Financial Condition and Operations included in our Prospectus dated April 6, 2016 filed with the SEC, except for the determination of the fair value of our common stock, which was used in estimating the fair value of stock-based awards at grant date. Prior to IPO, our stock was not publicly traded, therefore we estimated the fair value of our common stock as discussed in the Prospectus. Following our IPO, we established a policy of using the closing sale price per share of our common stock as quoted on the NASDAQ Global Market on the date of grant for purposes of determining the exercise price per share of our share-based awards to purchase common stock.

Results of Operations

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

The following table summarizes our results of operations for the three months ended June 30, 2016 and 2015, together with the changes in those items in dollars and as a percentage:

	Three Months Ended			
	June 30,		Dollar	
	2016	2015	Change	% Change

	(dollars in thousands)				
Revenues:					
Grant	$1,373	$3,427	$(2,054)	(60	)%
Operating expenses:					
Research and development	$4,420	$2,736	$1,684	62	%
General and administrative	2,448	2,123	325	15	%
Total operating expenses	6,868	4,859	2,009	41	%
Loss from operations	(5,495)	(1,432)	(4,063)	284	%
Interest income	74	5	69	*	
Other expense, net	(9)	—	(9)	*	
Net loss	$(5,430)	$(1,427)	$(4,003)	281	%

*Percentage not meaningful

Grant Revenues. Grant revenue decreased by $2.1 million, or 60%, to $1.4 million for the three months ended June 30, 2016 from $3.4 million for the three months ended June 30, 2015. The decrease was due to grant revenue recognized in connection with the execution of the CPRIT grant agreement in June 2015. Upon execution of the agreement, all accumulated qualified expenditures paid and incurred during the period from June 1, 2014 through June 30, 2015 were recognized as grant revenue in the three months ended June 30, 2015.

Research and Development Expenses. Research and development expenses increased by $1.7 million, or 62%, to $4.4 million for the three months ended June 30, 2016 from $2.7 million for the three months ended June 30, 2015. Included in the research and development expenses are costs directly associated with our lead product candidate AEB1102, which increased to $2.7 million for the three months ended June 30, 2016 from $1.7 million for the three months ended June 30, 2015. The increase in research and development expenses was primarily due to:

- Higher nonclinical expenses, which increased by $0.4 million as a result of additional toxicology studies and analysis costs in preparation for multi-dose clinical trials related to AEB1102 and additional research with the University of Texas at Austin;
- Higher personnel-related expenses, which increased by $0.8 million as a result of increased headcount to expand our internal regulatory and development capabilities in support of the three separate clinical trials for AEB1102 in patients with advanced solid tumors, Arginase I deficiency, and hematological malignancies; and
- Higher clinical development expenses, which increased by $0.8 million primarily as a result of initiating our Phase 1 dose escalation trials for AEB1102 in patients with advanced solid tumors in October 2015 and Arginase I deficiency in June 2016, and preparing for the initiation of our Phase 1 clinical trial in patients with hematological malignancies.

The increase in research and development expenses was offset by lower manufacturing expenses, which decreased by $0.4 million primarily as a result of manufacturing drug product in the first half of 2015 for use in clinical trials.

General and Administrative Expenses. General and administrative expenses increased by $0.3 million, or 15%, to $2.4 million for the three months ended June 30, 2016 from $2.1 million for the three months ended June 30, 2015. The increase in general and administrative expenses was primarily due to an increase of $0.2 million in employee compensation, recruiting, and travel expenses and $0.2 million in insurance and other administrative costs associated with being a public company offset by a $0.1 million decrease in professional services, audit and legal fees.

Interest Income. Interest income consists of interest earned on our cash, cash equivalents, and marketable securities. The increase in interest income to $74,000 for the three months ended June 30, 2016 from $5,000 for the three months ended June 30, 2015 was primarily due to purchased cash equivalents and marketable securities in September 2015 and funds invested from the closing of the IPO in April 2016.

Comparison of the Six Months Ended June 30, 2016 and 2015

The following table summarizes our results of operations for the six months ended June 30, 2016 and 2015, together with the changes in those items in dollars and as a percentage:

	Six Months Ended June 30,		Dollar Change	% Change
	2016	2015		
	(dollars in thousands)			
Revenues:				
Grant	$2,232	$3,427	$(1,195)	(35)%
Operating expenses:				
Research and development	$8,017	$4,358	$3,659	84 %

General and administrative	4,277	2,970	1,307	44	%
Total operating expenses	12,294	7,328	4,966	68	%
Loss from operations	(10,062)	(3,901)	(6,161)	158	%
Interest income	100	6	94	*	
Other expense, net	(15)	—	(15)	*	
Net loss	$(9,977)	$(3,895)	$(6,082)	156	%

*Percentage not meaningful

Grant Revenues. Grant revenue decreased by $1.2 million, or 35%, to $2.2 million for the six months ended June 30, 2016 from $3.4 million for the six months ended June 30, 2015. The decrease was due to grant revenue recognized in connection with the execution of the CPRIT grant agreement in June 2015. Upon execution of the agreement, all accumulated qualified expenditures paid and incurred during the period from June 1, 2014 through June 30, 2015 were recognized as grant revenue in the six months ended June 30, 2015.

Research and Development Expenses. Research and development expenses increased by $3.7 million, or 84%, to $8.0 million for the six months ended June 30, 2016 from $4.3 million for the six months ended June 30, 2015. Included in the research and development expenses are costs directly associated with our lead product candidate AEB1102, which increased to $5.1 million for the six months ended June 30, 2016 from $2.6 million for the six months ended June 30, 2015. The increase in research and development expenses was primarily due to:

- Higher nonclinical expenses, which increased by $1.2 million as a result of additional toxicology studies and analysis costs in preparation for multi-dose clinical trials related to AEB1102 and additional research with the University of Texas at Austin;
- Higher personnel-related expenses, which increased by $1.4 million as a result of increased headcount to expand our internal regulatory and development capabilities in support of the three separate clinical trials for AEB1102 in patients with advanced solid tumors, Arginase I deficiency, and hematological malignancies; and
- Higher clinical development expenses, which increased by $1.4 million primarily as a result of initiating our Phase 1 dose escalation trials for AEB1102 in patients with advanced solid tumors in October 2015 and Arginase I deficiency in June 2016, and preparing for the initiation of our Phase 1 clinical trial in patients with hematological malignancies.

The increase in research and development expenses was offset by lower manufacturing expenses, which decreased by $0.6 million primarily as a result of manufacturing drug product in the first half of 2015 for use in clinical trials.

General and Administrative Expenses. General and administrative expenses increased by $1.3 million, or 44%, to $4.3 million for the six months ended June 30, 2016 from $3.0 million for the six months ended June 30, 2015. The increase in general and administrative expenses was due to an increase of $0.5 million in employee compensation, recruiting, and travel expenses, $0.5 million in professional services, audit and legal fees associated with preparing to be a public company and the development of administrative functions, and $0.2 million in insurance and other administrative costs associated with being a public company.

Interest Income. Interest income consists of interest earned on our cash, cash equivalents, and marketable securities. The increase in interest income to $100,000 for the six months ended June 30, 2016 from $6,000 for the six months ended June 30, 2015 was primarily due to purchased cash equivalents and marketable securities in September 2015 and funds invested from the closing of the IPO in April 2016.

Liquidity and Capital Resources

Sources of liquidity

We are an early stage biotechnology company with a limited operating history, and due to our significant research and development expenditures, we have generated operating losses since our inception and have not generated any revenue from the sale of any products. Since our inception and through June 30, 2016, we have funded our operations by raising an aggregate of $109.5 million of gross proceeds from the sale and issuance of convertible preferred and common equity securities and collecting $6.7 million in grant proceeds. Additionally, we entered into an agreement with our strategic manufacturing partner in 2013 to provide convertible preferred shares in exchange for services performed, with the obligation fully satisfied in June 2015.

In April 2016, we completed an IPO and sold 5,481,940 shares of common stock for aggregate proceeds of $47.3 million net of underwriting discounts and commissions and offering expenses.

In June 2015, we entered into a Cancer Research Grant Contract with CPRIT, or the Grant Contract, under which we expect to generate up to $19.8 million in grant funding to fund our development of AEB1102. Through June 30, 2016, we have collected $6.7 million in grant proceeds with $13.1 million available for future collection under the grant contract. As of June 30, 2016, we have a grant receivable outstanding of $1.6 million.

Our primary use of cash is to fund the development of our lead product candidate, AEB1102. This includes both the research and development costs and the general and administrative expenses required to support those operations.

Since we are an early stage company, we have incurred significant operating losses since our inception and we anticipate such losses, in absolute dollar terms, to increase as we continue our clinical trials in AEB1102 and expand our development efforts in our pipeline of nonclinical candidates.

As of June 30, 2016, we had available cash, cash equivalents, and marketable securities of $73.6 million. We believe that we have sufficient resources to fund our operations through March 31, 2018 with our existing cash, cash equivalents, and marketable securities.

Future funding requirements and operational plan

Our operational plan for the near future is to commence and continue clinical trials for our lead product candidate AEB1102 in three separate indications, advanced solid tumors, hematological malignancies, and Arginase I deficiency, and to expand development for at least one additional product candidate. As such, we plan to increase our research and development expenditures for the foreseeable future with nonclinical studies, clinical trials, manufacturing and an integrated biomarker strategy. We expect our principal expenditures during this time period to include expenses for the following:

- funding the continuing development of AEB1102;
- funding the advancement of additional product candidates; and
- funding working capital, including general operating expenses.

We anticipate that we will continue to generate losses into the foreseeable future as we develop our lead product candidates, seek regulatory approval of those candidates and begin to commercialize any approved products. Until such time as we can generate substantial product revenue, we expect to finance our cash needs through a combination of equity or debt financings, research grants, collaborations, or other sources. We currently have no debt or debt facility or additional committed capital. To the extent that we raise additional equity, the ownership interest of our shareholders will be diluted.

Due to our significant research and development expenditures, we have generated substantial losses in each period since inception. We have incurred an accumulated deficit of $33.6 million through June 30, 2016. We expect to incur substantial losses in the future as we expand our research and development capabilities. Based on those plans, we expect our existing cash, cash equivalent, and marketable securities will enable us to fund our operating expenses and capital expenditure requirements at least through March 31, 2018. We have based this estimate on assumptions that may prove to be incorrect, however, and we could use our capital resources sooner than we expect.

Cash flows

The following table summarizes our cash flows for the periods indicated (in thousands):

	Six Months Ended June 30,	
	2016	2015
Net cash used in operating activities	$(8,620)	$(6,338)
Net cash provided by (used in) investing activities	660	(44)
Net cash provided by financing activities	49,294	42,847
Net increase in cash	$41,334	$36,465

Cash used in operating activities

Cash used in operating activities for the six months ended June 30, 2016 was $8.6 million and reflected a net loss of $10.0 million. Our net loss was offset in part by non-cash expenses of $0.5 million for stock-based compensation. The change in operating assets and liabilities was primarily due to an increase in accounts payables of $0.2 million and accrued and other liabilities of $1.2 million driven by an increase in accrued research and development costs, offset by a $0.7 million increase in prepaid expenses and other assets driven by an increase in prepaid insurance premiums and prepaid clinical development costs.

Cash used in operating activities for the six months ended June 30, 2015 was $6.3 million and reflected a net loss of $3.9 million and a decrease in operating assets and liabilities of $3.2 million. Our net loss was offset in part by non-cash expenses of $0.5 million for services performed by our strategic manufacturing partner for issued convertible preferred

stock. The change in operating assets and liabilities was primarily due to an increase in grant accounts receivable of $3.4 million driven by executing the CPRIT grant agreement in June 2015, offset by an increase of $0.5 million of accounts payable and accrued expenses driven by an increase in nonclinical activity.

Cash used in investing activities

Cash provided by investing activities for the six months ended June 30, 2016 was $0.7 million and consisted of $3.0 million in purchases of marketable securities and $0.1 million in purchases of property and equipment offset by $3.8 million in maturities of marketable securities.

Cash used in investing activities for the six months ended June 30, 2015 was $44,000 and consisted of $34,000 in purchases of property and equipment and a $10,000 increase in restricted cash.

Cash provided by financing activities

Cash provided by financing activities for the six months ended June 30, 2016 was $49.3 million, which consisted of $54.8 million from the IPO in April 2016, offset by $3.8 million in underwriting discounts and commissions and $1.7 million in offering costs.

Cash provided by financing activities for the six months ended June 30, 2015 was $42.8 million resulting from the $44.0 million closing of the Series B financing in March 2015, offset by $0.3 million in Series B offering costs and $0.8 million in IPO offering costs.

Contractual Obligations

In November 2014, we entered into an operating lease agreement to occupy office space in Austin, TX. The lease commenced in January 2015 and will continue through December 2017. The total of the estimated rent payments over the term of the lease are approximately $419,000.

In August 2016, the Company amended the research agreement with the University of Texas at Austin. The scope and term under the agreement were extended through August 31, 2017 with a $750,000 increase in the maximum expenditure limitation. The effective agreement as of June 30, 2016 expires on August 31, 2017 with no remaining payment obligations.

Contingent contractual obligations

The terms of the CPRIT Grant Contract require that we pay tiered royalties in the low- to mid-single digit percentages on revenues from sales and license or products or services that are based upon, utilize, are developed from or materially incorporate the intellectual property resulting from the grant-funded activities for AEB1102. Such royalties reduce to less than one percent after a mid-single digit multiple of the grant funds have been repaid to CPRIT in royalties. Such royalties are payable for so long as we have marketing exclusivity or patents covering the applicable product or service (or twelve years from commercial sale of product or service in certain countries if there is no such exclusivity or patent protection).

On December 24, 2013, two of our wholly owned subsidiaries, AECase, Inc. (AECase) and AEMase, Inc. (AEMase) entered into license agreements with the University of Texas at Austin (the University) under which the University has granted to AECase and AEMase exclusive, worldwide, sublicenseable licenses. The University granted the AECase license under a patent application relating to the right to use technology related to our AEB3103 product candidate. The University granted the AEMase license under a patent relating to the right to use technology related to our AEB2109 product candidate.

The licenses have substantially identical terms. With respect to each product candidate covered by a license with the University, AECase or AEMase could be required to pay the University up to $6.4 million milestone payments based on the achievement of certain development milestones, including clinical trials and regulatory approvals, the majority of which are due upon the achievement of later development milestones, including a $5.0 million payment due on regulatory approval of a product and a $500,000 payment payable on final regulatory approval of a product for a second indication. AECase and AEMase are also required to pay an annual license fee, ranging from $5,000 to $25,000. In addition, AECase and AEMase will pay the University a low single digit royalty on worldwide-net sales of products covered under each license agreement, together with a revenue share on non-royalty consideration received from sublicensees. The rate of the revenue share depends on the date the sublicense agreement is signed. The rate is 30% for agreements signed in

2014, 25% for agreements signed in 2015, 20% for agreements signed in 2016, 15% for agreements signed in 2017 and 6.5% for agreements signed in 2018 and thereafter. The University may terminate the agreement for breach by AECase or AEMase that is not cured within 30 or 60 days of notice (depending on the type of breach) and three or more financial breaches in any nine month period which, even if cured, were not cured within 30 days of notice, or if AECase or AEMase or any of their respective affiliates or sublicensees participates in any proceeding to challenge the licensed patent rights (unless, with respect to sublicensees, AECase or AEMase terminates the applicable sublicense).

Off Balance Sheet Arrangements

We do not have any off balance sheet arrangements, as defined by applicable SEC regulations.

Recent Accounting Pronouncements

In August 2014, the FASB issued ASU 2014-15, Presentation of Financial Statements—Going Concern (Subtopic 205-40): Disclosure of uncertainties about an Entity's Ability to continue as a Going Concern, which will require management to assess, at each annual and interim reporting period, the entity's ability to continue as a going concern. The amendments in ASU 2014-15 do not have any application to an entity's financial statements, but only to disclosure in the related notes. ASU 2014-15 is effective for annual periods ending after December 15, 2016 and early application is permitted. The Company intends to apply ASU 2014-15 in the first quarter of 2017 and for the annual period ending December 31, 2016.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842), which establishes a comprehensive new lease accounting model. The new standard: (a) clarifies the definition of a lease; (b) requires a dual approach to lease classification similar to current lease classifications; and, (c) causes lessees to recognize leases on the balance sheet as a lease liability with a corresponding right-of-use asset for leases with a lease-term of more than twelve months. The new standard is effective for fiscal years and interim periods beginning after December 15, 2018 and requires modified retrospective application. Early adoption is permitted. We are currently evaluating the impact that the adoption of ASU 2016-02 will have on our consolidated financial statements.

In March 2016, the FASB issued ASU No. 2016-09, Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting. The standard is intended to simplify several areas of accounting for share-based compensation arrangements, including the income tax impact, classification of awards as either equity or liabilities, classification on the statement of cash flows and forfeitures. The standard is effective for fiscal years and interim periods beginning after December 15, 2016. Early adoption is permitted. We are currently evaluating the impact that the standard will have on our consolidated financial statements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

We are exposed to market risks in the ordinary course of our business. These risks primarily include interest rate sensitivities.

As of June 30, 2016, we held $73.6 million in cash, cash equivalents, and marketable securities, all of which was denominated in U.S. dollar assets, and consisting primarily of investments in reverse repurchase agreements and U.S government and agency securities.

Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates, particularly because our investments are in short-term marketable securities. Our marketable securities are subject to interest rate risk and could fall in value if market interest rates increase. Due to the short-term

duration of our investment portfolio and the low risk profile of our investments, an immediate 10% change in interest rates would not have a material effect on the fair market value of our investment portfolio. We have the ability to hold our marketable securities until maturity, and therefore we would not expect our operating results or cash flows to be affected to any significant degree by the effect of a change in market interest rates on our investments.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and our principal financial officer, evaluated, as of the end of the period covered by this Quarterly Report on Form 10-Q, the effectiveness of our disclosure controls and procedures. Based on that evaluation of our disclosure controls and procedures as of June 30, 2016, our

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

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting during our first fiscal quarter ended June 30, 2016 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. – OTHER INFORMATION

Item 1. Legal Proceedings

From time to time, we may become involved in legal proceedings relating to claims arising from the ordinary course of business. Our management believes that there are currently no claims or actions pending against us, the ultimate disposition of which could have a material adverse effect on our results of operations, financial condition or cash flows.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information in this quarterly report on Form 10-Q, including our consolidated financial statements and related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations," before investing in our common stock. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that affect us. If any of the following risks occur, our business, operating results and prospects could be materially harmed. In that event, the price of our common stock could decline, and you could lose part or all of your investment.

Risks Related to Our Business and Industry

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

We are an early-stage biotechnology company. We began operations as a limited liability company in December 2013 and converted to a Delaware corporation in March 2015. Our operations to date have been limited to organizing and staffing our company, business planning, raising capital, acquiring and developing our technology, identifying potential product candidates, undertaking nonclinical studies, and preparing for and commencing clinical trials of our most advanced product candidate, AEB1102.

We have not yet demonstrated our ability to successfully complete any clinical trials, including large-scale, pivotal clinical trials, obtain marketing approvals, manufacture a commercial scale product or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. Products, on average, take ten to 15 years to be developed from the time they are discovered to the time they are approved and available for treating patients. Although we have recruited a team that has experience with clinical trials, as a company we have no experience in conducting clinical trials. In part because of this lack of experience, we cannot be certain that planned clinical trials will begin or be completed on time, if at all. Consequently, any predictions you make about our future success or viability based on our short operating history to date may not be as accurate as they could be if we had a longer operating history or an established track record in commercializing products or conducting clinical trials.

In addition, as a new business, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors. We will need to transition from a company with a research focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

We have no source of product revenue and we have incurred significant losses since inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.

We are an early-stage biotechnology company with a limited operating history. We have no approved products and have only recently begun clinical development of AEB1102. Our ability to generate revenue and become profitable depends upon our ability to successfully complete the development of any of our product candidates, including AEB1102, for any of our target indications and to obtain necessary regulatory approvals. To date, we have recognized revenue solely from a government grant and have not generated any product revenue. Even if we receive regulatory approval for any of our product candidates, we do not know when these product candidates will generate revenue for us, if at all.

In addition, since inception, we have incurred significant operating losses. For the three and six months ended June 30, 2016, we reported a net loss of $5.4 million and $10.0 million, respectively. For the year ended December 31, 2015, we reported a net loss of $11.3 million. As of June 30, 2016, we had an accumulated deficit of $33.6 million. We have financed our operations primarily through private placements of our preferred stock, the initial public offering, or IPO, of our common stock, which closed on April 12, 2016, and collection of a research grant. We have devoted substantially all of our efforts to research and development. We have only recently initiated clinical development for AEB1102 for the treatment of advanced solid tumors, Arginase I deficiency and hematological malignancies. We have not initiated clinical development of our other product candidates and expect that it will be many years, if ever, before we have a product candidate ready for commercialization. We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future, and the net losses we incur may fluctuate significantly from quarter to quarter. We anticipate that our expenses will increase substantially if and as we:

- continue our research, nonclinical and clinical development of our product candidates;
- seek to identify additional product candidates;
- conduct additional nonclinical studies and initiate clinical trials for our product candidates;
- seek marketing approvals for any of our product candidates that successfully complete clinical trials, including pivotal trials;
- ultimately establish a sales, marketing and distribution infrastructure to commercialize any product candidates for which we may obtain marketing approval;
- maintain, expand and protect our intellectual property portfolio;
- hire additional executive, clinical, quality control and scientific personnel;
- add operational, financial and management information systems and personnel, including personnel to support our product development; and
- acquire or in-license other product candidates and technologies.

We are unable to predict the timing or amount of increased expenses, or when, or if, we will be able to achieve or maintain profitability because of the numerous risks and uncertainties associated with product development. In addition, our expenses could increase significantly beyond expectations if we are required by the FDA, EMA, MHRA or other relevant regulatory authorities to perform studies in addition to those that we currently anticipate. Even if AEB1102, or any of our other product candidates, is approved for commercial sale, we anticipate incurring significant costs associated with the commercial launch of any product candidate.

To become and remain profitable, we must develop and eventually commercialize a product candidate or product candidates with significant market potential. This will require us to be successful in a range of challenging activities, including completing nonclinical testing, initiating and completing clinical trials of one or more of our product candidates, obtaining marketing approval for these product candidates, manufacturing, marketing and selling those product candidates for which we obtain marketing approval and satisfying any post-marketing requirements. We may

never succeed in these activities and, even if we do, we may never generate revenues that are significant or large enough to achieve profitability. We are currently only in the nonclinical development stages for most of our product candidates, and have only recently initiated clinical development for AEB1102 for the treatment of advanced solid tumors, Arginase I deficiency and hematological malignancies. If we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would decrease the value of the

company and could impair our ability to raise capital, maintain or expand our research and development efforts, expand our business or continue our operations. A decline in the value of our company would also cause you to lose part or even all of your investment.

We may not be successful in advancing the clinical development of our product candidates, including AEB1102.

In order to execute on our strategy of advancing the clinical development of our product candidates, we have designed our Phase 1 trial of AEB1102 in the United States for the treatment of Arginase I deficiency and our ongoing Phase 1 trial in the United States for the treatment of patients with advanced solid tumors. We have designed our recently initiated Phase 1 trial of AEB1102 for the treatment of hematological malignancies and the planned expansion portion of our Phase 1 trial of AEB1102 for the treatment of tumors predicted to be dependent on arginine based on our biomarker studies in archival tumor samples and in patient-derived xenograft efficacy studies, or studies involving the growth of tissue or cells from one species in a different species. If our product candidate fails to work as we expect, our ability to assess the therapeutic effect, seek regulatory approval or otherwise begin or further clinical development, could be compromised. This may result in longer development times, larger trials and a greater likelihood of not obtaining regulatory approval.

In addition, as we pursue oncology-related applications of our product candidates, because the natural history of different tumor types is variable, we will need to study our product candidates, including AEB1102, in clinical trials specific for a given tumor type and this may result in increased time and cost. Even if our product candidate demonstrates efficacy in a particular tumor type, we cannot guarantee that any product candidate, including AEB1102, will behave similarly in all tumor types, and we will be required to obtain separate regulatory approvals for each tumor type we intend a product candidate to treat. If any of our ongoing or planned clinical trials are unsuccessful, our business will suffer.

We or third parties may not be successful in developing companion diagnostic assays for our product candidates.

In developing a product candidate, we expect that if we use a biomarker-based test to identify and only enroll patients in clinical trials with tumors that express the biomarker, the FDA will require the development and regulatory approval of a companion diagnostic assay as a condition to approval of the product candidate. We do not have experience or capabilities in developing or commercializing these companion diagnostics and plan to rely in large part on third parties to perform these functions. Companion diagnostic assays are subject to regulation by the FDA as medical devices and require separate regulatory approval prior to the use of such diagnostic assays with a therapeutic product candidate. If we, or any third parties that we engage to assist us, are unable to successfully develop companion diagnostic assays for use with our product candidates, or experience delays in development, we may be unable to identify patients with the specific profile targeted by our product candidates for enrollment in our clinical trials. Accordingly, further investment may be required to further develop or obtain the required regulatory approval for the relevant companion diagnostic assay, which would delay or substantially impact our ability to conduct further clinical trials or obtain regulatory approval. In addition, if a companion diagnostic is necessary for any of our product candidates, the delay or failure to obtain regulatory approval of the companion diagnostic would delay or prevent the approval of the therapeutic product candidate. EMA, MHRA or comparable foreign regulatory authorities may also require the development and regulatory approval of a companion diagnostic assay as a condition to approval of the product candidate.

We will need substantial additional funding. If we are unable to raise capital when needed, we would be compelled to delay, reduce or eliminate our product development programs or commercialization efforts.

We expect our expenses to increase in parallel with our ongoing activities, particularly as we continue our discovery and nonclinical development to identify new clinical candidates and initiate and continue clinical trials of, and seek marketing approval for, our product candidates. In addition, if we obtain marketing approval for any of our product candidates, we expect to incur significant commercialization expenses related to product sales, marketing,

manufacturing and distribution. Furthermore, we expect to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we would be forced to delay, reduce or eliminate our discovery and nonclinical development programs or any future clinical development or commercialization efforts.

Based upon our planned use of the net proceeds from our IPO, we estimate such funds will be sufficient for us to fund the Phase 1 trial in the United States, and the planned Phase 2 trial in Europe for the treatment of patients with Arginase I deficiency, and to continue to fund our Phase 1 trials for AEB1102 for the treatment of patients with advanced solid tumors and hematological malignancies. Our future capital requirements will depend on many factors, including:

- the costs associated with the scope, progress and results of compound discovery, nonclinical development, laboratory testing and clinical trials for our product candidates;
- the costs related to the extent to which we enter into partnerships or other arrangements with third parties in order to further develop our product candidates;
- the costs and fees associated with the discovery, acquisition or in-license of product candidates or technologies;
- our ability to establish collaborations on favorable terms, if at all;
- the costs of future commercialization activities, if any, including product sales, marketing, manufacturing and distribution, for any of our product candidates for which we receive marketing approval;
- revenue, if any, received from commercial sales of our product candidates, should any of our product candidates receive marketing approval; and
- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims.

Our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of product candidates that we do not expect to be commercially available for many years, if at all. Accordingly, we will continue to rely on additional financing to achieve our business objectives, which may not be available to us on acceptable terms, or at all.

Raising additional capital may cause dilution to our stockholders, restrict our operations or require us to relinquish rights to our technologies or 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 equity or equity-linked offerings, debt financings, grants from research organizations and license and collaboration agreements. We do not have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may rank senior to our common stock and include liquidation or other preferences, covenants or other terms that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, 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 raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to us and/or that may reduce the value of our common stock.

We depend heavily on the success of our most advanced product candidate, AEB1102. All of our product candidates, other than AEB1102, are still in nonclinical development or nonclinical testing, and for AEB1102, the early stages of clinical development. Future clinical trials of our product candidates may not be successful. If we are unable to commercialize our product candidates or experience significant delays in doing so, our business will be materially harmed.

We have invested a significant portion of our efforts and financial resources in the nonclinical development and testing of our most advanced product candidate, AEB1102, for the treatment of patients with Arginase I deficiency and patients with advanced solid tumors and hematological malignancies that are dependent on arginine. 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 AEB1102. The success of AEB1102 and our other product candidates will depend on many factors, including the following:

- successful enrollment of patients in, and the completion of, our ongoing and planned clinical trials;
- receiving marketing approvals from applicable regulatory authorities;
- establishing commercial manufacturing capabilities or making arrangements with third-party manufacturers;

- obtaining and maintaining patent and trade secret protection and non-patent exclusivity for our product candidates and their components;
- enforcing and defending intellectual property rights and claims;
- achieving desirable therapeutic properties for our product candidates' intended indications;
- launching commercial sales of our product candidates, if and when approved, whether alone or in collaboration with third parties;
- acceptance of our product candidates, if and when approved, by patients, the medical community and third-party payors;
- effectively competing with other therapies; and
- maintaining an acceptable safety profile of our product candidates through clinical trials and following regulatory 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 our product candidates, which would materially harm our business.

Clinical drug development involves a lengthy and expensive process with an uncertain outcome. We may experience delays in completing, or ultimately be unable to complete, the development and commercialization of any of our product candidates.

We have only recently initiated clinical trials of our lead product candidate AEB1102, and the risk of failure for all of our product candidates is high. Before obtaining marketing approval from regulatory authorities for the sale of any product candidate, we must complete nonclinical development and then conduct extensive clinical trials to demonstrate the safety and efficacy of our product candidates in humans for the respective target indications. Clinical testing is expensive, difficult to design and implement and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process, and we only recently commenced clinical trials for AEB1102 for the treatment of patients with advanced solid tumors, Arginase I deficiency and hematological malignancies. Further, the results of nonclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials that will likely differ in design and size from early-stage clinical trials, and interim results of a clinical trial do not necessarily predict final results. For example, for AEB1102 for the treatment of patients with advanced solid tumors, we have only recently treated our first patients, and while we have observed a temporary reduction in blood arginine, this data may not necessarily be predictive of the final results of all patients intended to be enrolled in this Phase 1 trial or in future trials. Furthermore, our early clinical trials, such as our recently initiated Phase 1 clinical trial for the treatment of Arginase I deficiency, will evaluate the safety of our product candidates, and we will not be evaluating the efficacy of our product candidates in these early trials. Moreover, nonclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in nonclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their products. It is impossible to predict when or if any of our product candidates will prove effective or safe in humans or will receive regulatory approval.

We may experience delays in our ongoing and planned clinical trials and we do not know whether planned clinical trials will begin or enroll subjects on time, whether they will need to be redesigned or whether they will be able to be completed on schedule, if at all. There can be no assurance that the FDA, EMA, MHRA or any similar foreign regulatory agency will allow us to begin clinical trials or that they will not put any of the trials for any of our product candidates that enter clinical development on clinical hold in the future. We may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent our ability to receive marketing approval or commercialize our product candidates. Clinical trials may be delayed, suspended or prematurely terminated because costs are greater than we anticipate or for a variety of reasons, such as:

- delay or failure in reaching agreement with the FDA, EMA, MHRA or a comparable foreign regulatory authority on a trial design that we are able to execute;
-

delay or failure in obtaining authorization to commence a trial or inability to comply with conditions imposed by a regulatory authority regarding the scope or design of a clinical trial;

- delays in reaching, or failure to reach, agreement on acceptable clinical trial contracts or clinical trial protocols with planned trial sites;
- inability, delay, or failure in identifying and maintaining a sufficient number of trial sites, many of which may already be engaged in other clinical programs;

- delay or failure in recruiting and enrolling suitable subjects to participate in one or more clinical trials;
- delay or failure in having subjects complete a trial or return for post-treatment follow-up;
- clinical sites and investigators deviating from the trial protocol, failing to conduct the trial in accordance with regulatory requirements, or dropping out of a trial;
- a clinical hold for any of our ongoing or planned clinical trials, including for AEB1102, where a clinical hold in a trial in one indication would result in a clinical hold for clinical trials in other indications;
- clinical trials of our product candidates may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct more clinical trials than we anticipate or abandon product development programs;
- the number of patients required for clinical trials of our product candidates may be larger than we anticipate, enrollment in these clinical trials may be slower than we anticipate or insufficient or participants may drop out of these clinical trials at a higher rate than we anticipate;
- we may experience delays or difficulties in the enrollment of patients with Arginase I deficiency or patients with tumors or hematological malignancies dependent on arginine, including the identification of patients with Arginase I deficiency or development or identification of a test, if needed, to screen for those cancer patients;
- 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;
- we may have difficulty partnering with experienced CROs that can screen for patients with tumors or hematological malignancies dependent on arginine that AEB1102 is designed to target and with CROs that can run our clinical trials effectively;
- regulators 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 unacceptable health risks;
- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates may be insufficient or inadequate; or
- there may be changes in governmental regulations or administrative actions.

If we are required to conduct additional clinical trials or other testing of our product candidates beyond those that we currently contemplate, if we are unable to successfully initiate or complete clinical trials of our product candidates or other testing, if the results of these trials or tests do not demonstrate sufficient clinical benefit or if our product candidates do not have an acceptable safety profile, we may:

- be delayed in obtaining marketing approval for our product candidates;
- not obtain marketing approval at all;
- obtain approval for indications or patient populations that are not as broad as intended or desired;
- obtain approval with labeling that includes significant use or distribution restrictions or safety warnings that would reduce the potential market for our product candidates or inhibit our ability to successfully commercialize our product candidates;
- be subject to additional post-marketing restrictions and/or testing requirements; or
- have the product removed from the market after obtaining marketing approval.

We do not know whether any of our planned or current nonclinical studies, or ongoing or planned clinical trials, will need to be restructured or will be completed on schedule, or at all. For example, we withdrew our initial IND for the treatment of Arginase I deficiency in order to comply with new draft guidance issued by the FDA that required additional toxicology studies. In addition, we originally proposed including subjects younger than age 18 in our initial Phase 1 trial in patients with Arginase I deficiency; however, the FDA stated that enrollment in this Phase 1 trial must currently be limited to adult patients 18 years and older. Significant nonclinical or clinical trial delays also could shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we do and impair our ability to successfully commercialize our product candidates and may materially harm our business and results of operations.

We may not be able to submit INDs, or foreign equivalents outside of the United States, to commence clinical trials for product candidates on the timeframes we expect, and even if we are able to, the FDA, EMA, MHRA or comparable foreign regulatory authorities may not permit us to proceed with planned clinical trials.

We are currently conducting nonclinical development of our product candidates other than our clinical trials for AEB1102 for the treatment of patients with advanced solid tumors, Arginase I deficiency and hematological malignancies. Progression of any candidate into clinical trials is inherently risky and dependent on the results obtained in nonclinical programs, and other potential results such as the results of other clinical programs and results of third-party programs. If results are not available when expected or problems are identified during therapy development, we may experience significant delays in clinical development. This may also impact our ability to achieve certain financial milestones and the expected timeframes to market any of our product candidates. Failure to submit or have effective INDs, CTAs or other comparable foreign equivalents and commence clinical programs will significantly limit our opportunity to generate revenue.

Our recombinant human enzyme product candidates for our oncology indications represent a novel approach to cancer treatment, which could result in heightened regulatory scrutiny, delays in clinical development, or delays in our ability to achieve regulatory approval or commercialization of our product candidates.

Recombinant human enzyme products are a new category of therapeutics. Because this is a relatively new and expanding area of novel therapeutic interventions, there can be no assurance as to the length of the trial period, the number of patients the FDA, EMA, MHRA or another applicable regulatory authority will require to be enrolled in the trials in order to establish the safety, efficacy, purity and potency of engineered human enzyme products, or that the data generated in these trials will be acceptable to the FDA or another applicable regulatory authority to support marketing approval.

We have only recently initiated our Phase 1 clinical trials for AEB1102 for the treatment of patients with advanced solid tumors, Arginase I deficiency and hematological malignancies. We have not dosed any of our other product candidates in humans. Our existing and future planned clinical trials may reveal significant adverse events, toxicities or other side effects not seen in our nonclinical studies and may result in a safety profile that could inhibit regulatory approval or market acceptance of any of our product candidates.

In order to obtain marketing approval for any of our product candidates, we must demonstrate the safety and efficacy of the product candidate for the relevant clinical indication or indications through nonclinical studies and clinical trials as well as additional supporting data. If our product candidates are associated with undesirable side effects in nonclinical studies or clinical trials or have characteristics that are unexpected, we may need to interrupt, delay or abandon their development or limit development to more narrow uses or subpopulations in which the undesirable side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective.

We have only recently initiated our clinical trials for AEB1102 for the treatment of patients with advanced solid tumors, Arginase I deficiency and hematological deficiencies. Given the nature of the patient population enrolled in these trials, we expect to observe serious adverse events which could be related or unrelated to AEB1102. For example, in our Phase 1 trial for AEB1102 for the treatment of patients with advanced solid tumors, we have observed serious adverse events in some patients, including death. Reported serious adverse events included hypercalcemia, bacteremia, general weakness, wrist pain, shoulder pain, worsening of neck pain, deep vein thrombosis associated with catheter insertion, pericardial effusion, respiratory failure and worsening of the patients' underlying cancer, none of which were assessed as related to the administration of AEB1102. All patients recovered except for two patients who died after discontinuing the trial due to worsening of the underlying cancer. To date, we do not consider any of these serious adverse events to be drug-related and are proceeding with the dosing schedule. Subjects in our ongoing and planned clinical trials may suffer significant serious adverse events, including those that are drug-related, or other side effects not observed in our nonclinical studies, including, but not limited to, immune responses, organ toxicities such as liver, heart or kidney or other tolerability issues. We have not dosed any of our other product candidates in

humans.

Testing in animals, such as our primate studies for AEB1102, may not uncover all side effects in humans or any observed side effects in animals may be more severe in humans. For example, it is possible that patients' immune systems may recognize our engineered human enzymes as foreign and trigger an immune response. This risk is heightened in patients who lack the target enzyme, as is the case with patients with Arginase I deficiency that we are treating in our recently initiated Phase 1 trial and our future trials for this IEM. In addition, our product candidates such as AEB1102 break down target amino acids such as arginine, thereby releasing metabolites such as ornithine into the bloodstream. Some patients may be sensitive to these metabolites, increasing the risk of an adverse reaction due to treatment, which risk may not be able to be mitigated through dosing. Finally, although our engineered human enzyme

product candidates such as AEB1102 are engineered from the human genome, AEB1102 is produced in E. coli. This manufacturing process could lead AEB1102 to be more likely to trigger an immune response than we expect.

To the extent significant adverse events or other side effects are observed in any of our clinical trials, we may have difficulty recruiting patients to the clinical trial, patients may drop out of our trial, or we may be required to abandon the trial or our development efforts of that product candidate altogether. Some potential therapeutics developed in the biotechnology industry that initially showed therapeutic promise in early-stage studies have later been found to cause side effects that prevented their further development. Even if the side effects do not preclude the drug from obtaining or maintaining marketing approval, undesirable side effects may inhibit market acceptance of the approved product due to its tolerability versus other therapies. Any of these developments could materially harm our business, financial condition and prospects.

Further, toxicities associated with our product candidates may also develop after regulatory approval and lead to the withdrawal of the product from the market. We cannot predict whether our product candidates will cause organ or other injury in humans that would preclude or lead to the revocation of regulatory approval based on nonclinical studies or early stage clinical testing.

If we experience delays or difficulties in the enrollment of patients in our ongoing or planned clinical trials, our receipt of necessary regulatory approvals could be delayed or prevented.

We may not be able to initiate or continue our ongoing or planned clinical trials if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA, EMA, MHRA or comparable regulatory authorities outside the United States. More specifically, many of our product candidates, including AEB1102, initially target indications that may be characterized as orphan markets, which can prolong the clinical trial timeline for the regulatory process if sufficient patients cannot be enrolled in a timely manner. Arginase I deficiency, for example, is the least common of the urea cycle disorders, with a reported incidence of 1:350,000 to 1:1,000,000 live births. Urea cycle disorders are the IEM resulting from defects in the enzymes of the urea cycle, the process by which the human body detoxifies ammonia, a natural byproduct of protein metabolism. While there is currently a neonatal blood test to screen for Arginase I deficiency, it has only been in broad use in the United States since 2006 and is not commonly used in Europe. We plan initially to treat patients who are 18 and older in the United States. The urea cycle disorder consortium and one national urea cycle disorder patient group have together identified an aggregate of approximately 22 patients with Arginase I deficiency in the United States and approximately 16 in Europe. Because neonatal blood testing for this disorder did not become common in the United States until 2006, we believe that approximately half of those identified in the United States are younger than 18, and thus would not be eligible for inclusion in our recently initiated Phase 1 trial in the United States.

Delays in patient enrollment could result in increased costs, delays in advancing our product development, delays in testing the effectiveness of our technology or termination of the clinical trials altogether.

Patient enrollment is affected by factors including:

- the severity of the disease under investigation;
- the design of the clinical trial protocol;
- the novelty of the product candidate and acceptance by physicians;
- the patient eligibility criteria for the study in question;
- the size of the total patient population;
- the design of the clinical trials;
- the perceived risks and benefits of the product candidate under study;
- our payments for conducting clinical trials;
- the patient referral practices of physicians;
- the ability to monitor patients adequately during and after treatment with the product candidate; and

§ the proximity and availability of clinical trial sites for prospective patients.

In addition, some patients with Arginase I deficiency suffer from heightened levels of ammonia, or hyperammonemia. Hyperion Therapeutics, Inc., which has been acquired by Horizon Pharma plc, has gained approval for

its product RAVICTI (glycerol phenylbutyrate) to treat patients with urea cycle disorders suffering from hyperammonemia. Some patients who may be eligible for our ongoing or planned clinical trials may instead pursue treatment for this effect of their condition by taking RAVICTI (glycerol phenylbutyrate) or through dietary protein restriction. Our inability to enroll a sufficient number of patients for any of our clinical trials could result in significant delays and could require us to abandon one or more clinical trials altogether. Enrollment delays in our clinical trials may result in increased development costs for our product candidates and in delays to commercially launching our product candidates, if approved, which would cause the value of our company to decline and limit our ability to obtain additional financing.

Even though we have obtained orphan drug designation for AEB1102 for the treatment of hyperargininemia, we may not obtain or maintain orphan drug exclusivity for AEB1102 and we may not obtain orphan drug designation or exclusivity for any of our other product candidates or indications.

Regulatory authorities in some jurisdictions, including the United States and Europe, may designate drugs or biologics for relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a product as an orphan drug if it is a drug or biologic intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals in the United States. Similarly, the European Commission may designate a product as an orphan drug under certain circumstances.

Generally, if a product with an orphan drug designation subsequently receives the first marketing approval for the indication for which it has such designation, the product is entitled to a period of marketing exclusivity, which precludes the FDA or the EMA from approving another marketing application for the same drug for that time period. 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 so that market exclusivity is no longer justified. Orphan drug exclusivity may be lost if the FDA or EMA 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.

On March 16, 2015, we obtained orphan drug designation in the United States for AEB1102 for the treatment of patients with hyperargininemia, also known as Arginase I deficiency. On July 14, 2016, we also received orphan drug designation in Europe for AEB1102 for the treatment of patients with Arginase I deficiency. A company that first obtains FDA or EMA approval for a designated orphan drug for the specified rare disease or condition receives orphan drug marketing exclusivity for that drug for a period of seven years in the United States or ten years in the European Union, respectively. This orphan drug exclusivity prevents the FDA or EMA from approving another application, including a Biologics License Application, or BLA, in the United States or a MAA in the European Union, to market a drug containing the same active moiety, or principal molecular structure, for the same orphan indication, except in very limited circumstances, including when the FDA or the EMA concludes that the later drug is 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.

Even though we have received orphan drug designation for AEB1102 for the treatment of Arginase I deficiency, we may not be the first to obtain marketing approval for the orphan-designated indication due to the uncertainties associated with developing pharmaceutical product candidates. Further, even if we obtain orphan drug exclusivity for a product, that exclusivity may not effectively protect the product from competition because different drugs with different active moieties can be approved for the same condition or a drug with the same active moiety can be approved for a different indication. 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. In addition, even if we intend to seek orphan drug designation for other product candidates or indications, we may never receive such designations or obtain orphan drug exclusivity.

If the market opportunities for our product candidates are smaller than we believe they are, our future product revenues may be adversely affected and our business may suffer.

Our understanding of both the number of people who suffer from conditions such as Arginase I deficiency or who have advanced tumors or hematological malignancies dependent on arginine, as well as the potential subset of those who have the potential to benefit from treatment with our product candidates such as AEB1102, are based on estimates. These estimates may prove to be incorrect and new studies may reduce the estimated incidence or prevalence of these diseases. The number of patients in the United States, Europe or elsewhere may turn out to be lower than expected, may not be otherwise amenable to treatment with our product candidates or patients may become increasingly difficult to identify and access, all of which would adversely affect our business, financial condition, results of operations and prospects.

Further, there are several factors that could contribute to making the actual number of patients who receive our potential product candidates less than the potentially addressable market. These include the lack of widespread availability of, and limited reimbursement for, new therapies in many underdeveloped markets.

Even if any of our product candidates receives marketing approval, it 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 any of our product candidates receives marketing approval, it may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success. For example, current cancer treatments like chemotherapy and radiation therapy are well established in the medical community, and physicians may continue to rely on these treatments instead of adopting the use of AEB1102 for the treatment of patients with arginine dependent cancers. In addition, many new drugs have been recently approved and many more are in the pipeline to treat patients with cancer. Additionally, current treatments for Arginase I deficiency include dietary protein restriction and, in some instances, ammonia-scavenging drugs such as RAVICTI (glycerol phenylbutyrate). If our product candidates do not achieve an adequate level of acceptance, we may never generate significant product revenues and we may not become profitable. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including:

- their efficacy, safety and other potential advantages compared to alternative treatments;
- our ability to offer them for sale at competitive prices;
- their 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;
- the availability of third-party coverage and adequate reimbursement for our product candidates;
- the prevalence and severity of their side effects;
- any restrictions on the use of our product candidates together with other medications;
- interactions of our product candidates with other products patients are taking; and
- inability of patients with certain medical histories to take our product candidates.

We expect to expand our development and regulatory capabilities and potentially implement sales, marketing and distribution capabilities, and, as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

We expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of product candidate development, regulatory affairs and, if any of our product candidates receives marketing approval, sales, marketing and distribution.

We currently do not have a marketing or sales team for the marketing, sales and distribution of any of our product candidates that are able to obtain regulatory approval. In order to commercialize any product candidates, we must build on a territory-by-territory basis marketing, sales, distribution, managerial and other non-technical capabilities or make arrangements with third parties to perform these services, and we may not be successful in doing so. If our product candidates receive regulatory approval, we intend to establish an internal sales or marketing team with technical expertise and supporting distribution capabilities to commercialize our product candidates, which will be expensive and time consuming and will require significant attention of our executive officers to manage. Any failure or delay in the development of our internal sales, marketing and distribution capabilities would adversely impact the commercialization of any of our product candidates that we obtain approval to market. With respect to the commercialization of all or certain of our product candidates, we may choose to collaborate, either globally or on a territory-by-territory basis, with third parties that have direct sales forces and established distribution systems, either to augment our own sales force and distribution systems or in lieu of our own sales force and distribution systems. If we are unable to enter into such arrangements when needed on acceptable terms, or at all, we may not be able to successfully commercialize any of our product candidates that receive regulatory approval or any such

commercialization may experience delays or limitations. If we are not successful in commercializing our product candidates, either on our own or through collaborations with one or more third parties, our future product revenue will suffer and we may incur significant additional losses.

To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

We face significant competition from other biotechnology and pharmaceutical companies and our operating results will suffer if we fail to compete effectively.

The biotechnology and pharmaceutical industries are intensely competitive. We have competitors both in the United States and internationally, including major multinational pharmaceutical companies, biotechnology companies, universities and other research institutions. Many of our competitors have substantially greater financial, technical and other resources, such as larger research and development staff and experienced marketing and manufacturing organizations and well-established sales forces. Competition may increase further as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in these industries. Our competitors may succeed in developing, acquiring or licensing, on an exclusive basis, product candidates that are more effective or less costly than any product candidate that we are currently developing or that we may develop.

We face intense competition from companies developing products to address urea cycle disorders. For example, Horizon Pharma plc has gained approval for its drug RAVICTI (glycerol phenylbutyrate), which is used to treat patients with urea cycle disorders suffering from hyperammonemia, which may sometimes include patients suffering from Arginase I deficiency. Patients with Arginase I deficiency may also benefit from taking RAVICTI (glycerol phenylbutyrate). We also face intense competition from companies developing products and therapies to treat cancer. For example, Polaris Pharmaceuticals is conducting numerous clinical trials of ADI-PEG 20, an enzyme derived from mycoplasma, which degrades arginine in the blood.

Our ability to compete successfully will depend largely on our ability to leverage our experience in product candidate discovery and development to:

- discover and develop product candidates that are superior to other products in the market;
- attract qualified scientific, product development and commercial personnel;
- obtain and maintain patent and/or other proprietary protection for our product candidates and technologies;
- obtain required regulatory approvals; and
- successfully collaborate with research institutions or pharmaceutical companies in the discovery, development and commercialization of new product candidates.

The availability and price of our competitors' products could limit the demand, and the price we are able to charge, for any of our product candidates, if approved. We will not achieve our business plan if acceptance is inhibited by price competition or the reluctance of physicians to switch from existing drug products or other therapies to our product candidates, or if physicians switch to other new drug products or choose to reserve our product candidates for use in limited circumstances.

Established biotechnology companies may invest heavily to accelerate discovery and development of products that could make our product candidates less competitive. In addition, any new product that competes with an approved product must demonstrate compelling advantages in efficacy, convenience, tolerability and safety in order to overcome price competition and to be commercially successful. Accordingly, our competitors may succeed in obtaining patent protection, receiving FDA or non-U.S. regulatory approval or discovering, developing and commercializing product candidates before we do, which would have a material adverse impact on our business. Many of our competitors have greater resources than we do and have established sales and marketing capabilities, whether internally or through third parties. We will not be able to successfully commercialize our product candidates

without establishing sales and marketing capabilities internally or through strategic partners.

The insurance coverage and reimbursement status of newly-approved products is uncertain. Failure to obtain or maintain adequate coverage and reimbursement for new or current product candidates could limit our ability to market those product candidates and decrease our ability to generate revenue.

The availability and extent of reimbursement by governmental and private payors is essential for most patients to be able to afford expensive treatments. Sales of any of our product candidates that receive marketing approval will depend substantially, both in the United States and internationally, on the extent to which the costs of our product candidates will be paid by health maintenance, managed care, pharmacy benefit and similar healthcare management organizations, or reimbursed by government health administration authorities, private health coverage insurers and other third-party payors. If reimbursement is not available, or is available only to limited levels, we may not be able to successfully commercialize our product candidates. Even if coverage is provided, the approved reimbursement amount may not be high enough to allow us to establish or maintain pricing sufficient to realize a sufficient return on our investment.

There is significant uncertainty related to the insurance coverage and reimbursement of newly approved products. In the United States, the principal decisions about reimbursement for new products are typically made by the Centers for Medicare & Medicaid Services, or CMS, an agency within the U.S. Department of Health and Human Services since CMS decides whether and to what extent a new product will be covered and reimbursed under Medicare. Private payors tend to follow CMS to a substantial degree. It is difficult to predict what CMS will decide with respect to reimbursement for novel products such as ours since there is no body of established practices and precedents for these new products. Reimbursement agencies in Europe may be more conservative than CMS. For example, a number of cancer drugs have been approved for reimbursement in the United States and have not been approved for reimbursement in certain European countries.

Outside the United States, international operations are generally subject to extensive governmental price controls and other market regulations, and we believe the increasing emphasis on cost-containment initiatives in Europe, Canada and other countries has and will continue to put pressure on the pricing and usage of therapeutics such as our product candidates. In many countries, particularly the countries of the European Union, the prices of medical products are subject to varying price control mechanisms as part of national health systems. 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. In general, the prices of products under such systems are substantially lower than in the United States. Other countries allow companies to fix their own prices for products, but monitor and control company profits. Additional foreign price controls or other changes in pricing regulation could restrict the amount that we are able to charge for our product candidates. Accordingly, in markets outside the United States, the reimbursement for our products may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenues and profits.

Moreover, increasing efforts by governmental and third-party payors, in the United States and internationally, to cap or reduce healthcare costs may cause such organizations to limit both coverage and level of reimbursement for new products approved and, as a result, they may not cover or provide adequate payment for our product candidates. We expect to experience pricing pressures in connection with the sale of any of our product candidates due to the trend toward managed healthcare, the increasing influence of health maintenance organizations and additional legislative changes. The downward pressure on healthcare costs in general, particularly prescription drugs and surgical procedures and other treatments, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products into the healthcare market.

In addition to CMS and private payors, professional organizations such as the National Comprehensive Cancer Network and the American Society of Clinical Oncology can influence decisions about reimbursement for new products by determining standards for care. In addition, many private payors contract with commercial vendors who sell software that provide guidelines that attempt to limit utilization of, and therefore reimbursement for, certain

products deemed to provide limited benefit to existing alternatives. Such organizations may set guidelines that limit reimbursement or utilization of our product candidates.

Furthermore, some of our target indications, including for Arginase I deficiency for AEB1102, are orphan indications where patient populations are small. In order for therapeutics that are designed to treat smaller patient populations to be commercially viable, the reimbursement for such therapeutics must be higher, on a relative basis, to account for the lack of volume. Accordingly, we will need to implement a coverage and reimbursement strategy for any approved product candidate that accounts for the smaller potential market size. If we are unable to establish or sustain coverage and adequate reimbursement for any future product candidates from third-party payors, the adoption of those products and

sales revenue will be adversely affected, which, in turn, could adversely affect the ability to market or sell those product candidates, if approved, and ultimately our financial results.

Our future success depends on our ability to retain key executives and to attract, retain and motivate qualified personnel.

We are an early-stage clinical development company with a limited operating history, and, as of June 30, 2016, had only 28 employees, including five executive officers. We are highly dependent on the research and development, clinical and business development expertise of Dr. David G. Lowe, our President and Chief Executive Officer, as well as the other principal members of our management, scientific and clinical team. Any of our management team members may terminate their employment with us at any time. We do not maintain “key person” insurance for any of our executives or other employees.

Recruiting and retaining qualified scientific, clinical, manufacturing and sales and marketing personnel will also be critical to our success. The loss of the services of our executive officers or other key employees could impede the achievement of our research, development and commercialization objectives and seriously harm our ability to successfully implement our business strategy. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, facilitate regulatory approval of and commercialize product candidates. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our discovery and nonclinical development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to continue to attract and retain high quality personnel, our ability to pursue our growth strategy will be limited.

Our product candidates for which we intend to seek approval as biologic products may face competition sooner than anticipated.

With the enactment of the Biologics Price Competition and Innovation Act of 2009, or BPCIA, an abbreviated pathway for the approval of biosimilar and interchangeable biological products was created. The abbreviated regulatory pathway establishes 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 reference product. Under the BPCIA, an application for a biosimilar product cannot be approved by the FDA until 12 years after the original branded product is approved under a BLA. On March 6, 2015, the FDA approved the first biosimilar product under the BPCIA. However, 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 the 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 believe that if any of our product candidates are approved as a biological product under a BLA, it should qualify for the 12-year period of exclusivity. However, there is a risk that the FDA will not consider any of our product candidates to be reference products for competing products, potentially creating the opportunity for biosimilar competition sooner than anticipated. Additionally, this period of regulatory exclusivity does not apply to companies pursuing regulatory approval via their own traditional BLA, rather than via the abbreviated pathway. Moreover, the extent to which a biosimilar, once approved, will be substituted for any one of our reference products that may be approved 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.

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

Despite the implementation of security measures, our internal computer systems and those of our strategic partners and third-parties on whom we rely are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. Furthermore, we have little or no control over the security measures and computer systems of third parties including the University of Texas at Austin and any CROs we may work with in the future. While we and, to our knowledge, our third-party strategic partners have not experienced any such system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our operations, or the operations of our strategic partner KBI BioPharma, Inc., or KBI, the University of Texas at Austin or our

other third-party strategic partners, it could result in a material disruption of our product candidate development programs. For example, the loss of research data by University of Texas at Austin could delay development of our product candidates and the loss of clinical trial data from completed or ongoing or planned clinical trials could result in delays in our regulatory approval efforts, and we may incur substantial costs to attempt to recover or reproduce the data. If any disruption or security breach resulted in a loss of or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability or the further development of our product candidates could be delayed.

Risks Related to Our Reliance on Third Parties

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

We currently rely and will continue to rely on third parties to provide manufacturing, discovery and clinical development capabilities. For example, we rely on the University of Texas at Austin to provide research under our sponsored research agreement, and we rely on our strategic partner KBI to manufacture and supply nonclinical and clinical trial quantities of the biological substance of our lead product candidate, AEB1102 and pipeline product candidates. Until we develop our own drug discovery capabilities, we will continue to depend on third parties such as the University of Texas at Austin for the identification of future targets for our product candidates.

We will rely on third-party CROs to conduct our ongoing and future planned clinical trials of AEB1102. We do not plan to independently conduct clinical trials of our other product candidates. These agreements might terminate for a variety of reasons, including a failure to perform by the third parties. If we need to enter into alternative arrangements, that would delay our product development activities.

Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our responsibilities. For example, we will remain responsible for ensuring that each of our ongoing and future planned clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with regulatory standards, commonly referred to as good clinical practices for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. Other countries' regulatory agencies also have requirements for clinical trials with which we must comply. We also will be required to register ongoing clinical trials and post the results of completed clinical trials on a government-sponsored database, ClinicalTrials.gov, within specified timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions.

Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our ongoing and future planned clinical trials in accordance with regulatory requirements or our stated protocols, we will not be able to complete our clinical trials, obtain, or may be delayed in obtaining, marketing approvals for our product candidates and will not be able to, or may be delayed in our efforts to, successfully commercialize our product candidates.

We also expect to rely on other third parties to store and distribute drug supplies for our clinical trials. Any performance failure on the part of our distributors could delay clinical development or marketing approval of our product candidates or commercialization of our product candidates, producing additional losses and depriving us of potential product revenue.

We contract with third parties for the manufacture of our product candidates for nonclinical studies and our ongoing and future planned clinical testing and expect to continue to do so for commercialization. This reliance on third parties increases the risk that we will not have sufficient quantities of our product candidates at an acceptable cost and

quality, which could delay, prevent or impair our development or commercialization efforts.

We do not own or operate facilities for the manufacture of our product candidates, and we do not have any manufacturing personnel. We currently have no plans to build our own clinical or commercial scale manufacturing capabilities. We rely, and expect to continue to rely, on third parties, including KBI and Lyophilization Services of New England, Inc., for the manufacture of our product candidates for nonclinical studies and for our existing and future planned clinical trials. We will rely on third parties as well for commercial manufacture if any of our product candidates receive marketing approval. This reliance on third parties increases the risk that we will not have sufficient quantities of our

product candidates or such quantities at an acceptable cost or quality, which could delay, prevent or impair our development or commercialization efforts.

Any performance failure on the part of our existing or future manufacturers could delay clinical development or marketing approval. We do not currently have arrangements in place for redundant supply or a source for bulk drug substance. Currently, KBI is supplying, and is expected to continue to supply, the drug substance requirements for our ongoing and planned clinical trials with AEB1102. If KBI cannot supply us with sufficient amounts, pursuant to product requirements as agreed, we may be required to identify alternative manufacturers, which would lead us to incur added costs and delays in identifying and qualifying any replacement.

The formulation used in early studies is not a final formulation for commercialization. If we are unable to demonstrate that our commercial scale product is comparable to the product used in clinical trials, we may not receive regulatory approval for that product without additional clinical trials. We cannot guarantee that we will be able to make the required modifications within currently anticipated timeframes or that such modifications, if and when made, will obtain regulatory approval or that the new processes or modified processes will successfully be transferred to the third-party contract suppliers within currently anticipated timeframes. These may require additional studies, and may delay our clinical trials and/or commercialization.

We expect to rely on third-party manufacturers or third-party strategic partners for the manufacture of commercial supply of any product candidates for which our strategic partners or we obtain marketing approval. We may be unable to establish any additional agreements with third-party manufacturers or to do so on acceptable terms. Even if we are able to establish agreements with third-party manufacturers on acceptable terms, such third-party manufacturers may have limited experience manufacturing pharmaceutical drugs for commercialization, and reliance on third-party manufacturers for the commercial supply of our products may expose us to various risks, including:

- possible noncompliance by the third party with regulatory requirements and quality assurance;
- the possible breach of the manufacturing agreement by the third party;
- the possible misappropriation of our proprietary information, including our trade secrets and know-how; and
- the possible termination or nonrenewal of the agreement by the third party at a time that is costly or inconvenient for us.

Third-party manufacturers may not be able to comply with current good manufacturing practices, or cGMP or similar regulatory requirements outside the United States. Although we do not have day-to-day control over third-party manufacturers' compliance with these regulations and standards, we are responsible for ensuring compliance with such regulations and standards. Our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates, operating restrictions and criminal prosecutions, any of which would significantly and adversely affect supplies of our product candidates and our business.

In addition, the process of manufacturing and administering our product candidates is complex and highly regulated. As a result of the complexities, our manufacturing and supply costs are likely to be higher than those at more traditional manufacturing processes and the manufacturing process is less reliable and more difficult to reproduce.

We also expect to rely on other third parties to store and distribute drug supplies for our clinical trials. Any performance failure on the part of our distributors could delay clinical development or marketing approval of our product candidates or commercialization of our product candidates, producing additional losses and depriving us of potential product revenue.

Our product candidates and any products that we may develop may compete with other product candidates and products for access to manufacturing facilities. There are a limited number of manufacturers that operate under cGMP regulations and that might be capable of manufacturing for us.

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

Failure of any future third-party collaborators to successfully commercialize companion diagnostics developed for use with our therapeutic product candidates for oncology indications could harm our ability to commercialize these product candidates.

We do not plan to develop companion diagnostics internally and, as a result, we are dependent on the efforts of our third-party strategic partners to successfully commercialize any needed companion diagnostics. Our strategic partners:

- may not perform their obligations as expected;
- may encounter production difficulties that could constrain the supply of the companion diagnostics;
- may have difficulties gaining acceptance of the use of the companion diagnostics in the clinical community;
- may not pursue commercialization of any companion diagnostics;
- may elect not to continue or renew commercialization programs based on changes in the strategic partners' strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities;
- may not commit sufficient resources to the marketing and distribution of such companion diagnostic product candidates; and
- may terminate their relationship with us.

If companion diagnostics needed for use with our therapeutic product candidates in oncology fail to gain market acceptance, our ability to derive revenues from sales of these therapeutic product candidates could be harmed. If our strategic partners fail to commercialize these companion diagnostics, it could adversely affect and delay the development or commercialization of our therapeutic product candidates.

We may not be successful in finding strategic partners for continuing development of certain of our product candidates or successfully commercializing or competing in the market for certain indications.

We may seek to develop strategic partnerships for developing certain of our product candidates, due to capital costs required to develop the product candidates or manufacturing constraints. We may not be successful in our efforts to establish such a strategic partnership or other alternative arrangements for our product candidates because our research and development pipeline may be insufficient, our product candidates may be deemed to be at too early of a stage of development for collaborative effort or third parties may not view our product candidates as having the requisite potential to demonstrate safety and efficacy. In addition, we may be restricted under existing collaboration agreements from entering into future agreements with potential strategic partners. We cannot be certain that, following a strategic transaction or license, we will achieve an economic benefit that justifies such transaction.

If we are unable to reach agreements with suitable strategic partners on a timely basis, on acceptable terms or at all, we may have to curtail the development of a product candidate, reduce or delay its development program, delay its potential commercialization, 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 fund development or commercialization activities on our own, we may need to obtain additional expertise and additional capital, which may not be available to us on acceptable terms or at all. If we fail to enter into collaborations and do not have sufficient funds or expertise to undertake the necessary development and commercialization activities, we may not be able to further develop our product candidates and our business, financial condition, results of operations and prospects may be materially and adversely affected.

Our employees may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements, which could cause significant liability for us and harm our reputation.

We are exposed to the risk of employee fraud or other misconduct, including intentional failures to comply with FDA regulations or similar regulations of comparable non-U.S. regulatory authorities, provide accurate information to the FDA or comparable non-U.S. regulatory authorities, comply with manufacturing standards we have established, comply with the Foreign Corrupt Practices Act and federal and state healthcare fraud and abuse laws and regulations

and similar laws and regulations established and enforced by comparable non-U.S. regulatory authorities, report financial information or data accurately or disclose unauthorized activities to us. Employee misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. It is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws,

standards or regulations. 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 and results of operations, including the imposition of significant fines or other sanctions.

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

Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. 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 these employees or we have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such employee's former employer. Litigation may be necessary to defend against these claims.

In addition, while it is our policy to require our employees and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own. Our and their assignment agreements may not be self-executing or may be breached, and we may be forced to bring claims against third parties, or defend claims they may bring against us, to determine the ownership of what we regard as our intellectual property.

If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to management.

We and our strategic partners that we rely on may be adversely affected by natural disasters, and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Natural disasters could severely disrupt our operations or the operations of KBI's manufacturing facilities and have a material adverse effect on our business, financial condition, results of operations 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 KBI's manufacturing facilities, 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 currently are limited and may not prove adequate in the event of a serious disaster or similar event. KBI's manufacturing facility, as well as substantially all of our current supply of product candidates is located in Durham, North Carolina, and we do not have any existing back-up facilities in place or plans for such back-up facilities. 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, financial condition, results of operations and prospects.

Risks Related to Government Regulation

If we are not able to obtain, or if there are delays in obtaining, required regulatory approvals in the United States or in foreign jurisdictions, we will not be able to commercialize our product candidates, and our ability to generate revenue will be materially impaired.

Our product candidates must be approved by the FDA pursuant to a BLA in the United States, and by the EMA pursuant to a MAA, and by other comparable regulatory authorities outside the United States prior to commercialization. The process of obtaining marketing approvals, both in the United States and internationally, is expensive and takes many years, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity and novelty of the product candidates involved. The approval procedure varies among countries and can involve additional testing. The time required to obtain approval in Europe or another

non-U.S. jurisdiction may differ substantially from that required to obtain FDA approval. The regulatory approval process outside the United States generally includes all of the risks associated with obtaining FDA approval. In addition, in many countries outside the United States, it is required that the product be approved for reimbursement before the product can be approved for sale in that country. We or our third-party strategic partners may not obtain approvals from regulatory authorities outside the United States on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one regulatory authority outside the United States does not ensure approval by regulatory authorities in other countries or jurisdictions or by the FDA. We may not be able to file for marketing approvals and may not receive necessary approvals to commercialize our product candidates in any market.

Failure to obtain marketing approval for a product candidate will prevent us from commercializing the product candidate. We have not received approval to market any of our product candidates from regulatory authorities in any jurisdiction. We have no experience in filing and supporting the applications necessary to gain marketing approvals and expect to rely on third-party CROs to assist us in this process. Securing marketing approval requires the submission of extensive nonclinical and clinical data and supporting information to regulatory authorities for each therapeutic indication to establish the product candidate's safety and efficacy. Securing marketing approval also requires the submission of information about the product manufacturing process to, and inspection of manufacturing facilities by, the regulatory authorities. Our product candidates may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining marketing approval or prevent or limit commercial use. Regulatory authorities have substantial discretion in the approval process and may refuse to accept any application or may decide that our data are insufficient for approval and require additional nonclinical, clinical or other studies. In addition, varying interpretations of the data obtained from nonclinical and clinical testing could delay, limit or prevent marketing approval of a product candidate. Changes in marketing approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted product application, may also cause delays in or prevent the approval of an application.

Approval of our product candidates may be delayed or refused for many reasons, including the following:

- the FDA, EMA, MHRA or other comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA, EMA, MHRA or other comparable foreign regulatory authorities that our product candidates are safe and effective for any of their proposed indications;
- the results of clinical trials may not meet the level of statistical significance required by the FDA, EMA, MHRA or other comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that our product candidates' clinical and other benefits outweigh their safety risks;
- the FDA, EMA, MHRA or other comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical programs or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to the satisfaction of the FDA, EMA, MHRA or other comparable foreign regulatory authorities to support the submission of a BLA, MAA or other comparable submission in other jurisdictions or to obtain regulatory approval in the United States or elsewhere;
- the facilities of the third-party manufacturers with which we partner may not be adequate to support approval of our product candidates; and
- the approval policies or regulations of the FDA, EMA or other comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

New products for the treatment of cancer frequently are initially indicated only for patient populations that have not responded to an existing therapy or have relapsed. If any of our product candidates receives marketing approval, the approved labeling may limit the use of our product candidates in this way, which could limit sales of the product.

Any marketing approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render the approved product not commercially viable. If we experience delays in obtaining approval or if we fail to obtain approval of our product candidates, the commercial prospects for our product candidates may be harmed and our ability to generate revenues will be materially impaired.

Any Fast Track Designation by the FDA, even if granted for any of our product candidates, may not lead to a faster development or regulatory review or approval process, and does not increase the likelihood that our product candidates will receive marketing approval.

We have received Fast Track Designation from the FDA for our lead product candidate AEB1102 for the treatment of hyperargininemia secondary to Arginase I deficiency, and may seek such designation for some or all of our product

candidates. If a drug or biologic is intended for the treatment of a serious or life-threatening condition and the drug or biologic demonstrates the potential to address unmet medical needs for this condition, the drug or biologic sponsor may apply for FDA Fast Track Designation. The FDA has broad discretion whether or not to grant this designation. 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 though we have received Fast Track Designation for AEB1102 for the treatment of hyperargininemia

secondary to Arginase I deficiency, and even if we receive Fast Track Designation for other product candidates or indications in the future, we may not experience a faster development process, review or approval compared to conventional FDA procedures. The FDA may withdraw Fast Track Designation if it believes that the designation is no longer supported by data from our clinical development program. Many drugs or biologics that have received Fast Track Designation have failed to obtain approval.

We may also seek accelerated approval for products that have obtained fast track designation. Under the FDA's accelerated approval program, the FDA may approve a drug or biologic for a serious or life-threatening illness that provides meaningful therapeutic benefit to patients over existing treatments based upon a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. For drugs or biologics granted accelerated approval, post-marketing confirmatory trials are required to describe the anticipated effect on irreversible morbidity or mortality or other clinical benefit. These confirmatory trials must be completed with due diligence and, in some cases, the FDA may require that the trial be designed and/or initiated prior to approval. Moreover, the FDA may withdraw approval of our product candidate or indication approved under the accelerated approval pathway if, for example:

- the trial or trials required to verify the predicted clinical benefit of our product candidate fail to verify such benefit or do not demonstrate sufficient clinical benefit to justify the risks associated with the drug;
- other evidence demonstrates that our product candidate is not shown to be safe or effective under the conditions of use;
- we fail to conduct any required post-approval trial of our product candidate with due diligence; or
- we disseminate false or misleading promotional materials relating to the relevant product candidate.

A Breakthrough Therapy Designation by the FDA, even if granted for any of our product candidates, may not lead to a faster development or regulatory review or approval process, and does not increase the likelihood that our product candidates will receive marketing approval.

We do not currently have Breakthrough Therapy Designation for any of our product candidates, but may seek such designation. A Breakthrough Therapy is defined as a drug or biologic 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 or biologic may demonstrate substantial improvement over existing therapies with respect to one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. For drugs or biologics that have been designated as Breakthrough Therapies, interaction and communication between the FDA and the sponsor can help to identify the most efficient path for development.

Designation as a Breakthrough Therapy is within the discretion of the FDA. Accordingly, even if we believe, after completing early clinical trials, that one of our product candidates meets 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 or biologics considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if one or more of our product candidates qualify as Breakthrough Therapies, the FDA may later decide that such product candidates no longer meet the conditions for qualification.

Any product candidate for which we obtain marketing approval will be subject to extensive post-marketing regulatory requirements and could be subject to post-marketing restrictions or withdrawal from the market, and we may be subject to penalties if we fail to comply with regulatory requirements or if we experience unanticipated problems with our product candidates, when and if any of them are approved.

Our product candidates and the activities associated with their development and commercialization, including their testing, manufacture, recordkeeping, labeling, storage, approval, advertising, promotion, sale and distribution, are subject to comprehensive regulation by the FDA and other regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, registration and listing requirements, cGMP, requirements relating to manufacturing, quality control, quality assurance and corresponding maintenance of records and documents, including periodic inspections by the FDA and other regulatory authorities, requirements regarding the distribution of samples to physicians and recordkeeping.

The FDA may also impose requirements for costly post-marketing studies or clinical trials and surveillance to monitor the safety or efficacy of any approved product. The FDA closely regulates the post-approval marketing and

promotion of drugs and biologics to ensure drugs and biologics are marketed only for the approved indications and in accordance with the provisions of the approved labeling. The FDA imposes stringent restrictions on manufacturers' communications regarding use of their products and if we promote our product candidates beyond their approved indications, we may be subject to enforcement action for off-label promotion. Violations of the Federal Food, Drug, and Cosmetic Act relating to the promotion of prescription drugs may lead to investigations alleging violations of federal and state healthcare fraud and abuse laws, as well as state consumer protection laws.

In addition, later discovery of previously unknown adverse events or other problems with our product candidates, manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may yield various results, including:

- restrictions on such product candidates, manufacturers or manufacturing processes;
- restrictions on the labeling or marketing of a product;
- restrictions on product distribution or use;
- requirements to conduct post-marketing studies or clinical trials;
- warning or untitled letters;
- withdrawal of any approved product from the market;
- refusal to approve pending applications or supplements to approved applications that we submit;