

# ASPEN AEROGELS INC

## FORM FWP

(Free Writing Prospectus - Filing under Securities Act Rules 163/433)

Filed 06/13/14

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CIK	0001145986
Symbol	ASPN
SIC Code	5030 - Lumber And Other Construction Materials
Fiscal Year	12/31

**Aspen Aerogels, Inc.**

This free writing prospectus relates only to the initial public offering of the shares of common stock described below and should be read together with the preliminary prospectus, subject to completion, dated June 2, 2014 (the “Red Herring Prospectus”) included in Amendment No. 3 to the Registration Statement on Form S-1 (File No. 333-195523) of Aspen Aerogels, Inc. (the “Company”), relating to its initial public offering of common stock, together with the Company’s prior free writing prospectuses dated June 10, 2014 and June 12, 2014 (collectively with the Red Herring Prospectus, the “Preliminary Prospectus”). On June 12, 2014, we filed Amendment No. 5 to the Registration Statement (“Amendment No. 5”), which can be accessed through the following link:  
<http://www.sec.gov/Archives/edgar/data/1145986/000119312514234297/d627478ds1a.htm>

The information set forth in this free writing prospectus updates and supersedes the information in the Preliminary Prospectus to the extent that it is inconsistent therewith. All references to captions correspond to the Preliminary Prospectus unless otherwise specified. The information in this free writing prospectus updates the Preliminary Prospectus primarily to reflect a decrease in the price of our initial public offering to \$11.00 per share, an increase in the number of shares offered to 7,500,000 and certain other changes. **YOU SHOULD READ AMENDMENT NO. 5 CAREFULLY BEFORE DECIDING TO INVEST IN OUR COMMON STOCK.**

The following supplements and updates the information contained in the Preliminary Prospectus.

<b>Initial public offering price per share:</b>	\$11.00 per share.
<b>Reverse stock split:</b>	Prior to the closing of this offering, we will implement a reverse stock split of 1-for-824.7412544. Unless otherwise indicated, all information in this free writing prospectus reflects the implementation of this split.
<b>Common stock offered by us:</b>	7,500,000 shares (or 8,625,000 shares if the underwriters exercise in full their option to purchase additional shares). Unless otherwise indicated, all information in this free writing prospectus assumes the underwriters do not exercise their option to purchase additional shares.
<b>Common stock to be outstanding after this offering:</b>	23,000,000 shares (or 24,125,000 shares if the underwriters exercise in full their option to purchase additional shares).
<b>Over-allotment option:</b>	We have granted the underwriters a 30-day option to purchase up to 1,125,000 of additional shares of our common stock to cover over-allotments, if any.
<b>New York Stock Exchange Listing:</b>	Our common stock has been authorized for listing on the New York Stock Exchange, subject to final notice of issuance, under the symbol “ASPN.”
<b>Participation by existing stockholders:</b>	Entities affiliated with Reservoir Capital Partners, L.P. and GKFF Ventures I, LLC (formerly known as Argonaut Ventures I, LLC), two of our principal stockholders, and our Chief Executive Officer, Mr. Donald Young, have agreed to purchase an aggregate of 1,872,727 shares of our common stock in this offering at the initial public offering price. The underwriters will not receive an underwriting discount on any sales of shares to these stockholders.
<b>Management’s equity incentives:</b>	As a result of the issuance of shares of our common stock upon conversion of our convertible notes, as described in the prospectus under the heading “Conversion of Convertible Notes,” and the reverse stock split described in the prospectus under the heading “Prospectus Summary – The Offering,” the percentage of our

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outstanding shares held by our executive officers on a fully diluted basis (including shares issuable upon exercise of options held by our executive officers) will, upon consummation of the offering made hereby, be approximately 0.2%, which is significantly less than the approximately 5.4% it would have been had the initial public offering price of our common stock been at the mid-point of the price range indicated in our preliminary prospectus, subject to completion, dated June 2, 2014. We have historically used stock options as a means of seeking to align employee incentives with the interests of our stockholders. Given the reduction in the anticipated equity incentive component for our employees as noted above, we may consider reviewing and addressing the levels of equity incentives held by our employees, including our executive officers, in the near term.

<b>Risk factors:</b>	The “Risk Factors” section of the Preliminary Prospectus has been revised as set forth on Annex I.
<b>Conversion of convertible notes:</b>	The “Conversion of Convertible Notes” section of the Preliminary Prospectus has been revised as set forth on Annex II.
<b>Use of proceeds:</b>	The “Use of Proceeds” section of the Preliminary Prospectus has been revised as set forth on Annex III.
<b>Capitalization:</b>	The “Capitalization” section of the Preliminary Prospectus has been revised as set forth on Annex IV.
<b>Dilution:</b>	The “Dilution” section of the Preliminary Prospectus has been revised as set forth on Annex V.
<b>Selected consolidated financial data:</b>	The “Selected Consolidated Financial Data” section of the Preliminary Prospectus has been revised as set forth on Annex VI. Conforming changes should be considered made to the “Prospectus Summary – Summary Consolidated Financial Data” section of the Preliminary Prospectus.
<b>Management’s Discussion and Analysis of Financial Condition and Results of Operations:</b>	The “Management’s Discussion and Analysis of Financial Condition and Results of Operations” section of the Preliminary Prospectus has been revised as set forth on Annex VII.
<b>Prospectus summary, Special Note Regarding Forward Looking Statements and Business:</b>	The “Prospectus Summary, “ “Special Note Regarding Forward Looking Statements” and “Business” sections of the Preliminary Prospectus have been revised as set forth on Annex VIII.
<b>Principal stockholders:</b>	The “Principal Stockholders” section of the Preliminary Prospectus has been revised as set forth on Annex IX.

**The Company has filed a registration statement (including a prospectus) with the Securities and Exchange Commission (the “SEC”) for the offering to which this communication relates. Before you invest, you should read the prospectus in that registration statement for more complete information about the Company and this offering. You may get these documents for free by visiting EDGAR on the SEC website at [www.sec.gov](http://www.sec.gov). Alternatively, a copy of the prospectus may be obtained from the offices of: Barclays Capital Inc., c/o Broadridge Financial Solutions, 1155 Long Island Avenue, Edgewood, New York 11717, or by email at: [barclaysprospectus@broadridge.com](mailto:barclaysprospectus@broadridge.com), or by telephone: (888) 603-5847; J.P. Morgan Securities LLC, c/o Broadridge Financial Solutions, 1155 Long Island Avenue, Edgewood, New York 11717 or by calling tolling-free at 1-866-803-9204; and Citigroup Global Markets Inc., c/o Broadridge Financial Solutions, 1155 Long Island Avenue, Edgewood, NY 11717 (Tel: 800-831-9146). You may obtain a copy of the most recent amendment to the registration statement at <http://www.sec.gov/Archives/edgar/data/1145986/000119312514234297/d627478ds1a.htm>.**

*The disclosure set forth in the Preliminary Prospectus in the third and fourth sentences of the first paragraph under “Risk Factors—Risks Related to Our Business and Strategy—We will require significant additional capital to pursue our growth strategy beyond the construction of our third line in our East Providence facility, but we may not be able to obtain additional financing on acceptable terms or at all.” has been revised by replacing those sentences with the following:*

In particular, our plans to construct a second manufacturing facility in Europe or Asia are dependent on our ability to secure grants from governments and to raise debt and potentially equity. There is no assurance of our ability to obtain any such type of financing on terms acceptable to us or at all.

*The disclosure set forth in the Preliminary Prospectus under “Risk Factors—Risks Related to Our Common Stock and This Offering—Our directors, officers and principal stockholders have significant voting power and may take actions that may not be in the best interests of our other stockholders.” has been revised by replacing it in its entirety with:*

After this offering and giving effect to the reverse stock split ratio of 1-for-824.7412544 and the purchase of 1,872,727 shares of our common stock by certain of our stockholders and their affiliated entities, our officers, directors and principal stockholders and their affiliates collectively will control approximately 60% of our outstanding common stock (or 57% if the underwriters exercise in full their option to purchase additional shares), without giving effect to the voting waiver by the Fidelity Funds referenced in the immediately subsequent risk factor. As a result, these stockholders, if they act together, will be able to control the management and affairs of our company and most matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions. This concentration of ownership may have the effect of delaying or preventing a change of control and might adversely affect the market price of our common stock. This concentration of ownership may not be in the best interests of our other stockholders.

As a result of the issuance of shares of our common stock upon conversion of our convertible notes, as described in the prospectus under the heading “Conversion of Convertible Notes,” and the reverse stock split described in the prospectus under the heading “Prospectus Summary—The Offering,” the percentage of our outstanding shares held by our executive officers on a fully diluted basis (including shares issuable upon exercise of options held by our executive officers) will, upon consummation of the offering made hereby, be approximately 0.2%, which is significantly less than the approximately 5.4% it would have been had the initial public offering price of our common stock been at the mid-point of the price range indicated in our preliminary prospectus, subject to completion, dated June 2, 2014. We have historically used stock options as a means of seeking to align employee incentives with the interests of our stockholders. Given the reduction in the anticipated equity incentive component for our employees as noted above, we may consider reviewing and addressing the levels of equity incentives held by our employees, including our executive officers, in the near term.

*The disclosure set forth in the Preliminary Prospectus in the second paragraph under “Risk Factors—Risks Related to Our Common Stock and This Offering—Anti-takeover provisions in our restated certificate of incorporation and restated by-laws, and Delaware law, could delay or discourage a takeover.” has been revised by replacing that second paragraph with:*

Further, as a result of the agreement we entered into with the Fidelity Funds in June 2014, whereby the Fidelity Funds have waived their right to vote with respect to any shares they or their affiliates possess in excess of 14.9% of our total outstanding shares, it could be more difficult for stockholders to achieve any specific percentage voting threshold. Upon the consummation of this offering, we expect the Fidelity Funds to hold approximately 29.8% of our common stock and, as a result, approximately 14.9% of our shares of common stock will not be voted for so long as such shares are held by the Fidelity Funds. See “Description of Capital Stock—Common Stock.”

## CONVERSION OF CONVERTIBLE NOTES

As described in “Description of Certain Indebtedness,” we have issued \$88.4 million in aggregate principal amount of convertible notes. The unpaid principal amount plus accrued interest of these convertible notes will automatically convert upon the closing of the offering made hereby into a number of shares of our common stock equal to the quotient obtained by dividing the unpaid principal amount of the convertible notes plus interest accrued but unpaid thereon, by 62.5% of the initial public offering price. Based on the expected closing date of this offering of June 18, 2014 and the initial public offering price of \$11.00 per share, the \$88.4 million in outstanding principal amount and \$16.1 million of accrued interest on the outstanding convertible notes will convert into 15,319,034 shares of our common stock.

The table below sets forth the number of shares of our common stock and the relative percentage ownership of the investors in this offering and our existing stockholders immediately after the conversion of our convertible notes and giving effect to this offering, the issuance of shares of restricted common stock to our non-employee directors, and the conversion of our preferred stock and our Series C warrants in connection with this offering, based on (i) the expected closing date of this offering of June 18, 2014, (ii) the initial public offering price of \$11.00, and (iii) the consummation of the reverse stock split prior to the closing of this offering:

<b>Initial public offering price per share</b>	<b>\$11.00</b>
Stock split ratio for our common stock	1:824.7412544
Outstanding shares of our common stock	3,168
Shares of restricted common stock issued to non-employee directors in connection with this Offering	61,816
Shares of common stock issued upon conversion of preferred stock and Series C warrants	115,982
Shares of common stock issued upon conversion of convertible notes	15,319,034
Outstanding shares of our common stock, after giving effect to restricted stock grants to directors, conversion of preferred stock and Series C warrants and conversion of convertible notes	<u>15,500,000</u>
Fully diluted common stock outstanding prior to this offering, using the treasury stock method	15,500,000
Shares of our common stock issued in this offering (excluding the underwriters’ option to purchase additional shares)	7,500,000
Fully diluted common stock outstanding after this offering (excluding the underwriters’ option to purchase additional shares) using the treasury stock method	<u>23,000,000</u>
Outstanding shares of our common stock immediately after this offering	23,000,000
Pro forma percentage ownership of the existing stockholders based on common stock outstanding	67.4%
Pro forma percentage ownership of the investors in this offering based on common stock outstanding	32.6%
Pro forma percentage ownership of the investors in this offering based on fully diluted common stock using treasury stock method	32.6%

## USE OF PROCEEDS

We estimate that we will receive net proceeds from this offering of approximately \$75.3 million, or approximately \$86.8 million if the underwriters exercise their option to purchase additional shares in full, based on the initial public offering price of \$11.00 per share, after deducting underwriting discounts and estimated offering expenses payable by us.

We intend to use:

- approximately \$30 million of the net proceeds we receive from this offering to fund the additional expenditures necessary for the design, development and construction of our third production line in East Providence;
- approximately \$1.0 million of the net proceeds to repay any amounts outstanding under our revolving line of credit, which matures on July 27, 2014 and bears interest at the greater of the prime rate or 4% (which at March 31, 2014 was 4% per annum and which is also the weighted average rate), plus 1.0% per annum, and approximately \$19.0 million of the net proceeds to repay our subordinated notes due September 2014, which bear interest at a rate of 20% per annum; and
- the remaining net proceeds for general corporate purposes, which will include funding a portion of the design, development and construction of our planned second production plant in Europe or Asia after completion of our third production line.

We anticipate initial operation of a first production line at this second production plant during 2017. Based on our preliminary plans for this plant, our projected cost to construct an initial production line and plant infrastructure is \$80 million to \$100 million, of which we expect approximately \$20 million to \$25 million to be funded by the net proceeds of this offering. We expect that the remaining \$55 million to \$80 million required to construct an initial production line and plant infrastructure will be funded by anticipated cash flows from operations, local government grants, debt financings and potentially equity financings. See “Risk Factors—Risks Related to Our Business and Strategy—We will require significant additional capital to pursue our growth strategy beyond the construction of our third line in our East Providence facility, but we may not be able to obtain additional financing on acceptable terms or at all.”

## CAPITALIZATION

The following table sets forth our cash and capitalization as of March 31, 2014:

- on an actual basis;
- on an as adjusted basis (a) giving effect to the net exercise of all of our outstanding warrants to purchase Series C preferred stock, (b) giving effect prior to the closing of this offering to the reverse stock split of 1:824.7412544 of our existing common stock, and (c) giving effect upon the completion of this offering to:
  - the automatic conversion of all shares of our preferred stock into 115,982 shares of our common stock;
  - the automatic conversion of our convertible notes and all accrued but unpaid interest thereon into 15,319,034 shares of our common stock; and
  - the sale of 7,500,000 shares of our common stock offered by us in this offering at the initial public offering price of \$11.00 per share and after deducting underwriting discounts and estimated offering expenses payable by us and the use of a portion of the proceeds therefrom to repay all outstanding amounts under our revolving credit facility and under our subordinated notes due September 2014.

You should read this table together with our consolidated financial statements and the related notes thereto, as well as the information under “Selected Consolidated Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” The as adjusted information below is prepared for illustrative purposes only and our capitalization following the completion of this offering will be adjusted based on the actual initial public offering price, the closing of the offering made hereby and other terms of the offering determined at pricing.

	As of March 31, 2014	
	Actual	As adjusted
	(Unaudited)	
	(In thousands, except share and per share data)	
Cash	\$ 1,155	\$ 57,372
Debt:		
Capital leases	\$ 222	\$ 222
Revolving Credit Facility(1)	1,500	—
Subordinated Notes(1)	18,102	—
Convertible notes(2)	135,301	—
Total debt	<u>\$ 155,125</u>	<u>\$ 222</u>
Stockholders' (deficit) equity:		
Series A preferred stock, \$0.00001 par value; 5,284,347 shares authorized, issued and outstanding, on an actual basis; no shares issued or outstanding, as adjusted	—	—
Series B preferred stock, \$0.00001 par value; 1,601,053 shares authorized, issued and outstanding, on an actual basis; no shares issued or outstanding, as adjusted	—	—
Series C preferred stock, \$0.00001 par value; 116,024,242 shares authorized, 20,000 shares issued and outstanding, on an actual basis; no shares issued or outstanding, as adjusted	—	—
Common stock, \$0.00001 par value; 255,702 shares authorized, 3,168 shares issued and outstanding, on an actual basis; and 125,000,000 shares authorized, 23,000,000 shares issued and outstanding, as adjusted(2) (3)	—	—
Additional paid-in capital(2)(3)	271,135	518,709
Accumulated deficit(4)	<u>(351,809)</u>	<u>(388,815)</u>
Total stockholders' (deficit) equity	<u>\$ (80,674)</u>	<u>\$ 129,894</u>
Total capitalization	<u>\$ 74,451</u>	<u>\$ 130,116</u>

- (1) A portion of the net proceeds will be used to repay the amounts outstanding under the revolving credit facility and under the subordinated notes, which were \$1.5 million and \$18.5 million, respectively, as of May 15, 2014. As of the date of this prospectus, \$1.0 million was outstanding under the revolving credit facility.
- (2) The unpaid principal amount of our convertible notes, together with accrued but unpaid interest thereon (which in each case has been accruing since issuance), will be automatically converted into common stock upon the closing of the offering made hereby, at a conversion price equal to 62.5% of the initial public offering price per share of the common stock in this offering.
- (3) Excludes 96,999 shares of our common stock issuable upon the exercise of stock options outstanding as of May 15, 2014 and 131 shares of our common stock issuable upon the exercise of warrants to purchase our common stock outstanding as of May 15, 2014.
- (4) The as adjusted accumulated deficit reflects (i) interest expense on the convertible notes of \$33.2 million, which represents the change in fair value of the convertible notes for the period from April 1, 2014 through June 18, 2014, the expected date of conversion, and (ii) the recognition of compensation cost for performance-based options pursuant to the closing of this offering.



## DILUTION

If you invest in our common stock, your interest in our net tangible book value will be diluted to the extent of the difference between the initial public offering price and the net tangible book value per share of our common stock immediately after the completion of this offering. Dilution results from the fact that the initial public offering price is substantially in excess of the book value per share attributable to the existing stockholders for the presently outstanding stock.

As of March 31, 2014, our net tangible book value was approximately \$(82.6) million, or approximately \$(25,778.90) per share of common stock. Net tangible book value per share represents the amount of our total tangible assets less total liabilities and preferred stock, divided by 3,204, the number of shares of our common stock outstanding on March 31, 2014. Our pro forma net tangible book value as of March 31, 2014 was \$52.7 million, or \$3.40 per share of common stock. Pro forma net tangible book value per share represents the amount of our total tangible assets less our total liabilities, divided by the number of shares of our common stock outstanding, as of March 31, 2014, after (a) giving effect to the net exercise of all of our outstanding warrants to purchase Series C preferred stock and (b) giving effect to (i) the automatic conversion of all shares of our preferred stock into 115,982 shares of our common stock and (ii) the automatic conversion of all outstanding principal and interest on our convertible notes upon the closing of the offering made hereby into an aggregate of 15,319,034 shares of our common stock, at a conversion price equal to 62.5% of the initial offering price, based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock and that the closing of the offering made hereby occurs on June 18, 2014.

After giving effect to the sale by us of shares of our common stock in the offering at the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse stock split of our common stock, and after deducting underwriting discounts and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of March 31, 2014 would have been \$128.0 million, or \$5.56 per share. This amount represents an immediate increase in pro forma as adjusted net tangible book value of \$2.16 per share to our existing stockholders and an immediate dilution in pro forma as adjusted net tangible book value of \$5.44 per share to new investors purchasing shares of our common stock in this offering. We determine dilution by subtracting the pro forma as adjusted net tangible book value per share after the offering from the amount of cash that a new investor paid for a share of common stock.

If the underwriters exercise their option to purchase additional shares in full, the pro forma as adjusted net tangible book value per share after giving effect to the offering would be \$5.78 per share. This represents an increase in pro forma as adjusted net tangible book value of \$2.38 per share to existing stockholders and dilution in pro forma as adjusted net tangible book value of \$5.22 per share to new investors, based on the initial public offering price of \$11.00 per share and the 1-for-824.7412544 reverse stock split.

The following table shows, as of May 15, 2014, the differences between the number of shares purchased from us, the total consideration paid to us and the average price per share that existing stockholders (including in connection with the conversion of our convertible notes and the issuance of restricted shares of common stock to our non-employee directors in connection with this offering) and new investors paid. The calculations below are based on the initial public offering price of \$11.00 per share and the reverse stock split ratio of 1:824.7412544, before deducting the underwriting discounts and estimated offering expenses payable by us.

	<u>Shares Purchased</u>		<u>Total Consideration</u>		<u>Average Price per Share</u>
	<u>Number</u>	<u>Percentage</u>	<u>Amount</u>	<u>Percentage</u>	
Existing stockholders	15,500,000	67.4%	\$311,109,136	79.0%	\$ 20.07
New investors	7,500,000	32.6	82,500,000	21.0	11.00
Total	<u>23,000,000</u>	<u>100.0%</u>	<u>\$393,609,136</u>	<u>100.0%</u>	<u>\$ 17.11</u>

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The discussion and tables above assume no exercise of the underwriters' option to purchase additional shares. If the underwriters' option to purchase additional shares is exercised in full, the number of shares of our common stock held by existing stockholders will be further reduced to 64.2% of the total number of shares of our common stock to be outstanding after the offering, and the number of shares of our common stock held by investors participating in the offering will be further increased to 35.8% of the total number of shares of our common stock to be outstanding after the offering.

In addition, except as noted, the above discussion and table assume no exercise of stock options or warrants to purchase common stock after May 15, 2014. As of May 15, 2014, we had outstanding options to purchase a total of 96,999 shares of our common stock at a weighted-average exercise price of \$91.96 per share and 131 shares of common stock reserved for issuance upon the exercise of outstanding warrants at a weighted-average exercise price of \$9.63 per share. If all such options and warrants had been exercised as of May 15, 2014, pro forma as adjusted net tangible book value per share would be \$5.93 per share and dilution to new investors would be \$5.07 per share. To the extent we grant options to our employees in the future and those options are exercised or other issuances of common stock are made, there will be further dilution to new investors.

**SELECTED CONSOLIDATED FINANCIAL DATA**

The following table sets forth our selected consolidated financial data for the periods, and as of the dates, indicated. You should read the following selected consolidated financial data in conjunction with our consolidated financial statements and the related notes thereto included elsewhere in this prospectus and the “Management’s Discussion and Analysis of Financial Condition and Results of Operations” section of this prospectus.

We derived the consolidated statement of operations data for the years ended December 31, 2011, 2012 and 2013, and the consolidated balance sheet data as of December 31, 2012 and 2013, from our audited consolidated financial statements and the related notes thereto included elsewhere in this prospectus. We derived the consolidated statement of operations data for the fiscal years ended December 31, 2009 and 2010, and the consolidated balance sheet data as of December 31, 2009, 2010 and 2011, from our audited consolidated financial statements and the related notes thereto that are not included in this prospectus.

We derived the consolidated statement of operations data for the three months ended March 31, 2013 and 2014, and the consolidated balance sheet data as of March 31, 2014, from our unaudited consolidated financial statements and the related notes thereto included elsewhere in this prospectus. Our unaudited consolidated financial statements and the related notes thereto have been prepared on the same basis as the audited consolidated financial statements and the related notes thereto and, in the opinion of our management, reflect all adjustments that are necessary for a fair presentation in conformity with GAAP. The results of operations for these interim periods are not necessarily indicative of the results to be expected for a full year. Our historical results for prior periods are not necessarily indicative of results to be expected for any future period.

	Year Ended December 31					Three Months Ended	
	2009	2010	2011	2012	2013	March 31	
						2013	2014
	(\$ in thousands, except share and per share data)						
<b>Consolidated statements of operations data:</b>							
Revenue:							
Product	\$ 24,752	\$ 38,690	\$ 42,717	\$ 60,389	\$ 82,057	\$ 16,170	\$ 21,493
Research services	3,864	4,519	3,233	3,064	4,037	835	870
Total revenue	28,616	43,209	45,950	63,453	86,094	17,005	22,363
Cost of revenue:							
Product	30,462	35,399	47,071	70,025	73,399	16,611	18,541
Research services	1,788	2,119	1,505	1,396	1,964	356	476
Gross profit (loss)	(3,634)	5,691	(2,626)	(7,968)	10,731	38	3,346
Operating expenses:							
Research and development	2,524	2,985	4,085	5,142	5,159	1,235	1,284
Sales and marketing	3,994	4,526	5,565	8,564	9,271	2,040	2,238
General and administrative	5,430	5,675	8,291	11,299	12,833	2,788	2,722
Write-off of construction in progress	—	—	—	—	3,440	—	—
Total operating expenses	11,948	13,186	17,941	25,005	30,703	6,063	6,244
Income (loss) from operations	(15,582)	(7,495)	(20,567)	(32,973)	(19,972)	(6,025)	(2,898)
Other income (expense):							
Interest income (expense)	(3,057)	(2,415)	(8,822)	(21,790)	(30,599)	3,366	(16,151)
Gain on extinguishment of convertible notes	—	—	—	—	8,898	8,898	—
Loss on exchange of convertible notes	—	—	—	—	(5,697)	(5,212)	—
Debt extinguishment costs	—	—	—	(1,379)	—	—	—
Costs associated with postponed public offering	—	—	(3,443)	—	(241)	—	—
Total other income (expense), net	(3,057)	(2,415)	(12,265)	(23,169)	(27,639)	7,052	(16,151)
Net income (loss)	(18,639)	(9,910)	(32,832)	(56,142)	(47,611)	1,027	(19,049)
Accretion (deemed dividends) on preferred stock	(2,984)	(57,007)	(23,665)	47,201	(996)	(996)	—
Extinguishment of redeemable feature for convertible preferred stock	—	—	—	—	86,161	86,161	—
Earnings attributable to preferred stock shareholders	—	—	—	—	(36,216)	(65,941)	—
Net income (loss) attributable to common stockholders	\$ (21,623)	\$ (66,917)	\$ (56,497)	\$ (8,941)	\$ 1,338	\$ 20,251	\$ (19,049)
<b>Per share data:</b>							
Net income (loss) attributable to common stockholders per share:							
Basic	<u>\$(18,284.51)</u>	<u>\$(21,583.48)</u>	<u>\$(17,863.90)</u>	<u>\$(2,812.37)</u>	<u>\$ 420.62</u>	<u>\$6,367.00</u>	<u>\$( 5,979.37)</u>
Diluted	<u>\$(18,284.51)</u>	<u>\$(21,583.48)</u>	<u>\$(17,863.90)</u>	<u>\$(2,812.37)</u>	<u>\$ 404.12</u>	<u>\$6,103.09</u>	<u>\$( 5,979.37)</u>
Weighted-average common shares outstanding:							
Basic	<u>1,183</u>	<u>3,101</u>	<u>3,162</u>	<u>3,180</u>	<u>3,181</u>	<u>3,181</u>	<u>3,184</u>
Diluted	<u>1,183</u>	<u>3,101</u>	<u>3,162</u>	<u>3,180</u>	<u>3,302</u>	<u>3,316</u>	<u>3,184</u>
Pro forma net income (loss) per share, basic and diluted(1)							
					<u>\$ (1.22)</u>		<u>\$( 0.18)</u>
Weighted-average common shares outstanding used in computing pro forma net income (loss) per share, basic and diluted(1)							
					<u>23,000,013</u>		<u>23,000,016</u>

	As of					As of
	2009	2010	December 31 2011	2012	2013	March 31 2014
	(\$ in thousands)					
<b>Consolidated balance sheet data:</b>						
Cash	\$27,502	\$ 26,800	\$ 11,241	\$ 1,343	\$ 1,574	\$ 1,155
Working capital(2)	21,766	24,723	12,532	1,132	(3,460)	(5,152)
Total assets	64,735	88,795	102,154	95,301	90,442	88,169
Total debt	575	8,139	60,462	110,083	138,555	155,125
Redeemable preferred stock	31,681	109,786	133,451	86,250	—	—
Total stockholders' (deficit) equity	6,153	(58,103)	(113,513)	(120,795)	(61,966)	(80,674)

- (1) Pro forma per share data is computed based upon the number of shares of common stock outstanding immediately after consummation of this offering applied to our historical net income (loss) amounts as adjusted to give retroactive effect to the preferred stock and convertible notes conversions based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock, the expected closing date of June 18, 2014 and the issuance of the shares of our common stock offered hereby.

The following table presents the calculation of pro forma basic and diluted net income (loss) per share:

	Year Ended	Three Months
	December 31	Ended
	2013	March 31
	(\$ in thousands, except share and per share data)	
Net income (loss) attributable to common stockholders	\$ 1,338	\$ (19,049)
Deemed dividends (accretion) on preferred stock	996	—
Gain on extinguishment of convertible notes	(8,898)	—
Loss on exchange of convertible notes	5,697	—
Recognition of compensation cost for performance-based options	(3,436)	(361)
Extinguishment of redeemable feature for convertible preferred stock	(86,161)	—
Earnings attributable to preferred stock shareholders	36,216	—
Interest expense	26,187	15,292
Pro forma net income (loss) attributable to common stockholders	<u>\$ (28,061)</u>	<u>\$ (4,118)</u>
Weighted-average common shares outstanding, basic and diluted	3,181	3,184
Common shares issued upon conversion of preferred stock and exercise of Series C warrants	115,982	115,982
Common shares issued upon conversion of convertible notes and interest thereon	15,319,034	15,319,034
Issuance of restricted common shares to non-employee directors in connection with this offering	61,816	61,816
Issuance of common shares pursuant to this offering	7,500,000	7,500,000
Weighted-average common shares outstanding used in computing pro forma net income (loss) per share, basic and diluted	<u>23,000,013</u>	<u>23,000,016</u>
Pro forma net income (loss) per share, basic and diluted	<u>\$ (1.22)</u>	<u>\$ (0.18)</u>

- (2) Working capital means current assets minus current liabilities.

*The disclosure set forth in the Preliminary Prospectus in the third paragraph under “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Overview” has been revised by replacing the paragraph in its entirety with:*

We believe that our existing cash and net proceeds from this offering will be sufficient (i) to fund the design, development and construction of our third production line in East Providence to expand our production capacity, (ii) to repay amounts outstanding under our subordinated notes and line of credit, and (iii) to fund a portion of the design, development and construction of a second production plant in Europe or Asia. We expect to supplement the funds available to us from this offering with anticipated cash flows from operations, local government grants, debt financings and potentially equity financings to provide the capital required to complete the first production line in our second facility. We will need to pursue alternative sources of financing, including additional issuance of debt or private equity, if this offering is not completed.

*The disclosure set forth in the Preliminary Prospectus in the second paragraph under “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Capital Spending and Future Capital Requirements” has been revised by replacing the paragraph in its entirety with:*

We have funded our capital expenditures related to design, development and construction of our existing manufacturing facility in East Providence with cash on hand and the proceeds of our financings to date. We currently estimate that design, development and construction of our third production line in the East Providence facility will require additional expenditures of \$30 million. We intend to fund capital expenditures related to design, development and construction of our planned second manufacturing facility with the remaining proceeds from this offering, cash flow from operations, local government grants, debt financings and potentially equity financings. We estimate that the total expenditures for the first production line in our second manufacturing facility will be approximately \$80 million to \$100 million.

*The disclosure set forth in the Preliminary Prospectus under “Prospectus Summary—Our Competitive Strengths—Experienced Management Team with a Demonstrated Track Record” and “Business—Our Competitive Strengths—Experienced Management Team with a Demonstrated Track Record” has been revised by replacing the paragraph in its entirety with:*

Our executive officers have an average of more than 20 years each of experience in global industrial companies, specialty chemical companies or related material science research. This management team is responsible for the development of our proprietary manufacturing technology, the commercial acceptance of our products, and the creation of a global distribution and marketing platform. As of May 15, 2014, we employed 226 research scientists, engineers, manufacturing line operators, sales and administrative staff, and management. We believe our dedicated and experienced team is an important competitive asset.

*The disclosure set forth in the Preliminary Prospectus in the eighth paragraph under “Prospectus Summary—Overview” has been revised by replacing the paragraph in its entirety with:*

Our capacity expansion plan requires us to raise capital. We plan to complete the expansion of our current production facility using a portion of the net proceeds from this offering. We will use additional net proceeds from this offering to fund the development, design and a portion of the build-out of a second plant. We expect to utilize anticipated cash flows from operations, local government grants, debt financings and potentially equity financings to provide the remaining capital required to complete the first production line in our second facility.

*The disclosure set forth in the Preliminary Prospectus in the tenth bullet under “Special Note Regarding Forward Looking Statements” has been revised by replacing the bullet in its entirety with:*

- our belief that we can finance our planned second manufacturing facility and its first production line with, in addition to the net proceeds from this offering, anticipated cash flows from operations, local government grants, debt financings and potentially equity financings;

## PRINCIPAL STOCKHOLDERS

The following table and accompanying footnotes present information about the beneficial ownership of our common stock as of May 15, 2014, and as adjusted to reflect the shares offered by this prospectus, by:

- each existing stockholder we know to beneficially own 5% or more of our common stock after this offering, which we call our principal stockholders;
- each of our directors and directors-elect;
- each of our named executive officers; and
- all of our current directors, directors-elect and executive officers as a group.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to the securities. Shares of common stock that may be acquired by an individual or group within 60 days following May 15, 2014, pursuant to the exercise of options or warrants are deemed to be outstanding for the purpose of computing the percentage ownership of such individual or group, but are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person shown in the table. Under these rules, more than one person may be deemed to be a beneficial owner of the same securities and a person may be deemed to be a beneficial owner of securities as to which such person has no economic interest.

The percentage of shares beneficially owned before the offering is based on 15,500,000 shares of our common stock outstanding as of May 15, 2014, which gives effect to (i) the automatic conversion of all shares of our preferred stock outstanding at May 15, 2014 into an aggregate of 115,982 shares of our common stock upon completion of the offering made hereby, following the automatic net exercise of all of our outstanding warrants to purchase Series C preferred stock immediately prior thereto, (ii) the automatic conversion of our convertible notes, including accrued but unpaid interest thereon, upon the completion of the offering made hereby into an aggregate of 15,319,034 shares of our common stock, at a conversion price equal to 62.5% of the initial offering price, (including the purchase of the aggregate of 1,064,604 shares of our common stock upon completion of the offering made hereby in exchange for the cancellation of our non-interest bearing promissory notes issued to Arcapita Ventures I Limited at a discount rate that would result in the holder receiving an amount of shares of common stock equivalent to a convertible note that bore interest at the same 8% interest rate and converted at the same 62.5% conversion price as our convertible notes) and (iii) an aggregate of 61,816 restricted shares of common stock to be issued to our non-employee directors under our non-employee director compensation policy in connection with this offering, in each case, based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock and the expected closing date of June 18, 2014. The percentage of shares beneficially owned before the offering also assumes, for purposes of calculating the beneficial ownership of certain holders of options to purchase shares of our common stock as set forth in the prior paragraph, that the offering made hereby has not occurred. The percentage of shares beneficially owned after the offering is based on 23,000,000 shares of our common stock to be outstanding after the offering, based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock and the expected closing date of June 18, 2014. Entities affiliated with Reservoir Capital Partners, L.P. and GKFF Ventures I, LLC (formerly known as Argonaut Ventures I, LLC), two of our principal stockholders have agreed to purchase, respectively, 500,000 shares and 1,363,636 shares of our common stock in this offering at the initial public offering price, and our Chief Executive Officer, Mr. Donald Young, has agreed to purchase 9,091 shares of our common stock in this offering at the initial public offering price, for an aggregate purchase by these existing stockholders of 1,872,727 shares. The figures in the table below do not reflect the purchase of any shares in this offering by these investors. Based on such initial public offering price, reverse stock split and closing date, and without giving effect to the purchase by Mr. Young of shares in this offering, our current executive officers will beneficially own 34,135 shares of our common stock after this offering.



As a result of the issuance of shares of our common stock upon conversion of our convertible notes, as described in the prospectus under the heading “Conversion of Convertible Notes,” and the reverse stock split described in the prospectus under the heading “Prospectus Summary – The Offering,” the percentage of our outstanding shares held by our executive officers on a fully diluted basis (including shares issuable upon exercise of options held by our executive officers) will, upon consummation of the offering made hereby, be approximately 0.2%, which is significantly less than the approximately 5.4% it would have been had the initial public offering price of our common stock been at the mid-point of the price range indicated in our preliminary prospectus, subject to completion, dated June 2, 2014. We have historically used stock options as a means of seeking to align employee incentives with the interests of our stockholders. Given the reduction in the anticipated equity incentive component for our employees as noted above, we may consider reviewing and addressing the levels of equity incentives held by our employees, including our executive officers, in the near term.

Except as indicated in footnotes to this table, we believe that the stockholders named in this table have sole voting and investment power with respect to all shares of common stock shown to be beneficially owned by them, based on information provided to us by such stockholders. Unless otherwise indicated, the address of all listed stockholders is c/o Aspen Aerogels, 30 Forbes Road, Building B, Northborough, Massachusetts 01532.

<b>Name of Beneficial Owner</b>	<b>Prior to this Offering</b>		<b>After this Offering</b>	
	<b>Shares of Common Stock</b>	<b>Percentage of Common Stock</b>	<b>Shares of Common Stock</b>	<b>Percentage of Common Stock</b>
<b>Principal Stockholders:</b>				
Arcapita Ventures I Limited <sup>(1)</sup>	1,080,733	7.0%	1,080,733	4.7%
GKFF Ventures I, LLC (formerly known as Argonaut Ventures I, LLC) <sup>(2)</sup>	1,803,686	11.6%	1,803,686	7.8%
Reservoir Capital Partners, L.P. and affiliated funds <sup>(3)</sup>	2,370,020	15.3%	2,370,020	10.3%
RockPort Capital Partners, L.P. and affiliated funds <sup>(4)</sup>	606,083	3.9%	606,083	2.6%
NICHIAS Corporation <sup>(5)</sup>	972,301	6.3%	972,301	4.2%
Entities affiliated with Fidelity Investments <sup>(6)</sup>	6,843,288	44.2%	6,843,288	29.8%
<b>Directors, Directors-Elect and Named Executive Officers:</b>				
Donald R. Young <sup>(7)</sup>	4,928	*	20,255	*
John F. Fairbanks <sup>(8)</sup>	1,535	*	5,213	*
Corby C. Whitaker <sup>(9)</sup>	700	*	3,152	*
P. Ramsay Battin <sup>(10)</sup>	9,220	*	9,220	*
Robert M. Gervis <sup>(11)</sup>	8,029	*	9,087	*
Craig A. Huff <sup>(12)</sup>	2,377,747	15.3%	2,377,747	10.3%
Steven R. Mitchell <sup>(13)</sup>	7,727	*	7,727	*
Mark L. Noetzel <sup>(14)</sup>	8,085	*	9,340	*
William P. Noglows <sup>(15)</sup>	7,739	*	7,739	*
David J. Prend <sup>(16)</sup>	613,810	4.0%	613,810	2.7%
Richard F. Reilly <sup>(17)</sup>	8,037	*	9,126	*
All executive officers, directors and directors-elect as a group (13 persons) <sup>(18)</sup>	3,048,781	19.7%	3,077,931	13.4%

\* Indicates beneficial ownership of less than 1%.

- (1) Consists of (i) 16,129 shares held by Arcapita Ventures I Limited (“AVIL”), including 13,851 shares of our common stock to be issued upon the automatic conversion of our Series C preferred stock following the automatic net exercise immediately prior to the consummation of this offering of warrants to purchase Series C preferred stock, and (ii) 1,064,604 shares of our common stock to be issued in connection with purchases in exchange for the cancellation of \$6.5 million principal amount of promissory notes upon the closing of the offering made hereby, based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock and the expected closing date of June 18, 2014. AVIL is a

wholly-owned subsidiary of Arcapita Ventures I Holding Company Limited (“Arcapita Holding”). Arcapita Ventures I Holdings Limited, VCI Angel Capital Limited, VCI Corporate Capital Limited, VCI Enterprise Capital Limited, VCI Investment Capital Limited, VCI Transaction Capital Limited and AIPL Subsidiary Limited are the voting shareholders (the “Arcapita Shareholders”) of Arcapita Holding, and therefore share voting and investment control over the securities held by AVIL. The address for AVIL is c/o Arcapita Investment Management US Inc., 75 Fourteenth Street, 23rd Floor, Atlanta, Georgia 30309.

- (2) Consists of (i) 32,357 shares held by GKFF Ventures I, LLC (formerly known as Argonaut Ventures I, LLC) (“GKFF Ventures”), including 29,571 shares of our common stock to be issued upon the automatic conversion of our Series C preferred stock following the automatic net exercise immediately prior to the consummation of this offering of warrants to purchase Series C preferred stock, and (ii) 1,771,329 shares of our common stock to be issued to GKFF Ventures upon the automatic conversion of \$10.8 million principal amount and all accrued but unpaid interest on the convertible notes upon the closing of the offering made hereby at a conversion price equal to 62.5% of the initial offering price, based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock and the expected closing date of June 18, 2014. Does not reflect the purchase of 1,363,636 shares of our common stock in this offering by GKFF Ventures or its affiliates. GKFF Ventures is managed by Ken Levit and Robert Thomas. George Kaiser Family Foundation (“GKFF”) is the sole equity owner of GKFF Ventures. Messrs. Levit and Thomas and GKFF may be deemed to share voting and investment control over the shares, which are beneficially owned by GKFF Ventures. Each of these individuals and GKFF disclaims beneficial ownership of the reported securities except to the extent of his or its pecuniary interest therein. The address of GKFF Ventures I, LLC is c/o George Kaiser Family Foundation, 7030 South Yale Avenue, Suite 600, Tulsa, Oklahoma 74136.
- (3) Consists of (i) 38,975 shares held by Reservoir Capital Partners, L.P. (“RCP”) and Reservoir Capital Master Fund, L.P. (“RCMF”), including 31,989 shares and 3,097 shares of our common stock to be issued to RCP and RCMF, respectively, upon the automatic conversion of our Series C preferred stock following the automatic net exercise immediately prior to the consummation of this offering of the warrants to purchase Series C preferred stock, and (ii) 2,331,045 shares of our common stock to be issued upon the automatic conversion of \$14.2 million principal amount and all accrued but unpaid interest on the convertible notes upon the closing of the offering made hereby at a conversion price equal to 62.5% of the initial offering price, based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock and the expected closing date of June 18, 2014, of which 2,129,833 shares of our common stock will be issued to RCP and 201,212 shares of our common stock will be issued to RCMF. Does not reflect the purchase of 500,000 shares of our common stock in this offering by RCP, RCMF or their affiliates. The securities held by RCP may be deemed to be beneficially owned by Daniel Stern and one of our directors, Craig A. Huff, who are the senior managing members (the “Reservoir Members”) of RCGM, LLC (“RCGM”). RCGM is the managing member of Reservoir Capital Group, L.L.C. (“RCG”), which is in turn the general partner of Reservoir Capital Partners (Cayman), L.P. (“RCP Cayman”), which is in turn the sole member of RCP GP, LLC (“RCP GP”), and which is in turn the general partner of RCP. The securities held by RCMF may be deemed to be beneficially owned by the Reservoir Members, who are the senior managing members of RCGM. RCGM is the managing member of RCG, which is in turn the general partner of RCMF. As a result, Messrs. Stern and Huff share voting and investment control over the shares held by RCP and RCMF. Each of the Reservoir Members, RCGM, RCG, RCP Cayman and RCP GP disclaims beneficial ownership of the reported securities except to the extent of his or its pecuniary interest therein. The address for RCP and RCMF is c/o Reservoir Capital Group, L.L.C., 767 Fifth Avenue, 16<sup>th</sup> Floor, New York, New York 10153.
- (4) Consists of (i) 9,218 shares held by RockPort Capital Partners, L.P. (“RockPort I”), RockPort Capital Partners II, L.P. (“RockPort II”), RockPort SII, LLC (“RSII”) and RP Co-Investment Fund I, LP (“RPCIF”), including 3,723 shares, 2,327 shares, 1,000 shares and 251 shares of our common stock to be issued to RockPort I, RockPort II, RSII and RPCIF, respectively, upon the automatic conversion of our Series C preferred stock following the automatic net exercise immediately prior to the consummation of this offering of the warrants to purchase Series C preferred stock, (ii) warrants to purchase one share of our common stock held by RockPort I, and (iii) 596,864 shares of our common stock to be issued upon the automatic conversion of \$3.6 million principal amount and all accrued but unpaid interest on the convertible

notes upon the closing of the offering made hereby at a conversion price equal to 62.5% of the initial offering price, based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock and the expected closing date of June 18, 2014, of which 149,541 shares of our common stock will be issued to RockPort I, 389,696 shares of our common stock will be issued to RockPort II, 34,176 shares of our common stock will be issued to RSII and 23,451 shares of our common stock will be issued to RPCIF. The securities held by RockPort I, RockPort II, RSII and RPCIF may be deemed to be beneficially owned by RockPort Capital I, LLC, RockPort Capital II, LLC, RockPort SGII, LLC and RP Co-Investment Fund I GP, LLC, respectively, each of which is the general partner of the respective entity. The securities held by RockPort I, RockPort II, RSII and RPCIF may also be deemed to be beneficially owned by Alexander Ellis III, Janet B. James, William E. James, Charles J. McDermott, Stoddard M. Wilson and one of our directors, David J. Prend, who are the managing members (the "Rockport Members") of the general partners of each of RockPort I, RockPort II, RSII and RPCIF, all of which may be deemed to share voting and investment control with respect to such shares. Each of the general partners of RockPort I, RockPort II, RSII and RPCIF and the Rockport Members (the "Rockport Reporting Persons") disclaim beneficial ownership of the reported securities except to the extent of his, her or its pecuniary interest therein. The address for the Rockport Reporting Persons is c/o RockPort Capital Partners, 160 Federal Street, 18th Floor, Boston, Massachusetts 02110.

- (5) Consists of 972,301 shares of our common stock to be issued upon the automatic conversion of \$5.5 million principal amount and all accrued but unpaid interest on the convertible notes upon the closing of the offering made hereby at a conversion price equal to 62.5% of the initial offering price, based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock and the expected closing date of June 18, 2014. The address for NICHIAS Corporation is 1-26, Shibadaimon 1-chome, Minato-ku, Tokyo 105-8555, Japan.
- (6) Consists of 2,309 shares of our common stock to be issued upon the automatic conversion of our Series C preferred stock following the automatic net exercise immediately prior to the consummation of this offering of the warrants to purchase Series C preferred stock, of which 421 shares will be issued to Fidelity Advisor Series VII: Fidelity Advisor Industrials Fund, 919 shares will be issued to Fidelity Central Investment Portfolios LLC: Fidelity Industrials Central Fund, 316 shares will be issued to Fidelity Central Investment Portfolios LLC: Fidelity Materials Central Fund, 555 shares will be issued to Fidelity Select Portfolios: Industrials Portfolio and 98 shares will be issued to Variable Insurance Products Fund IV: Industrials Portfolio, and also consists of 6,840,979 shares of our common stock to be issued upon the automatic conversion of \$37.5 million principal amount and all accrued but unpaid interest on the convertible notes upon the closing of the offering made hereby at a conversion price equal to 62.5% of the initial offering price, based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock and the expected closing date of June 18, 2014, of which 73,542 shares of our common stock will be issued to Fidelity Advisor Series I: Fidelity Advisor Dividend Growth Fund, 388,275 shares of our common stock will be issued to Fidelity Advisor Series VII: Fidelity Advisor Industrials Fund, 711,895 shares of our common stock will be issued to Fidelity Central Investment Portfolios LLC: Fidelity Industrials Central Fund, 273,161 shares of our common stock will be issued to Fidelity Central Investment Portfolios LLC: Fidelity Materials Central Fund, 2,373,128 shares of our common stock will be issued to Fidelity Puritan Trust: Fidelity Puritan Fund, 754,879 shares of our common stock will be issued to Fidelity Securities Fund: Fidelity Dividend Growth Fund, 50,962 shares of our common stock will be issued to Fidelity Select Portfolios: Environment and Alternative Energy Portfolio, 473,952 shares of our common stock will be issued to Fidelity Select Portfolios: Industrials Portfolio, 1,452,587 shares of our common stock will be issued to Fidelity Select Portfolios: Materials, 95,475 shares of our common stock will be issued to Variable Insurance Products Fund III: Balanced Portfolio, 87,892 shares of our common stock will be issued to Variable Insurance Products Fund IV: Industrials Portfolio, and 105,231 shares of our common stock will be issued to Variable Insurance Products Fund IV: Materials Portfolio. In June 2014, we entered into an agreement with the Fidelity Funds by which they waived the right to vote with respect to any shares they or their affiliates possess in excess of 14.9% of our total outstanding shares. Such agreement will terminate automatically once the Fidelity Funds and their affiliates own 14.89% or less of our outstanding

common stock. Fidelity Management & Research Company, or Fidelity, 245 Summer Street, F7B, Boston, Massachusetts 02210, a wholly-owned subsidiary of FMR LLC and an investment adviser registered under Section 203 of the Investment Advisers Act of 1940, is the beneficial owner of the securities held by these funds as a result of acting as investment adviser to various investment companies registered under Section 8 of the Investment Company Act of 1940. Edward C. Johnson 3d and FMR LLC, through its control of Fidelity, and the funds each has sole power to dispose of the securities owned by the Funds. Members of the family of Edward C. Johnson 3d, Chairman of FMR LLC, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. Neither FMR LLC nor Edward C. Johnson 3d, Chairman of FMR LLC, has the sole power to vote or direct the voting of the shares owned directly by the Fidelity Funds, which power resides with the Funds' Boards of Trustees. Fidelity carries out the voting of the shares under written guidelines established by the Funds' Boards of Trustees.

- (7) Consists of (i) 8 shares held by Mr. Young, including 6 shares of our common stock to be issued upon the automatic conversion of our Series C preferred stock following the automatic net exercise immediately prior to the consummation of this offering of warrants to purchase Series C preferred stock, (ii) 4,443 shares of our common stock issuable upon the exercise of options exercisable within 60 days following May 15, 2014, including 441 shares issuable upon the exercise of options held by Mr. Young's children, of which Mr. Young has sole voting power, and 48 shares issuable upon the exercise of options held by a trust for the benefit of Mr. Young's family, of which Mr. Young has sole voting power, and (iii) 477 shares of our common stock to be issued upon the automatic conversion of less than \$0.1 million principal amount and all accrued but unpaid interest on the convertible notes upon the closing of the offering made hereby at a conversion price equal to 62.5% of the initial offering price, based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock and the expected closing date of June 18, 2014. After this offering also includes options to purchase 15,327 shares of our common stock exercisable within 60 days of May 15, 2014 held by Mr. Young, the vesting of which is contingent upon the consummation of this offering, based on such offering price and closing date. Does not reflect the purchase by Mr. Young of 9,091 shares of our common stock in this offering.
- (8) Consists of (i) 8 shares held by Mr. Fairbanks, including 6 shares of our common stock to be issued upon the automatic conversion of our Series C preferred stock following the automatic net exercise immediately prior to the consummation of this offering of warrants to purchase Series C preferred stock, (ii) 1,050 shares of our common stock issuable upon the exercise of options exercisable within 60 days following May 15, 2014, and (iii) 477 shares of our common stock to be issued upon the automatic conversion of less than \$0.1 million principal amount and all accrued but unpaid interest on the convertible notes upon the closing of the offering made hereby at a conversion price equal to 62.5% of the initial offering price, based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock and the expected closing date of June 18, 2014. After this offering also includes options to purchase 3,678 shares of our common stock exercisable within 60 days of May 15, 2014, the vesting of which is contingent upon the consummation of this offering, based on such offering price and closing date.
- (9) Consists of 700 shares issuable upon the exercise of options exercisable within 60 days following May 15, 2014. After this offering also includes options to purchase 2,452 shares of our common stock exercisable within 60 days of May 15, 2014, the vesting of which is contingent upon the consummation of this offering, based on such offering price and closing date.
- (10) Consists of (i) 32 shares held by Mr. Battin, including 27 shares of our common stock to be issued upon the automatic conversion of our Series C preferred stock following the automatic net exercise immediately prior to the consummation of this offering of warrants to purchase Series C preferred stock, (ii) 1,461 shares of our common stock to be issued upon the automatic conversion of less than \$0.1 million principal amount and all accrued but unpaid interest on the convertible notes upon the closing of the offering made hereby at

- a conversion price equal to 62.5% of the initial offering price, based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock and the expected closing date of June 18, 2014 and (iii) 7,727 restricted shares of our common stock granted to Mr. Battin in connection with this offering pursuant to our non-employee director compensation policy, based on the initial public offering price of \$11.00 per share. Reflects securities beneficially owned individually by Mr. Battin. Mr. Battin is a consultant to Arcapita Investment Management US Inc., an investment adviser to Arcapita Ventures I Limited and is a former director of Arcapita Inc., an affiliate of AVIL, but is not deemed to beneficially own any of the shares held by AVIL.
- (11) Consists of 302 shares issuable upon the exercise of options exercisable within 60 days following May 15, 2014 and 7,727 restricted shares of our common stock granted to Mr. Gervis in connection with this offering pursuant to our non-employee director compensation policy, based on the initial public offering price of \$11.00 per share. After this offering also includes options to purchase 1,058 shares of our common stock exercisable within 60 days of May 15, 2014, the vesting of which is contingent upon the consummation of this offering, based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock and the expected closing date of June 18, 2014.
  - (12) Reflects securities beneficially owned by RCP and RCMF as set forth in footnote 3, for which Mr. Huff is a senior managing member of the ultimate general partner of both entities. Also includes 7,727 restricted shares of our common stock granted to Mr. Huff in connection with this offering pursuant to our non-employee director compensation policy, based on the initial public offering price of \$11.00 per share. Mr. Huff disclaims beneficial ownership of shares beneficially owned by RCP and RCMF except to the extent of his pecuniary interest therein, if any.
  - (13) Consists of 7,727 restricted shares of our common stock granted to Mr. Mitchell in connection with this offering pursuant to our non-employee director compensation policy, based on the initial public offering price of \$11.00 per share. Excludes securities beneficially owned by GKFF Ventures as set forth in footnote 2. Mr. Mitchell is the managing director of Argonaut Private Equity, LLC (“APE”), which was formerly a manager of GKFF Ventures until January 2013, but Mr. Mitchell no longer has any voting or investment control over securities held by GKFF Ventures.
  - (14) Consists of 358 shares issuable upon the exercise of options exercisable within 60 days following May 15, 2014 and 7,727 restricted shares of our common stock granted to Mr. Noetzel in connection with this offering pursuant to our non-employee director compensation policy, based on the initial public offering price of \$11.00 per share. After this offering also includes options to purchase 1,255 shares of our common stock exercisable within 60 days of May 15, 2014, the vesting of which is contingent upon the consummation of this offering, based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock and the expected closing date of June 18, 2014.
  - (15) Mr. Noglows will become a director upon the consummation of this offering. Consists of 12 shares issuable upon the exercise of options exercisable within 60 days following May 15, 2014 and 7,727 restricted shares of our common stock granted to Mr. Noglows in connection with this offering pursuant to our non-employee director compensation policy, based on the initial public offering price of \$11.00 per share.
  - (16) Reflects securities beneficially owned by Rockport Capital Partners, L.P. and affiliated funds as set forth in footnote 4, for which Mr. Prend is a managing member of the general partners of such securityholders. Also includes 7,727 restricted shares of our common stock granted to Mr. Prend in connection with this offering pursuant to our non-employee director compensation policy, based on the initial public offering price of \$11.00 per share. Mr. Prend disclaims beneficial ownership of shares beneficially owned by Rockport Capital Partners, L.P. and affiliated funds except to the extent of his pecuniary interest therein, if any.
  - (17) Consists of 310 shares issuable upon the exercise of options exercisable within 60 days following May 15, 2014 and 7,727 restricted shares of our common stock granted to Mr. Reilly in connection with this offering pursuant to our non-employee director compensation policy, based on the initial public offering price of \$11.00 per share. After this offering also includes options to purchase 1,089 shares of our common stock exercisable within 60 days of May 15, 2014, the vesting of which is contingent upon the consummation of this offering, based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock and the expected closing date of June 18, 2014.

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(18) See footnotes 7 through 17. Also includes options to purchase 524 shares of common stock held by George L. Gould, Ph.D., our Vice President, Research and Development, which are exercisable within 60 days following May 15, 2014, and options to purchase 700 shares of common stock held by Kevin A. Schmidt, our Vice President, Operations, which are exercisable within 60 days following May 15, 2014. After this offering also includes options to purchase 1,839 shares of our common stock exercisable within 60 days of May 15, 2014 held by Dr. Gould and options to purchase 2,452 shares of our common stock exercisable within 60 days of May 15, 2014 held by Mr. Schmidt, the vesting of which is contingent upon the consummation of this offering, based on the initial public offering price of \$11.00 per share, the 1-for-824.7412544 reverse split of our common stock and the expected closing date of June 18, 2014.