

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

FORM 10-Q

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

For the quarterly period ended June 30, 2014

or

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

For the transition period from _____ to _____

Commission File Number: 001-32979

Threshold Pharmaceuticals, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

94-3409596
(I.R.S. Employer
Identification No.)

170 Harbor Way, Suite 300, South San Francisco, CA 94080
(Address of principal executive offices, including zip code)

(650) 474-8200
(Registrant's telephone number, including area code)

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, 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	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>

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

On July 25, 2014, there were 59,366,054 shares of common stock, par value \$0.001 per share, of Threshold Pharmaceuticals, Inc. outstanding.

Threshold Pharmaceuticals, Inc.

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The terms “Threshold,” “we,” “us,” “the Company” and “our” as used in this report refer to Threshold Pharmaceuticals, Inc. Threshold Pharmaceuticals, Inc., our logo and Metabolic Targeting are our trademarks. Other trademarks, trade names and service marks used in this quarterly report on Form 10-Q are the property of their respective owners.

PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

Threshold Pharmaceuticals, Inc.
CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)
(unaudited)

	June 30, 2014	December 31, 2013 (Note 1)
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 6,463	\$ 7,279
Marketable securities, current	56,571	58,390
Collaboration receivable	4,263	18,094
Prepaid expenses and other current assets	2,845	2,246
Total current assets	70,142	86,009
Marketable securities, non-current	12,181	16,364
Property and equipment, net	690	686
Other assets	1,159	1,059
Total assets	<u>\$ 84,172</u>	<u>\$ 104,118</u>
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable	\$ 2,891	\$ 1,689
Accrued clinical and development expenses	7,173	7,444
Accrued liabilities	2,511	3,161
Deferred revenue, current	14,722	14,722
Total current liabilities	27,297	27,016
Warrant liability	15,299	23,421
Deferred revenue, non-current	69,555	76,916
Deferred rent	274	240
Total liabilities	112,425	127,593
Commitments and contingencies (Note 7)		
Stockholders' equity (deficit):		
Preferred stock, \$0.001 par value, 2,000,000 shares authorized; no shares issued and outstanding	—	—
Common stock, \$0.001 par value, shares authorized: 150,000,000 shares; issued and outstanding: 59,365,233 shares at June 30, 2014 and 59,232,611 shares at December 31, 2013	59	59
Additional paid-in capital	331,224	328,116
Accumulated other comprehensive gain (loss)	17	28
Accumulated deficit	(359,553)	(351,678)
Total stockholders' equity (deficit)	(28,253)	(23,475)
Total liabilities and stockholders' equity (deficit)	<u>\$ 84,172</u>	<u>\$ 104,118</u>

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

Threshold Pharmaceuticals, Inc.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(in thousands, except per share data)
(unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2014	2013	2014	2013
Revenue	\$ 3,680	\$ 3,180	\$ 7,361	\$ 6,102
Operating expenses:				
Research and development	8,664	7,983	18,317	14,451
General and administrative	2,477	2,166	5,111	4,681
Total operating expenses	11,141	10,149	23,428	19,132
Loss from operations	(7,461)	(6,969)	(16,067)	(13,030)
Interest income (expense), net	30	34	70	70
Other income (expense), net	6,665	(5,822)	8,122	(8,938)
Loss before provision for income taxes	(766)	(12,757)	(7,875)	(21,898)
Provision for income taxes	—	31	—	104
Net loss	(766)	(12,788)	(7,875)	(22,002)
Other comprehensive income (loss):				
Unrealized gain (loss) on available-for-sale securities	4	(33)	(11)	(38)
Comprehensive loss	\$ (762)	\$ (12,821)	\$ (7,886)	\$ (22,040)
Net loss per common share:				
Basic	\$ (0.01)	\$ (0.22)	\$ (0.13)	\$ (0.39)
Diluted	\$ (0.12)	\$ (0.22)	\$ (0.25)	\$ (0.39)
Weighted average number of shares used in per common share calculations:				
Basic	59,347	57,037	59,325	56,763
Diluted	62,998	57,037	63,433	56,763

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

Threshold Pharmaceuticals, Inc.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(unaudited)

	Six Months Ended June 30,	
	2014	2013
Cash flows from operating activities:		
Net loss	\$ (7,875)	\$ (22,002)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization	726	664
Stock-based compensation expense	2,734	2,325
Change in common stock warrant value	(8,122)	8,938
Changes in operating assets and liabilities:		
Collaboration receivable	13,831	13,087
Prepaid expenses and other assets	(699)	(746)
Accounts payable	1,202	(24)
Accrued clinical and development expenses	(271)	1,269
Accrued liabilities	(650)	(216)
Deferred rent	34	(11)
Deferred revenue	(7,361)	23,898
Net cash (used in) provided by operating activities	<u>(6,451)</u>	<u>27,182</u>
Cash flows from investing activities:		
Acquisition of property and equipment	(171)	(97)
Acquisition of marketable securities	(33,137)	(74,904)
Proceeds from sale of marketable securities	8,214	1,000
Proceeds from maturities of marketable securities	30,355	39,358
Net cash provided by (used in) investing activities	<u>5,261</u>	<u>(34,643)</u>
Cash flows from financing activities:		
Proceeds from issuance of common stock and warrants, net of offering expenses	374	845
Net cash provided by financing activities	<u>374</u>	<u>845</u>
Net increase (decrease) in cash and cash equivalents	(816)	(6,616)
Cash and cash equivalents, beginning of period	7,279	11,029
Cash and cash equivalents, end of period	<u>\$ 6,463</u>	<u>\$ 4,413</u>

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

Threshold Pharmaceuticals, Inc.
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1 — ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The Company

Threshold Pharmaceuticals, Inc. (the “Company”) is a biotechnology company using its expertise in the tumor microenvironment to discover and develop therapeutic agents that selectively target tumor cells for the treatment of patients living with cancer.

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America for interim financial information and with the instructions to Form 10-Q and Rule 10-01 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by accounting principles generally accepted in the United States of America for complete financial statements. The unaudited interim condensed consolidated financial statements have been prepared on the same basis as the annual consolidated financial statements. In the opinion of management, all adjustments, consisting of normal recurring adjustments necessary for the fair statement of results for the periods presented, have been included. The results of operations of any interim period are not necessarily indicative of the results of operations for the full year or any other interim period.

The preparation of condensed consolidated financial statements requires management to make estimates and assumptions that affect the recorded amounts reported therein. A change in facts or circumstances surrounding the estimate could result in a change to estimates and impact future operating results.

The unaudited condensed consolidated financial statements and related disclosures have been prepared with the presumption that users of the interim unaudited condensed consolidated financial statements have read or have access to the audited consolidated financial statements for the preceding fiscal year. The condensed consolidated balance sheet at December 31, 2013 has been derived from the audited financial statements at that date but does not include all the information and footnotes required by accounting principles generally accepted in the United States of America. Accordingly, these unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto for the year ended December 31, 2013 included in the Company’s Annual Report on Form 10-K filed with the Securities and Exchange Commission (“SEC”) on March 6, 2014.

The unaudited condensed consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary, and reflect the elimination of intercompany accounts and transactions.

Revenue Recognition

The Company recognizes revenue in accordance with ASC 605 “Revenue Recognition”, subtopic ASC 605-25 “Revenue with Multiple Element Arrangements” and subtopic ASC 605-28 “Revenue Recognition-Milestone Method”, which provides accounting guidance for revenue recognition for arrangements with multiple deliverables and guidance on defining the milestone and determining when the use of the milestone method of revenue recognition for research and development transactions is appropriate, respectively.

The Company’s revenues are related to its collaboration arrangement with Merck KGaA, which was entered in February 2012. The collaboration with Merck KGaA provides for various types of payments to the Company, including non-refundable upfront license, milestone and royalty payments. The Company recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable, and collectability is reasonably assured. The Company also receives reimbursement for Merck KGaA’s 70% share for eligible worldwide development expenses for TH-302. Such reimbursement is reflected as a reduction of operating expenses.

For multiple-element arrangements, each deliverable within a multiple deliverable revenue arrangement is accounted for as a separate unit of accounting if both of the following criteria are met: (1) the delivered item or items have value to the customer on a standalone basis and (2) for an arrangement that includes a general right of return relative to the delivered item(s), delivery or performance of the undelivered item(s) is considered probable and substantially in the Company’s control. The deliverables under the Merck KGaA agreement have been determined to be a single unit of accounting and as such the revenue relating to this unit of accounting will be recorded as deferred revenue and recognized ratably over the term of its estimated performance period under the agreement, which is the product development period. The Company determines the estimated performance period and it will be periodically reviewed based on the progress of the related product development plan. The effect of a change made to an estimated performance period, and the related ratably recognized revenue, would occur on a prospective basis in the period that the change was made.

Deferred revenue associated with a non-refundable payment received under a collaborative agreement for which the performance obligations are terminated will result in an immediate recognition of any remaining deferred revenue in the period that termination occurred provided that all performance obligations have been satisfied.

The Company recognizes revenue from milestone payments when: (i) the milestone event is substantive and its achievability has substantive uncertainty at the inception of the agreement, and (ii) the Company does not have ongoing performance obligations related to the achievement of the milestone earned. Milestone payments are considered substantive if all of the following conditions are met: the milestone payment (a) is commensurate with either the Company's performance subsequent to the inception of the arrangement to achieve the milestone or the enhancement of the value of the delivered item or items as a result of a specific outcome resulting from the Company's performance subsequent to the inception of the arrangement to achieve the milestone, (b) relates solely to past performance, and (c) is reasonable relative to all of the deliverables and payment terms (including other potential milestone consideration) within the arrangements. See Note 3, "Collaboration Arrangements," for analysis of milestone events deemed to be substantive or non-substantive.

NOTE 2 — NET LOSS PER COMMON SHARE

Basic net loss per common share is computed by dividing net loss by the weighted-average number of common shares outstanding during the period. Diluted net loss per common share is computed by giving effect to all potential dilutive common shares, including outstanding options and warrants.

Potential dilutive common shares also include the dilutive effect of the common stock underlying in-the-money stock options and warrants that were calculated based on the average share price for each period using the treasury stock method. Under the treasury stock method, the exercise price of an option or warrant is assumed to be used to repurchase shares in the current period. In addition, the average amount of compensation cost for in-the-money options, if any, for future service that the Company has not yet recognized when the option is exercised, is also assumed to repurchase shares in the current period. A reconciliation of the numerator and denominator used in the calculation is as follows (in thousands, except per share amounts):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2014	2013	2014	2013
Numerator:				
Net loss - basic	\$ (766)	\$ (12,788)	\$ (7,875)	\$ (22,002)
Less: noncash income from change in fair value of common stock warrants	<u>(6,665)</u>	<u>—</u>	<u>(8,122)</u>	<u>—</u>
Net loss - diluted	<u>(7,431)</u>	<u>(12,788)</u>	<u>(15,997)</u>	<u>(22,002)</u>
Denominator:				
Weighted average common shares outstanding	59,347	57,037	59,325	56,763
Dilutive effect of warrants	<u>3,651</u>	<u>—</u>	<u>4,108</u>	<u>—</u>
Weighted-average common shares outstanding and dilutive potential common shares — diluted	<u>62,998</u>	<u>57,037</u>	<u>63,433</u>	<u>56,763</u>
Net income (loss) per share				
Basic	\$ (0.01)	\$ (0.22)	\$ (0.13)	\$ (0.39)
Diluted	<u>\$ (0.12)</u>	<u>\$ (0.22)</u>	<u>\$ (0.25)</u>	<u>\$ (0.39)</u>

The following outstanding warrants, options and purchase rights under the Company's 2004 Employee Stock Purchase Plan were excluded from the computation of diluted net loss per share for the periods presented because including them would have had an antidilutive effect (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2014	2013	2014	2013
Shares issuable upon exercise of warrants	—	9,634	—	9,634
Shares issuable upon exercise of stock options	8,161	6,570	8,161	6,570
Shares issuable related to the ESPP	71	85	71	85

NOTE 3 — COLLABORATION ARRANGEMENTS

On February 3, 2012, the Company entered into a global license and co-development agreement with Merck KGaA, Darmstadt, Germany, to co-develop and commercialize TH-302, the Company's small molecule hypoxia-targeted drug. Under the terms of the agreement, Merck KGaA received co-development rights, exclusive global commercialization rights and provided the Company with an option to co-commercialize TH-302 in the United States. To date, the Company has received \$110 million in upfront and milestone payments, including \$12.5 million received during the quarter ended March 31, 2014. The milestones earned to date were not deemed to be substantive milestones because the work related to the achievement of these items was predominately completed prior to the inception of the arrangement or was not commensurate with Company's performance subsequent to the inception of the arrangement to achieve the milestone. The Company is eligible to earn additional potential milestone payments of up to \$100 million in regulatory and development milestones, and \$340 million in commercialization milestones.

In the United States, the Company has primary responsibility for development of TH-302 in the soft tissue sarcoma indication. The Company and Merck KGaA will jointly develop TH-302 in all other cancer indications being pursued. Merck KGaA will pay 70% of worldwide development expenses for TH-302. Subject to FDA approval in the United States, Merck KGaA will initially be responsible for commercialization of TH-302 with the Company receiving a tiered, double-digit royalty on sales. Under the royalty bearing portion of the agreement, Threshold retains the option to co-promote TH-302 in the United States. Additionally, the Company retains the option to co-commercialize TH-302 in the United States, upon the achievement of certain sales and regulatory milestones, allowing the Company to participate in up to 50% of the profits in the United States depending on total sales. Outside of the United States, Merck KGaA will be solely responsible for the commercialization of TH-302 with the Company receiving a tiered, double digit royalty on sales in these territories. The agreement will continue on a country-by-country and product-by-product basis until the later of the last to expire patent covering such product containing TH-302 in such country or ten years following the commercial launch of a product containing TH-302 in such country, unless terminated earlier. Merck KGaA has the right to terminate the agreement on limited notice to the Company, and each party has the right to terminate the agreement following an uncured material breach by the other party.

The Company's deliverables under the Merck KGaA agreement, which include delivery of the rights and license for TH-302 and performance of research and development activities, have been determined to be a single unit of accounting. The delivered license does not have standalone value at the inception of the arrangement due to the Company's proprietary expertise with respect to the licensed compound and related ongoing developmental participation under the global license and co-development agreement, which is required for Merck KGaA to fully realize the value from the delivered license. Therefore, the revenue relating to this unit of accounting will be recorded as deferred revenue and recognized over the estimated performance period under the agreement, which is the product development period. The Company has recorded \$110 million of the upfront payment and milestones payments as deferred revenue and is amortizing them ratably over its estimated period of performance, which the Company currently estimates to end on March 31, 2020. As a result, the Company recognized \$3.7 million and \$7.4 million of revenue during the three and six months ended June 30, 2014, respectively, compared to \$3.2 and \$6.1 million for the three and six months ended June 30, 2013, respectively. The Company will periodically review and, if necessary, revise the estimated periods of performance of its collaboration. The Company also earned \$3.5 million and \$9.4 million reimbursement for eligible worldwide development expenses for TH-302 from Merck KGaA during the three and six months ended June 30, 2014, respectively compared to \$2.5 million and \$6.1 million for the three and six months ended June 30, 2013, respectively. Such earned reimbursement has been reflected as a reduction of operating expenses.

Of the remaining potential future milestones, \$100 million are related to regulatory and development milestones and \$340 million are related to commercialization milestones that may be received under the Merck KGaA Agreement. Regulatory milestones include the filing and acceptance of regulatory applications for marketing approval in major markets. Development milestones include primarily the initiation of various phases of clinical trials. Commercialization milestones include the achievement of first commercial sales in a particular market or annual product sales in excess of a pre-specified threshold. At the inception of the collaboration agreement the Company assessed regulatory and development milestones to be substantive where there was substantive scientific and regulatory uncertainty of achievement, the amounts of payments assigned were considered to be commensurate with the enhancement

that occurred subsequent to inception of the Merck KGaA agreement, of the value of the delivered rights and license of TH-302 and the Company's performance is necessary to the achievement of the milestone. Accordingly, the Company will recognize payments related to the achievement of such milestones, if any, when such milestone is achieved. Regulatory and development milestones that do not meet these conditions were considered non-substantive and payments related to the achievement of such milestones, if any, will be recorded as deferred revenue and amortized ratably over the estimated period of performance. Final determination of whether a development or regulatory milestone is substantive will depend upon the Company's role in achieving the milestone. The specific role and responsibilities related to the regulatory and development activities for certain of these milestones have yet to be determined and may change during the development period. Under the Merck KGaA agreement, Merck KGaA will initially be responsible for commercialization activities and the Company initially may not be involved in the achievement of these commercialization milestones. These commercialization milestones would typically be achieved after the completion of the Company's regulatory and development activities. If there are no future development obligations, the Company expects to account for the commercialization milestones in the same manner as royalties, with revenue recognized upon achievement of the milestone.

NOTE 4 — STOCKHOLDERS' EQUITY

Common Stock Warrants

The Company accounts for its common stock warrants under guidance in ASC 815 that clarifies the determination of whether an instrument (or an embedded feature) is indexed to an entity's own stock, which would qualify for classification as liabilities. The guidance required the Company's outstanding warrants to be classified as liabilities and to be fair valued at each reporting period, with the changes in fair value recognized as other income (expense) in the Company's consolidated statements of operations.

At both June 30, 2014 and December 31, 2013, the Company had warrants outstanding to purchase 4,287,940 shares of common stock, having an exercise price of \$2.05 per share, which warrants were initially issued by the Company in a private placement in October 2009. The fair value of these warrants on June 30, 2014 and December 31, 2013 was determined using a Black Scholes valuation model with the following level 3 inputs:

	June 30, 2014	December 31, 2013
Risk-free interest rate	0.11 %	0.13 %
Expected life (in years)	0.27	0.76
Dividend yield	—	—
Volatility	44 %	49 %
Stock price	\$ 3.96	\$ 4.67

During the three and six months ended June 30, 2014, the change in fair value of \$3.4 million and \$3.1 million, respectively, related to the October 2009 warrants was recorded as other income in the Company's consolidated statement of operations.

At both June 30, 2014 and December 31, 2013, the Company had also warrants outstanding to purchase 3,993,783 shares of common stock, having an exercise price of \$2.46 per share, which warrants were initially issued by the Company in an underwritten public offering in March 2011. The fair value of these warrants on June 30, 2014 and December 31, 2013 was determined using a Black Scholes valuation model with the following level 3 inputs:

	June 30, 2014	December 31, 2013
Risk-free interest rate	0.47 %	0.78 %
Expected life (in years)	1.71	2.21
Dividend yield	—	—
Volatility	50 %	88 %
Stock price	\$ 3.96	\$ 4.67

During the three and six months ended June 30, 2014, the change in fair value of \$3.2 million and \$5.0 million, respectively, related to the March 2011 warrants was recorded as other income in the Company's consolidated statement of operations.

The following table sets forth the Company's financial liabilities, related to warrants issued in the October 2009 and March 2011 offerings, subject to fair value measurements as of June 30, 2014 and December 31, 2013:

(in thousands)	Fair Value as of June 30, 2014	Basis of Fair Value Measurements		
		Level 1	Level 2	Level 3
October 2009 warrants	\$ 8,190	\$ —	\$ —	\$ 8,190
March 2011 warrants	7,109	—	—	7,109
Total common stock warrants	<u>\$ 15,299</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 15,299</u>

(in thousands)	Fair Value as of December 31, 2013	Basis of Fair Value Measurements		
		Level 1	Level 2	Level 3
October 2009 warrants	\$ 11,320	\$ —	\$ —	\$ 11,320
March 2011 warrants	12,101	—	—	12,101
Total common stock warrants	<u>\$ 23,421</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 23,421</u>

The following table is a reconciliation of the warrant liability measured at fair value using level 3 inputs (in thousands):

	Warrant Liability
Balance at December 31, 2013	\$ 23,421
Change in fair value of common stock warrants during six months ended June 30, 2014	(8,122)
Exercise of warrants during six months ended June 30, 2014	—
Balance at June 30, 2014	<u>\$ 15,299</u>

NOTE 5 — STOCK BASED COMPENSATION

The Company recognizes stock-based compensation in accordance with ASC 718, "Compensation—Stock Compensation." Stock-based compensation expense, which consists of the compensation cost for employee stock options and the Company's ESPP, and the value of options issued to non-employees for services rendered, was allocated to research and development and general and administrative in the unaudited consolidated statements of operations for the three and six months ended June 30, 2014 and 2013 as follows (in thousands):

	Three Months Ended June 30,		Six Months Ended June 30,	
	2014	2013	2014	2013
Amortization of stock-based compensation:				
Research and development	\$ 846	\$ 663	\$ 1,517	\$ 1,197
General and administrative	622	609	1,217	1,128
	<u>\$ 1,468</u>	<u>\$ 1,272</u>	<u>\$ 2,734</u>	<u>\$ 2,325</u>

Valuation Assumptions

The Company estimated the fair value of stock options granted using the Black-Scholes option-pricing formula and a single option award approach. This fair value is being amortized ratably over the requisite service periods of the awards, which is generally the vesting period. The fair value of employee stock options and employee purchase rights under the Company's ESPP was estimated using the following weighted-average assumptions for the three and six months ended June 30, 2014 and 2013:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2014	2013	2014	2013
Employee Stock Options:				
Risk-free interest rate	1.81 %	0.96 %	1.82 %	1.13 %
Expected term (in years)	5.97	5.47	5.97	5.97
Dividend yield	—	—	—	—
Volatility	94 %	102 %	94 %	101 %
Weighted-average fair value of stock options granted	\$ 2.79	\$ 4.28	\$ 2.89	\$ 4.03
	Three Months Ended June 30,		Six Months Ended June 30,	
	2014	2013	2014	2013
Employee Stock Purchase Plan (ESPP):				
Risk-free interest rate	0.18 %	0.20 %	0.18 %	0.20 %
Expected term (in years)	1.23	1.25	1.23	1.25
Dividend yield	—	—	—	—
Volatility	53 %	92 %	53 %	92 %
Weighted-average fair value of ESPP purchase rights	\$ 1.79	\$ 2.44	\$ 1.79	\$ 2.44

To determine the expected term of the Company's employee stock options granted, the Company utilized the simplified approach as defined by SEC Staff Accounting Bulletin No. 107, "Share-Based Payment" ("SAB 107"). To determine the risk-free interest rate, the Company utilized an average interest rate based on U.S. Treasury instruments with a term consistent with the expected term of the Company's stock based awards. To determine the expected stock price volatility for the Company's stock based awards, the Company utilized the historical volatilities of the Company. The fair value of all the Company's stock based awards assumes no dividends as the Company does not anticipate paying cash dividends on its common stock.

Employee Stock-based Compensation Expense

As required by ASC 718, the Company recognized \$1.5 million and \$2.7 million of stock-based compensation expense related to stock options and purchase rights, under the Company's equity incentive plans and ESPP, for the three and six months ended June 30, 2014, respectively, and \$1.2 million and \$2.2 million of stock-based compensation for the three and six months ended June 30, 2013, respectively. As of June 30, 2014, the total unrecognized compensation cost related to unvested stock-based awards granted to employees under the Company's equity incentive plans was approximately \$12.7 million before forfeitures. This cost will be recorded as compensation expense on a straight-line basis over the remaining weighted average requisite service period of approximately 2.7 years.

Non-employee Stock-based Compensation Expense

The Company accounts for equity instruments issued to non-employees in accordance with ASC 505, "Equity." The equity instruments consisting of stock options are valued using the Black-Scholes option pricing model. The values attributable to these options are amortized over the service period and the unvested portion of these options is remeasured at each vesting date. In connection with the grant of stock options to non-employees, the Company recorded stock-based compensation of approximately \$19,000 and \$55,000 for the three and six months ended June 30, 2014, respectively, and \$34,000 and \$0.1 million for the three and six months ended June 30, 2013, respectively.

Equity Incentive Plans

Equity Incentive Plans On January 1, 2014, an additional 1,250,000 shares was authorized for issuance under the 2004 Equity Incentive Plan ("2004 Incentive Plan"), pursuant to the annual automatic increase to the authorized shares under the 2004 Incentive Plan.

The 2004 Incentive Plan expired pursuant to its terms on April 7, 2014. No additional awards have been or will be made after April 7, 2014 under the 2004 Incentive Plan. In May 2014, the Company adopted the 2014 Equity Incentive Plan ("2014 Plan"). The terms of the 2014 Plan provide for the grant of incentive stock options, nonstatutory stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards, other stock awards, and performance awards that may be settled in cash, stock, or other property. The total number of shares of the Company's common stock reserved for issuance under the 2014 Plan is equal to the sum of (i) 6,000,000 newly reserved shares plus (ii) up to 6,626,157 additional shares (the "Prior Plan Shares") that may be added to the 2014 Plan in connection with the forfeiture or expiration of awards outstanding under the 2004 Incentive Plan as of May 15, 2014 (the "Returning Shares"). The Prior Plan Shares will be added to the share reserve under the 2014 Plan only as and when such shares become Returning Shares. At June 30, 2014, 4,446,294 shares were authorized and available for issuance under the 2014 Plan.

The following table summarizes stock option activity under the Company's equity incentive plans:

Options	Number of Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at December 31, 2013	6,526,506	\$ 3.66	—	—
Granted	1,765,250	\$ 3.79	—	—
Exercised	(58,560)	\$ 1.45	—	—
Forfeitures	(72,333)	\$ 4.62	—	—
Outstanding at June 30, 2014	<u>8,160,863</u>	\$ 3.69	7.67	8,434,466
Vested and expected to vest June 30, 2014	8,071,025	\$ 3.69	7.65	8,412,349
Exercisable at June 30, 2014	<u>4,450,857</u>	\$ 3.04	6.60	7,212,989

The total intrinsic value of stock options exercised during the six months ended June 30, 2014 and 2013 were \$0.2 million and \$0.4 million, respectively, as determined at the date of the option exercise. Cash received from stock option exercises was \$0.1 million and \$0.2 million for each of the six months ended June 30, 2014 and 2013, respectively. The Company issues new shares of common stock upon exercise of options. In connection with these exercises, there was no tax benefit realized by the Company due to the Company's current loss position.

2004 Employee Stock Purchase Plan On January 1, 2014, an additional 100,000 shares was authorized for issuance under the 2004 Employee Stock Purchase Plan ("2004 Purchase Plan") pursuant to the annual automatic increase to the authorized shares under the 2004 Purchase Plan. For the six months ended June 30, 2014, plan participants had purchased 74,062 shares at an average purchase price of \$3.91 for total cash proceeds of \$0.3 million. At June 30, 2014, 261,834 shares were authorized and available for issuance under the ESPP.

NOTE 6 — FAIR VALUE MEASUREMENTS AND MARKETABLE SECURITIES

The Company accounts for its marketable securities in accordance with ASC 820 "Fair Value Measurements and Disclosures." ASC 820 defines fair value, establishes a framework for measuring fair value in GAAP, and expands disclosures about fair value measurements. ASC 820 defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. ASC 820 also establishes a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The standard describes three levels of inputs that may be used to measure fair value:

Level 1—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, quoted prices in markets that are not active, 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—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The Company utilizes the market approach to measure fair value for its financial assets and liabilities. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities. For Level 2 securities that have market prices from multiples sources, a "consensus price" or a weighted average price for each of these securities can be derived from a distribution-curve-based algorithm which includes market prices obtained from a variety of industrial standard data providers (e.g. Bloomberg), security master files from large financial institutions, and other third-party sources. Level 2

securities with short maturities and infrequent secondary market trades are typically priced using mathematical calculations adjusted for observable inputs when available.

The following table sets forth the Company's financial assets (cash equivalents and marketable securities) at fair value on a recurring basis as of June 30, 2014 and December 31, 2013:

(in thousands)	Fair Value as of	Basis of Fair Value Measurements		
	June 30, 2014	Level 1	Level 2	Level 3
Money market funds	\$ 6,463	\$ 6,463	\$ —	\$ —
Certificates of deposit	2,844	—	2,844	—
Corporate debt securities	40,937	—	40,937	—
U.S. Government securities	20,023	—	20,023	—
Municipal securities	1,450	—	1,450	—
Commercial paper	3,498	—	3,498	—
Total cash equivalents and marketable securities	\$ 75,215	\$ 6,463	\$ 68,752	\$ —

(in thousands)	Fair Value as of	Basis of Fair Value Measurements		
	December 31, 2013	Level 1	Level 2	Level 3
Money market funds	\$ 4,285	\$ 4,285	\$ —	\$ —
Certificates of deposit	1,584	—	1,584	—
Corporate debt securities	49,019	—	49,019	—
U.S. Government securities	21,731	—	21,731	—
Municipal securities	2,815	—	2,815	—
Commercial paper	2,599	—	2,599	—
Total cash equivalents and marketable securities	\$ 82,033	\$ 4,285	\$ 77,748	\$ —

The Company invests in highly-liquid, investment-grade securities. The following is a summary of the Company's available-for-sale securities at June 30, 2014 and December 31, 2013:

As of June 30, 2014 (in thousands):	Cost Basis	Unrealized Gain	Unrealized Loss	Fair Value
Money market funds	\$ 6,463	\$ —	\$ —	\$ 6,463
Certificates of deposit	2,844	—	—	2,844
Corporate debt securities	40,930	12	(5)	40,937
U.S. Government securities	20,013	11	(1)	20,023
Municipal securities	1,450	—	—	1,450
Commercial paper	3,498	—	—	3,498
	75,198	23	(6)	75,215
Less cash equivalents	6,463	—	—	6,463
Total marketable securities	\$ 68,735	\$ 23	\$ (6)	\$ 68,752

As of December 31, 2013 (in thousands):	Cost Basis	Unrealized Gain	Unrealized Loss	Fair Value
Money market funds	\$ 4,285	\$ —	\$ —	\$ 4,285
Certificates of deposit	1,584	—	—	1,584
Corporate debt securities	49,001	25	(7)	49,019
U.S. Government securities	21,722	12	(3)	21,731
Municipal securities	2,814	1	—	2,815
Commercial paper	2,599	—	—	2,599
	82,005	38	(10)	82,033
Less cash equivalents	7,279	—	—	7,279
Total marketable securities	\$ 74,726	\$ 38	\$ (10)	\$ 74,754

There were no realized gains or losses in the three and six months ended June 30, 2014 and 2013, respectively.

As of June 30, 2014, the weighted average maturity for the Company's available for sale securities was 6.6 months, with the longest maturity being November 2015.

The following table provides the breakdown of the marketable securities with unrealized losses at June 30, 2014 (in thousands):

As of June 30, 2014 (in thousands):	In loss position for less than twelve months	
	Fair Value	Unrealized Loss
U.S. Government securities	\$ 8,010	\$ (1)
Corporate debt securities	12,259	(5)
Total marketable securities	<u>\$ 20,269</u>	<u>\$ (6)</u>

The Company determined the fair value of the liability associated with its warrants to purchase 8.3 million shares of outstanding common stock using a Black-Scholes Model. See detailed discussion in Note 4 — Stockholders' Equity.

NOTE 7 — COMMITMENTS AND CONTINGENCIES

The Company leases certain of its facilities under noncancelable leases, which qualify for operating lease accounting treatment under ASC 840, "Leases," and, as such, these facilities are not included on its unaudited condensed consolidated balance sheets. The future rental payments required by the Company for all of its facilities under noncancelable operating leases are as follows (in thousands):

Years Ending December 31,	
2014	\$ 447
2015	918
2016	953
2017	238
Thereafter	—
Total	<u>\$ 2,556</u>

Indemnification

The Company enters into indemnification provisions under its agreements with other companies in the ordinary course of business, including business partners, contractors and parties performing its clinical trials. Pursuant to these arrangements, the Company indemnifies, holds harmless, and agrees to reimburse the indemnified parties for losses suffered or incurred by the indemnified party as a result of the Company's activities. The duration of these indemnification agreements is generally perpetual. The maximum potential amount of future payments the Company could be required to make under these agreements is not determinable. The Company has never incurred costs to defend lawsuits or settle claims related to these indemnification agreements. As a result, the Company believes the estimated fair value of these agreements is minimal. The Company maintains commercial general liability insurance and products liability insurance to offset certain of its potential liabilities under these indemnification provisions. Accordingly, the Company has not recognized any liabilities relating to these agreements as of June 30, 2014.

The Company's bylaws provide that it is required to indemnify its directors and officers against liabilities that may arise by reason of their status or service as directors or officers, other than liabilities arising from willful misconduct of a culpable nature, to the fullest extent permissible by applicable law; and to advance their expenses incurred as a result of any proceeding against them as to which they could be indemnified.

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

This Management's Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with the "Risk Factors" section of this Quarterly Report on Form 10-Q. Other than statements of historical fact, statements made in this Quarterly Report on Form 10-Q are forward-looking statements within the meaning of Section 21E of the Exchange Act, and Section 27A of the Act. When used in this report or elsewhere by management from time to time, the words "believe," "will," "may," "anticipate," "intend," "plan," "estimate," "expect," and similar expressions are forward-looking statements. Such forward-looking statements are based on current expectations. Forward-looking statements made in this report include, for example, statements about:

- the clinical development of TH-302 and its expected uses and benefits;
- anticipated clinical developmental events for TH-302, including the timing of the commencement, conduct and completion of clinical trials for TH-302 and the timing of any efficacy and/or safety analyses from ongoing trials;
- anticipated milestone payments from Merck KGaA;
- the success of any clinical trials that we and/or Merck KGaA commence;
- our and Merck KGaA's potential receipt of regulatory approvals, and our and Merck KGaA's satisfaction of ongoing regulatory review;
- our and Merck KGaA's ability to timely develop a viable commercial formulation of TH-302;
- whether any product candidates that we and/or Merck KGaA are able to commercialize are safer or more effective than other marketed products, treatments or therapies;
- uncertainties associated with obtaining and enforcing patents and other intellectual property rights;
- the costs and timing of obtaining drug supply for our pre-clinical and clinical activities;
- anticipated expenses, including clinical trial, research and development and personnel costs;
- the anticipated sufficiency of our cash resources and our need for additional capital;
- our projected financial performance; and
- the clinical development of [18-F]-HX4 and its expected uses and benefits.

Forward-looking statements are not guarantees of future performance and involve risks and uncertainties. Actual events or results may differ materially from those discussed in the forward-looking statements as a result of various factors. For a more detailed discussion of the potential risks and uncertainties that may impact their accuracy, see the "Risk Factors" section in Part II, Item 1A of this quarterly report on Form 10-Q. Given these risks, uncertainties and other factors, you should not place undue reliance on these forward-looking statements. Also, these forward-looking statements reflect our view only as of the date of this report. You should read this report completely and with the understanding that our actual future results may be materially different from what we expect. We hereby qualify our forward-looking statements by our cautionary statements. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons that actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

Overview

We are a biotechnology company using our expertise in the tumor microenvironment to discover and develop therapeutic agents that selectively target tumor cells for the treatment of patients living with cancer. Our lead investigational small molecule, TH-302, is being evaluated in two pivotal Phase 3 clinical trials and multiple earlier-stage clinical trials. We have a global license and co-development agreement for TH-302 with Merck KGaA, with an option to co-commercialize in the United States.

TH-302 was discovered by our scientists based on our hypoxia-targeted therapeutics prodrug technology. Hypoxia, or abnormally low oxygen concentration, is a common feature of the tumor microenvironment in most solid tumors and in the bone marrow of patients with hematological malignancies (also known as cancers of the bone marrow, for example, leukemias and multiple myeloma). We believe that by virtue of targeting tumor hypoxia, TH-302 may have broad clinical applicability across many types of solid tumors and some hematological malignancies. To explore this broad therapeutic potential of TH-302, we are conducting multiple clinical trials to evaluate its safety and efficacy in solid tumors and hematological malignancies in combination with currently marketed anticancer drugs, including traditional chemotherapeutic agents and antiangiogenic agents, and as monotherapy for certain cancers.

The most advanced clinical study of TH-302 is a pivotal Phase 3 clinical trial of TH-302 plus doxorubicin versus doxorubicin alone in patients with advanced soft tissue sarcoma, which we refer to as the 406 trial. The 620 patient trial enrollment completion was announced in December 2013. Pre-planned interim analyses of both efficacy and safety data are currently expected to be conducted by an Independent Data Monitoring Committee (IDMC) in September 2014. The IDMC will recommend the next steps for the study, which we plan to announce shortly thereafter. The interim analyses are designed to allow for the early termination of the study based on achieving a pre-specified improvement in overall survival and the recommendation of the IDMC. Early termination of the study may also result if the IDMC determines that the 406 trial would be unlikely to meet its primary endpoint of overall survival or if unexpected safety events altering the risk-benefit profile are observed. If the IDMC recommends that the study continue as planned, we will remain blinded to the data until the primary analysis of overall survival is conducted, which is scheduled to occur after 434 deaths are reported. We currently project that, unless the IDMC recommends the trial end early, the required number of events may be reached in mid-2015, with the primary analysis of overall survival to be conducted in the second half of 2015.

In January 2013, we announced that our partner Merck KGaA initiated the global pivotal Phase 3 MAESTRO Metastatic or unresectable pancreatic adenocarcinoma study assessing the efficacy and safety of TH-302 in combination with gemcitabine in patients with previously untreated, locally advanced unresectable or metastatic pancreatic adenocarcinoma. The pivotal Phase 3 MAESTRO clinical trial was initiated after our randomized and controlled Phase 2 clinical trial of TH-302 plus gemcitabine versus gemcitabine (which we refer to as the 404 trial) met its primary efficacy endpoint, demonstrating an improvement in progression-free survival when TH-302 was combined with gemcitabine in this patient population. Enrollment in the Phase 3 MAESTRO trial remains on track. In March 2014, we announced that Merck KGaA initiated a Phase 1 dose escalation study assessing the safety, tolerability and anti-tumor activity of TH-302 in combination with gemcitabine and nab-paclitaxel (Abraxane®) in patients with previously untreated, locally advanced unresectable or metastatic pancreatic adenocarcinoma.

In June 2014, we announced the initiation of a 440-patient, randomized, double-blind, placebo-controlled trial of TH-302 in combination with pemetrexed in patients with second-line advanced non-squamous non-small cell lung cancer (which we refer to as the 415 trial). The international Phase 2 trial is designed to support registration and will compare the combination of TH-302 plus pemetrexed versus the combination of pemetrexed plus placebo as second-line therapy in this patient population. The study's primary efficacy endpoint is overall survival and secondary endpoints include safety and assessment of anti-tumor activity as determined by progression-free survival and objective response rate.

In March 2012, we initiated a Phase 1/2 open label clinical trial of TH-302 to determine the maximum tolerated dose, dose limiting toxicity, safety, tolerability, clinical activity, and pharmacokinetics of TH-302 in patients with relapsed/refractory multiple myeloma (which we refer to as the 408 trial). Updated results were reported at the June 2014 ASCO annual meeting showing initial signs of clinical activity of the combination of TH-302 and dexamethasone in patients with extensively treated relapsed/refractory multiple myeloma. Enrollment of patients treated at the maximum tolerated dose is complete with treatment ongoing. In July 2014, we announced the initiation of dosing in the final stage of the 408 trial, which is evaluating TH-302 in combination with the proteasome inhibitor bortezomib (Velcade®) plus low-dose dexamethasone or "TBorD" in patients with relapsed/refractory multiple myeloma. Enrollment is ongoing.

TH-302 is also the subject of clinical trials investigating TH-302 as a monotherapy or TH-302 in combination with antiangiogenic therapies in a variety of tumor types. In August 2013, we announced the initiation of a Phase 2 clinical trial of TH-302 as single-agent monotherapy in patients with advanced melanoma (which we refer to as the 413 trial). A Phase 1 dose-escalation study of TH-302 in combination with sunitinib in patients with advanced renal cell carcinoma or RCC, gastrointestinal stroma tumors, and pancreatic neuroendocrine tumors (which we refer to as the 410 trial) established a recommended phase 2 dose of the combination; additional development opportunities for the investigation of TH-302 in combination with sunitinib are being assessed. Two investigator-sponsored trials of TH-302 are currently enrolling patients: a Phase 1/2 study of TH-302 in combination with bevacizumab in recurrent glioblastoma following bevacizumab failure and a Phase 1/2 study of TH-302 in combination with sorafenib in advanced RCC and advanced hepatocellular carcinoma.

We are working to broaden the potential applicability of TH-302 as well as to discover additional therapeutics that will selectively target cancer cells. We also seek to optimize patient selectivity for our hypoxia-targeted therapeutics through the development of our [18F]-HX4 investigational hypoxia Positron Emission Tomography (PET) tracer. [18F]-HX4 is a radiolabeled tracer that we acquired from Siemens Healthcare Molecular Imaging to potentially identify and quantify the degree of hypoxia in tumors *in vivo*.

We were incorporated in October 2001. We have devoted substantially all of our resources to research and development of our product candidates. We have not generated any revenue from the commercial sales of our product candidates, and since inception we have funded our operations through the private placement and public offering of equity securities and through payments received under our license and co-development agreement with Merck KGaA. As of June 30, 2014 and December 31, 2013, we had cash, cash equivalents and marketable securities of \$75.2 million and \$82.0 million, respectively. We expect to continue to devote substantial resources to research and development in future periods as we complete our current clinical trials, start additional clinical trials under our collaboration with Merck KGaA or on our own and continue our discovery efforts. Research and development expenses net of

reimbursements of Merck KGaA's 70% share of total TH-302 development expenses are expected to increase in 2014 compared to 2013 due primarily to the continued execution of existing clinical trials and anticipated commencement of new clinical trials for TH-302. We believe that our cash, cash equivalents and marketable securities will be sufficient to fund our projected operating requirements for at least the next twelve months based upon current operating plans, milestone payment forecasts and spending assumptions. Although 70% of the collaboration expenditures related to the development of TH-302 are expected to be funded by Merck KGaA, we expect that we will need to raise additional capital to complete the clinical development of TH-302 and to support new in-house development programs or to in-license or otherwise acquire and develop additional products or programs. Research and development expenses may fluctuate significantly from period to period as a result of the progress and results of our clinical trials.

Results of Operations

Revenue. For the three and six months ended June 30, 2014, we recognized \$3.7 million and \$7.4 million in revenue, respectively, from the amortization of the aggregate of \$110 million in upfront and milestone payments earned in 2013 and 2012 from our collaboration with Merck KGaA. For the three and six months ended June 30, 2013, we recognized \$3.2 million and \$6.1 million, respectively, in revenue, from the amortization of the \$97.5 million in upfront and milestone payments earned in 2012 and in the first quarter of 2013 from our collaboration with Merck KGaA. We are amortizing the upfront payment and milestones earned over the period of performance (product development period). We will periodically review and, if necessary, revise the estimated periods of performance of our collaboration. We expect revenue to increase in 2014 compared to 2013 due to the full year amortization of milestone payments earned in 2013.

Research and Development. Research and development expenses were \$8.7 million for the three months ended June 30, 2014 compared to \$8.0 million for the three months ended June 30, 2013, in each case net of the reimbursement for Merck KGaA's 70% share of total development expenses for TH-302. The \$0.7 million increase in expenses is due primarily to an increase of \$1.2 million in consulting and employee related expenses and a \$0.4 million increase in clinical development expenses, partially offset by a \$0.9 million increase in reimbursement for Merck KGaA's 70% share of total development expenses for TH-302. Research and development expenses were \$18.3 million for the six months ended June 30, 2014 compared to \$14.5 million for the six months ended June 30, 2013, in each case net of the reimbursement for Merck KGaA's 70% share of total development expenses for TH-302. The \$3.8 million increase in expenses is due primarily to a \$5.1 million increase in clinical development expenses and an increase of \$2.0 million in consulting and employee related expenses, partially offset by a \$3.3 million increase in reimbursement for Merck KGaA's 70% share of total development expenses for TH-302.

During the three and six months ended June 30, 2014 and 2013, we were engaged in two primary research and development programs: the development of TH-302, which is the subject of two ongoing pivotal Phase 3 clinical trials and multiple Phase 2 and Phase 1 clinical trials; and our discovery research program aimed at identifying new drug candidates. Research and development expenses consist primarily of costs of conducting clinical trials, salaries and related costs for personnel including non-cash stock-based compensation, costs of clinical materials, costs for research projects and preclinical studies, costs related to regulatory filings, and facility costs. Contracting and consulting expenses are a significant component of our research and development expenses as we rely on consultants and contractors in many of these areas. The following table summarizes our research and development expenses (net of reimbursement for Merck KGaA's 70% share of total development expenses in the case of TH-302) attributable to both programs for each period presented:

Research and Development Expenses by Project (in thousands):	Three Months Ended June 30,		Six Months Ended June 30,	
	2014	2013	2014	2013
TH-302	\$ 7,177	\$ 6,827	\$ 15,409	\$ 12,273
Discovery Research	1,487	1,156	2,908	2,178
Total Research and Development Expenses	\$ 8,664	\$ 7,983	\$ 18,317	\$ 14,451

Research and development expenses associated with our internally discovered compound TH-302 were \$7.2 million and \$15.4 million for the three and six months ended June 30, 2014, respectively and \$6.8 million and \$12.3 million for the three and six months ended June 30, 2013, respectively, in each case net of the reimbursement for Merck KGaA's 70% share of total development expenses for TH-302. The increase of \$0.4 million and \$3.1 million during the three and six months ended June 30, 2014, respectively compared to same periods in 2013, net of reimbursement for Merck KGaA's 70% share of total development expenses for TH-302, was due primarily to an increase in development costs for the 406 trial, the MAESTRO trial and the 415 trial. TH-302 continues to progress through the 406 trial, the MAESTRO trial, the recently initiated 415 trial, the 413 trial and the 408 trial.

Discovery research and development expenses were \$1.5 million and \$2.9 million for the three and six months ended June 30, 2014, respectively, compared to \$1.2 million and \$2.2 million for the three and six months ended June 30, 2013, respectively. We continue to focus our efforts towards discovering and developing new drug candidates from our hypoxia targeted therapeutic technology.

The largest component of our total operating expenses is our ongoing investment in our research and development activities, primarily the clinical development of TH-302, and we expect to continue to devote substantial resources to research and development in future periods as we complete our current clinical trials, start additional clinical trials and continue our discovery efforts under our collaboration with Merck as well as on our own. Research and development expenses, including reimbursements of Merck KGaA's 70% share of development expenses, are expected to increase in 2014 compared to 2013 due to the continued execution of existing clinical trials and the anticipated start of new clinical trials. Expenses will fluctuate based upon many factors including the degree of collaborative activities, timing of manufacturing batches of TH-302 active pharmaceutical ingredient, or API, and drug product, numbers of patients enrolled in our clinical trials and the outcome of each clinical trial event.

The process of conducting the clinical research necessary to obtain FDA and foreign regulatory approvals is costly, uncertain and time consuming. We consider the active management and development of our TH-302 and discovery research programs to be critical to our long-term success. The actual probability of success for TH-302 and future clinical product candidates may be impacted by a variety of factors, including, among others, the quality of the product candidate, early clinical data, investment in the program and the availability of adequate funding, competition, manufacturing capability and commercial viability. Furthermore, our strategy may include entering into collaborations with third parties, such as our TH-302 collaboration with Merck KGaA, to participate in the development and commercialization of our product candidates. In these situations, the preclinical development or clinical trial process for a product candidate and the estimated completion date may largely be under the control of that third party and not under our control. We cannot forecast with any degree of certainty which of our future clinical product candidates will be subject to future collaborations or how such arrangements would affect our development plans or capital requirements. In addition, the length of time required for clinical development of a particular product candidate and our development costs for that product candidate may be impacted by the scope and timing of enrollment in clinical trials for the product candidate, unanticipated additional clinical trials that may be required, future decisions to develop a product candidate for subsequent indications, and whether in the future we decide to pursue development of the product candidate with a collaborator or independently. For example, TH-302 may have the potential to be approved for multiple indications, and we do not yet know how many of those indications we and Merck KGaA will pursue. In this regard, the decision to pursue regulatory approval for subsequent indications will depend on several variables outside of our control, including the strength of the data generated in our and Merck KGaA's prior and ongoing clinical studies and the willingness of Merck KGaA to jointly fund such additional work. Furthermore, the scope and number of clinical studies required to obtain regulatory approval for each pursued indication is subject to the input of the applicable regulatory authorities, and we have not yet sought such input for all potential indications that we and Merck KGaA may elect to pursue, and even after having given such input applicable regulatory authorities may subsequently require additional clinical studies prior to granting regulatory approval based on new data generated by us or other companies, or for other reasons outside of our control.

We did not track research and development expenses by project prior to 2003, and therefore we cannot provide cumulative project expenses to date. The risks and uncertainties associated with our research and development projects are discussed more fully in the "Risk Factors" section in Part II, Item 1A of this quarterly report on Form 10-Q. As a result of the risks and uncertainties discussed in the "Risk Factors" section and above, we are unable to determine with any degree of certainty the duration and completion costs of our research and development projects, anticipated completion dates or when and to what extent we will receive cash inflows from the commercialization and sale of a product candidate, including TH-302. To date, we have not commercialized any of our product candidates and in fact may never do so.

General and Administrative. General and administrative expenses were \$2.5 million for the three months ended June 30, 2014, compared to \$2.2 million for the three months ended June 30, 2013. The \$0.3 million increase in expenses is due primarily to an increase in employee-related and consulting expenses. General and administrative expenses were \$5.1 million for the six months ended June 30, 2014, compared to \$4.7 million for the six months ended June 30, 2013. The \$0.4 million increase was primarily due to an increase in employee-related and consulting expenses. We currently expect our general and administrative expenses to increase in 2014 compared to 2013 due to increased staffing and consulting expenses to support activities related to our collaboration with Merck KGaA and the ongoing development of TH-302.

Interest Income (Expense), Net. Interest income (expense), net for the three months ended June 30, 2014 was \$30,000 compared to \$34,000 of interest income for same period in 2013. Interest income (expense), net for each of the six months ended June 30, 2014 and 2013 was \$70,000 of interest income.

Other Income (Expense). Other income (expense) for the three months ended June 30, 2014 was non-cash income of \$6.7 million compared to non-cash expense of \$5.8 million, for the three months ended June 30, 2013. The non-cash income during the three months ended June 30, 2014 was due to a decrease in the fair value of the outstanding warrants as result of a decrease in the underlying price of the common stock, whereas the non-cash expense during the three months ended June 30, 2013 was due to an increase in the fair value of the outstanding warrants as a result of an increase in the underlying price of the common stock. Other income (expense) for the six months ended June 30, 2014 was non-cash income of \$8.1 million compared to non-cash expense of \$8.9 million, for the six months ended June 30, 2013. The non-cash income during the six months ended June 30, 2014 was due to a decrease in the fair value of the outstanding warrants as result of a decrease in the underlying price of the common stock, whereas the non-cash expense during the six months ended June 30, 2013 was due to an increase in the fair value of the outstanding warrants as a

result of an increase in the underlying price of the common stock. ASC 815 "*Derivatives and Hedging*" requires that stock warrants with certain terms need to be accounted for as a liability with changes to their fair value recognized in the consolidated statement of comprehensive income (loss).

Liquidity and Capital Resources

We have not generated and do not expect to generate revenue from sales of product candidates in the near term. Since our inception we funded our operations primarily through private placements and public offerings of equity securities and through payments received under our license and co-development agreement with Merck KGaA. To date we have received \$110 million in upfront and milestone payments from our collaboration with Merck KGaA, including a \$12.5 million milestone payment received during the three months ended March 31, 2014. We had cash, cash equivalents and marketable securities of \$75.2 million and \$82.0 million at June 30, 2014 and December 31, 2013, respectively, available to fund operations.

Net cash used in operating activities for the six months ended June 30, 2014 was \$6.5 million compared to net cash provided by operating activities of \$27.2 million for the six months ended June 30, 2013. The decrease of \$33.7 million in cash provided by operations was primarily attributable to \$12.5 million of cash received related to a milestone payment from the Merck KGaA collaboration during the six months ended June 30, 2014 compared to \$42.5 million of cash received related to milestone payments from the Merck KGaA collaboration during the six months ended June 30, 2013.

Net cash provided by investing activities for the six months ended June 30, 2014 was \$5.3 million compared with net cash used in investing activities of \$34.6 million for the six months ended June 30, 2013. The \$39.9 million decrease in cash used by investing activities was due primarily to a decrease in proceeds used in the purchase of marketable securities net of proceeds from the sales and maturities of marketable securities.

Net cash provided by financing activities for the six months ended June 30, 2014 and 2013 was \$0.4 million and \$0.8 million, respectively. Net cash received during both periods was related to the exercise of stock options and purchase rights under our employee equity incentive plans.

We believe that our cash, cash equivalents and marketable securities will be sufficient to fund our projected operating requirements for at least the next 12 months based upon current operating plans, milestone payment forecasts and spending assumptions. Although some of the expenditures related to TH-302 are expected to be funded by Merck KGaA, we expect that we will need to raise additional capital to complete the clinical development of TH-302 and to support new in-house development programs or to in-license or otherwise acquire and develop additional products or programs.

We may seek to raise capital through a variety of sources, including:

- the public equity market;
- private equity financing;
- collaborative arrangements;
- licensing arrangements; and/or
- public or private debt.

Our ability to raise additional funds will depend, in part on the outcome of our clinical trials and other clinical and regulatory events, as well as factors related to financial, economic, and market conditions, collaboration or license agreement with others and factors related to financial, economic and market conditions, many of which are beyond our control. In addition, our ability to raise additional capital may be dependent upon our common stock remaining listed on the NASDAQ Capital Market. We cannot be certain that sufficient funds will be available to us when required or on satisfactory terms, if at all. If adequate funds are not available, we may be required to significantly reduce or refocus our operations or to obtain funds through additional arrangements that may require us to relinquish rights to certain of our products, technologies or potential markets, any of which could delay or require that we curtail or eliminate some or all of our development programs or otherwise have a material adverse effect on our business, financial condition and results of operations. In addition, we may have to delay, reduce the scope of or eliminate some of our research and development, which could delay the time to market for any of our product candidates, if adequate funds are not available.

If we are unable to secure additional financing on a timely basis or on terms favorable to us, we may be required to cease or reduce certain research and development projects, to sell some or all of our technology or assets or to merge all or a portion of our business with another entity. Insufficient funds may require us to delay, scale back, or eliminate some or all of our activities, and if we are unable to obtain additional funding, there is uncertainty regarding our continued existence.

At Market Issuance Sales Agreement

On August 1, 2014, we entered into an at market issuance sales agreement, or sales agreement, with MLV & Co. LLC, or MLV, which provides that, upon the terms and subject to the conditions and limitations set forth in the sales agreement, we may elect to issue and sell shares of our common stock having an aggregate offering price of up to \$30.0 million from time to time through MLV as our sales agent. Sales of our common stock through MLV, if any, will be made on The NASDAQ Capital Market by means of ordinary brokers' transactions at market prices, in block transactions or as otherwise agreed by us and MLV. Subject to the terms and conditions of the sales agreement, MLV will use commercially reasonable efforts to sell our common stock from time to time, based upon our instructions (including any price, time or size limits or other customary parameters or conditions we may impose). We are not obligated to make any sales of common stock under the sales agreement. We will pay MLV an aggregate commission rate of up to 3.0% of the gross proceeds of the sales price per share of any common stock sold under the sales agreement. Under certain circumstances, sales of the stock under the sales agreement could result in an adjustment to the exercise price of certain of our outstanding warrants. The number of shares we are able to sell under this arrangement will be limited in practice based on the trading volume of our common stock. We have not yet sold any common stock pursuant to the sales agreement.

Obligations and Commitments

We lease certain of our facilities under noncancelable leases, which qualify for operating lease accounting treatment under ASC 840, "Leases," and, as such, these facilities are not included on our unaudited condensed consolidated balance sheets.

During the six months ended June 30, 2014, there have been no significant changes in our payments due under contractual obligations and commitments, as disclosed in our Annual Report on Form 10-K for the year ended December 31, 2013, which we filed with Securities and Exchange Commission on March 6, 2014.

Critical Accounting Policies and Use of Estimates

Our discussion and analysis of our financial condition and results of operations are based on our unaudited condensed consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America for interim financial information. The preparation of these unaudited condensed consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities and expenses based on historical experience and on various assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. For further information on our critical accounting policies, see the discussion of critical accounting policies in our Annual Report on Form 10-K for the year ended December 31, 2013, which we filed with the SEC on March 6, 2014.

Recent Accounting Pronouncements Not Yet Adopted

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, *Revenue From Contracts With Customers*, requiring an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The updated standard will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective and permits the use of either the retrospective or cumulative effect transition method. Early adoption is not permitted. The updated standard becomes effective for us in the first quarter of fiscal 2017. We have not yet selected a transition method and are currently evaluating the effect that the updated standard will have on our consolidated financial statements and related disclosures.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

During the six months ended June 30, 2014, there were no material changes to our market risk disclosures as set forth in Part II, Item 7A “Quantitative and Qualitative Disclosures About Market Risk” in our annual report on Form 10-K for the year ended December 31, 2013.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of disclosure controls and procedures.

We have carried out an evaluation under the supervision and with the participation of management, including our principal executive officer and principal financial officer, of our disclosure controls and procedures (as defined in Rule 13a-15(e) of the Securities Exchange Act of 1934, as amended) as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on their evaluation as of June 30, 2014, our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in internal controls over financial reporting.

There were no changes in our internal control over financial reporting during the three months ended June 30, 2014 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on the effectiveness of controls.

Our management, including our principal executive officer and principal financial officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within Threshold Pharmaceuticals, Inc. have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by management override of the control.

The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and we cannot be certain that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected. Accordingly, our disclosure controls and procedures are designed to provide reasonable, not absolute, assurance that the objectives of our disclosure control system are met and, as set forth above, our principal executive officer and principal financial officer have concluded, based on their evaluation, that our disclosure controls and procedures were effective as of June 30, 2014 to provide reasonable assurance that the objectives of our disclosure control system were met.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

We are not a party to any material legal proceedings.

ITEM 1A. RISK FACTORS

We have identified the following risks and uncertainties that may have a material adverse effect on our business, financial condition or results of operations. The risks described below are not the only ones we face. Additional risks not presently known to us or that we currently believe are immaterial may also significantly impair our business operations. Our business could be harmed by any of these risks. The trading price of our common stock could decline due to any of these risks, and you may lose all or part of your investment. In assessing these risks, you should refer to the other information contained in this quarterly report on Form 10-Q, including our condensed consolidated financial statements and related notes.

Risks Related to Drug Discovery, Development and Commercialization

We are substantially dependent upon the success of TH-302, which is our only product candidate in clinical development. If we and Merck KGaA are unable to successfully develop and obtain regulatory approval for TH-302, our ability to generate revenue from product sales will be significantly delayed.

We have focused our development activities on TH-302, and we do not presently have any other compounds in clinical development. Substantially all of our efforts and expenditures over the next few years are expected to be devoted to TH-302. Accordingly, our future prospects are substantially dependent on the successful development, regulatory approval and commercialization of TH-302. In addition, in February 2012, we entered into a global license and co-development agreement for TH-302 with Merck KGaA, with an option to co-commercialize in the United States. The success of this collaboration and the activities of Merck KGaA will significantly impact the development and potential commercialization of TH-302. In addition, TH-302 is not expected to be commercially available in the near term, if at all. Further, the commercial success of TH-302 will depend upon its acceptance by physicians, patients, third party payors and other key decision-makers as a therapeutic and cost effective alternative to currently available products. If we and Merck KGaA are unable to successfully develop, obtain regulatory approval for and commercialize TH-302, our ability to generate revenue from product sales will be significantly delayed and our business would be materially and adversely affected, and we may not be able to earn sufficient revenues to continue as a going concern.

In addition, the failure of TH-302 to achieve successful clinical trial endpoints, delays in clinical trial enrollment or events or in the clinical development of TH-302 generally, unanticipated adverse side effects related to TH-302 or any other adverse developments or information related to TH-302 would significantly harm our business, our prospects and the value of our common stock. TH-302 is currently the subject of two ongoing pivotal Phase 3 clinical trials being conducted under special protocol assessments, or SPAs, with the U.S. Food and Drug Administration, or FDA: the “406 trial” evaluating TH-302 in combination with doxorubicin versus doxorubicin alone in patients with soft tissue sarcoma, and the MAESTRO trial of TH-302 in combination with gemcitabine in patients with previously untreated, locally advanced unresectable or metastatic pancreatic adenocarcinoma. There is no guarantee that the results of either of the ongoing Phase 3 clinical trials will be positive. Negative or inconclusive results in either of the Phase 3 clinical trials could cause the FDA to require that we repeat it or conduct additional clinical trials. Even if we believe that the data from required Phase 3 clinical trials is positive, the FDA could require additional trials or other testing before approving TH-302 for marketing. In this regard, the FDA has substantial discretion in the approval process and may refuse to approve any application or decide that our or Merck KGaA’s data is insufficient for approval and require additional preclinical, clinical or other studies. Varying interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent regulatory approval of TH-302. The FDA could also require additional studies or trials to satisfy particular safety concerns noted in our or Merck KGaA’s preclinical or clinical testing. Even if the FDA or other regulatory agency approves TH-302, the approval may impose significant restrictions on the indicated uses, conditions for use, labeling, advertising, promotion, marketing and/or production of such product and may impose ongoing commitments or requirements for post-approval studies, including additional research and development and clinical trials. The FDA and other agencies also may impose various civil or criminal sanctions for failure to comply with regulatory requirements, including withdrawal of product approval. We and Merck KGaA will need to obtain regulatory approval from authorities in foreign countries to market TH-302 in those countries. Approval by one regulatory authority does not ensure approval by regulatory authorities in other jurisdictions. If we or Merck KGaA fail to obtain approvals from foreign jurisdictions, the geographic market for TH-302 would be limited.

Although we obtained agreement with the FDA on an SPA for our pivotal Phase 3 clinical trial of TH-302 in combination with doxorubicin versus doxorubicin alone in patients with soft tissue sarcoma and Merck KGaA has obtained agreement with the FDA on an SPA for the pivotal Phase 3 clinical trial of TH-302 in combination with gemcitabine for the treatment of previously untreated locally advanced unresectable or metastatic pancreatic cancer, an agreement on an SPA does not guarantee any particular outcome from regulatory review, including any regulatory approval.

We have obtained an agreement with the FDA on an SPA for the 406 trial of TH-302. Merck KGaA has also obtained an agreement with the FDA on an SPA for the MAESTRO trial of TH-302. The SPA process allows for FDA evaluation of a clinical trial protocol intended to form the primary basis of an efficacy claim in support of a new drug application, or NDA, and provides a product sponsor with an agreement confirming that the design and size of a trial will be appropriate to form the primary basis of an efficacy claim for an NDA if the trial is performed according to the SPA. Reaching agreement on an SPA is not an indication of approvability. Even if we believe that the data from a clinical trial are supportive, an SPA is not a guarantee of approval, and we cannot be certain that the design of, or data collected from, a trial will be adequate to demonstrate safety and efficacy, or otherwise be sufficient to support regulatory approval. There can be no assurance that the terms of an SPA will ultimately be binding on the FDA, and the FDA is not obligated to approve an NDA, if any, even if the clinical outcome is positive. The FDA retains significant latitude and discretion in interpreting the terms of an SPA and the data and results from a clinical trial, and can require trial design changes or additional studies if issues arise essential to determining safety or efficacy. Data may subsequently become available that causes the FDA to reconsider the previously agreed upon scope of review and the FDA may have subsequent safety or efficacy concerns that override an SPA, and we can give no assurance that as clinical trials proceed or as part of an NDA review process, if any, the FDA will determine that a previously approved SPA is still valid. As a result, we do not know how the FDA will interpret the parties' respective commitments under the SPA agreements, how it will interpret the data and results from the 406 trial and the MAESTRO trial, or whether TH-302 will receive any regulatory approvals.

Additionally, an SPA may be changed only with written agreement of the FDA and sponsor, and any further changes we or Merck KGaA may propose to our respective protocols will remain subject to the FDA's approval. The FDA may not agree to any such amendment and, even if they agree, they may request other amendments to the trial design that could require additional cost and time, as well as increase the degree of difficulty in reaching clinical endpoints. As a result, even with an SPA, we cannot be certain that the trial results from the 406 trial or the MAESTRO trial will be found to be adequate to support an efficacy claim and product approval. Therefore, despite the potential benefits of SPA agreements, significant uncertainty remains regarding the clinical development of and regulatory approval process for TH-302 and it is possible that we and Merck KGaA might never receive any regulatory approvals for TH-302.

Pre-clinical studies and Phase 1 or 2 clinical trials of TH-302 may not predict the results of subsequent human clinical trials.

Pre-clinical studies, including studies of our product candidates in animal models of disease, may not accurately predict the result of human clinical trials of those product candidates. In particular, promising animal studies suggesting the efficacy of TH-302 for the treatment of different types of cancer may not accurately predict the ability of TH-302 to treat cancer effectively in humans. TH-302 may be found not to be efficacious in treating cancer, alone or in combination with other agents, when studied in human clinical trials. In addition, we will not be able to commercialize our drug candidates until we obtain FDA approval in the United States or approval by comparable regulatory agencies in Europe and other countries. A number of companies in the pharmaceutical industry, including us and those with greater resources and experience than us, have suffered significant setbacks in Phase 3 clinical trials, even after encouraging results in earlier clinical trials.

To satisfy FDA or foreign regulatory approval standards for the commercial sale of our product candidates, we must demonstrate in adequate and controlled clinical trials that our product candidates are safe and effective. Success in early clinical trials, including in Phase 2 clinical trials, does not ensure that later clinical trials will be successful. Initial results from Phase 1 and Phase 2 clinical trials of TH-302 also may not be confirmed by later analysis or in subsequent larger clinical trials, including in the 406 trial and the MAESTRO trial. In particular, the results that achieved the primary endpoint for progression-free survival in the Phase 2b trial of TH-302 in pancreatic cancer may not predict the results of overall survival for patients in the same study or subsequent studies, including in the MAESTRO trial. As a result, despite the results reported in earlier clinical trials for TH-302, we do not know whether the ongoing Phase 3 clinical trials or other clinical trials that we or Merck KGaA may conduct will demonstrate adequate efficacy and safety to result in regulatory approval to market TH-302. Our and Merck KGaA's failure to successfully complete clinical trials and obtain regulatory approval for TH-302 would materially and adversely affect our business and our stock price.

We are dependent upon our collaborative relationship with Merck KGaA to further develop, manufacture and commercialize TH-302.

Our success in developing, manufacturing and commercializing TH-302 depends on our relationship with Merck KGaA. On February 3, 2012, we entered into a global license and co-development agreement for TH-302 with Merck KGaA, Darmstadt, Germany, with an option to co-commercialize in the United States. In the United States, we have primary responsibility for development of TH-302 in the soft tissue sarcoma indication. We and Merck KGaA will jointly develop TH-302 in all other cancer indications being pursued. We have rights to co-promote TH-302 in the United States, which we can exercise by giving notice during specified periods, and have the right to co-commercialize TH-302 if certain development or sales milestones are achieved.

We are subject to a number of risks associated with our dependence on our collaborative relationship with Merck KGaA, including:

- our ability, together with Merck KGaA, to achieve developmental and commercial milestones that will trigger payments to us under the agreement;
- our ability to fund 30% of the global development expenses of TH-302;
- we are not able to control any decisions by Merck KGaA regarding the amount and timing of resource expenditures for the development and commercialization of TH-302;
- Merck KGaA may delay clinical trials, provide insufficient funding for a clinical trial, stop a clinical trial or abandon TH-302, repeat or conduct new clinical trials or require a new formulation of TH-302 for clinical testing;
- possible disagreements with Merck KGaA as to development plans, clinical trials, regulatory marketing or sales;
- our need to develop a sales force to co-promote or co-commercialize TH-302 in the United States if we chose to do so, or our reliance on Merck KGaA to promote TH-302 in the United States;
- our inability to co-promote or co-commercialize TH-302 in any country outside the United States, which makes us solely dependent on Merck KGaA to promote and commercialize TH-302 in foreign countries;
- if TH-302 is approved for commercial sale and we exercise our co-promotion or co-commercialization rights for TH-302 in the United States, if we do not receive timely and accurate information from Merck KGaA regarding sales activities, expenses and resulting operating profits and losses, our estimates at a given point of time could be incorrect and we could be required to record adjustments in future periods or restate our financial results for prior periods;
- loss of significant rights if we fail to meet our obligations under the collaboration agreement;
- Merck KGaA may not properly maintain or defend our intellectual property rights or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our proprietary information or expose us to potential litigation;
- adverse regulatory or legal action against Merck KGaA resulting from failure to meet healthcare industry compliance requirements in the promotion and sale of TH-302, including federal and state reporting requirements;
- changes in key management personnel at Merck KGaA, including Merck KGaA's representatives on the joint steering committee or other committees that are administering the agreement;
- Merck KGaA could independently move forward with a competing product candidate developed either independently or in collaboration with others, including our competitors;
- changes in key management personnel at Merck KGaA, including Merck KGaA's representatives on the joint steering committee or other committees that are administering the agreement; and
- possible disagreements with Merck KGaA regarding interpretation or enforcement of the agreement that could result in the delay or termination of the research, development or commercialization of TH-302 or that could result in costly litigation or arbitration that diverts management's attention and resources.

We have limited ability to direct Merck KGaA in its development of TH-302 and we may be unable to obtain any remedy against Merck KGaA if they fail to do so, or to do so in a manner that we think is inadequate. Merck KGaA may not have sufficient expertise to develop, promote or obtain reimbursement for oncology products in the United States and may fail to devote appropriate resources to this task. Merck KGaA's development plans may be slower than or different from our plans were, when we were developing TH-302 on our own, leading to changes and delays in development and in the achievement of milestones that would impact payments to us under our agreement with Merck KGaA. In addition, Merck KGaA may establish a sales and marketing infrastructure for TH-302 that is not appropriate for the sales opportunity or establish this infrastructure too early or late in view of the ultimate timing of potential regulatory approvals. We are at risk with respect to the success or failure of Merck KGaA's development and commercial decisions related to TH-302 as well as the extent to which Merck KGaA succeeds in the execution of its strategy. Merck KGaA's development of other products may affect its incentives to develop and commercialize TH-302 and cause it to take actions that may be different from those we would take.

Under the terms of the agreement, we and Merck KGaA must agree on the development plan for TH-302. If we and Merck KGaA cannot agree, clinical trial progress could be significantly delayed. Further, we are required to fund 30% of the global development expenses of TH-302; if we cease funding development of TH-302 under the collaboration agreement, then we will be entitled to receive a royalty, but will lose our right to co-commercialize TH-302 and share in profits, which could substantially harm our business, financial condition and prospects.

Merck KGaA has the right to terminate the agreement on 90 days' prior written notice, or following our uncured material breach. If Merck KGaA terminates the agreement at its election, then we would become responsible for the costs of development and commercialization of TH-302, and there can be no assurance we would be able to do so, or to find another collaborator for the continued development and commercialization of TH-302. If we are unable to maintain our collaborative relationship with Merck KGaA, we may be unable to continue development, manufacturing and any marketing activities at our own expense.

If we were able to do so on our own, this would significantly increase our capital and infrastructure requirements, would necessarily impose delays on our TH-302 development program, may limit the indications we are able to pursue and could prevent us from effectively developing and commercializing TH-302. In turn, this could significantly harm our financial position, adversely affect our stock price and require us to incur all the costs of developing and commercializing TH-302, which are now being largely funded by Merck KGaA. In the future, we may not be able to locate third-party collaborators to develop and market TH-302 and we may lack the capital and resources necessary to develop TH-302 alone. Disputes with Merck KGaA may delay or prevent us from further developing, manufacturing or commercializing TH-302, and could lead to litigation against Merck KGaA, which could be time consuming and expensive.

Delays in our or Merck KGaA's clinical trials could result in us not achieving anticipated developmental milestones when expected, increased costs and delay our ability to us obtain regulatory approval and commercialize our product candidates.

Delays in the progression of our or Merck KGaA's clinical trials could result in us not meeting previously announced clinical milestones and could materially impact our product development costs and milestone revenue and delay regulatory approval of our product candidates. We do not know whether planned clinical trials will be completed on schedule, if at all. Clinical trials can be delayed for a variety of reasons, including:

- adverse safety events experienced during our clinical trials;
- a lower than expected frequency of clinical trial events;
- delays in obtaining clinical materials;
- slower than expected patient recruitment to participate in clinical trials;
- delays in reaching agreement on acceptable clinical trial agreement terms with prospective sites or obtaining institutional review board approval,
- delays in obtaining regulatory approval to commence new trials;
- changes to clinical trial protocols; and
- disagreements with Merck KGaA on development plans.

Delays in clinical trials can also result from difficulties in enrolling patients in our clinical trials, which could increase the costs or affect the timing or outcome of these clinical trials. This is particularly true with respect to diseases with relatively small patient populations. Timely completion of clinical trials depends, in addition to the factors outlined above, on our ability to enroll a sufficient number of patients, which itself is a function of many factors, including:

- the therapeutic endpoints chosen for evaluation;
- the eligibility criteria defined in the protocol;
- the perceived benefit of the investigational drug under study;
- the size of the patient population required for analysis of the clinical trial's therapeutic endpoints;
- our ability to recruit clinical trial investigators and sites with the appropriate competencies and experience;
- our ability to obtain and maintain patient consents; and
- competition for patients by clinical trial programs for other treatments.

If we and/or Merck KGaA do not successfully complete our clinical trials on schedule, the price of our common stock may decline.

Our product candidates must undergo rigorous clinical testing, the results of which are uncertain and could substantially delay or prevent us from bringing them to market.

Before we and/or Merck KGaA can obtain regulatory approval for a product candidate, we and/or Merck KGaA must undertake extensive clinical testing in humans to demonstrate safety and efficacy to the satisfaction of the FDA or other regulatory agencies. Clinical trials of new drug candidates sufficient to obtain regulatory marketing approval are expensive and take years to complete.

We cannot be certain of us or Merck KGaA successfully completing clinical testing within the time frames we have planned or anticipated, or at all. We or Merck KGaA may experience numerous unforeseen events during, or as a result of, the clinical trial process that could delay or prevent us or Merck KGaA from receiving regulatory approval or commercializing our product candidates, including the following:

- our or Merck KGaA's clinical trials may produce negative or inconclusive results, and we or Merck KGaA may decide, or regulators may require us and Merck KGaA, to conduct additional clinical and/or preclinical testing or to abandon programs;
- the results obtained in earlier stage clinical testing may not be indicative of results in future clinical trials;
- clinical trial results may not meet the level of statistical significance required by the FDA or other regulatory agencies;
- enrollment in clinical trials for our product candidates may be slower than we anticipate, resulting in significant delays and additional expense;
- we, or Merck KGaA or regulators may suspend or terminate our clinical trials if the participating patients are being exposed to unacceptable health risks; and
- the effects of our product candidates on patients may not be the desired effects or may include undesirable side effects or other characteristics that may delay or preclude regulatory approval or limit their commercial use, if approved.

In addition, clinical results are susceptible to varying interpretations that may delay, limit or prevent regulatory approvals. Negative or inconclusive results or adverse safety events, including patient fatalities that may be attributable to TH-302, during a clinical trial could cause the trial to be terminated or require additional studies. Furthermore, some of our clinical trials are overseen by Independent Data Monitoring Committees, or IDMCs. These independent oversight bodies are comprised of external experts who review the progress of the ongoing clinical trials as well as safety from other trials, and make recommendations concerning a trial's continuation, modification, or termination based on interim, unblinded data. Any of our ongoing clinical trials overseen by an IDMC may be discontinued or amended in response to recommendations made by responsible IDMCs based on their review of such interim trial results and an IDMC may determine to delay or suspend the trial due to safety or futility findings based on events occurring during a clinical trial. For example, as part of our study protocol for the 406 trial, an IDMC monitors patient safety on an ongoing basis and will conduct interim efficacy and safety analyses after 235 deaths are reported in the trial. If the IDMC at any time determines that data from the 406 trial give rise to safety concerns, the IDMC could recommend that the 406 trial be halted or substantially modified. Moreover, if as a result of the planned interim safety and efficacy analyses for the 406 trial the IDMC determines that the 406 trial would be unlikely to meet its primary endpoint of overall survival, the IDMC could recommend early termination of the 406 trial. The recommended termination of any of our or Merck KGaA's ongoing late-stage clinical trials by an IDMC, including the 406 trial, could materially and adversely impact the future development of TH-302, and our business, prospects, operating results, and financial condition may be materially harmed.

We are subject to significant regulatory approval requirements, which could delay, prevent or limit our ability to market our product candidates.

Our research and development activities, preclinical studies, clinical trials and the anticipated manufacturing and marketing of our product candidates are subject to extensive regulation by the FDA and other regulatory agencies in the United States and by comparable authorities in Europe and elsewhere. We and Merck KGaA require the approval of the relevant regulatory authorities before we may commence commercial sales of our product candidates in a given market. The regulatory approval process is expensive and time-consuming, and the timing of receipt of regulatory approval is difficult to predict. Our product candidates could require a significantly longer time to gain regulatory approval than expected, or may never gain approval. We cannot be certain that, even after expending substantial time and financial resources, we or Merck KGaA will obtain regulatory approval for any of our product candidates. A delay or denial of regulatory approval could delay or prevent our ability to generate product revenues and to achieve profitability.

Changes in regulatory approval policies during the development period of any of our product candidates, changes in, or the enactment of, additional regulations or statutes, or changes in regulatory review practices for a submitted product application may cause a delay in obtaining approval or result in the rejection of an application for regulatory approval. Regulatory approval, if obtained, may be made subject to limitations on the indicated uses for which we may market a product. These limitations could adversely affect our potential product revenues. Regulatory approval may also require costly post-marketing follow-up studies. In addition, the labeling, packaging, adverse event reporting, storage, advertising, promotion and record-keeping related to the product will be subject to extensive ongoing regulatory requirements. Furthermore, for any marketed product, its manufacturer and its manufacturing facilities will be subject to continual review and periodic inspections by the FDA or other regulatory authorities. Failure to comply with applicable regulatory requirements may, among other things, result in fines, suspensions of regulatory approvals, product recalls, product seizures, operating restrictions and criminal prosecution.

Our product candidates are based on targeting the microenvironment of solid tumors and some hematological malignancies, which currently is an unproven approach to therapeutic intervention.

Our product candidates are designed to target the microenvironment of solid tumors and some hematological malignancies by, in the case of TH-302, harnessing hypoxia for selective toxin activation. We have not, nor to our knowledge has any other company, received regulatory approval for a drug based on this approach. We cannot be certain that our approach will lead to the development of approvable or marketable drugs. Our approach may lead to unintended, or off-target, adverse effects or may lack efficacy or contribution to efficacy in combination with other anti-cancer drugs.

In addition, the FDA or other regulatory agencies may lack experience in evaluating the safety and efficacy of drugs based on these targeting approaches, which could lengthen the regulatory review process, increase our development costs and delay or prevent commercialization of our product candidates.

Our product candidates may have undesirable side effects that prevent or delay their regulatory approval or limit their use if approved.

Anti-tumor drugs being developed by us, including TH-302, are expected to have undesirable side effects. For example, in clinical trials of TH-302, some patients have exhibited skin and/or mucosal toxicities that have in some cases caused patients to stop or delay therapy. The extent, severity and clinical significance of these or other undesirable side effects may not be apparent initially and may be discovered or become more significant during drug development or even post-approval. These expected side effects or other side effects identified in the course of our or Merck KGaA's clinical trials or that may otherwise be associated with our product candidates may outweigh the benefits of our product candidates. Side effects may prevent or delay regulatory approval or limit market acceptance if our products are approved. In this regard, TH-302 may prove to have undesirable or unintended side effects or other characteristics adversely affecting its safety, efficacy or cost effectiveness that could prevent or limit its approval for marketing and successful commercial use, or that could delay or prevent the commencement and/or completion of clinical trials for TH-302.

We have not yet gained sufficient experience with a commercial formulation of TH-302.

The formulation of TH-302 that we and Merck KGaA are using in our clinical trials was recently changed to address issues with a prior formulation that was subject to storage and handling requirements that were not suitable for a commercial product. We developed a new formulation of TH-302 that may be suitable for a commercial product, but additional data will be required to verify this and there can be no assurance that we will be able to do so in a timely manner, if at all. If we are not able to develop a viable commercial formulation of TH-302, then we and/or Merck KGaA may be required to repeat some or all of our respective Phase 3 clinical trials of TH-302, or we and Merck KGaA may need to develop an alternative commercial formulation, either of which could delay, perhaps substantially, our ability to obtain any regulatory approvals of TH-302.

Even though we and Merck KGaA have received orphan drug designation for TH-302, we may not receive orphan drug marketing exclusivity for TH-302. Even if we and/or Merck KGaA obtain orphan drug exclusivity, orphan drug exclusivity would afford us and Merck KGaA limited protection, and if another party obtains orphan drug exclusivity for the drugs and indications we are targeting, we may be precluded from commercializing our product candidates in those indications.

We and Merck KGaA have received orphan drug designation for TH-302 for the treatment of soft tissue sarcoma and pancreatic cancer in the United States and the European Union. Under the Orphan Drug Act in the United States, the FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition, which is defined by the FDA as a disease or condition that affects fewer than 200,000 individuals in the United States. In the EU, orphan drug designation is provided for a drug that is intended to diagnose, prevent or treat a life-threatening or chronically debilitating condition which affects no more than 5 in 10,000 individuals in the EU (approximately 245,000 individuals) and for which no satisfactory method of diagnosis, prevention or treatment of the condition already exists, or if such method does exist, that the orphan product must be of significant benefit to the patient population over existing products. The company that obtains the first FDA approval for a designated orphan drug indication receives marketing exclusivity for use of that drug for that indication for a period of seven years in the U.S. and 10 years for the EU. The orphan drug designation also allows a waiver or reduction in select regulatory fees. Orphan drug exclusive marketing rights may be lost if the FDA later determines that the request for designation was materially defective, or if the manufacturer is unable to assure sufficient quantity of the drug. Orphan drug designation does not shorten the development or regulatory review time of a drug.

Even if we and Merck KGaA obtain orphan drug exclusivity for TH-302, orphan drug exclusivity may not prevent other market entrants. A different drug, or, under limited circumstances, the same drug may be approved by the FDA for the same orphan indication. The limited circumstances include an inability to supply the drug in sufficient quantities or where a new formulation of the drug has shown superior safety or efficacy. As a result, if TH-302 were approved for soft tissue sarcoma and/or pancreatic cancer, other drugs could still be approved for use in treating the same indications covered by TH-302, which could create a more competitive market for us.

Moreover, due to the uncertainties associated with developing pharmaceutical products, we may not be the first to obtain marketing approval for any orphan drug indication. Although we and Merck KGaA have obtained orphan drug designation, if a competitor obtains regulatory approval for TH-302 for the same indication we are targeting before we do, we would be blocked from obtaining approval for that indication for seven years, unless our product is a new formulation of the drug that has shown superior safety or efficacy, or the competitor is unable to supply sufficient quantities.

Failure to successfully develop and obtain regulatory approval for companion diagnostics could harm our drug development and commercialization strategy.

In March 2013, we announced the acquisition of [18F]-HX4 [flortanidazole (18F)] from Siemens Healthcare. [18F]-HX4 is an investigational radiolabeled hypoxia Positron Emission Tomography tracer developed by Siemens Healthcare Molecular Imaging to potentially identify and quantify the degree of hypoxia in tumors *in vivo*. [18F]-HX4 could potentially be used as a companion diagnostic to hypoxia-targeted therapeutics based on our drug discovery platform. A companion diagnostic is a test or measurement intended to assist physicians in making treatment decisions for their patients. We initially intend to develop [18F]-HX4 to determine a patient's tumor hypoxia profile, which may identify patients who will best respond to our hypoxia targeted therapeutics. Companion diagnostics are subject to regulation by the FDA and comparable foreign regulatory authorities as medical devices and require separate regulatory approval prior to commercialization. We may encounter difficulties in developing and obtaining approval for [18F]-HX4, including issues relating to selectivity/specificity, analytical validation, reproducibility, or clinical validation, and we may have difficulties gaining market acceptance of the use of [18F]-HX4 in the clinical or medical community. Because [18F]-HX4 is at an early stage of development, we have yet to seek a meeting with the FDA to discuss our potential [18F]-HX4 companion diagnostic development plans, and therefore cannot yet know what the FDA will require in order to obtain regulatory approval of [18F]-HX4. In any event, we may not be able to develop or obtain any regulatory approval or clearance for [18F]-HX4, and we may therefore not realize any return on our investment in [18F]-HX4.

We may not develop additional prodrug product candidates suitable for clinical testing, which could limit our growth and revenue potential.

We are focused on the design and development of novel cytotoxic prodrug compounds for the treatment of cancer. However, TH-302 is our only product candidate in clinical development and we may be unable to discover and develop additional product candidates suitable for clinical testing. If we are unable to develop suitable product candidates for clinical testing from our internal efforts, we may pursue additional product candidates through in-licensing. Any growth through in-licensing would depend upon the availability of suitable product candidates at favorable prices and upon advantageous terms and conditions. If we are unable to develop or obtain suitable product candidates, our growth and revenue potential could be significantly harmed.

Even if we obtain regulatory approval, our marketed drugs will be subject to ongoing regulatory review. If we or Merck KGaA fail to comply with continuing United States and foreign regulations, we or they could lose our approvals to market drugs and our business would be seriously harmed.

Following initial regulatory approval of any drugs we may develop, we and Merck KGaA will be subject to continuing regulatory review, including review of adverse drug experiences and clinical results that are reported after our drug products become commercially available. This would include results from any post-marketing tests or vigilance required as a condition of approval. The manufacturer and manufacturing facilities used to make any of our drug candidates will also be subject to periodic review and inspection by the FDA. If a previously unknown problem or problems with a product or a manufacturing and laboratory facility used by us is discovered, the FDA or foreign regulatory agency may impose restrictions on that product or on the manufacturing facility, including requiring us to withdraw the product from the market. Any changes to an approved product, including the way it is manufactured or promoted, often require FDA approval before the product, as modified, can be marketed. Manufacturers of our products, if approved, will be subject to ongoing FDA requirements for submission of safety and other post-market information. If such manufacturers fail to comply with applicable regulatory requirements, a regulatory agency may:

- issue warning letters;
- impose civil or criminal penalties;
- suspend or withdraw our regulatory approval;
- suspend or terminate any of our ongoing clinical trials;
- refuse to approve pending applications or supplements to approved applications filed by us;
- impose restrictions on our operations;
- close the facilities of our contract manufacturers;
- seize or detain products or require a product recall, or
- revise or restrict labeling and promotion.

The FDA and foreign regulatory authorities may impose significant restrictions on the indicated uses and marketing of pharmaceutical products.

Even if we and/or Merck KGaA obtain regulatory approval for TH-302, it would be subject to ongoing requirements by the FDA and comparable foreign regulatory authorities governing the manufacture, quality control, further development, labeling, packaging, storage, distribution, safety surveillance, import, export, advertising, promotion, recordkeeping and reporting of safety and other post-market information. The safety profile of any product will continue to be closely monitored by the FDA and comparable foreign regulatory authorities after approval. If the FDA or comparable foreign regulatory authorities become aware of new safety information after approval of any of our product candidates, they may require labeling changes or establishment of a REMS or similar strategy, impose significant restrictions on a product's indicated uses or marketing, or impose ongoing requirements for potentially costly post-approval studies or post-market surveillance. For example, the label ultimately approved for TH-302, if it achieves marketing approval, may include restrictions on use. Advertising and promotion of any product candidate that obtains approval in the United States will be heavily scrutinized by the FDA, the Department of Justice, or the DOJ, the Office of Inspector General of the Department of Health and Human Services, or HHS, state attorneys general, members of Congress and the public. Violations, including promotion of our products for unapproved or off-label uses, are subject to enforcement letters, inquiries and investigations, and civil and criminal sanctions by the FDA. Additionally, advertising and promotion of any product candidate that obtains approval outside of the United States will be heavily scrutinized by comparable foreign regulatory authorities. In the United States, engaging in impermissible promotion of our products for off-label uses can also subject us to false claims litigation under federal and state statutes, which can lead to civil and criminal penalties and fines and agreements that materially restrict the manner in which we promote or distribute our drug products.

These false claims statutes include the federal False Claims Act, which allows any individual to bring a lawsuit against a pharmaceutical company on behalf of the federal government alleging submission of false or fraudulent claims, or causing to present such false or fraudulent claims, for payment by a federal program such as Medicare or Medicaid. If the government prevails in the lawsuit, the individual will share in any fines or settlement funds. Since 2004, these False Claims Act lawsuits against pharmaceutical companies have increased significantly in volume and breadth, leading to several substantial civil and criminal settlements based on certain sales practices promoting off-label drug uses. This growth in litigation has increased the risk that a pharmaceutical company will have to defend a false claim action, pay settlement fines or restitution, agree to comply with burdensome reporting and compliance obligations, and be excluded from the Medicare, Medicaid and other federal and state healthcare programs. If we do not lawfully promote any approved products, we may become subject to such litigation and, if we are not successful in defending against such actions, those actions could compromise our ability to become profitable.

We do not have a sales force or marketing infrastructure and may not develop an effective one.

Our license and co-development agreement with Merck KGaA gives us the right, under certain circumstances, to co-promote or co-commercialize TH-302. We have no sales experience, as a company. There are risks involved with establishing our own sales and marketing capabilities, as well as entering into arrangements with third parties to perform these services. Developing an internal sales force and function will require substantial expenditures and will be time-consuming, and we may not be able to effectively recruit, train or retain sales personnel. On the other hand, if we enter into arrangements with third parties to perform sales, marketing and distribution services, our product revenues will be lower than if we market and sell any products that we develop ourselves. We may not be able to effectively sell TH-302, if approved, and if we exercise our rights to do so, which could materially harm our business and our financial condition.

Risks Related to Our Financial Performance and Operations

We have incurred losses since our inception and anticipate that we will continue to incur significant losses for the foreseeable future, and our future profitability is uncertain.

We have incurred losses in each year since our inception in 2001, and we expect to incur losses for the foreseeable future. We have devoted, and will continue to devote for the foreseeable future, substantially all of our resources to research and development of our product candidates. For the six months ended June 30, 2014, we had an operating loss of \$16.1 million and a net loss of \$7.9 million, including \$8.1 million in non-cash income related to the change in the fair value of outstanding warrants. Clinical trials and activities associated with discovery research are costly. We do not expect to generate any revenue from the commercial sales of our product candidates in the near term, and we expect to continue to have significant losses for the foreseeable future.

To attain ongoing profitability, we will need to develop products successfully and market and sell them effectively, or rely on other parties, such as Merck KGaA, to do so. We cannot predict when we will achieve ongoing profitability, if at all. We have never generated revenue from the commercial sales of our product candidates, and there is no guarantee that we will be able to do so in the future. If we fail to become profitable, or if we are unable to fund our continuing losses, we would be unable to continue our research and development programs.

Our financial results are likely to fluctuate from period to period, making it difficult to evaluate our stock based on financial performance.

Our quarterly and annual results of operations are likely to fluctuate based on the timing of milestones and payments under our license and co-development agreement with Merck KGaA. We believe that period-to-period comparisons of our operating results should not be relied upon as predictive of future performance. Our prospects must be considered in light of the risks, expenses and difficulties encountered by companies with no approved pharmaceutical products, and with products that are undergoing clinical development.

We are likely to require substantial additional funding and may be unable to raise capital when needed, which could force us to delay, reduce or eliminate our drug discovery, product development and commercialization activities.

Developing drugs, conducting clinical trials, and commercializing products is expensive. Our future funding requirements will depend on many factors, including:

- the achievement of certain milestone events under, and the continued effectiveness of, our collaborative arrangement with Merck KGaA;
- the extent of product development funding under our collaborative arrangement with Merck KGaA;
- the terms and timing of any future collaborative, licensing, acquisition or other arrangements that we may establish;
- the scope, rate of progress and cost of our clinical trials and other research and development activities;
- the costs and timing of obtaining regulatory approvals;
- the cost of manufacturing clinical, and establishing commercial, supplies of our product candidates and any products that we may develop;
- the cost and timing of establishing sales, marketing and distribution capabilities;
- the costs of filing, prosecuting, defending and enforcing any patent applications, claims, patents and other intellectual property rights;
- the cost and timing of securing manufacturing capabilities for our clinical product candidates and commercial products, if any; and
- the costs of lawsuits involving us or our product candidates.

We believe that our cash, cash equivalents and marketable securities will be sufficient to fund our projected operating requirements for at least the next 12 months based upon current operating plans, milestone payment forecasts and spending assumptions. Although 70% of the collaboration expenditures related to development of TH-302 are expected to be funded by Merck KGaA, we expect that we will need to raise additional capital to complete the clinical development of TH-302 and to support new in-house development programs or to in-license or otherwise acquire and develop additional products or programs.

We may seek to raise capital through a variety of sources, including:

- the public equity market, including pursuant to our at market issuance sales agreement, or the sales agreement, with MLV & Co. LLC, or MLV
- private equity financing;
- collaborative arrangements;
- licensing arrangements; and/or
- public or private debt.

Our ability to raise additional funds will depend, in part on the outcome of our clinical trials and other clinical and regulatory events, as well as factors related to financial, economic, and market conditions, collaboration or license agreement with others and factors related to financial, economic and market conditions, many of which are beyond our control. In addition, our ability to raise additional capital may be dependent upon our common stock remaining listed on the NASDAQ Capital Market. We cannot be certain that sufficient funds will be available to us when required or on satisfactory terms, if at all. If adequate funds are not available, we may be required to significantly reduce or refocus our operations or to obtain funds through additional arrangements that may require us to relinquish rights to certain of our products, technologies or potential markets, any of which could delay or require that we curtail or eliminate some or all of our development programs or otherwise have a material adverse effect on our business, financial condition and results of operations. In addition, we may have to delay, reduce the scope of or eliminate some of our research and development, which could delay the time to market for any of our product candidates, if adequate funds are not available.

If we are unable to secure additional financing on a timely basis or on terms favorable to us, we may be required to cease or reduce certain research and development projects, to sell some or all of our technology or assets or to merge all or a portion of our business with another entity. Insufficient funds may require us to delay, scale back, or eliminate some or all of our activities, and if we are unable to obtain additional funding, there is uncertainty regarding our continued existence.

Our success depends in part on retaining and motivating key personnel and, if we fail to do so, it may be more difficult for us to execute our business strategy. As a small organization we are dependent on key employees and may need to hire additional personnel to execute our business strategy successfully.

Our success depends on our continued ability to attract, retain and motivate highly qualified management, clinical and scientific personnel and on our ability to develop and maintain important relationships with leading academic institutions, clinicians and scientists. We are highly dependent upon our senior management and scientific staff, particularly our Chief Executive Officer, Dr. Harold E. Selick, and Senior Vice President of Discovery Research, Dr. Mark G. Matteucci. We do not have an employment agreement with Drs. Selick or Matteucci. The loss of the services of Drs. Selick or Matteucci or one or more of our other key employees could delay or have an impact on the successful completion of our clinical trials or the development of additional product candidates.

As of June 30, 2014, we had 58 employees. Our success will depend on our ability to retain and motivate remaining personnel and hire additional qualified personnel when required. Competition for qualified personnel in the biotechnology field is intense. We face competition for personnel from other biotechnology and pharmaceutical companies, universities, public and private research institutions and other organizations. We may not be able to attract and retain qualified personnel on acceptable terms given the competition for such personnel. If we are unsuccessful in our retention, motivation and recruitment efforts, we may be unable to execute our business strategy.

Significant disruptions of information technology systems or breaches of data security could adversely affect our business.

Our business is increasingly dependent on critical, complex and interdependent information technology systems, including Internet-based systems, to support business processes as well as internal and external communications. The size and complexity of our computer systems make them potentially vulnerable to breakdown, malicious intrusion and computer viruses that may result in the impairment of production and key business processes.

In addition, our systems are potentially vulnerable to data security breaches—whether by employees or others—that may expose sensitive data to unauthorized persons. Such data security breaches could lead to the loss of trade secrets or other intellectual property, or could lead to the public exposure of personal information (including sensitive personal information) of our employees, clinical trial patients, customers and others. Such disruptions and breaches of security could have a material adverse effect on our business, financial condition and results of operations.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

Under Section 382 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an “ownership change,” generally defined as a greater than 50% change (by value) in its equity ownership over a three-year period, the corporation’s ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes (such as research tax credits) to offset its post-change taxable income or taxes may be limited. Our prior and potential future equity offerings and other changes in our stock ownership, some of which are outside of our control, may have resulted or could in the future result in an ownership change. If a limitation were to apply, utilization of a portion of our domestic net operating loss and tax credit carryforwards could be limited in future periods and a portion of the carryforwards could expire before being available to reduce future income tax liabilities.

Our facilities in California are located near an earthquake fault, and an earthquake or other natural disaster or resource shortage could disrupt our operations.

Important documents and records, such as hard copies of our laboratory books and records for our product candidates, are located in our corporate facilities in South San Francisco, California, near active earthquake zones. In the event of a natural disaster, such as an earthquake, drought or flood, or localized extended outages of critical utilities or transportation systems, we do not have a formal business continuity or disaster recovery plan, and could therefore experience a significant business interruption. In addition, California from time to time has experienced shortages of water, electric power and natural gas. Future shortages and conservation measures could disrupt our operations and could result in additional expense. Although we maintain business interruption insurance coverage, the policy specifically excludes coverage for earthquake and flood.

Risks Related to Our Dependence on Third Parties

We rely on third parties to manufacture TH-302. If these parties do not manufacture the active pharmaceutical ingredients or finished drug products of satisfactory quality, in a timely manner, in sufficient quantities or at an acceptable cost, clinical development and commercialization of TH-302 could be delayed.

We do not have our own manufacturing capability for TH-302 API or TH-302 drug product. Under our license and co-development agreement with Merck KGaA, Merck KGaA has exclusive rights to manufacture TH-302 for clinical and commercial use, except that we have the right to obtain clinical supply of TH-302 for clinical trials for United States approval of TH-302 for soft tissue sarcoma and for any other clinical trials for which we are responsible. For these latter cases, we can obtain clinical supply directly from existing or new suppliers. To date, however, we have relied on, and we expect to continue to rely on, a limited number of third party single source contract manufacturers and excipient suppliers for the TH-302 API and TH-302 drug product to meet our and Merck KGaA’s clinical supply needs of TH-302. We have no long-term commitments or commercial supply agreements with any of our TH-302 suppliers. Our current and anticipated future dependence upon others for the manufacture of our product candidates may adversely affect our ability to develop and commercialize any product candidates on a timely and competitive basis.

We need to have sufficient TH-302 API and drug product manufactured to meet the clinical supply demands for our and Merck KGaA’s clinical trials. While we have developed plans to meet our and Merck KGaA’s clinical supply needs for our ongoing clinical trials of TH-302, we base our estimates for the amount of drug product we will need on assumptions about trial enrollment and trial dose levels. If we are not successful in having sufficient quantities of TH-302 API and drug product manufactured, or if manufacturing is interrupted at our single source contract manufacturers and excipient suppliers for TH-302 API and TH-302 drug product due to regulatory or other reasons, or consume more drug product than anticipated because of a higher than expected trial utilization or have quality issues that limit the utilization of the drug product, we may experience a significant delay in our TH-302 clinical program. In any event, we will need to order additional TH-302 API and drug product and we have in the past experienced delays in the receipt of satisfactory drug product, and any additional delays we may experience in the receipt of satisfactory TH-302 API or drug product could cause significant delays in our clinical trials, which would harm our business. Moreover the need for additional supplies and preparation for registration may require manufacturing process improvements in TH-302 API and drug product. The manufacturing processes improvements for the TH-302 API may require facilities upgrades at our suppliers, which may lead to delays or disruption in supply, or delays in regulatory approval of TH-302. Changes to the formulation of TH-302 for our clinical trials may also require bridging studies to demonstrate the comparability of the new formulation with the old. These studies may delay our clinical trials and may not be successful. If we are not successful in procuring sufficient TH-302 clinical trial material, we may experience a significant delay in our TH-302 clinical program. Finally, we have not engaged any backup or alternative suppliers for parts of our TH-302 supply chain for our clinical trials. If we are required to engage a backup or alternative supplier, the transfer of technical expertise and manufacturing process to the backup or alternative supplier would be difficult, costly and time-consuming and would increase the likelihood of a significant delay or interruption in manufacturing or a shortage of supply of TH-302.

In any event, additional agreements for more supplies of each of our product candidates, including TH-302, will be needed to complete clinical development and/or commercialize them. In this regard, Merck KGaA may need to enter into agreements for additional supplies of TH-302 to commercialize it or develop such capability itself. We cannot be certain that Merck KGaA can do so on favorable terms, if at all. Merck KGaA will need to satisfy all current good manufacturing practice, or cGMP, regulations, including passing specifications. Merck KGaA's inability to satisfy these requirements could delay our clinical programs and the potential commercialization of TH-302 if approved for commercial sale.

If TH-302 or any of our other product candidates is approved by the FDA or other regulatory agencies for commercial sale, we or Merck KGaA as applicable, will need to have it manufactured in commercial quantities. It may not be possible to successfully manufacture commercial quantities of TH-302 or increase the manufacturing capacity for TH-302 or any of our other product candidates in a timely or economically feasible manner. Prior to commercial launch of TH-302, we may be required to manufacture additional validation batches, which the FDA and other regulatory agencies must review and approve. If we and/or Merck KGaA are unable to successfully manufacture the additional validation batches or increase the manufacturing capacity for TH-302 or any other product candidates, the regulatory approval or commercial launch of that product candidate may be delayed, or there may be a shortage of supply which could limit sales.

In addition, if the facility or the equipment in the facility that produces our product candidates is significantly damaged or destroyed, or if the facility is located in another country and trade or commerce with or exportation from such country is interrupted or delayed, we may be unable to replace the manufacturing capacity quickly or inexpensively. The inability to obtain manufacturing agreements, the damage or destruction of a facility on which we rely for manufacturing or any other delays in obtaining supply would delay or prevent us from completing our clinical trials and commercializing our current product candidates.

In addition, the TH-302 formulation includes excipients that might be available from a limited number of suppliers. We have not signed long term supply agreements with these excipient suppliers. We or Merck KGaA will need to enter into long term supply agreements to ensure uninterrupted supply of these excipients to continuously manufacture clinical batches or commercial supplies, which we and/or Merck KGaA may be unable to do in a timely or economically feasible manner or at all.

We have no control over our manufacturers' and suppliers' compliance with manufacturing regulations, and their failure to comply could result in an interruption in the supply of our product candidates.

The facilities used by our single source contract manufacturers must undergo an inspection by the FDA for compliance with cGMP regulations, before the respective product candidates can be approved. In the event these facilities do not receive a satisfactory cGMP inspection for the manufacture of our product candidates, we may need to fund additional modifications to our manufacturing process, conduct additional validation studies, or find alternative manufacturing facilities, any of which would result in significant cost to us as well as a delay of up to several years in obtaining approval for such product candidate. In addition, our contract manufacturers, and any alternative contract manufacturer we may utilize, will be subject to ongoing periodic inspection by the FDA and corresponding state and foreign agencies for compliance with cGMP regulations, similar foreign regulations and other regulatory standards. We do not have control over our contract manufacturers' compliance with these regulations and standards. Any failure by our third-party manufacturers or suppliers to comply with applicable regulations could result in sanctions being imposed on them (including fines, injunctions and civil penalties), failure of regulatory authorities to grant marketing approval of our product candidates, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or products, operating restrictions and criminal prosecution.

We rely on third parties to conduct some of our clinical trials, and their failure to perform their obligations in a timely or competent manner may delay development and commercialization of our product candidates.

We may use clinical research organizations to assist in conduct of our clinical trials. There are numerous alternative sources to provide these services. However, we may face delays outside of our control if these parties do not perform their obligations in a timely or competent fashion or if we are forced to change service providers. This risk is heightened for clinical trials conducted outside of the United States, where it may be more difficult to ensure that clinical trials are conducted in compliance with FDA requirements. Any third-party that we hire to conduct clinical trials may also provide services to our competitors, which could compromise the performance of their obligations to us. If we experience significant delays in the progress of our clinical trials and in our plans to submit NDAs to the FDA, the commercial prospects for product candidates could be harmed and our ability to generate product revenue would be delayed or prevented.

We are dependent on Eleison to develop and commercialize glufosfamide

We are dependent upon Eleison Pharmaceuticals, Inc., to whom we exclusively licensed glufosfamide in October 2009, to develop and commercialize glufosfamide. Any profit sharing or other payments to us under the Eleison license depend almost entirely upon the efforts of Eleison, which may not be able to raise sufficient funds to continue clinical development activities with glufosfamide. Even if Eleison is successful at raising sufficient funding, it may not be successful in developing and commercializing

glufosfamide. We may also be asked to provide technical assistance related to the development of glufosfamide, which may divert our resources from other activities. If the Eleison license terminates in such a way that glufosfamide reverts to us and we seek alternative arrangements with one or more other parties to develop and commercialize glufosfamide, we may not be able to enter into such an agreement with another suitable third party or third parties on acceptable terms or at all. In such event, since we have no further development plans for glufosfamide, we may not receive any further return on our investment in glufosfamide.

Risks Related to Our Intellectual Property

Hypoxia-targeted prodrug technology is not a platform technology broadly protected by patents, and others may be able to develop competitive drugs using this approach.

Although we have U.S. and foreign issued patents that cover certain hypoxia-targeted prodrugs, including TH-302, we have no issued patents or pending patent applications that would prevent others from taking advantage of hypoxia-targeted prodrug technology generally to discover and develop new therapies for cancer or other diseases. Consequently, our competitors may seek to discover and develop potential therapeutics that operate by mechanisms of action that are the same or similar to the mechanisms of action of our hypoxia-targeted prodrug product candidates.

We are dependent on patents and proprietary technology. If we fail to adequately protect this intellectual property or if we otherwise do not have exclusivity for the marketing of our products, our ability to commercialize products could suffer.

Our commercial success will depend in part on our ability to obtain and maintain patent protection sufficient to prevent others from marketing our product candidates, as well as to defend and enforce these patents against infringement and to operate without infringing the proprietary rights of others. We will only be able to protect our product candidates from unauthorized use by third parties to the extent that valid and enforceable patents cover our product candidates or their manufacture or use or if they are effectively protected by trade secrets. If our patent applications do not result in issued patents, or if our patents are found to be invalid, we will lose the ability to exclude others from making, using or selling the inventions claimed therein. We have a limited number of patents and pending patent applications.

The patent positions of pharmaceutical and biotechnology companies can be highly uncertain and involve complex legal and factual questions. No consistent policy regarding the breadth of claims allowed in biotechnology patents has emerged to date in the United States. The laws of many countries may not protect intellectual property rights to the same extent as United States laws, and those countries may lack adequate rules and procedures for defending our intellectual property rights. Changes in either patent laws or in interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property. We do not know whether any of our patent applications will result in the issuance of any patents and we cannot predict the breadth of claims that may be allowed in our patent applications or in the patent applications we may license from others.

The degree of future protection for our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. For example:

- we might not have been the first to make the inventions covered by each of our pending patent applications and issued patents, and we may have to participate in expensive and protracted interference proceedings to determine priority of invention;
- we might not have been the first to file patent applications for these inventions;
- others may independently develop identical, similar or alternative product candidates to any of our product candidates;
- our pending patent applications may not result in issued patents;
- our issued patents may not provide a basis for commercially viable products or may not provide us with any competitive advantages or may be challenged by third parties;
- others may design around our patent claims to produce competitive products that fall outside the scope of our patents;
- we may not develop additional patentable proprietary technologies related to our product candidates; or
- the patents of others may prevent us from marketing one or more of our product candidates for one or more indications that may be valuable to our business strategy.

Moreover, an issued patent does not guarantee us the right to practice the patented technology or commercialize the patented product. Third parties may have blocking patents that could be used to prevent us from commercializing our patented products and practicing our patented technology. Our issued patents and those that may be issued in the future may be challenged, invalidated or circumvented, which could limit our ability to prevent competitors from marketing the same or related product candidates or could limit the length of the term of patent protection of our product candidates. In addition, the rights granted under any issued patents may not provide us with proprietary protection or competitive advantages against competitors with similar technology. Furthermore, our

competitors may independently develop similar technologies. Moreover, because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that, before any of our product candidates can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby reducing any advantage of the patent. Patent term extensions may not be available for these patents. If we are not able to obtain adequate protection for, or defend, the intellectual property position of TH-302 or any other potential future product candidates, then we may not be able to retain or attract collaborators to partner our development programs, including TH-302. Further, even if we can obtain protection for and defend the intellectual property position of TH-302 or any potential future product candidates, we or any of our potential future collaborators still may not be able to exclude competitors from developing or marketing competing drugs. Should this occur, we, Merck KGaA and potential future collaborators may not generate any revenues or profits from TH-302 or any potential future product candidates or our revenue or profit potential would be significantly diminished.

We rely on trade secrets and other forms of non-patent intellectual property protection. If we are unable to protect our trade secrets, other companies may be able to compete more effectively against us.

We rely on trade secrets to protect certain aspects of our technology, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect, especially in the pharmaceutical industry, where much of the information about a product must be made public during the regulatory approval process. Although we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, outside scientific collaborators and other advisors may unintentionally or willfully disclose our information to competitors. Enforcing a claim that a third party illegally obtained and is using our trade secret information is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States may be less willing to or may not protect trade secrets. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how.

If we are sued for infringing intellectual property rights of third parties or if we are forced to engage in an interference proceeding, it will be costly and time consuming, and an unfavorable outcome in that litigation or interference would have a material adverse effect on our business.

Our ability to commercialize our product candidates depends on our ability to develop, manufacture, market and sell our product candidates without infringing the proprietary rights of third parties. Numerous United States and foreign patents and patent applications, which are owned by third parties, exist in the general field of cancer therapies or in fields that otherwise may relate to our product candidates. If we are shown to infringe, we could be enjoined from use or sale of the claimed invention if we are unable to prove that the patent is invalid. In addition, because patent applications can take many years to issue, there may be currently pending patent applications, unknown to us, which may later result in issued patents that our product candidates may infringe, or which may trigger an interference proceeding regarding one of our owned or licensed patents or applications. There could also be existing patents of which we are not aware that our product candidates may inadvertently infringe or which may become involved in an interference proceeding.

The biotechnology and pharmaceutical industries are characterized by the existence of a large number of patents and frequent litigation based on allegations of patent infringement. For so long as our product candidates are in clinical trials, we believe our clinical activities fall within the scope of the exemptions provided by 35 U.S.C. Section 271(e) in the United States, which exempts from patent infringement liability activities reasonably related to the development and submission of information to the FDA. As our clinical investigational drug product candidates progress toward commercialization, the possibility of a patent infringement claim against us increases. While we attempt to ensure that our active clinical investigational drugs and the methods we employ to manufacture them, as well as the methods for their use we intend to promote, do not infringe other parties' patents and other proprietary rights, we cannot be certain they do not, and competitors or other parties may assert that we infringe their proprietary rights in any event.

We may be exposed to future litigation based on claims that our product candidates, or the methods we employ to manufacture them, or the uses for which we intend to promote them, infringe the intellectual property rights of others. Our ability to manufacture and commercialize our product candidates may depend on our ability to demonstrate that the manufacturing processes we employ and the use of our product candidates do not infringe third-party patents. If third-party patents were found to cover our product candidates or their use or manufacture, we could be required to pay damages or be enjoined and therefore unable to commercialize our product candidates, unless we obtained a license. A license may not be available to us on acceptable terms, if at all.

Risks Related To Our Industry

If our competitors are able to develop and market products that are more effective, safer or more affordable than ours, or obtain marketing approval before we do, our commercial opportunities may be limited.

Competition in the biotechnology and pharmaceutical industries is intense and continues to increase, particularly in the area of cancer treatment. Most major pharmaceutical companies and many biotechnology companies are aggressively pursuing oncology development programs, including traditional therapies and therapies with novel mechanisms of action. Our cancer product candidates face competition from established biotechnology and pharmaceutical companies and from generic pharmaceutical manufacturers. In particular, if approved for commercial sale for pancreatic cancer, TH-302 would compete with Gemzar[®], marketed by Eli Lilly and Company; Tarceva[®], marketed by Genentech and Astellas Oncology; Abraxane[®] marketed by Celgene; and FOLFIRINOX, which is a combination of generic products that are sold individually by many manufacturers. If approved for sale for soft tissue sarcoma, TH-302 could potentially compete with doxorubicin or the combination of doxorubicin and ifosfamide, generic products sold by many manufacturers. There may also be product candidates of which we are not aware at an earlier stage of development that may compete with TH-302 or other product candidates we may develop. In short, each cancer indication for which we are or may be developing products has a number of established medical therapies with which our candidates will compete. Our TH-302 product candidate for targeting the tumor hypoxia is likely to be in highly competitive markets and may eventually compete with other therapies offered by companies who are developing or were developing drugs that target tumor hypoxia.

We also face potential competition from academic institutions, government agencies and private and public research institutions engaged in the discovery and development of drugs and therapies. Many of our competitors have significantly greater financial resources and expertise in research and development, preclinical testing, conducting clinical trials, obtaining regulatory approvals, manufacturing, sales and marketing than we do. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established pharmaceutical companies.

Our competitors may succeed in developing products that are more effective, have fewer side effects and are safer or more affordable than our product candidates, which would render our product candidates less competitive or noncompetitive. These competitors also compete with us to recruit and retain qualified scientific and management personnel, establish clinical trial sites and patient registration for clinical trials, as well as to acquire technologies and technology licenses complementary to our programs or advantageous to our business. Moreover, competitors that are able to achieve patent protection obtain regulatory approvals and commence commercial sales of their products before we do, and competitors that have already done so, may enjoy a significant competitive advantage.

Our relationships with customers and third-party payors will be subject to applicable anti-kickback, fraud and abuse and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm and diminished profits and future earnings.

Healthcare providers, physicians and third-party payors will play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our future arrangements with third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we would market, sell and distribute our products. As a biotechnology company, even though we do not and will not control referrals of healthcare services or bill directly to Medicare, Medicaid or other third-party payors, federal and state healthcare laws and regulations pertaining to fraud and abuse and patients' rights are and will be applicable to our business. Federal healthcare Anti-Kickback Statute will constrain our marketing practices, educational programs, pricing policies, and relationships with healthcare providers or other entities, by prohibiting, among other things, persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under a federal healthcare program such as Medicare and Medicaid. Federal civil and criminal false claims laws and civil monetary penalty laws impose criminal and civil penalties, including through civil whistleblower or qui tam actions, against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, including the Medicare and Medicaid programs, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government. The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, imposes criminal and civil liability for executing a scheme to defraud any healthcare benefit program and also created federal criminal laws that prohibit knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false statements in connection with the delivery of or payment for healthcare benefits, items or services. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, also imposes obligations, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information. The federal physician sunshine requirements under the Affordable Care Act requires manufacturers of drugs, devices, biologics and medical supplies to report annually to HHS information related to payments and other transfers of value to physicians, other healthcare providers, and teaching hospitals, and ownership and investment interests held by physicians and other healthcare providers and their immediate family members and applicable group purchasing organizations. Analogous state and foreign laws and regulations, such as

state anti-kickback and false claims laws, may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers; some state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government and may require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures. State and foreign laws also govern the privacy and security of health information in specified circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts. Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, imprisonment, exclusion from government funded healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations. If any physicians or other healthcare providers or entities with whom we expect to do business are found to not be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from government funded healthcare programs.

There is a substantial risk of product liability claims in our business. If we do not obtain sufficient liability insurance, a product liability claim could result in substantial liabilities.

Our business exposes us to significant potential product liability risks that are inherent in the development, manufacturing and marketing of human therapeutic products. Regardless of merit or eventual outcome, product liability claims may result in:

- delay or failure to complete our clinical trials;
- withdrawal of clinical trial participants;
- decreased demand for our product candidates;
- injury to our reputation;
- litigation costs;
- substantial monetary awards against us; and
- diversion of management or other resources from key aspects of our operations.

If we succeed in marketing products, product liability claims could result in an FDA investigation of the safety or efficacy of our products, our manufacturing processes and facilities or our marketing programs. An FDA investigation could also potentially lead to a recall of our products or more serious enforcement actions, or limitations on the indications, for which they may be used, or suspension or withdrawal of approval.

We have product liability insurance that covers our clinical trials up to a \$5 million annual aggregate limit. We intend to expand our insurance coverage to include the sale of commercial products if marketing approval is obtained for our product candidates or any other compound that we may develop. However, insurance coverage is expensive and we may not be able to maintain insurance coverage at a reasonable cost or at all, and the insurance coverage that we obtain may not be adequate to cover potential claims or losses.

Even if we receive regulatory approval to market our product candidates, the market may not be receptive to our product candidates upon their commercial introduction, which would negatively affect our ability to achieve profitability.

Our product candidates may not gain market acceptance among physicians, patients, healthcare payors and the medical community. The degree of market acceptance of any approved products will depend on a number of factors, including:

- the effectiveness of the product;
- the prevalence and severity of any side effects;
- potential advantages or disadvantages over alternative treatments;
- relative convenience and ease of administration;
- the strength of marketing and distribution support;
- the price of the product, both in absolute terms and relative to alternative treatments; and
- sufficient third-party coverage or reimbursement.

If our product candidates receive regulatory approval but do not achieve an adequate level of acceptance by physicians, healthcare payors and patients, we may not generate product revenues sufficient to attain profitability.

If third-party payors do not adequately reimburse patients for any of our product candidates, if approved for marketing, we may not be successful in selling them.

Our ability to commercialize any products successfully will depend in part on the extent to which reimbursement will be available from governmental and other third-party payors, both in the United States and in foreign markets. Even if we succeed in bringing one or more products to the market, the amount reimbursed for our products may be insufficient to allow us to compete effectively and could adversely affect our profitability. Reimbursement by a governmental and other third-party payor may depend upon a number of factors, including a governmental or other third-party payor's determination that use of a product is:

- a covered benefit under its health plan;
- safe, effective and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

Obtaining reimbursement approval for a product from each third-party and governmental payor is a time consuming and costly process that could require us to provide supporting scientific, clinical and cost effectiveness data for the use of our products to each payor. We may not be able to provide data sufficient to obtain reimbursement.

Eligibility for coverage does not imply that any drug product will be reimbursed in all cases or at a rate that allows us to make a profit. Interim payments for new products, if applicable, may also not be sufficient to cover our costs and may not become permanent. Reimbursement rates may vary according to the use of the drug and the clinical setting in which it is used, may be based on payments allowed for lower-cost drugs that are already reimbursed, may be incorporated into existing payments for other products or services and may reflect budgetary constraints and/or Medicare or Medicaid data used to calculate these rates. Net prices for products also may be reduced by mandatory discounts or rebates required by government health care programs or by any future relaxation of laws that restrict imports of certain medical products from countries where they may be sold at lower prices than in the United States.

The health care industry is experiencing a trend toward containing or reducing costs through various means, including lowering reimbursement rates, limiting therapeutic class coverage and negotiating reduced payment schedules with service providers for drug products. The Medicare Prescription Drug, Improvement and Modernization Act of 2003, or MMA, became law in November 2003 and created a broader prescription drug benefit for Medicare beneficiaries. The MMA also contains provisions intended to reduce or eliminate delays in the introduction of generic drug competition at the end of patent or nonpatent market exclusivity. The impact of the MMA on drug prices and new drug utilization over the next several years is unknown. The MMA also made adjustments to the physician fee schedule and the measure by which prescription drugs are presently paid, changing from Average Wholesale Price to Average Sales Price. The effects of these changes are unknown but may include decreased utilization of new medicines in physician prescribing patterns, and further pressure on drug company sponsors to provide discount programs and reimbursement support programs. There have been, and we expect that there will continue to be, federal and state proposals to constrain expenditures for medical products and services, which may affect reimbursement levels for our future products. In addition, the Centers for Medicare & Medicaid Services frequently change product descriptors, coverage policies, product and service codes, payment methodologies and reimbursement values. Third-party payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates and may have sufficient market power to demand significant price reductions.

Foreign governments tend to impose strict price controls, which may adversely affect our future profitability.

In some foreign countries, particularly in the European Union, prescription drug pricing is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies. If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our profitability will be negatively affected.

We may incur significant costs complying with environmental laws and regulations, and failure to comply with these laws and regulations could expose us to significant liabilities.

Our research and development activities use biological and hazardous materials that are dangerous to human health and safety or the environment. We are subject to a variety of federal, state and local laws and regulations governing the use, generation, manufacture, storage, handling and disposal of these materials and wastes resulting from these materials. We are also subject to

regulation by the Occupational Safety and Health Administration, or OSHA, the California and federal environmental protection agencies and to regulation under the Toxic Substances Control Act. OSHA or the California or federal Environmental Protection Agency, or EPA, may adopt regulations that may affect our research and development programs. We are unable to predict whether any agency will adopt any regulations that could have a material adverse effect on our operations. We have incurred, and will continue to incur, capital and operating expenditures and other costs in the ordinary course of our business in complying with these laws and regulations. Although we believe our safety procedures for handling and disposing of these materials comply with federal, state and local laws and regulations, we cannot entirely eliminate the risk of accidental injury or contamination from the use, storage, handling or disposal of hazardous materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could significantly exceed our insurance coverage.

Risks Related To Our Common Stock

The price of our common stock has been and may continue to be volatile.

The stock markets in general, the markets for biotechnology stocks and, in particular, the stock price of our common stock, have experienced extreme volatility. Price declines in our common stock could result from general market and economic conditions and a variety of other factors, including:

- adverse results or delays in our or Merck KGaA's clinical trials of TH-302;
- announcements of FDA non-approval of our product candidates, or delays in the FDA or other foreign regulatory agency review process;
- our or Merck KGaA's failure to meet milestones that would have given rise to payments under our agreement with Merck KGaA;
- announcements by Merck KGaA related to the development of TH-302 or announcements related to our agreement with Merck KGaA;
- adverse actions taken by regulatory agencies with respect to our product candidates, clinical trials, manufacturing processes or sales and marketing activities;
- announcements of clinical trial results by us, Merck KGaA or our competitors;
- announcements of technological innovations, patents or new products by us or our competitors;
- regulatory developments in the United States and foreign countries;
- any lawsuit involving us or our product candidates;
- announcements concerning our competitors, or the biotechnology or pharmaceutical industries in general;
- developments concerning any strategic alliances or acquisitions we may enter into;
- actual or anticipated variations in our operating results;
- changes in recommendations by securities analysts or lack of analyst coverage;
- deviations in our operating results from the estimates of analysts;
- sales of our common stock by our executive officers, directors and significant stockholders or sales of substantial amounts of common stock; and
- loss of any of our key scientific or management personnel.

In the past, following periods of volatility in the market price of a particular company's securities, litigation has often been brought against that company. Any such lawsuit could consume resources and management time and attention, which could adversely affect our business.

If there are large sales of our common stock, the market price of our common stock could drop substantially. In addition, a significant number of shares of our common stock are subject to issuance upon exercise of outstanding warrants, which upon such exercise would result in dilution to our security holders.

If our existing stockholders sell a large number of shares of our common stock or the public market perceives that existing stockholders might sell shares of our common stock, the market price of our common stock could decline significantly. As of June 30, 2014, we had 59,365,233 outstanding shares of common stock, substantially all of which may be sold in the public market without restriction. In addition, a significant number of shares of our common stock are subject to issuance upon the exercise of outstanding warrants. On March 16, 2011, we issued warrants to purchase an aggregate of 5,725,227 shares of our common stock, at an exercise price of \$2.46 per share. On October 5, 2009, we issued warrants to purchase an aggregate of 7,329,819 shares of our common stock,

at an exercise price of \$2.23 per share, which exercise price was subsequently reduced to \$2.05 per share on March 16, 2011 under the anti-dilution provisions of the warrants as a result of our March 2011 registered offering of common stock and warrants. As of June 30, 2014, warrants to purchase 1,731,444 shares of common stock issued in March 2011 and warrants to purchase 3,041,879 shares of common stock issued in October 2009 had been exercised. The exercise price and/or the number of shares of common stock issuable upon exercise of the warrants may be adjusted in certain circumstances, including certain issuances of securities at a price equal to less than the then current exercise price, subdivisions and stock splits, stock dividends, combinations, reorganizations, reclassifications, consolidations, mergers or sales of properties and assets and upon the issuance of certain assets or securities to holders of our common stock, as applicable. Although we cannot determine at this time how many of these remaining warrants will ultimately be exercised, the warrants will likely be exercised only if the exercise price is below the market price of our common stock. To the extent the warrants are exercised, additional shares of our common stock will be issued that will be eligible for resale in the public market, which will result in dilution to our security holders. The issuance of additional securities could also have an adverse effect on the market price of our common stock.

Failure to maintain effective internal controls in accordance with Section 404 of the Sarbanes-Oxley Act of 2002 could have a material adverse effect on our stock price.

Section 404 of the Sarbanes-Oxley Act of 2002 and the related rules and regulations of the Securities and Exchange Commission, or SEC, require annual management assessments of the effectiveness of our internal control over financial reporting and a report by our independent registered public accounting firm attesting to, and reporting on, the effectiveness of our internal control over financial reporting. If we fail to maintain the adequacy of our internal control over financial reporting, as such standards are modified, supplemented or amended from time to time, we may not be able to ensure that we can conclude on an ongoing basis that we have effective internal control over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act of 2002 and the related rules and regulations of the SEC. If we cannot favorably assess, or our independent registered public accounting firm is unable to provide an unqualified attestation report on, the effectiveness of our internal control over financial reporting, investor confidence in the reliability of our financial reports may be adversely affected, which could have a material adverse effect on our stock price.

Our certificate of incorporation, our bylaws, our preferred shares rights agreement and Delaware law contain provisions that could discourage another company from acquiring us and may prevent attempts by our stockholders to replace or remove our current management.

Provisions of Delaware law, where we are incorporated, our certificate of incorporation and bylaws may discourage, delay or prevent a merger or acquisition that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace or remove our board of directors. These provisions include:

- authorizing the issuance of “blank check” preferred stock without any need for action by stockholders;
- providing for a classified board of directors with staggered terms;
- requiring supermajority stockholder voting to effect certain amendments to our certificate of incorporation and bylaws;
- eliminating the ability of stockholders to call special meetings of stockholders;
- prohibiting stockholder action by written consent; and
- establishing advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted on by stockholders at stockholder meetings.

In addition, in August 2006, our board of directors adopted a preferred shares rights agreement, or the rights plan, the provisions of which could make it more difficult for a potential acquirer to consummate a transaction without the approval of our board of directors. The rights plan could also reduce the price that investors might be willing to pay for shares of our common stock and result in the market price being lower than it would be without the rights plan. In addition, the existence of the rights plan itself may deter a potential acquirer from acquiring us. As a result, either by operation of the rights plan or by its potential deterrent effect, mergers and acquisitions of us that our stockholders may consider in their best interests may not occur.

We have never paid dividends on our common stock, and we do not anticipate paying any cash dividends in the foreseeable future.

We have never declared or paid cash dividends on our common stock. We do not anticipate paying any cash dividends on our common stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. As a result, capital appreciation, if any, of our common stock will be our stockholders’ sole source of gain for the foreseeable future.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS.

None.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

On August 1, 2014, we entered into an At Market Issuance Sales Agreement, or the Sales Agreement, with MLV & Co., LLC, or MLV, which provides that, upon the terms and subject to the conditions and limitations set forth in the Sales Agreement, we may elect to issue and sell shares of our common stock having an aggregate offering price of up to \$30.0 million from time to time through MLV as our sales agent. The issuance and sale of these shares by us under the Sales Agreement, if any, is subject to the effectiveness of our shelf registration statement on Form S-3 (File No. 333-195084), initially filed with the Securities and Exchange Commission on April 7, 2014. We make no assurance as to the continued effectiveness of this shelf registration statement.

MLV may sell the common stock by any method that is deemed to be an “at-the-market” equity offering as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, including sales made directly on or through The NASDAQ Capital Market or any other existing trading market for our common stock in the United States or to or through a market maker. Subject to the terms and conditions of the Sales Agreement, MLV will use commercially reasonable efforts consistent with its normal trading and sales practices to sell the common stock from time to time, based upon our instructions (including any price, time or size limits or other customary parameters or conditions that we may impose). We are not obligated to make any sales of common stock under the Sales Agreement. The offering of our common stock pursuant to the Sales Agreement will terminate upon the earlier of (i) the sale of all of our common stock subject to the Sales Agreement or (ii) the termination of the Sales Agreement as permitted therein. The Sales Agreement may be terminated by us or MLV at any time upon 10 days’ notice to the other party, or by MLV at any time in certain circumstances, including the occurrence of a material adverse change with respect to us. We will pay MLV an aggregate commission rate equal to up to 3.0% of the gross proceeds of the sales price per share for common stock sold through MLV under the Sales Agreement. We have also provided MLV with customary indemnification rights and expense reimbursements for up to \$25,000 of expenses.

The foregoing description of the Sales Agreement is not complete and is qualified in its entirety by reference to the full text of such agreement, a copy of which is filed herewith as Exhibit 10.5 and is incorporated herein by reference. A copy of the opinion of Cooley LLP relating to the validity of the issuance and sale of the common stock pursuant to the Sales Agreement (the “Opinion”) is also filed herewith as Exhibit 5.1. This Quarterly Report on Form 10-Q also incorporates by reference the Sales Agreement and the Opinion into our above-referenced shelf registration statement on Form S-3.

ITEM 6. EXHIBITS

The exhibits listed on the accompanying index to exhibits are filed or incorporated by reference (as stated therein) as part of this Quarterly Report on Form 10-Q.

Exhibit Number	Description
5.1	Opinion of Cooley LLP.
10.1	Threshold Pharmaceuticals Inc. 2014 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-32979) filed on May 21, 2014).
10.2	Form of Stock Option Grant Notice and Option Agreement for employees under the Threshold Pharmaceuticals Inc. 2014 Equity Incentive Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K (File No. 001-32979) filed on May 21, 2014).
10.3	Form of Stock Option Grant Notice and Option Agreement for non-employee directors under the Threshold Pharmaceuticals Inc. 2014 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-32979) filed on May 21, 2014).
10.4	Non-Employee Director Compensation Policy, adopted by the Board of Directors of the Registrant on March 20, 2014 (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-32979) filed on May 1, 2014).
10.5	At Market Issuance Sales Agreement, dated August 1, 2014, by and between Threshold Pharmaceuticals, Inc. and MLV & Co., LLC.
23.1	Consent of Cooley LLP (included in Exhibit 5.1).
31.1	Certification of Principal Executive Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934 as amended.
31.2	Certification of Principal Financial Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934 as amended.
32.1*	Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350.
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101.INS	XBRL Instance Document.
101.SCH	XBRL Taxonomy Extension Schema Document.
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB	XBRL Taxonomy Extension Labels Linkbase Document.
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.

* Furnished herewith. This certification is not deemed filed for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section, and is not deemed to be incorporated by reference into any filing under the Securities Act or the Exchange Act.

SIGNATURES

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

Threshold Pharmaceuticals, Inc.

Date: August 1, 2014

/s/ Harold E. Selick, Ph.D.

Harold E. Selick, Ph.D.
Chief Executive Officer
(Principal Executive Officer)

Date: August 1, 2014

/s/ Joel A. Fernandes

Joel A. Fernandes
Vice President, Finance and Controller
(Principal Financial and Accounting Officer)

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* Furnished herewith. This certification is not deemed filed for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section, and is not deemed to be incorporated by reference into any filing under the Securities Act or the Exchange Act.

August 1, 2014

Threshold Pharmaceuticals, Inc.
170 Harbor Way, Suite 300
South San Francisco, CA 94080

Ladies and Gentlemen:

We have acted as counsel to Threshold Pharmaceuticals, Inc., a Delaware corporation (the "**Company**"), in connection with the offering of up to \$30,000,000 of shares of the Company's common stock, par value \$0.001 (the "**Shares**"), and the preferred stock purchase rights (the "**Rights**") associated with the Shares to be issued pursuant to that certain Rights Agreement, dated as of August 8, 2006, as amended (the "**Rights Agreement**"), between the Company and Mellon Investor Services LLC as rights agent (the "**Rights Agent**"), pursuant to the Registration Statement on Form S-3 (File No. 333-195084) originally filed with the Securities and Exchange Commission (the "**Commission**") under the Securities Act of 1933, as amended (the "Act"), on April 7, 2014 (the "**Registration Statement**"), the related prospectus dated April 17, 2014, included in the Registration Statement (the "**Base Prospectus**"), and the prospectus supplement dated August 1, 2014, to be filed with the Commission pursuant to Rule 424(b) of the rules and regulations of the Act (the "**Prospectus Supplement**"). The Base Prospectus and the Prospectus Supplement are collectively referred to as the "Prospectus." The Shares are to be sold by the Company in accordance with the At Market Issuance Sales Agreement, dated August 1, 2014, between the Company and MLV & Co. LLC (the "**Sales Agreement**"), as described in the Prospectus. The Company has requested our opinion in connection with certain related matters.

In connection with this opinion, we have examined and relied upon the Registration Statement, the Prospectus, the Company's Amended and Restated Certificate of Incorporation, as amended, the Company's Amended and Restated Bylaws, the Sales Agreement and the Rights Agreement, each as currently in effect, and the originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not independently verified such matters. We have assumed the genuineness and authenticity of all documents submitted to us as originals, and the conformity to originals of all documents submitted to us as copies thereof.

This opinion assumes, with your consent, that the Rights Agreement has been duly authorized, executed and delivered by the Rights Agent, and that the Company's Board of Directors (the "**Board**") has acted in a manner consistent with its fiduciary duties as required under applicable law in adopting the Rights Agreement. This opinion does not address whether the Board may be required to redeem or terminate, or take other action with respect to, the Rights in the future based on the facts and circumstances then existing. Moreover, this opinion addresses corporate procedures in connection with the issuance of the Rights associated with the Shares, and not any particular provision of the Rights or the Rights Agreement. It should be understood that it is not settled whether the invalidity of any particular provision of a rights agreement or purchase rights issued thereunder would invalidate such rights in their entirety.

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Threshold Pharmaceuticals,
Inc.
August 1, 2014
Page 2

Further, we have assumed that no more than 7,389,163 Shares will be sold, based on a sale price of \$4.06 per share, representing the last reported sale price of the Company's common stock on The NASDAQ Capital Market on July 28, 2014.

With respect to securities of the Company to be issued after the date hereof, we express no opinion to the extent that, notwithstanding its current reservation of shares of common stock, future issuances of securities of the Company and/or antidilution adjustments to outstanding securities of the Company cause outstanding securities to be convertible for more shares of common stock than the number that remain authorized but unissued.

Our opinion is limited to the matters stated herein and no opinion is implied or may be inferred beyond the matters expressly stated. Our opinion herein is expressed solely with respect to the federal laws of the United States and the General Corporation Law of the State of Delaware. Our opinion is based on these laws as in effect on the date hereof, and we disclaim any obligation to advise you of facts, circumstances, events or developments which hereafter may be brought to our attention and which may alter, affect or modify the opinion expressed herein. We express no opinion as to whether the laws of any particular jurisdiction other than those identified above are applicable to the subject matter hereof.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares and the associated Rights, when sold and issued against payment therefor in accordance with the Sales Agreement, the Registration Statement and the Prospectus, will be validly issued, and the Shares fully paid and nonassessable.

We consent to the reference to our firm under the caption "Legal Matters" in the Prospectus included in the Registration Statement and to the filing of this opinion as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2014.

Sincerely,

Cooley LLP

By: /s/ Chadwick L. Mills
Chadwick L. Mills

THRESHOLD PHARMACEUTICALS, INC.

Common Stock
(par value \$0.001 per share)

At Market Issuance Sales Agreement

August 1, 2014

MLV & Co. LLC
1251 Avenue of the Americas, 41st Floor
New York, NY 10020

Ladies and Gentlemen:

Threshold Pharmaceuticals, Inc., a Delaware corporation (the "Company"), confirms its agreement (this "Agreement") with MLV & Co. LLC (the "MLV"), as follows:

1. Issuance and Sale of Shares. The Company agrees that, from time to time during the term of this Agreement, on the terms and subject to the conditions set forth herein, it may issue and sell through MLV, shares (the "Placement Shares") of the Company's common stock, par value \$0.001 per share (the "Common Stock") up to an aggregate offering price of \$30,000,000; provided however, that in no event shall the Company issue or sell through MLV such number of Placement Shares that (a) would cause the Company to not satisfy the eligibility requirements for use of Form S-3 (including, if applicable, Instruction I.B.6. thereof), (b) exceeds the amount of Placement Shares registered on the effective Registration Statement and included in the Prospectus Supplement (each as defined below) pursuant to which the offering is being made or (c) exceeds the number of authorized but unissued shares of the Company's Common Stock (the lesser of (a), (b) and (c), the "Maximum Amount"). Notwithstanding anything to the contrary contained herein, the parties hereto agree that compliance with the limitations set forth in this Section 1 on the amount of Placement Shares issued and sold under this Agreement shall be the sole responsibility of the Company and that MLV shall have no obligation in connection with such compliance. The issuance and sale of Placement Shares through MLV will be effected pursuant to the Registration Statement (as defined below) filed by the Company and declared effective by the Securities and Exchange Commission (the "Commission"), although nothing in this Agreement shall be construed as requiring the Company to use the Registration Statement to issue any Common Stock.

The Company has filed, in accordance with the provisions of the Securities Act of 1933, as amended (the "Securities Act") and the rules and regulations thereunder (the "Securities Act Regulations"), with the Commission a registration statement on Form S-3 (File No.333-195084), including a base prospectus, relating to certain securities, including the Placement Shares to be issued from time to time by the Company, and which incorporates by reference documents that the Company has filed or will file in accordance with the provisions of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules and regulations thereunder (the "Exchange Act Regulations"). The Company has prepared a prospectus supplement specifically relating to the Placement Shares (the "Prospectus Supplement") to the base prospectus included as part of such registration statement. The Company will furnish to MLV, for use by MLV,

copies of the prospectus included as part of such registration statement, as supplemented by the Prospectus Supplement, relating to the Placement Shares. Except where the context otherwise requires, such registration statement, including all documents filed as part thereof or incorporated by reference therein, and including any information contained in a Prospectus (as defined below) subsequently filed with the Commission pursuant to Rule 424(b) under the Securities Act Regulations or deemed to be a part of such registration statement pursuant to Rule 430B of the Securities Act Regulations, is herein called the “Registration Statement.” The base prospectus, including all documents incorporated therein by reference, included in the Registration Statement, as it may be supplemented by the Prospectus Supplement, in the form in which such prospectus and/or Prospectus Supplement have most recently been filed by the Company with the Commission pursuant to Rule 424(b) under the Securities Act Regulations, is herein called the “Prospectus”. Any reference herein to the Registration Statement, the Prospectus or any amendment or supplement thereto shall be deemed to refer to and include the documents incorporated by reference therein, and any reference herein to the terms “amend,” “amendment” or “supplement” with respect to the Registration Statement or the Prospectus shall be deemed to refer to and include the filing after the execution hereof of any document with the Commission deemed to be incorporated by reference therein (the “Incorporated Documents”).

For purposes of this Agreement, all references to the Registration Statement, the Prospectus or to any amendment or supplement thereto shall be deemed to include the most recent copy filed with the Commission pursuant to its Electronic Data Gathering Analysis and Retrieval System, or if applicable, the Interactive Data Electronic Application system when used by the Commission (collectively, “EDGAR”).

2. Placements. Each time that the Company wishes to issue and sell Placement Shares hereunder (each, a “Placement”), it will notify MLV by email notice (or other method mutually agreed to in writing by the Parties) of the number of Placement Shares, the time period during which sales are requested to be made, any limitation on the number of Placement Shares that may be sold in any one day and any minimum price below which sales may not be made (a “Placement Notice”), the form of which is attached hereto as Schedule 1. The Placement Notice shall originate from any of the individuals from the Company set forth on Schedule 3 (with a copy to each of the other individuals from the Company listed on such schedule), and shall be addressed to each of the individuals from MLV set forth on Schedule 3, as such Schedule 3 may be amended from time to time. The Placement Notice shall be effective unless and until (i) MLV declines to accept the terms contained therein for any reason, in its sole discretion, (ii) the entire amount of the Placement Shares thereunder have been sold, (iii) the Company suspends or terminates the Placement Notice or (iv) the Agreement has been terminated under the provisions of Section 13. The amount of any discount, commission or other compensation to be paid by the Company to MLV in connection with the sale of the Placement Shares shall be calculated in accordance with the terms set forth in Schedule 2. It is expressly acknowledged and agreed that neither the Company nor MLV will have any obligation whatsoever with respect to a Placement or any Placement Shares unless and until the Company delivers a Placement Notice to MLV and MLV does not decline such Placement Notice pursuant to the terms set forth above, and then only upon the terms specified therein and herein. In the event of a conflict between the terms of this Agreement and the terms of a Placement Notice, the terms of the Placement Notice will control.

3. Sale of Placement Shares by MLV. Subject to the terms and conditions of this Agreement, MLV, for the period specified in the Placement Notice, will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of NASDAQ (the “Exchange”), to sell the Placement Shares up to the amount specified, and otherwise in accordance with the terms of such Placement Notice. MLV will provide written confirmation to the Company no later than the opening of the Trading Day (as defined below) immediately following the Trading Day on which it has made sales of Placement Shares hereunder setting forth the number of Placement Shares sold on such day, the compensation payable by the Company to MLV pursuant to Section 2 with respect to such sales, and the Net Proceeds (as defined below) payable to the Company, with an itemization of the deductions made by MLV (as set forth in Section 5(b)) from the gross proceeds that it receives from such sales. Subject to the terms of the Placement Notice, MLV may sell Placement Shares by any method permitted by law deemed to be an “at the market” offering as defined in Rule 415 of the Securities Act Regulations, including without limitation sales made directly on the Exchange, on any other existing trading market for the Common Stock or to or through a market maker. Subject to the terms of a Placement Notice and only with the Company’s prior written consent, MLV may also sell Placement Shares by any other method permitted by law, including but not limited to in privately negotiated transactions. “Trading Day” means any day on which Common Stock are purchased and sold on the Exchange. Neither MLV nor any of its affiliates or subsidiaries shall engage in (i) any short sale of any security of the Company, (ii) any sale of any security of the Company that MLV does not own or any sale which is consummated by the delivery of a security of the Company borrowed by, or for the account of, MLV or (iii) any market-making, bidding, stabilization or other trading activity with respect to the Common Stock or related derivative securities if such activity would be prohibited under Regulation M or other anti-manipulation rules under the Securities Act. Neither MLV nor any of its affiliates or subsidiaries, shall engage in any proprietary trading or trading for MLV’s (or its affiliates’ or subsidiaries’) own account.

4. Suspension of Sales. The Company or MLV may, upon notice to the other party in writing (including by email correspondence to each of the individuals of the other Party set forth on Schedule 3, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) or by telephone (confirmed immediately by verifiable facsimile transmission or email correspondence to each of the individuals of the other Party set forth on Schedule 3), suspend any sale of Placement Shares; provided, however, that such suspension shall not affect or impair any party’s obligations with respect to any Placement Shares sold hereunder prior to the receipt of such notice. Each of the parties agrees that no such notice under this Section 4 shall be effective against any other party unless it is made to one of the individuals named on Schedule 3 hereto, as such Schedule may be amended from time to time.

5. Sale and Delivery to MLV; Settlement.

(a) Sale of Placement Shares. On the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, upon MLV’s acceptance of the terms of a Placement Notice, and unless the sale of the Placement Shares described therein has been declined, suspended, or otherwise terminated in accordance with the terms of this Agreement, MLV, for the period specified in the Placement Notice, will use its

commercially reasonable efforts consistent with its normal trading and sales practices to sell such Placement Shares up to the amount specified, and otherwise in accordance with, the terms of such Placement Notice. The Company acknowledges and agrees that (i) there can be no assurance that MLV will be successful in selling Placement Shares, (ii) MLV will incur no liability or obligation to the Company or any other person or entity if it does not sell Placement Shares for any reason other than a failure by MLV to use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable law and regulations to sell such Placement Shares as required under this Agreement and (iii) MLV shall be under no obligation to purchase Placement Shares on a principal basis pursuant to this Agreement, except as otherwise agreed by MLV and the Company.

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

(c) Delivery of Placement Shares. On or before each Settlement Date, the Company will, or will cause its transfer agent to, electronically transfer the Placement Shares being sold by crediting MLV's or its designee's account (provided MLV shall have given the Company written notice of such designee prior to the Settlement Date) at The Depository Trust Company through its Deposit and Withdrawal at Custodian System or by such other means of delivery as may be mutually agreed upon by the parties hereto which in all cases shall be freely tradable, transferable, registered shares in good deliverable form. On each Settlement Date, MLV will deliver the related Net Proceeds in same day funds to an account designated by the Company on, or prior to, the Settlement Date. The Company agrees that if the Company, or its transfer agent (if applicable), defaults in its obligation to deliver Placement Shares on a Settlement Date through no fault of MLV, the Company agrees that in addition to and in no way limiting the rights and obligations set forth in Section 11(a) hereto, it will (i) hold MLV harmless against any loss, claim, damage, or expense (including reasonable legal fees and expenses), as incurred, arising out of or in connection with such default by the Company or its transfer agent (if applicable) and (ii) pay to MLV (without duplication) any commission, discount, or other compensation to which it would otherwise have been entitled absent such default.

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

Shares pursuant to this Agreement at a price lower than the minimum price authorized from time to time by the Company's board of directors, a duly authorized committee thereof or a duly authorized executive committee, and notified to MLV in writing. Further, under no circumstances shall the Company cause or permit the aggregate offering amount of Placement Shares sold pursuant to this Agreement to exceed the Maximum Amount.

6. Representations and Warranties of the Company. Except as disclosed in the Registration Statement and the Prospectus (including the Incorporated Documents), the Company represents and warrants to, and agrees with MLV that as of the date of this Agreement and as of each Applicable Time (as defined below), unless such representation, warranty or agreement specifies a different time or time:

(a) Registration Statement and Prospectus. The Company and, assuming no act or omission on the part of MLV that would make such statement untrue, the transactions contemplated by this Agreement meet the requirements for and comply with the conditions for the use of Form S 3 under the Securities Act, including, if applicable, the transaction requirements set forth in General Instruction I.B.6 of such form. The Registration Statement has been filed with the Commission and has been declared effective under the Securities Act. The Prospectus Supplement will name MLV as the agent in the section entitled "Plan of Distribution." The Company has not received, and has no notice of, any order of the Commission preventing or suspending the use of the Registration Statement, or threatening or instituting proceedings for that purpose. The Registration Statement and the offer and sale of Placement Shares as contemplated hereby meet the requirements of Rule 415 under the Securities Act and comply in all material respects with said Rule. Any statutes, regulations, contracts or other documents that are required to be described in the Registration Statement or the Prospectus or to be filed as exhibits to the Registration Statement have been so described or filed. Copies of the Registration Statement, the Prospectus, and any such amendments or supplements and all documents incorporated by reference therein that were filed with the Commission on or prior to the date of this Agreement have been delivered, or are available through EDGAR, to MLV and its counsel. The Company has not distributed and, prior to the later to occur of each Settlement Date and completion of the distribution of the Placement Shares, will not distribute any offering material in connection with the offering or sale of the Placement Shares other than the Registration Statement and the Prospectus and any Permitted Free Writing Prospectus (as defined below). The Common Stock is currently listed on the Exchange under the trading symbol "THLD". Except as disclosed in the Registration Statement, including the Incorporated Documents, the Company has not, in the 12 months preceding the date hereof, received notice from the Exchange to the effect that the Company is not in compliance with the listing or maintenance requirements. Except as disclosed in the Registration Statement, including the Incorporated Documents, or the Prospectus, the Company has no reason to believe that it will not in the foreseeable future continue to be in compliance with all such listing and maintenance requirements.

(b) No Misstatement or Omission. The Registration Statement, when it became effective, and the Prospectus, and any amendment or supplement thereto, on the date of such Prospectus or amendment or supplement, conformed and will conform in all material respects with the requirements of the Securities Act. At each Settlement Date, the Registration Statement and the Prospectus, as of such date, will conform in all material respects with the requirements of

the Securities Act. The Registration Statement, when it became or becomes effective, did not, and will not, contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The Prospectus and any amendment and supplement thereto, on the date thereof and at each Applicable Time, did not or will not include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading. The documents incorporated by reference in the Prospectus did not, and any further documents filed and incorporated by reference therein will not, when filed with the Commission, contain an untrue statement of a material fact or omit to state a material fact required to be stated in such document or necessary to make the statements in such document, in light of the circumstances under which they were made, not misleading. The foregoing shall not apply to statements in, or omissions from, any such document made in reliance upon, and in conformity with, information furnished to the Company by MLV specifically for use in the preparation thereof.

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

(d) Financial Information. The consolidated financial statements of the Company included or incorporated by reference in the Registration Statement, the Prospectus and any Permitted Free Writing Prospectus together with the related notes and schedules, present fairly, in all material respects, the consolidated financial position of the Company and the Subsidiaries as of the dates indicated and the consolidated results of operations, cash flows and changes in stockholders' equity of the Company for the periods specified and have been prepared in compliance with the requirements of the Securities Act and Exchange Act, as applicable, and in conformity with GAAP (as defined below) applied on a consistent basis (except (i) for such adjustments to accounting standards and practices as are noted therein or (ii) in the case of unaudited interim financial statements, to the extent that they may not include footnotes or may be condensed or summary statements) during the periods involved; there are no financial statements (historical or pro forma) that are required to be included or incorporated by reference in the Registration Statement or the Prospectus that are not included or incorporated by reference as required; and all disclosures contained or incorporated by reference in the Registration Statement, the Prospectus and any Permitted Free Writing Prospectus regarding "non-GAAP financial measures" (as such term is defined by the rules and regulations of the Commission) comply in all material respects with Regulation G of the Exchange Act and Item 10 of Regulation S-K under the Securities Act, to the extent applicable. The Company and the Subsidiaries (as defined below) do not have any material liabilities or obligations, direct or contingent (including any off-balance sheet obligations and any "variable interest entities" within the meaning of Financial Accounting Standards Board Interpretation No. 46) not disclosed in the Registration Statement and the Prospectus and which are required to be disclosed in the Registration Statement or the Prospectus.

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

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

(g) Subsidiaries. The subsidiaries set forth on Schedule 4 (collectively, the "Subsidiaries"), are the Company's only subsidiaries. Except as set forth in the Registration Statement and in the Prospectus, the Company owns, directly or indirectly, all of the equity interests of the Subsidiaries free and clear of any lien, charge, security interest, encumbrance, right of first refusal or other restriction, and all the equity interests of the Subsidiaries are validly issued and are fully paid, nonassessable and free of preemptive and similar rights.

(h) No Violation or Default. Neither the Company nor any of its Subsidiaries is (i) in violation of its charter or by-laws or similar organizational documents; (ii) in default, and no event has occurred that, with notice or lapse of time or both, would constitute such a default, in the due performance or observance of any term, covenant or condition contained in any indenture, mortgage, deed of trust, loan agreement or other agreement or instrument to which the Company or any of its Subsidiaries is a party or by which the Company or any of its Subsidiaries is bound or to which any of the property or assets of the Company or any of its Subsidiaries are subject; or (iii) in violation of any law or statute or any judgment, order, rule or regulation of any court or arbitrator or governmental or regulatory authority, except, in the case of each of clauses (ii) and (iii) above, for any such violation or default that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. Except as described in the Prospectus, the Prospectus Supplement or the Incorporated Documents, to the Company's knowledge, no other party under any material contract or other agreement to which it or any of its Subsidiaries is a party is in default in any respect thereunder where such default would reasonably be expected to have a Material Adverse Effect.

(i) No Material Adverse Change. Subsequent to the respective dates as of which information is given in the Registration Statement and the Prospectus (including the Incorporated Documents), there has not been (i) any Material Adverse Effect, (ii) any obligation

or liability, direct or contingent (including any off-balance sheet obligations), incurred by the Company or any Subsidiary, which is material to the Company and the Subsidiaries taken as a whole, (iv) any material change in the capital stock (other than (A) as a result of the sale of Placement Shares, (B) as described in a current report on Form 8-K, a proxy statement filed on Schedule 14A or a Registration Statement on Form S-4 and otherwise publicly announced or (C) changes in the number of outstanding shares of Common Stock due to the issuance of shares upon the exercise or conversion of securities exercisable for, or convertible into, shares of Common Stock, or the vesting of equity awards) or outstanding long-term indebtedness of the Company or any of its Subsidiaries or (v) any dividend or distribution of any kind declared, paid or made on the capital stock of the Company or any Subsidiary, other than in each case above (A) in the ordinary course of business, (B) as otherwise disclosed in the Registration Statement or Prospectus (including the Incorporated Documents) or (C) where such matter, item, change or development would not make the statements in the Registration Statement or the Prospectus contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading.

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

(k) Authorization; Enforceability. The Company has full legal right, power and authority to enter into this Agreement and perform the transactions contemplated hereby. This Agreement has been duly authorized, executed and delivered by the Company and is a legal, valid and binding agreement of the Company enforceable against the Company in accordance with its terms, except to the extent that (i) enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally and by general equitable principles and (ii) the indemnification and contribution provisions of Section 11 hereof may be limited by federal or state securities laws and public policy considerations in respect thereof.

(l) Authorization of Placement Shares. The Placement Shares, when issued and delivered pursuant to the terms approved by the board of directors of the Company or a duly

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

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

(n) No Preferential Rights. Except as set forth in the Registration Statement and the Prospectus, (i) no person, as such term is defined in Rule 1-02 of Regulation S-X promulgated under the Securities Act (each, a “Person”), has the right, contractual or otherwise, to cause the Company to issue or sell to such Person any Common Stock or shares of any other capital stock or other securities of the Company (other than upon the exercise of options or warrants to purchase Common Stock or upon the exercise or vesting of options or other equity awards that may be granted from time to time under the Company’s equity compensation plans), (ii) no Person has any preemptive rights, rights of first refusal, or any other rights (whether pursuant to a “poison pill” provision or otherwise) to purchase any Common Stock or shares of any other capital stock or other securities of the Company from the Company which have not been duly waived with respect to the offering contemplated hereby, (iii) except as may be disclosed to MLV, no Person has the right to act as an underwriter or as a sales agent to the Company in connection with the offer and sale of the Common Stock, and (iv) no Person has the right, contractual or otherwise, to require the Company to register under the Securities Act any Common Stock or shares of any other capital stock or other securities of the Company, or to include any such shares or other securities in the Registration Statement or the offering contemplated thereby, whether as a result of the filing or effectiveness of the Registration Statement or the sale of the Placement Shares as contemplated thereby or otherwise.

(o) Independent Public Accountant. Ernst & Young LLP (the “Accountant”), whose report on the consolidated financial statements of the Company is filed with the Commission as part of the Company’s most recent Annual Report on Form 10-K filed with the Commission and incorporated into the Registration Statement, are and, during the periods covered by their report, were independent public accountants within the meaning of the Securities Act and the Public Company Accounting Oversight Board (United States). To the Company’s knowledge, after due inquiry, the Accountant is not in violation of the auditor independence requirements of the Sarbanes-Oxley Act of 2002 (the “Sarbanes-Oxley Act”) with respect to the Company.

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

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

(r) Licenses and Permits. Except as set forth in the Registration Statement or the Prospectus, the Company and each of its Subsidiaries possess or have obtained, all licenses, certificates, consents, orders, approvals, permits and other authorizations issued by, and have made all declarations and filings with, the appropriate federal, state, local or foreign governmental or regulatory authorities that are necessary for the ownership or lease of their respective properties or the conduct of their respective businesses as described in the Registration Statement and the Prospectus (the "Permits"), except where the failure to possess, obtain or make the same would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. Except as disclosed in the Registration Statement or the Prospectus, neither the Company nor any of its Subsidiaries have received written notice of any proceeding relating to revocation or modification of any such Permit or has any reason to believe that such Permit will not be renewed in the ordinary course, except where the failure to obtain any such renewal would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(s) Market Capitalization. As of the close of trading on the Exchange on the Trading Day immediately prior to the date of this Agreement, the aggregate market value of the outstanding voting and non-voting common equity (as defined in Securities Act Rule 405) of the

Company held by persons other than affiliates of the Company (pursuant to Securities Act Rule 144, those that directly, or indirectly through one or more intermediaries, control, or are controlled by, or are under common control with, the Company) (the “Non-Affiliate Shares”), was approximately \$227.8 million (calculated by multiplying (x) the price at which the common equity of the Company was last sold on the Exchange on the Trading Day immediately prior to the date of this Agreement times (y) the number of Non-Affiliate Shares).

(t) No Material Defaults. Neither the Company nor any of the Subsidiaries has defaulted on any installment on indebtedness for borrowed money or on any rental on one or more long-term leases, which defaults, individually or in the aggregate, could reasonably be expected to have a Material Adverse Effect. The Company has not filed a report pursuant to Section 13(a) or 15(d) of the Exchange Act since the filing of its last Annual Report on Form 10-K, indicating that it (i) has failed to pay any dividend or sinking fund installment on preferred stock or (ii) has defaulted on any installment on indebtedness for borrowed money or on any rental on one or more long-term leases, which defaults, individually or in the aggregate, could reasonably be expected to have a Material Adverse Effect.

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

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

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

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

(y) Title to Real and Personal Property. Except as set forth in the Registration Statement or the Prospectus, the Company and its Subsidiaries have good and valid title in fee

simple to all items of real property and good and valid title to all personal property (excluding Intellectual Property) described in the Registration Statement or Prospectus as being owned by them that are material to the businesses of the Company or such Subsidiary, in each case free and clear of all liens, encumbrances and claims, except those that (i) do not materially interfere with the use made and proposed to be made of such property by the Company and any of its Subsidiaries or (ii) would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect. Any real property described in the Registration Statement or Prospectus as being leased by the Company and any of its Subsidiaries is held by them under valid, existing and enforceable leases, except those that (A) do not materially interfere with the use made or proposed to be made of such property by the Company or any of its Subsidiaries or (B) would not be reasonably expected, individually or in the aggregate, to have a Material Adverse Effect.

(z) Intellectual Property. Except as set forth in the Registration Statement or the Prospectus, to the Company's knowledge, the Company and its Subsidiaries own or possess adequate enforceable rights to use all patents, patent applications, trademarks (both registered and unregistered), service marks, trade names, trademark registrations, service mark registrations, copyrights, licenses and know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures) (collectively, the "Intellectual Property"), necessary for the conduct of their respective businesses as conducted as of the date hereof, except to the extent that the failure to own or possess adequate rights to use such Intellectual Property would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; except as disclosed in writing to MLV, the Company and any of its Subsidiaries have not received any written notice of any claim of infringement or conflict which asserted Intellectual Property rights of others, which infringement or conflict, if the subject of an unfavorable decision, would result in a Material Adverse Effect; there are no pending, or to the Company's knowledge, threatened judicial proceedings or interference proceedings against the Company challenging the Company's or its Subsidiaries' rights in or to or the validity of the scope of any of the Company's or its Subsidiaries' patents, patent applications or proprietary information, except for any such proceedings that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. To the Company's knowledge, no other entity or individual has any right or claim in any of the Company's or its Subsidiaries' owned patents, patent applications or any patent to be issued therefrom by virtue of any contract, license or other agreement entered into between such entity or individual and the Company or a Subsidiary or by any non-contractual obligation, other than by written licenses granted by the Company or a Subsidiary and other than such rights or claims that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. The Company and its Subsidiaries have not received any written notice of any claim challenging the rights of the Company or a Subsidiary in or to any Intellectual Property owned, licensed or optioned by the Company or such Subsidiary which claim, if the subject of an unfavorable decision would result in a Material Adverse Effect.

(aa) Environmental Laws. Except as set forth in the Registration Statement or the Prospectus, the Company and its Subsidiaries (i) are in compliance with any and all applicable federal, state, local and foreign laws, rules, regulations, decisions and orders relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants (collectively, "Environmental Laws"); (ii) have received and

are in compliance with all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses as described in the Registration Statement and the Prospectus; and (iii) have not received notice of any actual or potential liability for the investigation or remediation of any disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants, except, in the case of any of clauses (i), (ii) or (iii) above, for any such failure to comply or failure to receive required permits, licenses, other approvals or liability as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(bb) Disclosure Controls. The Company maintains systems of internal accounting controls designed to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Since the date of the latest audited financial statements of the Company included in the Prospectus, there has been no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting (other than as set forth in the Prospectus). The Company has established disclosure controls and procedures (as defined in Exchange Act Rules 13a-15 and 15d-15) for the Company and designed such disclosure controls and procedures to ensure that material information relating to the Company and each of its Subsidiaries is made known to the certifying officers by others within those entities, particularly during the period in which the Company's Annual Report on Form 10-K or Quarterly Report on Form 10-Q, as the case may be, is being prepared. The Company's certifying officers have evaluated the effectiveness of the Company's controls and procedures as of a date within 90 days prior to the filing date of the Form 10-K for the fiscal year most recently ended (such date, the "Evaluation Date"). The Company presented in its Form 10 K for the fiscal year most recently ended the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date. Since the Evaluation Date, there have been no significant changes in the Company's internal controls (as such term is defined in Item 307(b) of Regulation S K under the Securities Act). To the knowledge of the Company, the Company's "internal controls over financial reporting" and "disclosure controls and procedures" are effective.

(cc) Sarbanes-Oxley. There is and has been no failure on the part of the Company or, to the knowledge of the Company, any of the Company's directors or officers, in their capacities as such, to comply with any applicable provisions of the Sarbanes-Oxley Act and the rules and regulations promulgated thereunder. Each of the principal executive officer and the principal financial officer of the Company (or each former principal executive officer of the Company and each former principal financial officer of the Company as applicable) has made all certifications required by Sections 302 and 906 of the Sarbanes-Oxley Act with respect to all reports, schedules, forms, statements and other documents required to be filed by it or furnished by it to the Commission. For purposes of the preceding sentence, "principal executive officer" and "principal financial officer" shall have the meanings given to such terms in the Sarbanes-Oxley Act.

(dd) Finder's Fees. Neither the Company nor any of the Subsidiaries has incurred any liability for any finder's fees, brokerage commissions or similar payments in connection with the transactions herein contemplated, except as may otherwise exist with respect to MLV pursuant to this Agreement.

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

(ff) Investment Company Act. Neither the Company nor any of the Subsidiaries is or, after giving effect to the offering and sale of the Placement Shares, will be an "investment company" or an entity "controlled" by an "investment company," as such terms are defined in the Investment Company Act of 1940, as amended (the "Investment Company Act").

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

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

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

(jj) ERISA. To the knowledge of the Company, each material employee benefit plan, within the meaning of Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), that is maintained, administered or contributed to by the Company or any of its affiliates for employees or former employees of the Company and any of its Subsidiaries has been maintained in material compliance with its terms and the requirements of any applicable statutes, orders, rules and regulations, including but not limited to ERISA and the Internal Revenue Code of 1986, as amended (the "Code"); no prohibited transaction, within the meaning of Section 406 of ERISA or Section 4975 of the Code, has occurred which would

result in a material liability to the Company with respect to any such plan excluding transactions effected pursuant to a statutory or administrative exemption; and for each such plan, if any, that is subject to the funding rules of Section 412 of the Code or Section 302 of ERISA, no “accumulated funding deficiency” as defined in Section 412 of the Code has been incurred, whether or not waived, and the fair market value of the assets of each such plan (excluding for these purposes accrued but unpaid contributions) equals or exceeds the present value of all benefits accrued under such plan determined using reasonable actuarial assumptions, other than, in the case of (i), (ii) and (iii) above, as would not reasonably be expected to have a Material Adverse Effect.

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

(ll) Insurance. The Company and each of its Subsidiaries carry, or are covered by, insurance in such amounts and covering such risks as the Company and each of its Subsidiaries reasonably believe are adequate for the conduct of their properties and as is customary for companies of similar size engaged in similar businesses in similar industries.

(mm) No Improper Practices. (i) Neither the Company nor, to the Company’s knowledge, the Subsidiaries, nor to the Company’s knowledge, any of their respective executive officers has, in the past five years, made any unlawful contributions to any candidate for any political office (or failed fully to disclose any contribution in violation of law) or made any contribution or other payment to any official of, or candidate for, any federal, state, municipal, or foreign office or other person charged with similar public or quasi-public duty in violation of any law; (ii) no relationship, direct or indirect, exists between or among the Company or, to the Company’s knowledge, any Subsidiary or any affiliate of any of them, on the one hand, and the directors, officers and stockholders of the Company or, to the Company’s knowledge, any Subsidiary, on the other hand, that is required by the Securities Act to be described in the Registration Statement and the Prospectus that is not so described; (iii) no relationship, direct or indirect, exists between or among the Company or any Subsidiary or any affiliate of them, on the one hand, and the directors, officers, stockholders or directors of the Company or, to the Company’s knowledge, any Subsidiary, on the other hand, that is required by the rules of FINRA to be described in the Registration Statement and the Prospectus that is not so described; (iv) except as described in the Prospectus, there are no material outstanding loans or advances or material guarantees of indebtedness by the Company or, to the Company’s knowledge, any Subsidiary to or for the benefit of any of their respective officers or directors or any of the members of the families of any of them; and (v) neither the Company nor any Subsidiary nor, to the Company’s knowledge, any employee or agent of the Company or any Subsidiary has made any payment of funds of the Company or any Subsidiary or received or retained any funds in violation of any law, rule or regulation (including, without limitation, the Foreign Corrupt Practices Act of 1977), which payment, receipt or retention of funds would reasonably be expected to have a Material Adverse Effect.

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

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

(pp) Clinical Studies. The clinical, pre-clinical and other studies and tests conducted by or, to the knowledge of the Company, on behalf of the Company were, and, if still pending, are being, conducted in accordance in all material respects with all statutes, laws, rules and regulations, as applicable (including, without limitation, the U.S. Federal and Drug Administration's (the "FDA") Good Laboratory Practices and Good Clinical Practices as well as all other applicable rules, regulations, or requirements of the FDA or any foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA), except where the failure to do so would not, individually or in the aggregate, have a Material Adverse Effect. Except as set forth in the Registration Statement and Prospectus, the Company has not received any written notices or other written correspondence from the FDA or any other foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA requiring the Company to terminate or suspend any ongoing clinical or pre-clinical studies or tests. Except as set forth in the Registration Statement and Prospectus, the Company has not received any Form 483 or other adverse finding from the FDA or any other regulator with respect to any clinical site, clinical trial protocol, or clinical investigator, other than any such Form 483 or adverse finding that would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(qq) Compliance Program. Except as disclosed in the Registration Statement and the Prospectus, the Company has established and administers a compliance program applicable to the Company, to assist the Company and the directors, officers and employees of the Company in complying with applicable regulatory guidelines (including, without limitation, those administered by the FDA and any other foreign, federal, state or local governmental or regulatory authority performing functions similar to those performed by the FDA); except where such noncompliance would not reasonably be expected to have a Material Adverse Effect. The Company has also established a Quality Assurance unit that is responsible for ensuring that each

test article complies with specifications, that all vendors are appropriately qualified, that all regulatory quality assurance requirements are met, and that all protocols, procedures and regulations that govern the conduct and monitoring of clinical trials are followed.

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

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

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

(a) Registration Statement Amendments. After the date of this Agreement and during any period in which a Prospectus relating to any Placement Shares is required to be delivered by MLV under the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 172 under the Securities Act), (i) the Company will notify MLV promptly of the time when any subsequent amendment to the Registration Statement, other than documents incorporated by reference, has been filed with the Commission and/or has become effective or any subsequent supplement to the Prospectus (other than documents incorporated by reference therein) has been filed and of any request by the Commission for any amendment or supplement to the Registration Statement or Prospectus or for additional information, (ii) the Company will prepare and file with the Commission, promptly upon MLV's request, any amendments or supplements to the Registration Statement or Prospectus that, in MLV's reasonable opinion, may be necessary or advisable in connection with the distribution of the Placement Shares by MLV (provided, however, that the failure of MLV to make such request shall not relieve the Company of any obligation or liability hereunder, or affect MLV's right to rely on the representations and warranties made by the Company in this Agreement and provided, further, that the only remedy MLV shall have with respect to the failure to make such filing shall be to cease making sales under this Agreement until such amendment or supplement is filed); (iii) the Company will not file any amendment or supplement to the Registration Statement or Prospectus (other than documents incorporated by reference therein) relating to the Placement Shares or a security convertible into the Placement Shares unless a copy thereof has been submitted to MLV within a reasonable period of time before the filing and MLV has not objected thereto (provided, however, that (A) the failure of MLV to make such objection shall not relieve the Company of any obligation or liability hereunder, or affect MLV's right to rely on the representations and warranties made by the Company in this Agreement, (B) the Company has no obligation to provide MLV any advance copy of such filing or to provide MLV an opportunity to object to such filing if such filing does not name MLV or does not relate to the transactions contemplated by this Agreement, and (C) the only remedy MLV shall have with respect to the failure by the Company to provide MLV with such copy or the filing of such amendment or supplement despite MLV's objection shall be to cease making sales under this Agreement) and the Company will furnish to MLV at the time of filing thereof a copy of any

document that upon filing is deemed to be incorporated by reference into the Registration Statement or Prospectus, except for those documents available via EDGAR; and (iv) the Company will cause each amendment or supplement to the Prospectus to be filed with the Commission as required pursuant to the applicable paragraph of Rule 424(b) of the Securities Act or, in the case of any document to be incorporated therein by reference, to be filed with the Commission as required pursuant to the Exchange Act, within the time period prescribed (the determination to file or not file any amendment or supplement with the Commission under this Section 7(a), based on the Company's reasonable opinion or reasonable objections, shall be made exclusively by the Company).

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

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

(d) Listing of Placement Shares. During any period in which the Prospectus relating to the Placement Shares is required to be delivered by MLV under the Securities Act with respect to the offer and sale of the Placement Shares, the Company will use its reasonable best efforts to cause the Placement Shares to be listed on the Exchange and to qualify the Placement Shares for sale under the securities laws of such jurisdictions as MLV reasonably designates and to continue such qualifications in effect so long as required for the distribution of the Placement Shares; provided, however, that the Company shall not be required in connection therewith to qualify as a foreign corporation or dealer in securities or file a general consent to service of process in any jurisdiction.

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

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

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

(h) Notice of Other Sales. Without the prior written consent of MLV, the Company will not, directly or indirectly, offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any Common Stock (other than the Placement Shares offered pursuant to this Agreement) or securities convertible into or exchangeable for Common Stock, warrants or any rights to purchase or acquire, Common Stock during the period beginning on the fifth (5th) Trading Day immediately prior to the date on which any Placement Notice is delivered to MLV hereunder and ending on the fifth (5th) Trading Day immediately following the final Settlement Date with respect to Placement Shares sold pursuant to such Placement Notice (or, if the Placement Notice has been terminated or suspended prior to the sale of all Placement Shares covered by a Placement Notice, ending on the date of such suspension or termination); and will not directly or indirectly engage in any other "at-the-market" transaction; provided, however, that such restrictions will not be required in connection with the Company's issuance or sale of (i) Common Stock, options to purchase Common Stock or other equity awards, or Common Stock issuable upon the exercise of options or vesting of any equity awards, pursuant to any employee or director equity compensation or benefits plan, stock ownership plan or dividend reinvestment plan (but not Common Stock subject to a waiver to exceed plan limits in its

dividend reinvestment plan) of the Company whether now in effect or hereafter implemented; (ii) Common Stock issuable upon conversion of securities or the exercise or vesting of warrants, options or other rights in effect or outstanding, and disclosed in filings by the Company available on EDGAR or otherwise in writing to MLV and (iii) Common Stock, or securities convertible into or exercisable for Common Stock, offered and sold in a privately negotiated transaction to vendors, customers, investors, strategic partners or potential strategic partners and otherwise conducted in a manner so as not to be integrated with the offering of Common Stock hereby.

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

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

(k) Required Filings Relating to Placement of Placement Shares. The Company agrees that on such dates as the Securities Act shall require, the Company will (i) file a prospectus supplement with the Commission under the applicable paragraph of Rule 424(b) under the Securities Act (each and every filing under Rule 424(b), a "Filing Date"), which prospectus supplement will set forth, within the relevant period, the amount of Placement Shares sold through MLV, the Net Proceeds to the Company and the compensation payable by the Company to MLV with respect to such Placement Shares, and (ii) deliver such number of copies of each such prospectus supplement to each exchange or market on which such sales were effected as may be required by the rules or regulations of such exchange or market.

(l) Representation Dates; Certificate. On or prior to the date of the first Placement Notice given hereunder and each time during the term of this Agreement the Company:

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

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

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

(iv) files a current report on Form 8-K containing amended financial information (other than information “furnished” pursuant to Items 2.02 or 7.01 of Form 8-K or to provide disclosure pursuant to Item 8.01 of Form 8-K relating to the reclassification of certain properties as discontinued operations in accordance with Statement of Financial Accounting Standards No. 144) under the Exchange Act;

(Each date of filing of one or more of the documents referred to in clauses (i) through (iv) shall be a “Representation Date.”)

the Company shall furnish MLV (but in the case of clause (iv) above only if MLV reasonably determines that the information contained in such Form 8 K is material) with a certificate, in the form attached hereto as Exhibit 7(1). *The requirement to provide a certificate under this Section 7(1) shall be waived for any Representation Date occurring at a time at which no Placement Notice is pending*, which waiver shall continue until the earlier to occur of the date the Company delivers a Placement Notice hereunder (which for such calendar quarter shall be considered a Representation Date) and the next occurring Representation Date; provided, however, that such waiver shall not apply for any Representation Date on which the Company files its annual report on Form 10-K. Notwithstanding the foregoing, if the Company subsequently decides to sell Placement Shares following a Representation Date when the Company relied on such waiver and did not provide MLV with a certificate under this Section 7(1), then before the Company delivers the Placement Notice or MLV sells any Placement Shares, the Company shall provide MLV with a certificate, in the form attached hereto as Exhibit 7(1), dated the date of the Placement Notice.

(m) Legal Opinion. On or before the date of the initial Placement Notice given hereunder, the Company shall cause to be furnished to MLV a written opinion and letter of Cooley LLP or such other counsel reasonably satisfactory to MLV (“Company Counsel”), covering opinions and statements substantially in the forms attached hereto as Exhibits 7(m)(1) and 7(m)(2). Thereafter within ten (10) Trading Days of each Representation Date with respect to which the Company is obligated to deliver a certificate in the form attached hereto as Exhibit 7(1) for which no waiver is applicable, the Company shall cause to be furnished to MLV a letter of Company Counsel covering statements substantially in the form attached hereto as Exhibit 7(m)(2) (such letter, a “Negative Assurance Letter”), modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented; provided, however, the Company shall be required to furnish to MLV no more than one Negative Assurance Letter hereunder per calendar quarter and the Company shall not be required to furnish such letter if the Company does not intend to deliver a Placement Notice in such calendar quarter until such time as the Company delivers its next Placement Notice; provided, further, that in lieu of such letters for subsequent periodic filings under the Exchange Act, Company Counsel may furnish MLV with a letter (a “Reliance Letter”) to the effect that MLV may rely on a prior Negative Assurance Letter delivered under this Section 7(m) to the same extent as if it were dated the date of such letter (except that statements in such prior letter shall be deemed to relate to the Registration Statement and the Prospectus as amended or supplemented as of the date of the Reliance Letter). Notwithstanding anything to the contrary set forth herein, each obligation of the Company to cause to be furnished to MLV a Negative Assurance Letter of Company Counsel shall be conditioned upon the concurrent delivery to MLV by counsel reasonably acceptable to MLV

("MLV Counsel") of a letter covering statements substantially similar to those covered by such Negative Assurance Letter of Company Counsel.

(n) Comfort Letter. (1) On or before the date of the initial Placement Notice given hereunder and, thereafter, within ten (10) Trading Days of each Representation Date, *other than pursuant to Section 7(l)(iii)*, and with respect to which the Company is obligated to deliver a certificate in the form attached hereto as Exhibit 7(l) for which no waiver is applicable, the Company shall cause its independent accountants to furnish MLV letters (the "Comfort Letters"), dated the date the Comfort Letter is delivered, which shall meet the requirements set forth in this Section 7(n); provided, that if requested by MLV, the Company shall cause a Comfort Letter to be furnished to MLV within ten (10) Trading Days of the date of occurrence of any material transaction or event (including the restatement of the Company's financial statements) requiring the filing of a current report on Form 8-K containing material financial information, or the date the first Placement Notice is given hereunder following such a material transaction or event, whichever is later. The Comfort Letter from the Company's independent accountants shall be in a form and substance reasonably satisfactory to MLV, (i) confirming that they are an independent public accounting firm within the meaning of the Securities Act and the PCAOB, (ii) stating, as of such date, the conclusions and findings of such firm with respect to the financial information and other matters ordinarily covered by accountants' "comfort letters" to underwriters in connection with registered public offerings (the first such letter, the "Initial Comfort Letter") and (iii) updating the Initial Comfort Letter with any information that would have been included in the Initial Comfort Letter had it been given on such date and modified as necessary to relate to the Registration Statement and the Prospectus, as amended and supplemented to the date of such letter.

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

(p) Investment Company Act. The Company will conduct its affairs in such a manner so as to reasonably ensure that neither it nor any of its Subsidiaries will be or become, at any time prior to the termination of this Agreement, an "investment company," as such term is defined in the Investment Company Act.

(q) No Offer to Sell. Neither MLV nor the Company (including its agents and representatives, other than MLV in their capacity as such) will make, use, prepare, authorize, approve or refer to any "written communication" which constitutes a "free writing prospectus" (as such terms are defined in Rule 405 under the Securities Act), required to be filed with the Commission, that constitutes an offer to sell or solicitation of an offer to buy Placement Shares hereunder. Any "free writing prospectus" the use of which has been consented to in writing by the Company and MLV is hereinafter referred to as a "Permitted Free Writing Prospectus."

(r) Sarbanes-Oxley Act. The Company and the Subsidiaries will maintain and keep accurate books and records reflecting their assets and maintain internal accounting controls

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

8. Representations and Covenants of MLV. MLV represents and warrants that it is duly registered as a broker-dealer under FINRA, the Exchange Act and the applicable statutes and regulations of each state in which the Placement Shares will be offered and sold, except such states in which MLV is exempt from registration or such registration is not otherwise required. MLV shall continue, for the term of this Agreement, to be duly registered as a broker-dealer under FINRA, the Exchange Act and the applicable statutes and regulations of each state in which the Placement Shares will be offered and sold, except such states in which MLV is exempt from registration or such registration is not otherwise required, during the term of this Agreement. MLV will comply with all applicable laws and regulations in connection with the Placement Shares, including but not limited to Regulation M under the Exchange Act.

9. Payment of Expenses. The Company will pay all expenses incident to the performance of its obligations under this Agreement, including (i) the preparation, filing, including any fees required by the Commission, and printing of the Registration Statement (including financial statements and exhibits) as originally filed and of each amendment and supplement thereto and any Permitted Free Writing Prospectus, in such number as MLV shall deem reasonably necessary, (ii) the printing and delivery to MLV of this Agreement and such other documents as may be required in connection with the offering, purchase, sale, issuance or delivery of the Placement Shares, (iii) the preparation, issuance and delivery of the certificates, if any, for the Placement Shares to MLV, including any stock or other transfer taxes and any capital duties, stamp duties or other duties or taxes payable upon the sale, issuance or delivery of the Placement Shares to MLV, (iv) the fees and disbursements of the counsel, accountants and

other advisors to the Company, (v) the reasonable fees and disbursements of the counsel to MLV, up to a maximum amount of \$25,000, (vi) the fees and expenses of the transfer agent and registrar for the Common Stock, (vii) the filing fees incident to any review by FINRA of the terms of the sale of the Placement Shares, and (viii) the fees and expenses incurred in connection with the listing of the Placement Shares on the Exchange.

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

(a) Registration Statement Effective. The Registration Statement shall have become effective and shall be available for the sale of all Placement Shares contemplated to be issued by any Placement Notice.

(b) No Material Notices. None of the following events shall have occurred and be continuing: (i) receipt by the Company of any request for additional information from the Commission or any other federal or state governmental authority during the period of effectiveness of the Registration Statement, the response to which would require any post-effective amendments or supplements to the Registration Statement or the Prospectus; (ii) the issuance by the Commission or any other federal or state governmental authority of any stop order suspending the effectiveness of the Registration Statement or the initiation of any proceedings for that purpose; (iii) receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Placement Shares for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; or (iv) the occurrence of any event that makes any material statement made in the Registration Statement or the Prospectus or any material document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires the making of any changes in the Registration Statement, the Prospectus or documents so that, in the case of the Registration Statement, it will not contain any materially untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading and, that in the case of the Prospectus, it will not contain any materially untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

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

(d) Material Changes. Except as contemplated in the Prospectus, or disclosed in the Company's reports filed with the Commission, there shall not have been any material adverse change, on a consolidated basis, in the authorized capital stock of the Company or any

Material Adverse Effect, or any development that could reasonably be expected to cause a Material Adverse Effect.

(e) Legal Opinion and Letters. MLV shall have received the opinion and letters, as applicable, of Company Counsel and MLV Counsel required to be delivered pursuant Section 7(m) on or before the date on which such delivery of such opinion and letters, as applicable, are required pursuant to Section 7(m).

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

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

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

(i) Other Materials. On each date on which the Company is required to deliver a certificate pursuant to Section 7(l), the Company shall have furnished to MLV such appropriate further information, certificates and documents as MLV may reasonably request. All such opinions, certificates, letters and other documents will be in compliance with the provisions hereof. The Company will furnish MLV with such conformed copies of such opinions, certificates, letters and other documents as MLV shall reasonably request.

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

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

(l) No Termination Event. There shall not have occurred any event that would permit MLV to terminate this Agreement pursuant to Section 13(a).

11. Indemnification and Contribution.

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

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

(ii) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, joint or several, to the extent of the aggregate amount paid in settlement of any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or of any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission; provided that any such settlement is effected with the written consent of the Company, which consent shall not unreasonably be delayed or withheld; and

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

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

(b) MLV Indemnification. MLV agrees to indemnify and hold harmless the Company and its directors and each officer of the Company who signed the Registration Statement, and each person, if any, who (i) controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act or (ii) is controlled by or is under common control with the Company against any and all loss, liability, claim, damage and expense described in the indemnity contained in Section 11(a), as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement (or any amendments thereto) or the Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with information relating to MLV and furnished to the Company in writing by MLV expressly for use therein.

(c) Procedure. Any party that proposes to assert the right to be indemnified under this Section 11 will, promptly after receipt of notice of commencement of any action against such party in respect of which a claim is to be made against an indemnifying party or parties under this Section 11, notify each such indemnifying party of the commencement of such

action, enclosing a copy of all papers served, but the omission so to notify such indemnifying party will not relieve the indemnifying party from (i) any liability that it might have to any indemnified party otherwise than under this Section 11 and (ii) any liability that it may have to any indemnified party under the foregoing provision of this Section 11 unless, and only to the extent that, such omission results in the forfeiture of substantive rights or defenses by the indemnifying party. If any such action is brought against any indemnified party and it notifies the indemnifying party of its commencement, the indemnifying party will be entitled to participate in and, to the extent that it elects by delivering written notice to the indemnified party promptly after receiving notice of the commencement of the action from the indemnified party, jointly with any other indemnifying party similarly notified, to assume the defense of the action, with counsel reasonably satisfactory to the indemnified party, and after notice from the indemnifying party to the indemnified party of its election to assume the defense, the indemnifying party will not be liable to the indemnified party for any legal or other expenses except as provided below and except for the reasonable costs of investigation subsequently incurred by the indemnified party in connection with the defense. The indemnified party will have the right to employ its own counsel in any such action, but the fees, expenses and other charges of such counsel will be at the expense of such indemnified party unless (1) the employment of counsel by the indemnified party has been authorized in writing by the indemnifying party, (2) the indemnified party has reasonably concluded (based on advice of counsel) that there may be legal defenses available to it or other indemnified parties that are different from or in addition to those available to the indemnifying party, (3) a conflict or potential conflict exists (based on advice of counsel to the indemnified party) between the indemnified party and the indemnifying party (in which case the indemnifying party will not have the right to direct the defense of such action on behalf of the indemnified party) or (4) the indemnifying party has not in fact employed counsel to assume the defense of such action within a reasonable time after receiving notice of the commencement of the action, in each of which cases the reasonable fees, disbursements and other charges of counsel will be at the expense of the indemnifying party or parties. It is understood that the indemnifying party or parties shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the reasonable fees, disbursements and other charges of more than one separate firm admitted to practice in such jurisdiction at any one time for all such indemnified party or parties. All such fees, disbursements and other charges will be reimbursed by the indemnifying party promptly after the indemnifying party receives a written invoice relating to fees, disbursements and other charges in reasonable detail. An indemnifying party will not, in any event, be liable for any settlement of any action or claim effected without its written consent. No indemnifying party shall, without the prior written consent of each indemnified party, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding relating to the matters contemplated by this Section 11 (whether or not any indemnified party is a party thereto), unless such settlement, compromise or consent (1) includes an unconditional release of each indemnified party from all liability arising out of such litigation, investigation, proceeding or claim and (2) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) Contribution. In order to provide for just and equitable contribution in circumstances in which the indemnification provided for in the foregoing paragraphs of this Section 11 is applicable in accordance with its terms but for any reason is held to be unavailable from the Company or MLV, the Company and MLV will contribute to the total losses, claims,

liabilities, expenses and damages (including any investigative, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding or any claim asserted, but after deducting any contribution received by the Company from persons other than MLV, such as persons who control the Company within the meaning of the Securities Act, officers of the Company who signed the Registration Statement and directors of the Company, who also may be liable for contribution) to which the Company and MLV may be subject in such proportion as shall be appropriate to reflect the relative benefits received by the Company on the one hand and MLV on the other hand. The relative benefits received by the Company on the one hand and MLV on the other hand shall be deemed to be in the same proportion as the total net proceeds from the sale of the Placement Shares (before deducting expenses) received by the Company bear to the total compensation received by MLV (before deducting expenses) from the sale of Placement Shares on behalf of the Company. If, but only if, the allocation provided by the foregoing sentence is not permitted by applicable law, the allocation of contribution shall be made in such proportion as is appropriate to reflect not only the relative benefits referred to in the foregoing sentence but also the relative fault of the Company, on the one hand, and MLV, on the other hand, with respect to the statements or omission that resulted in such loss, claim, liability, expense or damage, or action in respect thereof, as well as any other relevant equitable considerations with respect to such offering. Such relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or MLV, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and MLV agree that it would not be just and equitable if contributions pursuant to this Section 11(d) were to be determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, liability, expense, or damage, or action in respect thereof, referred to above in this Section 11(d) shall be deemed to include, for the purpose of this Section 11(d), any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim to the extent consistent with Section 11(c) hereof. Notwithstanding the foregoing provisions of this Section 11(d), MLV shall not be required to contribute any amount in excess of the commissions received by it under this Agreement and no person found guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 11(d), any person who controls a party to this Agreement within the meaning of the Securities Act, and any officers, directors, partners, employees or agents of MLV, will have the same rights to contribution as that party, and each officer and director of the Company who signed the Registration Statement will have the same rights to contribution as the Company, subject in each case to the provisions hereof. Any party entitled to contribution, promptly after receipt of notice of commencement of any action against such party in respect of which a claim for contribution may be made under this Section 11(d), will notify any such party or parties from whom contribution may be sought, but the omission to so notify will not relieve that party or parties from whom contribution may be sought from any other obligation it or they may have under this Section 11(d) except to the extent that the failure to so notify such other party materially prejudiced the substantive rights or defenses of the party from whom contribution is sought. Except for a settlement entered into pursuant to the last sentence of

Section 11(c) hereof, no party will be liable for contribution with respect to any action or claim settled without its written consent if such consent is required pursuant to Section 11(c) hereof.

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

13. Termination.

(a) MLV may terminate this Agreement, by notice to the Company, as hereinafter specified at any time (1) if there has been, since the time of execution of this Agreement or since the date as of which information is given in the Prospectus, any Material Adverse Effect, or any development that has occurred that is reasonably likely to have a Material Adverse Effect has occurred or in the sole judgment of MLV makes it impractical or inadvisable to market the Placement Shares or to enforce contracts for the sale of the Placement Shares, (2) if there has occurred any material adverse change in the financial markets in the United States or the international financial markets, any outbreak of hostilities or escalation thereof or other calamity or crisis or any change or development involving a prospective change in national or international political, financial or economic conditions, in each case the effect of which is such as to make it, in the sole judgment of MLV, impracticable or inadvisable to market the Placement Shares or to enforce contracts for the sale of the Placement Shares, (3) if trading in the Common Stock has been suspended or limited by the Commission or the Exchange, or if trading generally on the Exchange has been suspended or limited, or minimum prices for trading have been fixed on the Exchange, (4) if any suspension of trading of any securities of the Company on any exchange or in the over-the-counter market shall have occurred and be continuing, (5) if a major disruption of securities settlements or clearance services in the United States shall have occurred and be continuing, or (6) if a banking moratorium has been declared by either U.S. Federal or New York authorities. Any such termination shall be without liability of any party to any other party except that the provisions of Section 9 (Expenses), Section 11 (Indemnification), Section 12 (Survival of Representations), Section 18 (Applicable Law; Waiver of Jury Trial) and Section 19 (Consent to Jurisdiction) hereof shall remain in full force and effect notwithstanding such termination. If MLV elects to terminate this Agreement as provided in this Section 13(a), MLV shall provide the required notice as specified in Section 14 (Notices).

(b) The Company shall have the right, by giving ten (10) days notice as hereinafter specified to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 9, Section 11, Section 12, Section 18 and Section 19 hereof shall remain in full force and effect notwithstanding such termination.

(c) MLV shall have the right, by giving ten (10) days notice as hereinafter specified to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party

except that the provisions of Section 9, Section 11, Section 12, Section 18 and Section 19 hereof shall remain in full force and effect notwithstanding such termination.

(d) Unless earlier terminated pursuant to this Section 13, this Agreement shall automatically terminate upon the issuance and sale of all of the Placement Shares through MLV on the terms and subject to the conditions set forth herein except that the provisions of Section 9, Section 11, Section 12, Section 18 and Section 19 hereof shall remain in full force and effect notwithstanding such termination.

(e) This Agreement shall remain in full force and effect unless terminated pursuant to Sections 13(a), (b), (c), or (d) above or otherwise by mutual agreement of the parties; provided, however, that any such termination by mutual agreement shall in all cases be deemed to provide that Section 9, Section 11, Section 12, Section 18 and Section 19 shall remain in full force and effect. Upon termination of this Agreement, the Company shall not have any liability to MLV for any discount, commission or other compensation with respect to any Shares not otherwise sold by MLV under this Agreement.

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

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

MLV & Co. LLC
1251 Avenue of the Americas, 41st Floor
New York, NY 10020
Telephone: (212) 542-5870
Facsimile: (212) 317-1515
Attention: General Counsel

with a copy to (which shall not constitute notice):

LeClairRyan, A Professional Corporation
885 Third Avenue
New York, NY 10022
Telephone: (973) 491-3315
Attention: James T. Seery

and if to the Company, shall be delivered to:

Threshold Pharmaceuticals, Inc.
170 Harbor Way, Suite 300
South San Francisco, CA 94080

Telephone: (650) 474-8200
Facsimile: (650) 474-2529
Attention: Harold E. Selick, Ph.D., Chief Executive Officer

with a copy to (which shall not constitute notice):

Cooley LLP
3175 Hanover Street
Palo Alto, CA 94304
Telephone: (650) 843-5654
Facsimile: (650) 849-7400
Attention: Chadwick L. Mills

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

An electronic communication ("Electronic Notice") shall be deemed written notice for purposes of this Section 14 if sent to the electronic mail address specified by the receiving party under separate cover. Electronic Notice shall be deemed received at the time the party sending Electronic Notice receives confirmation of receipt by the receiving party. Any party receiving Electronic Notice may request and shall be entitled to receive the notice on paper, in a nonelectronic form ("Nonelectronic Notice") which shall be sent to the requesting party within ten (10) days of receipt of the written request for Nonelectronic Notice.

15. Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the Company and MLV and their respective successors and the affiliates, controlling persons, officers and directors referred to in Section 11 hereof. References to any of the parties contained in this Agreement shall be deemed to include the successors and permitted assigns of such party. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assigns any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement. Neither party may assign its rights or obligations under this Agreement without the prior written consent of the other party.

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

17. Entire Agreement; Amendment; Severability. This Agreement (including all schedules and exhibits attached hereto and Placement Notices issued pursuant hereto), together with that certain side letter agreement between the Company and MLV dated the date hereof and that certain Confidentiality Agreement, dated July 23, 2014, by and between the Company and MLV (the “CDA”), constitute the entire agreement of the parties with respect to the subject matter hereof and supersedes all other prior and contemporaneous agreements and undertakings, both written and oral, among the parties hereto with regard to the subject matter hereof. Moreover, the Company and MLV agree that all exchanges of information hereunder shall be governed by the terms of the CDA, which CDA the parties agree is and shall hereby be amended to remain in full force and effect at all times during the term of this Agreement. Neither this Agreement nor any term hereof may be amended except pursuant to a written instrument executed by the Company and MLV. In the event that any one or more of the provisions contained herein, or the application thereof in any circumstance, is held invalid, illegal or unenforceable as written by a court of competent jurisdiction, then such provision shall be given full force and effect to the fullest possible extent that it is valid, legal and enforceable, and the remainder of the terms and provisions herein shall be construed as if such invalid, illegal or unenforceable term or provision was not contained herein, but only to the extent that giving effect to such provision and the remainder of the terms and provisions hereof shall be in accordance with the intent of the parties as reflected in this Agreement.

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

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

20. **Use of Information.** MLV may not use any information gained in connection with this Agreement and the transactions contemplated by this Agreement, including due diligence, to advise any party with respect to transactions not expressly approved by the Company.

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

22. **Effect of Headings.**

The section and Exhibit headings herein are for convenience only and shall not affect the construction hereof.

23. **Absence of Fiduciary Relationship.**

The Company acknowledges and agrees that:

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

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

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

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

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

24. Definitions.

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

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

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

All references in this Agreement to the Registration Statement, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to EDGAR; all references in this Agreement to any Issuer Free Writing Prospectus (other than any Issuer Free Writing Prospectuses that, pursuant to Rule 433, are not required to be filed with the Commission) shall be deemed to include the copy thereof filed with the Commission pursuant to EDGAR; and all references in this Agreement to “supplements” to the Prospectus shall include, without limitation, any supplements, “wrappers” or similar materials prepared in connection with any offering, sale or private placement of any Placement Shares by MLV outside of the United States.

[Remainder of page intentionally left blank.]

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

Very truly yours,

THRESHOLD PHARMACEUTICALS, INC.

By: /s/ Harold E. Selick, Ph.D
Name: Harold E. Selick, Ph.D.
Title: Chief Executive Officer

ACCEPTED as of the date first-above written:

MLV & CO. LLC

By: /s/ Dean Colucci
Name: Dean Colucci
Title: President

SCHEDULE 1

**FORM OF PLACEMENT
NOTICE**

From: Threshold Pharmaceuticals, Inc.

To: MLV & Co. LLC

Attention: Patrice McNicoll

Subject: At Market Issuance—Placement
Notice

Gentlemen:

Pursuant to the terms and subject to the conditions contained in the At Market Issuance Sales Agreement between Threshold Pharmaceuticals, Inc., a Delaware corporation (the "Company") and MLV & Co. LLC ("MLV"), dated August 1, 2014, the Company hereby requests that MLV sell up to of the Company's Common Stock, no par value per share, at a minimum market price of \$ per share, during the time period beginning [month, day, time] and ending [month, day, time].

SCHEDULE 2

Compensation

The Company shall pay to MLV in cash, upon each sale of Placement Shares pursuant to this Agreement, an amount equal to up to 3.0% of the gross proceeds from each sale of Placement Shares.

SCHEDULE 3

Notice Parties

The Company

Harold E. Selick, Ph.D. bselick@thresholdpharm.com

Joel A. Fernandes jfernandes@thresholdpharm.com

MLV

Randy Billhardt rbillhardt@mlvco.com

Dean Colucci dcolucci@mlvco.com

Ryan Loforte rloforte@mlvco.com

Patrice McNicoll pmnicoll@mlvco.com

Miranda Toledano mtoledano@mlvco.com

With a copy to mlvatmdesk@mlvco.com

SCHEDULE 4

Subsidiaries

THLD Enterprises (UK), Limited

EXHIBIT 7(I)

Form of Representation Date Certificate

This Officers Certificate (this "Certificate") is executed and delivered in connection with Section 7(l) of the At Market Issuance Sales Agreement (the "Agreement"), dated August 1, 2014, and entered into between Threshold Pharmaceuticals, Inc. (the "Company") and MLV & Co. LLC. All capitalized terms used but not defined herein shall have the meanings given to such terms in the Agreement

The undersigned, a duly appointed and authorized officer of the Company, having made reasonable inquiries to establish the accuracy of the statements below and having been authorized by the Company to execute this certificate on behalf of the Company, hereby certifies, on behalf of the Company and not in the undersigned's individual capacity, as follows:

1. As of the date of this Certificate, (i) the Registration Statement does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein not misleading and (ii) neither the Registration Statement nor the Prospectus contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading and (iii) no event has occurred as a result of which it is necessary to amend or supplement the Prospectus in order to make the statements therein not untrue or misleading for (i) and (ii) to be true.

2. Each of the representations and warranties of the Company contained in the Agreement was true and correct in all material respects, when originally made, and, except for those representations and warranties that speak solely as of a specific date, are true and correct in all material respects as of the date of this Certificate.

3. Except as waived by MLV in writing, each of the covenants required to be performed by the Company in the Agreement on or prior to the date of the Agreement, this Representation Date, and each such other date prior to the date hereof as set forth in the Agreement, has been duly, timely and fully performed in all material respects and each condition required to be complied with by the Company on or prior to the date of the Agreement, this Representation Date, and each such other date prior to the date hereof as set forth in the Agreement has been duly, timely and fully complied with in all material respects.

4. Subsequent to the date of the most recent financial statements in the Prospectus, and except as described in the Prospectus, including Incorporated Documents, there has been no material adverse change.

5. No stop order suspending the effectiveness of the Registration Statement or of any part thereof has been issued, and no proceedings for that purpose have been instituted or are pending or threatened by any securities or other governmental authority (including, without limitation, the Commission).

6. No order suspending the effectiveness of the Registration Statement or the qualification or registration of the Placement Shares under the securities or Blue Sky laws of any

jurisdiction are in effect and no proceeding for such purpose is pending before, or threatened, to the Company's knowledge or in writing by, any securities or other governmental authority (including, without limitation, the Commission).

The undersigned has executed this Officer's Certificate on behalf of the Company as of the date first written above.

THRESHOLD PHARMACEUTICALS, INC.

By: _____

Name: _____

Title: _____

EXHIBIT 7(m)(1)

Form of Legal Opinion

EXHIBIT 7(m)(2)

Form of Legal Letter

CERTIFICATION

I, Harold E. Selick, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Threshold Pharmaceuticals, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer (s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 1, 2014

/s/ Harold E. Selick, Ph.D.
Harold E. Selick, Ph.D.
Chief Executive Officer

CERTIFICATION

I, Joel A. Fernandes, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Threshold Pharmaceuticals, Inc;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer (s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 1, 2014

/s/ Joel A. Fernandes
Joel A. Fernandes
Vice President, Finance and Controller
(Principal Financial Officer)

THRESHOLD PHARMACEUTICALS, INC.

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

In connection with the Quarterly Report of Threshold Pharmaceuticals, Inc (the "Company") on Form 10-Q for the quarter ended June 30, 2014, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Harold E. Selick, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 1, 2014

/s/ Harold E. Selick, Ph.D.

Harold E. Selick, Ph.D.
Chief Executive Officer

THRESHOLD PHARMACEUTICALS, INC.

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

In connection with the Quarterly Report of Threshold Pharmaceuticals, Inc (the "Company") on Form 10-Q for the quarter ended June 30, 2014, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Joel A. Fernandes, Vice President, Finance and Controller of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: August 1, 2014

/s/ Joel A. Fernandes
Joel A. Fernandes
Vice President, Finance and Controller
(Principal Financial Officer)