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As filed with the Securities and Exchange Commission on August 17, 2015

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Aclaris Therapeutics, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**2834**	**46-0571712**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

101 Lindenwood Drive, Suite 400
Malvern, PA 19355
(484) 324-7933
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Neal Walker
President and Chief Executive Officer
Aclaris Therapeutics, Inc.
101 Lindenwood Drive, Suite 400
Malvern, PA 19355
(484) 324-7933
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Brent B. Siler **Divakar Gupta** **Brian F. Leaf** **Cooley LLP** **11951 Freedom Drive** **Reston, VA 20190** **(703) 456-8000**	**Kamil Ali-Jackson** **Chief Legal Officer** **Aclaris Therapeutics, Inc.** **101 Lindenwood Drive,** **Suite 400** **Malvern, PA 19355** **(484) 324-7933**	**Peter N. Handrinos** **Nathan Ajiashvili** **Latham & Watkins LLP** **John Hancock Tower** **200 Clarendon Street** **Boston, MA 02116** **(617) 948-6000**

Approximate date of commencement of proposed sale to the public:
As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. o

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 under the Securities Exchange Act of 1934. (Check one):

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

CALCULATION OF REGISTRATION FEE

Title of Securities being Registered	Proposed Maximum Aggregate Offering Price[1][2]	Amount of Registration Fee
Common Stock, $0.00001 par value per share	$86,250,000	$10,022.25

(1) In accordance with Rule 457(o) under the Securities Act of 1933, as amended, the number of shares being registered and the proposed maximum offering price per share are not included in this table.

(2) Estimated solely for purposes of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act.

The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment that specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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SUBJECT TO COMPLETION, DATED AUGUST 17, 2015

PRELIMINARY PROSPECTUS

Shares

Aclaris Therapeutics, Inc.

Common Stock

We are offering shares of our common stock. This is our initial public offering and no public market currently exists for our common stock. We expect the initial public offering price to be between $ and $ per share. We have applied to list our common stock on The NASDAQ Global Market under the symbol "ACRS."

We are an "emerging growth company" as defined in Section 2(a) of the Securities Act of 1933 and will be subject to reduced public company reporting requirements. See "Prospectus Summary — Implications of Being an Emerging Growth Company."

Investing in our common stock involves a high degree of risk. Please read "Risk Factors" beginning on page 10 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	PER SHARE	TOTAL
Public offering price	$	$
Underwriting discount and commissions[(1)]	$	$
Proceeds to us, before expenses	$	$

(1) See "Underwriting" in this prospectus for a description of compensation payable to the underwriters.

Delivery of the shares of common stock is expected to be made on or about , 2015. We have granted the underwriters an option for a period of 30 days to purchase an additional shares of our common stock. If the underwriters exercise the option in full, the total underwriting discounts and commissions payable by us will be $ million, and the total proceeds to us, before expenses, will be $ million.

Jefferies **Citigroup**

William Blair

Prospectus dated , 2015

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You should rely only on the information contained in this prospectus and any free writing prospectus prepared by or on behalf of us or to which we have referred you. We have not authorized anyone to provide you with information that is different from that contained in such prospectuses. We are offering to sell shares of our common stock, and seeking offers to buy shares of our common stock, only in jurisdictions where such offers and sales are permitted. The information in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of our common stock.

Until and including , 2015, 25 days after the date of this prospectus, all dealers that buy, sell or trade our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to unsold allotments or subscriptions.

For investors outside of the United States: neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus, including our financial statements and the related notes thereto and the information set forth under the sections "Risk Factors" and "Management's Discussion and Analysis o Financial Condition and Results of Operations," in each case included in this prospectus. Unless the context otherwise requires, we use the terms "Aclaris," "company," "we," "us" and "our" in this prospectus to refer to Aclaris Therapeutics, Inc. and, where appropriate, our subsidiary.

Our Business

We are a clinical-stage specialty pharmaceutical company focused on identifying, developing and commercializing innovative and differentiated topical drugs to address significant unmet needs in dermatology. Our lead drug candidate, A-101, is a proprietary high-concentration hydrogen peroxide topica solution that we are developing as a prescription treatment for seborrheic keratosis, or SK, a common non-malignant skin tumor. We have completed three Phase 2 clinical trials of A-101 in over 300 patients with SK. In these trials, following one or two applications of A-101, we observed clinically relevant and statistically significant improvements in clearing SK lesions on the face, trunk and extremities of the body. Clinically relevant means that the observed results suggest a potential meaningful medical benefit, and statistically significant means that there is a low statistical probability, typically less than 5%, that the observed results occurred by chance alone. We plan to commence three Phase 3 clinical trials of A-101 in patients with SK in th second half of 2015 and, if the results of these trials are favorable, to submit a New Drug Application, or NDA, for A-101 for the treatment of SK to the U.S. Food and Drug Administration, or FDA, in the second half of 2016. We also intend to develop A-101 as a prescription treatment for common warts and A-102, a proprietary gel dosage form of hydrogen peroxide, as a prescription treatment for SK and common warts. In addition, we intend to in-license or acquire additional drug candidates for other dermatological conditions to build a fully integrated dermatology company.

SK lesions are among the most common non-malignant skin tumors and one of the most frequent diagnoses made by dermatologists. SK lesions typically have a waxy, scaly, slightly elevated appearance, and multiple lesions are often present. Though the lesions are non-malignant, patients often elect to have their condition treated by a dermatologist, either because the lesions have become inflamed or because the patient feels they are cosmetically unattractive. SK lesions are usually treated by cryosurgery, electrodesiccation, curettage or excision. Each of these methods may be painful or can result in pigmentary changes or scarring at the treatment site. No drugs have been approved by the FDA for the treatment of SK.

A study published in the Journal of The American Academy of Dermatology in 2006 estimated that SK affects over 83 million people in the United States. Based on a market survey we commissioned in 2014, we estimate that there are 18.5 million patient visits to dermatologists for SK and dermatologists perform approximately 8.3 million procedures to remove SK lesions annually in the United States. We estimate that the cost of these procedures to third-party payors and patients is more than $1.2 billion annually.

Management Experience

Our management team has extensive experience in dermatological product development from drug discovery through commercialization, with experience as practicing dermatologists and in leadership roles at a number of dermatology companies. Members of our management team founded and led Vicept Therapeutics, Inc., a dermatology company that was acquired by Allergan, Inc. in 2011. In addition, several of our management team members worked together at CollaGenex Pharmaceuticals, Inc., a dermatology-focused specialty pharmaceutical company that was acquired by Galderma Laboratories, LP in 2008, and Trigenesis Therapeutics, Inc., a dermatology company that was acquired by Dr. Reddy's Laboratories Inc. in 2004. We believe that the experience of our management team and our broad network of relationships with leaders

within the industry and medical community provides us with insight into product development and identification of other commercial opportunities in dermatology.

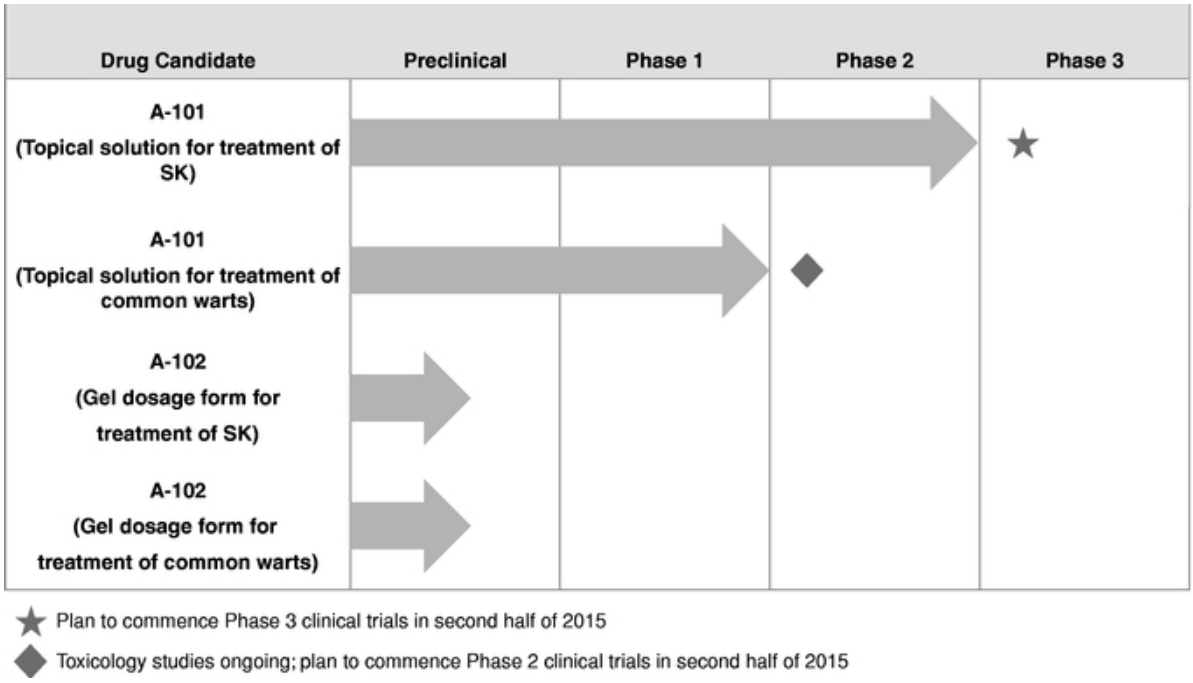
Strategy

Our goal is to develop and commercialize innovative and differentiated dermatology products that address significant unmet medical needs. The key components of our strategy to achieve this goal are to:

- § complete clinical development and obtain regulatory approval for A-101 for the treatment of SK;
- § develop A-101 for the treatment of common warts and develop our other drug candidates;
- § build a specialized sales and marketing organization; and
- § in-license or acquire additional drug candidates to build a fully integrated dermatology company.

Our Drug Candidates

We have utilized our experience to establish a pipeline of drug candidates that we believe will address significant unmet needs in dermatology. Our pipeline of drug candidates is summarized in the table below:



Our Lead Drug Candidate: A-101 for the Treatment of Seborrheic Keratosis

We are developing A-101, our proprietary high-concentration hydrogen peroxide topical solution, for the treatment of SK. SK lesions typically have a waxy, scaly, slightly elevated appearance, and multiple lesions are often present. Though the lesions are non-malignant, patients often elect to have their condition treated by a dermatologist, either because the lesions have become inflamed or because the patient feels they are cosmetically unattractive.

Limitations of Current Treatment Options for Seborrheic Keratosis

There are currently no FDA-approved drugs for the treatment of SK. However, dermatologists typically choose SK treatment based on a number of factors, including disease severity, patient characteristics and patient preference. Cryosurgery, which involves spraying liquid nitrogen at a temperature of negative 320 degrees Fahrenheit directly onto the SK lesions, is used in approximately two-thirds of treated SK patients. Depending on the severity of the patient's condition, more than one cryosurgery treatment is typically required to remove all of the targeted lesions. Adverse effects experienced by patients using cryosurgery

include permanent hypopigmentation, or loss of skin color, hyperpigmentation, or darkening of the skin, scarring, pain and edema, or swelling.

Other treatments include curettage, or scraping, as well as electrodesiccation and excision. We estimate that each of these treatments is used for 5% to 10% of treated SK patients. Curettage involves scraping SK lesions off with the use of a tool known as a curette. As a result, this procedure typically leads to bleeding, may result in infection and requires a longer time for the skin to heal. Electrodesiccation is a form of electrosurgery that involves the use of an electric needle to burn off the SK lesion. Electrodesiccation is labor- and time-intensive, can require local anesthesia and can lead to bleeding, infection and hyperpigmentation. With an excision procedure, the lesion is removed with a scalpel but remains intact for biopsy in cases where a definitive diagnosis has not been made. This procedure requires local anesthesia, can lead to infection and is more expensive than other treatment options. In addition, there are other dermatological treatments that are used less frequently.

Benefits of A-101

- ***Potential to be the First FDA-Approved Drug Treatment for SK.*** There are currently no FDA-approved drugs for the treatment of SK. If A-101 is approved by the FDA, it has the potential to be the first drug approved for the treatment of SK in the United States, thereby providing dermatologists confidence in A-101 as a treatment option.

- ***Attractive Efficacy Profile.*** In three clinical trials conducted to date in over 300 patients with A-101, we have observed clinically relevar and statistically significant clearance of SK lesions on the face, trunk and extremities after one or two applications.

- ***Non-invasive Treatment with Favorable Safety Profile.*** In each of our clinical trials, A-101 was well tolerated and caused minimal discomfort, with most patients experiencing only mild, transient tingling upon application. We believe A-101, if approved, will be an attractive treatment option for SK patients seeking an alternative that is non-invasive and reduces the risk of pigmentary changes, scarring, bleeding and other adverse side effects associated with current treatment procedures.

- ***Ease of Administration.*** If approved, we expect that A-101 will be administered using a single-use, self-contained, pre-filled, disposable pen-type applicator as an in-office treatment, without the need for anesthesia. After the initial diagnosis by a physician, we expect that A-101 will be appropriate for administration by non-physician staff, thereby freeing up physician time.

Clinical Development

In November 2013, we commenced our first Phase 2 clinical trial for A-101 for the treatment of SK with 35 enrolled subjects with four SK lesions on the trunk. We evaluated three concentrations of A-101, 25.0%, 32.5% and 40.0%, in this trial. We completed this trial in June 2014 and observed clinically relevant and statistically significant results in the clearance of SK lesions on the trunk for both the 32.5% and 40.0% concentrations of A-101, as compared to vehicle, after one or two applications.

In June 2014, we commenced our second Phase 2 clinical trial for the treatment of SK with 172 enrolled subjects with four SK lesions on the trunk or extremities. We evaluated two concentrations of A-101, 32.5% and 40.0%, in this trial. We completed this trial in December 2014 and observed clinically relevant and statistically significant results in the clearance of SK lesions on the trunk and extremities for both the 32.5% and 40.0% concentrations of A-101, as compared to vehicle, after one or two applications.

In October 2014, we commenced our third Phase 2 clinical trial for A-101 for the treatment of SK with 119 enrolled subjects with a single SK lesion on the face. We evaluated two concentrations of A-101, 32.5% and 40.0%, in this trial. We completed the trial in March 2015 and observed clinically relevant and statistically significant results in the clearance of SK lesions on the face for both the 32.5% and 40.0% concentrations of A-101, as compared to vehicle, after one or two applications.

We submitted the results from these three Phase 2 clinical trials to the FDA and held an end-of-Phase 2 meeting with them in May 2015. Based on the feedback we received from the FDA at this meeting, we plan to commence three Phase 3 clinical trials of A-101 in patients with SK lesions on the face trunk and

extremities in the second half of 2015. If the results of the Phase 3 clinical trials are favorable, we intend to submit our NDA for A-101 for the treatment of SK to the FDA in the second half of 2016 and build a specialty sales force to market the product to dermatologists in the United States. We have als received written guidance from the European Medicines Agency, or EMA, regarding the design of our Phase 3 clinical trials for A-101 for the treatment of SK. We plan to seek a collaborator to commercialize A-101, if approved, in the European Union. We have the exclusive right to commercialize A-10 if approved, throughout the world.

We also plan to develop A-101 for the treatment of common warts. We are conducting toxicology studies and plan to commence Phase 2 clinical trials of A-101 for the treatment of common warts in the second half of 2015. In addition to A-101, we are also developing A-102, a proprietary topical gel dosage form of hydrogen peroxide, for the treatment of both SK and common warts.

Intellectual Property

Our intellectual property portfolio contains issued patents directed to methods of use for A-101. Our issued patents begin to expire in 2022, subject to any applicable patent term adjustment or extension in a particular country. Our intellectual property portfolio also contains a U.S. and a PCT patent application directed to, among other things, formulations and methods of use for A-101 and a single-use, self-contained, pre-filled, disposable pen-type applicator for use with such formulations, including A-101. Our pending U.S. and PCT patent applications, if they issue as patents, would be expected to expire in 2035.

Financing History

Since inception, we have financed our operations through private placements of our redeemable convertible preferred stock with several investors, including funds affiliated with Vivo Capital, Fidelity Biosciences and Sofinnova Ventures, providing total gross proceeds of $31.5 million.

Risks Associated with Our Business

Our business is subject to a number of risks of which you should be aware before deciding to invest in our common stock. These risks are discussed more fully in the "Risk Factors" section of this prospectus. These risks include the following:

- We have incurred significant losses since our inception. We expect to incur losses over the next several years and may never achieve or maintain profitability.
- Even if this offering is successful, we will need substantial additional funding to meet our financial obligations and to pursue our business objectives. If we are unable to raise capital when needed, we could be forced to curtail our planned operations and the pursuit of our growth strategy.
- We are early in our development efforts and have only one drug candidate, A-101 for the treatment of SK, for which we have conducted clinical trials. If we are unable to successfully develop, receive regulatory approval for and commercialize A-101 for the treatment of SK o any other drug candidates, or experience significant delays in doing so, our business will be harmed.
- We expect third-party payors generally will not cover the use of our drug candidates for the treatment of SK and, accordingly, our succes will be dependent upon the willingness of patients to pay out of pocket for procedures using these drug candidates.
- Our future success depends on our ability to retain key executives and to attract, retain and motivate qualified personnel.
- If we are unable to establish sales, marketing and distribution capabilities for A-101 or any other drug candidate that may receive regulatory approval, we may not be successful in commercializing those drug candidates if and when they are approved.

- If we are unable to obtain and maintain patent protection for our drug candidates, or if the scope of the patent protection obtained is not sufficiently broad, our competitors could develop and commercialize technology and drugs similar or identical to ours, and our ability to successfully commercialize our technology and drug candidates may be impaired.

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

Corporate Information

We were incorporated under the laws of the State of Delaware in July 2012. Our principal executive offices are located at 101 Lindenwood Drive, Suite 400, Malvern, PA 19355 and our telephone number is (484) 324-7933. Our website address is *www.aclaristx.com*. The information contained on our website is not incorporated by reference into this prospectus, and you should not consider any information contained on, or that can be accessed through, our website as part of this prospectus or in deciding whether to purchase our common stock.

We have proprietary rights to a number of trademarks used in this prospectus which are important to our business, including the Aclaris Therapeutics trademark. Solely for convenience, the trademarks and trade names in this prospectus are referred to without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. All other trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners.

Implications of Being an Emerging Growth Company

We qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. An emerging growth company may take advantage of relief from some of the reporting requirements and other burdens that are otherwise applicable generally to public companies. These provisions include:

- presentation of only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure in this prospectus;

- exemption from the auditor attestation requirement on the effectiveness of our internal control over financial reporting;

- reduced disclosure about our executive compensation arrangements in our periodic reports, proxy statements and registration statements; and

- no requirements for non-binding advisory votes on executive compensation or golden parachute arrangements.

We may take advantage of these provisions for up to five years or such earlier time that we no longer qualify as an emerging growth company. We would cease to be an emerging growth company if we have more than $1.0 billion in annual revenue, have more than $700 million in market value of our capital stock held by non-affiliates or issue more than $1.0 billion of non-convertible debt over a three-year period. We may choose to take advantage of some but not all of these reduced burdens. For example, we have taken advantage of the reduced reporting requirements with respect to disclosure regarding our executive compensation arrangements, have presented only two years of audited financial statements and only two years of related "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure in this prospectus, and have taken advantage of the exemption from auditor attestation on the effectiveness of our internal control over financial reporting. To the extent that we take advantage of these reduced burdens, the information that we provide stockholders may be different than you might obtain from other public companies in which you hold equity interests.

In addition, under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies

THE OFFERING

Common stock offered by us	shares
Common stock to be outstanding immediately after this offering	shares
Option to purchase additional shares	We have granted the underwriters an option for a period of 30 days from the date of this prospectus to purchase up to additional shares of our common stock.
Use of proceeds	We estimate that the net proceeds to us from this offering, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, will be $ million, assuming the shares are offered at $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus. We anticipate that the net proceeds from this offering, together with our existing cash and cash equivalents, will be used to complete our three planned Phase 3 clinical trials and seek regulatory approval of A-101 for the treatment of SK; to fund continued research and development of A-101 for the treatment of common warts, including completion of our planned Phase 2 clinical trials for this indication; and to fund other research and development activities, including development of A-102 for the treatment of SK and common warts, as well as for working capital and other general corporate purposes, including to pursue our strategy to in-license or acquire additional drug candidates. See "Use of Proceeds" for additional information.
Risk factors	You should read the "Risk Factors" section of this prospectus for a discussion of factors to consider carefully before deciding to inves in shares of our common stock.
Proposed NASDAQ Global Market symbol	"ACRS."

The number of shares of our common stock that will be outstanding after this offering is based on 36,761,057 shares of common stock outstanding as of June 30, 2015, after giving effect to the conversion of shares of our redeemable convertible preferred stock outstanding as of June 30, 2015 into an aggregate of 27,341,057 shares of our common stock upon the closing of this offering, and excludes:

- 1,725,961 shares of our common stock issuable upon the exercise of stock options outstanding under our 2012 equity compensation pla as of June 30, 2015, at a weighted average exercise price of $0.35 per share; and
- shares of our common stock reserved for future issuance under our 2015 equity incentive plan, which will become effective upon the closing of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this plan.

Except as otherwise indicated herein, all information in this prospectus, including the number of shares that will be outstanding after this offering, assumes or gives effect to:

- a -for- reverse stock split of our common stock expected to be completed prior to the closing of this offering;
- no exercise of the outstanding options described above; and
- no exercise of the underwriters' option to purchase additional shares of common stock in this offering.

SUMMARY FINANCIAL DATA

You should read the following summary financial data together with our financial statements and the related notes thereto included elsewhere in this prospectus and the "Selected Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections of this prospectus. We have derived the statement of operations data for the years ended December 31, 2013 and 2014 from our audited financial statements included elsewhere in this prospectus. The statement of operations data for the six months ended June 30, 2014 and 2015 and the balance sheet data as of June 30, 2015 have been derived from our unaudited interim financial statements included elsewhere in this prospectus and have been prepared on the same basis as the audited financial statements. In the opinion of management, the unaudited data reflects all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the financial information in those statements. Our historical results are not necessarily indicative of the results that should be expected in the future and the results for the six months ended June 30, 2015 are not necessarily indicative of the results to be expected for the full year ending December 31, 2015 or any other future period.

	Year Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
	(in thousands, except per share data)			
Statement of Operations Data:				
Revenue	$ —	$ —	$ —	$ —
Operating expenses:				
Research and development	3,488	6,507	2,356	3,530
General and administrative	1,769	2,026	913	1,695
Total operating expenses	5,257	8,533	3,269	5,225
Loss from operations	(5,257)	(8,533)	(3,269)	(5,225)
Interest income	21	16	6	8
Net loss	(5,236)	(8,517)	(3,263)	(5,217)
Accretion of redeemable convertible preferred stock to redemption value	(1,740)	(2,054)	(914)	(1,333)
Net loss attributable to common stockholders	$ (6,976)	$ (10,571)	$ (4,177)	$ (6,550)
Net loss per share attributable to common stockholders, basic and diluted	$ (1.87)	$ (1.78)	$ (0.72)	$ (0.88)
Weighted average common shares outstanding, basic and diluted	3,731	5,934	5,780	7,435
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)		$ (0.30)		$ (0.15)
Pro forma weighted average common shares outstanding, basic and diluted (unaudited)		28,468		34,776

The following table presents our summary balance sheet data as of June 30, 2015:

- § on an actual basis;
- § on a pro forma basis to give effect to the conversion of all outstanding shares of our redeemable convertible preferred stock into an aggregate of 27,341,057 shares of our common stock, which will occur upon the closing of this offering; and
- § on a pro forma as adjusted basis to give further effect to our sale of shares of common stock in this offering at an assumed initi public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	As of June 30, 2015		
	Actual	Pro Forma	Pro Forma As Adjusted
		(in thousands)	
Balance Sheet Data:			
Cash and cash equivalents	$ 9,853	$ 9,853	$
Working capital	9,020	9,020	
Total assets	12,223	12,223	
Redeemable convertible preferred stock	38,010	—	
Total stockholders' equity (deficit)	(27,214)	10,796	

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth o the cover page of this prospectus, would increase or decrease the pro forma as adjusted amount of each of cash and cash equivalents, working capita total assets and total stockholders' equity by $ million, assuming that the number of shares offered by us, as set forth on the cover page of th prospectus, remains the same and after deducting the estimated underwriting discounts and commissions. Each increase or decrease of 1.0 million in the number of shares we are offering would increase or decrease the pro forma as adjusted amount of each of cash and cash equivalents, working capital, total assets and total stockholders' equity by $ million, assuming no change in the assumed initial public offering price per share and after deducting the estimated underwriting discounts and commissions. This pro forma as adjusted information is illustrative only and will depend on th actual initial public offering price and other terms of this offering determined at pricing.

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before you invest in our common stock, you should carefully consider the following risks, as well as general economic and business risks, and all of the other information contained in this prospectus. Any of the following risks could have a material adverse effect on our business, operating results and financial condition and cause the trading price of our common stock to decline, which would cause you to lose all or part of your investment. When determining whether to invest, you should also refer to the other information contained in this prospectus, including our financial statements and the related notes thereto.

Risks Related to Our Financial Position and Capital Needs

We have incurred significant losses since our inception. We expect to incur losses over the next several years and may never achieve or maintain profitability.

We are a clinical-stage specialty pharmaceutical company with limited operating history. Since inception, we have incurred significant net losses. We incurred net losses of $5.2 million and $8.5 million for the years ended December 31, 2013 and 2014, respectively, and $5.2 million for the six months ended June 30, 2015. As of June 30, 2015, we had an accumulated deficit of $27.2 million. We have financed our operations to date with $31.5 million in gross proceeds raised in private placements of redeemable convertible preferred stock. We have no products approved for commercialization and have never generated any revenue.

We have devoted substantially all of our financial resources and efforts to development of our lead drug candidate, A-101 for the treatment of SK, including preclinical studies and clinical trials. We have completed three Phase 2 clinical trials of A-101 in patients with SK. In addition to developing A-101 for the treatment of SK, we are also developing A-101 as a prescription treatment for common warts as well as A-102, a gel dosage form of hydrogen peroxide, as a prescription treatment for SK and common warts. Therefore, we expect to continue to incur significant expenses and operating losses over the next several years. Our net losses may fluctuate significantly from quarter to quarter and year to year. We anticipate that our expenses will increase substantially as we:

- continue our ongoing clinical trials evaluating A-101 for the treatment of SK;
- pursue regulatory approvals for A-101 for the treatment of SK and for any other drug candidates that successfully complete clinical trials;
- initiate clinical trials of our other drug candidates, including A-101 for the treatment of common warts and A-102 for the treatment of SK and common warts;
- seek to discover and develop additional drug candidates;
- ultimately establish a commercialization infrastructure and scale up external manufacturing and distribution capabilities to commercialize any drug candidates for which we may obtain regulatory approval;
- seek to in-license or acquire additional drug candidates for other dermatological conditions;
- adapt our regulatory compliance efforts to incorporate requirements applicable to marketed drugs;
- maintain, expand and protect our intellectual property portfolio;
- hire additional clinical, manufacturing and scientific personnel;
- add operational, financial and management information systems and personnel, including personnel to support our drug development and planned future commercialization efforts; and
- incur additional legal, accounting and other expenses in operating as a public company.

To become and remain profitable, we must succeed in developing and eventually commercializing drug candidates that generate significant revenue. This will require us to be successful in a range of challenging activities, including completing preclinical testing and clinical trials of our drug candidates, obtaining

regulatory approval, and manufacturing, marketing and selling any drug candidates for which we may obtain regulatory approval, as well as discovering and developing additional drug candidates. We are only in the preliminary stages of most of these activities. We may never succeed in these activities and, even if we do, may never generate revenue that is significant enough to achieve profitability.

In cases where we are successful in obtaining regulatory approval to market one or more of our drug candidates, our revenue will be dependent, in part, upon the size of the markets in the territories for which we gain regulatory approval, the accepted price for the product, the ability to obtain coverage and reimbursement, and whether we own the commercial rights for that territory. If the number of our addressable patients is not as significant as we estimate, the indication approved by regulatory authorities is narrower than we expect, or the treatment population is narrowed by competition, physician choice or treatment guidelines, we may not generate significant revenue from sales of such drug products, even if approved.

Because of the numerous risks and uncertainties associated with drug development, we are unable to accurately predict the timing or amount of expenses or when, or if, we will be able to achieve profitability. If we are required by regulatory authorities to perform studies in addition to those expected, or if there are any delays in the initiation and completion of our clinical trials or the development of any of our drug candidates, our expenses could increase.

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

Even if this offering is successful, we will need substantial additional funding to meet our financial obligations and to pursue our business objectives. If we are unable to raise capital when needed, we could be forced to curtail our planned operations and the pursuit of our growth strategy.

Identifying potential drug candidates and conducting preclinical testing and clinical trials is a time-consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain regulatory approval and achieve product sales. We expect to continue to incur significant expenses and operating losses over the next several years as we commence our Phase 3 clinical trials of A-101 in patients with SK, seek marketing approval for A-101 for the treatment of SK and advance our other drug candidates. In addition, our drug candidates, if approved, may not achieve commercial success. Our revenue, if any, will be derived from sales of drugs that we do not expect to be commercially available for a number of years, if at all. If we obtain marketing approval for A-101 for the treatment of SK or any other drug candidates that we develop, we expect to incur significant commercialization expenses related to product sales, marketing, distribution and manufacturing. We also expect an increase in our expenses associated with creating additional infrastructure to support operations as a public company.

As of June 30, 2015, we had cash and cash equivalents of $9.9 million. We believe that the anticipated net proceeds from this offering, together with our existing cash and cash equivalents, will enable us to fund our operating expenses and capital expenditure requirements for at least the next months. This estimate is based on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we expect. Changes may occur beyond our control that would cause us to consume our available capital before that time, including changes in and progress of our development activities, acquisitions of additional drug candidates, and changes in regulation. Our future capital requirements will depend on many factors, including:

- the progress and results of the three Phase 3 clinical trials of A-101 in patients with SK that we plan to commence in the second half of 2015;

- the progress and results of the toxicology studies and Phase 2 clinical trials evaluating A-101 as a potential treatment for common warts;
- the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials for our other drug candidates, including A-102;
- the extent to which we in-license or acquire other drug candidates and technologies;
- the number and development requirements of other drug candidates that we may pursue;
- the costs, timing and outcome of regulatory review of our drug candidates;
- the costs and timing of future commercialization activities, including drug manufacturing, marketing, sales and distribution, for any of our drug candidates for which we receive marketing approval;
- the revenue, if any, received from commercial sales of our drug candidates for which we receive marketing approval;
- our ability to establish collaborations to commercialize A-101 outside the United States; and
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims.

We expect that we will require additional capital to commercialize A-101 for the treatment of SK. If we receive regulatory approval for A-101 for this indication, we expect to incur significant commercialization expenses related to product manufacturing, sales, marketing and distribution, depending on where we choose to commercialize. Additional funds may not be available on a timely basis, on favorable terms, or at all, and such funds, if raised, may not be sufficient to enable us to continue to implement our long-term business strategy. If we are unable to raise sufficient additional capital, we could be forced to curtail our planned operations and the pursuit of our growth strategy.

Raising additional capital may cause dilution to our stockholders, including purchasers of common stock in this offering, restrict our operations or require us to relinquish rights to our technologies or drug candidates.

Until such time, if ever, as we can generate substantial revenue, we may finance our cash needs through a combination of equity offerings, debt financings and license and collaboration agreements. We do not currently have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may be required to relinquish valuable rights to our technologies, future revenue streams or drug candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our drug development or future commercialization efforts or grant rights to develop and market drug candidates that we would otherwise prefer to develop and market ourselves.

We have a limited operating history and no history of commercializing drugs, which may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

We commenced operations in 2012, and our operations to date have been largely focused on raising capital and developing A-101 for the treatment of SK, including undertaking preclinical studies and conducting clinical trials. A-101 for the treatment of SK is our only drug candidate for which we have conducted clinical trials. We have not yet demonstrated our ability to successfully complete later-stage clinical trials, obtain regulatory approvals, manufacture a drug on a commercial scale, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful commercialization. Consequently, any predictions you make about our future success or viability may not be as accurate as they

could be if we had a longer operating history or a history of successfully developing and commercializing drugs.

We may encounter unforeseen expenses, difficulties, complications, delays and other known or unknown factors in achieving our business objectives. We will need to transition at some point from a company with a development focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

Risks Related to the Development of Our Drug Candidates

We are early in our development efforts and have only one drug candidate, A-101 for the treatment of SK, for which we have conducted clinical trials. If we are unable to successfully develop, receive regulatory approval for and commercialize A-101 for the treatment of SK or any other drug candidates, or experience significant delays in doing so, our business will be harmed.

We currently have no drug products that are approved for commercial sale. We are early in our development efforts and have only one drug candidate, A-101 for the treatment of SK, for which we have conducted Phase 2 clinical trials. We have not completed the development of any drug candidates and we may never be able to develop marketable drugs. We have invested substantially all of our efforts and financial resources in the development of A-101 for the treatment of SK, the development of our other drug candidates and the identification of potential drug candidates. Our ability to generate revenue from our drug candidates, which we do not expect will occur for a number of years, if ever, will depend heavily on their successful development, regulatory approval and eventual commercialization of these drug candidates. The success of A-101 or any other drug candidates that we develop will depend on several factors, including:

- successful completion of preclinical studies and our clinical trials;
- successful development of our manufacturing processes for any of our drug candidates that receive regulatory approval;
- receipt of timely marketing approvals from applicable regulatory authorities;
- launching commercial sales of drugs, if approved;
- acceptance of our drugs, if approved, by patients, the medical community and third-party payors, and willingness of patients to pay out of pocket for procedures using our drug candidates for the treatment of SK;
- our success in educating physicians and patients about the benefits, administration and use of A-101 or any other drug candidates, if approved;
- the prevalence and severity of adverse events experienced with A-101 or our other drug candidates;
- the availability, perceived advantages, cost, safety and efficacy of alternative treatments for SK;
- obtaining and maintaining patent, trademark and trade secret protection and regulatory exclusivity for our drug candidates and otherwise protecting our rights in our intellectual property portfolio;
- maintaining compliance with regulatory requirements, including current good manufacturing practices, or cGMPs;
- competing effectively with other procedures; and
- maintaining a continued acceptable safety, tolerability and efficacy profile of the drugs following approval.

Whether regulatory approval will be granted is unpredictable and depends upon numerous factors, including the substantial discretion of the regulatory authorities. Our drug candidates' success in clinical trials will not guarantee regulatory approval. If, following submission, our NDA for A-101 for the treatment of SK or any other drug candidate is not accepted for substantive review, or even if it is accepted for substantive review, the FDA or other comparable foreign regulatory authorities may require that we conduct additional studies or clinical trials, provide additional data, take additional manufacturing steps, or require other conditions before they will reconsider or approve our application. If the FDA or other comparable foreign

regulatory authorities require additional studies, clinical trials or data, we would incur increased costs and delays in the marketing approval process, which may require us to expend more resources than we have available. In addition, the FDA or other comparable foreign regulatory authorities may not consider sufficient any additional required studies, clinical trials, data or information that we perform and complete or generate, or we may decide to abandon the program.

It is possible that A-101 or any of our other drug candidates will never obtain regulatory approval, even if we expend substantial time and resources seeking such approval. If we do not achieve one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize our drug candidates, which would harm our business.

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

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

We have not completed all clinical trials required for the approval of any of our drug candidates. Based on the feedback from our recent meeting with the FDA in May 2015, we plan to commence three Phase 3 clinical trials of A-101 in patients with SK lesions on the face, trunk and extremities in the second half of 2015. We have also received written guidance from the EMA regarding the design of our Phase 3 clinical trials for A-101 for the treatment of SK. The development of our other drug candidates is less advanced and we have not commenced any clinical trials. We cannot assure you that any Phase 3 or other clinical trials that we may conduct will demonstrate consistent or adequate efficacy and safety to obtain regulatory approval to market our drug candidates.

We may experience numerous unforeseen events during or as a result of clinical trials that could delay or prevent our ability to receive marketing approval or commercialize our drug candidates, including:

- § regulators or institutional review boards may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- § we may experience delays in reaching, or fail to reach, agreement on acceptable clinical trial contracts or clinical trial protocols with prospective trial sites or prospective contract research organizations, or CROs, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- § clinical trials of our drug candidates may produce negative or inconclusive results, including failure to demonstrate statistical significance, and we may decide, or regulators may require us, to conduct additional clinical trials or abandon drug development programs;
- § the number of patients required for clinical trials of our drug candidates may be larger than we anticipate, enrollment in these clinical trials may be slower than we anticipate or participants may drop out of these clinical trials or fail to return for post-treatment follow-up at a higher rate than we anticipate;

- our drug candidates may have undesirable side effects or other unexpected characteristics, causing us or our investigators, regulators or institutional review boards to suspend or terminate the trials;
- our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- regulators or institutional review boards may require that we or our investigators suspend or terminate clinical development for various reasons, including noncompliance with regulatory requirements or a finding that the participants are being exposed to unacceptable health risks;
- the cost of clinical trials of our drug candidates may be greater than we anticipate; and
- the supply or quality of our drug candidates or other materials necessary to conduct clinical trials of our drug candidates may be insufficient or inadequate.

We could also encounter delays if a clinical trial is suspended or terminated by us, by the institutional review boards of the institutions in which such trials are being conducted, by the data safety monitoring board for such trial or by the FDA or other regulatory authorities. Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. If we experience delays in the completion of, or termination of, any clinical trial of our drug candidates, the commercial prospects of our drug candidates will be harmed, and our ability to generate product revenues from any of these drug candidates will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our drug candidate development and approval process and jeopardize our ability to commence product sales and generate revenues. Any of these occurrences may harm our business, financial condition and prospects significantly. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our drug candidates. If we are required to conduct additional clinical trials or other testing of our drug candidates beyond those that we currently contemplate, if we are unable to successfully complete clinical trials of our drug candidates or other testing, if the results of these trials or tests are not favorable or if there are safety concerns, we may:

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

Our drug development costs will also increase if we experience delays in testing or marketing approvals. We do not know whether any of our preclinical studies or clinical trials will begin as planned, will need to be restructured or will be completed on schedule, or at all. Significant preclinical study or clinical trial delays also could shorten any periods during which we may have the exclusive right to commercialize our drug candidates or allow our competitors to bring drugs to market before we do and impair our ability to successfully commercialize our drug candidates.

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

Successful and timely completion of clinical trials will require that we enroll a sufficient number of patients. Patient enrollment, a significant factor in the timing of clinical trials, is affected by many factors including the size and nature of the patient population. Trials may be subject to delays as a result of patient enrollment taking longer than anticipated or patient withdrawal. We may not be able to initiate or continue clinical trials for our drug candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA or similar regulatory authorities outside the United States. We cannot predict how successful we will be at enrolling subjects in future clinical trials. Subject enrollment is affected by other factors including:

- § the eligibility criteria for the trial in question;
- § the perceived risks and benefits of the drug candidate in the trial;
- § the availability of drugs approved to treat the skin disease in the trial;
- § the efforts to facilitate timely enrollment in clinical trials;
- § the patient referral practices of physicians;
- § the ability to monitor patients adequately during and after treatment; and
- § the proximity and availability of clinical trial sites for prospective patients.

Our inability to enroll a sufficient number of patients for clinical trials would result in significant delays and could require us or them to abandon one or more clinical trials altogether. Enrollment delays in these clinical trials may result in increased development costs for our drug candidates, which would cause the value of our company to decline and limit our ability to obtain additional financing. Furthermore, we rely on and expect to continue to rely on CROs and clinical trial sites to ensure the proper and timely conduct of our clinical trials and we will have limited influence over their performance.

Our clinical trials may fail to demonstrate the safety and efficacy of our drug candidates, or serious adverse or unacceptable side effects may be identified during the development of our drug candidates, which could prevent or delay regulatory approval and commercialization, increase our costs or necessitate the abandonment or limitation of the development of some of our drug candidates.

Before obtaining regulatory approvals for the commercial sale of our drug candidates, we must demonstrate through lengthy, complex and expensive preclinical testing and clinical trials that our drug candidates are both safe and effective for use in each target indication, and failures can occur at any stage of testing. Clinical trials often fail to demonstrate safety and efficacy of the drug candidate studied for the target indication.

If our drug candidates are associated with side effects in clinical trials or have characteristics that are unexpected, we may need to abandon their development or limit development to more narrow uses in which the side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective. The FDA or an institutional review board may also require that we suspend, discontinue, or limit our clinical trials based on safety information. Such findings could further result in regulatory authorities failing to provide marketing authorization for our drug candidates. Many drug candidates that initially showed promise in early stage testing have later been found to cause side effects that prevented further development of the drug candidate.

Additionally, if one or more of our drug candidates receives marketing approval, and we or others identify undesirable side effects caused by such drugs, a number of potentially significant negative consequences could result, including:

- § regulatory authorities may withdraw approvals of such product;
- § regulatory authorities may require additional warnings on the labels;

- we may be required to create a medication guide outlining the risks of such side effects for distribution to patients;
- we could be sued and held liable for harm caused to patients; and
- our reputation and physician or patient acceptance of our products may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the particular drug candidate, if approved, and could significantly harm our business, results of operations and prospects.

Changes in methods of drug candidate manufacturing or formulation may result in additional costs or delay.

As drug candidates are developed through preclinical studies to late-stage clinical trials towards approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods and formulation, are altered along the way in an effort to optimize processes and results. Such changes carry the risk that they will not achieve these intended objectives. Any of these changes could cause our drug candidates to perform differently and affect the results of planned clinical trials or other future clinical trials conducted with the altered materials. For example, if we need to manufacture A-102, we may experience difficulties manufacturing a stable gel dosage form as opposed to a topical solution. Such changes may also require additional testing, FDA notification or FDA approval. This could delay completion of clinical trials, require the conduct of bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay approval of our drug candidates and jeopardize our ability to commence sales and generate revenue.

We may not be successful in our efforts to increase our pipeline of drug candidates, including by in-licensing or acquiring additional drug candidates for other dermatological conditions.

A key element of our strategy is to build and expand our pipeline of drug candidates. In addition, we intend to in-license or acquire additional drug candidates for other dermatological conditions to build a fully integrated dermatology company. We may not be able to identify or develop drug candidates that are safe, tolerable and effective. Even if we are successful in continuing to build our pipeline, the potential drug candidates that we identify, in-license or acquire may not be suitable for clinical development, including as a result of being shown to have harmful side effects or other characteristics that indicate that they are unlikely to be drugs that will receive marketing approval and achieve market acceptance.

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

Because we have limited financial and management resources, we focus on development programs and drug candidates that we identify for specific indications. As such, we are currently primarily focused on the development of A-101 for the treatment of SK. As a result, we may forego or delay pursuit of opportunities with other drug candidates or for other indications that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial drugs or profitable market opportunities. Our spending on current and future development programs and drug candidates for specific indications may not yield any commercially viable drugs. If we do not accurately evaluate the commercial potential or target market for a particular drug candidate, we may relinquish valuable rights to that drug candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such drug candidate.

Risks Related to the Commercialization of Our Drug Candidates

Even if any of our drug candidates receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.

If any of our drug candidates receives marketing approval, it may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors and others in the medical community. If our drug candidates do not achieve an adequate level of acceptance, we may not generate significant revenue and we may not become profitable. The degree of market acceptance of our drug candidates, if approved for commercial sale, will depend on a number of factors, including:

- § the efficacy, safety and potential advantages compared to alternative treatments;
- § our ability to offer our drugs for sale at competitive prices;
- § the ability of dermatologists to charge a premium for A-101 and our other drug candidates;
- § the convenience and ease of administration compared to alternative treatments;
- § the willingness of the target patient population to try new treatments and of physicians to prescribe these treatments;
- § our ability to hire and retain a sales force in the United States;
- § the strength of marketing and distribution support;
- § the willingness of patients to pay out of pocket for procedures using A-101 for the treatment of SK;
- § the availability of third-party coverage and adequate reimbursement;
- § the prevalence and severity of any side effects; and
- § any restrictions on the use of our drugs together with other medications.

If we are unable to establish sales, marketing and distribution capabilities for A-101 or any other drug candidate that may receive regulatory approval, we may not be successful in commercializing those drug candidates if and when they are approved.

We do not have sales or marketing infrastructure. To achieve commercial success for A-101 and any other drug candidate for which we may obtain marketing approval, we will need to establish a sales and marketing organization. In the future, we expect to build a focused sales and marketing infrastructure to market or co-promote some of our drug candidates in the United States, if and when they are approved. There are risks involved with establishing our own sales, marketing and distribution capabilities. For example, recruiting and training a sales force is expensive and time consuming and could delay any drug launch. If the commercial launch of a drug candidate for which we recruit a sales force and establish marketing capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel.

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

- § our inability to recruit, train and retain adequate numbers of effective sales and marketing personnel;
- § the inability of sales personnel to obtain access to physicians or persuade adequate numbers of physicians to prescribe any future drugs;
- § the lack of complementary drugs to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines; and
- § unforeseen costs and expenses associated with creating an independent sales and marketing organization.

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

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

The development and commercialization of new drugs is highly competitive. We face competition with respect to our current drug candidates, and will face competition with respect to any drug candidates that we may seek to develop or commercialize in the future, from many different sources, including major pharmaceutical and specialty pharmaceutical companies, academic institutions and governmental agencies and public and private research institutions.

With respect to A-101 for the treatment of SK, we are aware of one biopharmaceutical company developing a combination drug candidate that targets SK, and another company that currently markets a line of cosmetic products targeting skin conditions, including SK.

With respect to A-101 for the treatment of common warts, we are aware of one company developing a prescription treatment for common warts and another company that intends to initiate a Phase 2 clinical trial of a gel as a prescription treatment for common warts. In addition, other drugs have been used off-label as treatments for common warts. We could also encounter competition from over-the-counter treatments for common warts.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize drugs that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than A-101 or any other drug that we may develop. Our competitors also may obtain FDA or other regulatory approval for their drugs more rapidly than we may obtain approval for our drug, which could result in our competitors establishing a strong market position before we are able to enter the market.

Many of the companies against which we are competing, or against which we may compete in the future, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved drugs than we do. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or that may be necessary for, our programs.

We expect third-party payors generally will not cover the use of our drug candidates for the treatment of SK and, accordingly, our success will be dependent upon the willingness of patients to pay out of pocket for procedures using these drug candidates.

We do not expect third-party payors to cover and reimburse providers who use A-101 or A-102 on patients for the treatment of SK. Payors generally do not reimburse the provider for the product used to remove non-malignant lesions, including SK. In addition, they do not generally reimburse providers for the procedure removing such lesions, since the procedure is considered to be cosmetic in nature, unless there

is a medical need to remove the lesion such as confirming a diagnosis with a biopsy or treating SK that are causing the patient physical discomfort. We anticipate that in some cases, our drug candidates will be used to remove SK lesions that are inflamed and causing the patient discomfort. Any reduction in reimbursement for the procedure to remove inflamed SK may result in a higher percentage of patients needing to pay out of pocket for treatment with our drug candidates. Accordingly, the commercial success of A-101 and A-102 depends on the extent to which patients will be willing to pay out of pocket for the in-office procedure using these drug candidates.

The success of our drug candidates for the treatment of common warts will depend significantly on continued coverage and adequate reimbursement or the willingness of patients to pay for these procedures.

In the case of A-101 and A-102 for the treatment of common warts, we believe our success depends on continued coverage and adequate reimbursement for in-office wart treatment procedures or, in the absence of coverage and adequate reimbursement, on the extent to which patients will be willing to pay out of pocket for the in-office procedures that include our drug candidates.

Third-party payors determine which medical procedures they will cover and establish reimbursement levels. Even if a third-party payor covers a particular procedure, the resulting reimbursement payment rates may not be adequate. Patients who are treated in-office for a medical condition generally rely on third-party payors to reimburse all or part of the costs associated with the procedure and may be unwilling to undergo such procedures for the removal of warts in the absence of such coverage and reimbursement. Physicians may be unlikely to offer procedures for the treatment of warts if they are not covered by insurance and may be unlikely to purchase and use our product for warts unless coverage is provided and reimbursement is adequate.

Reimbursement by a third-party payor may depend upon a number of factors, including the third-party payor's determination that a procedure is neither cosmetic, experimental, nor investigational; safe, effective, and medically necessary; appropriate for the specific patient; cost-effective; supported by peer-reviewed medical journals; and included in clinical practice guidelines.

Further, from time to time, typically on an annual basis, payment rates are updated and revised by third-party payors. To the extent that the procedures using our drug candidates, if approved, are covered, the cost of our products are generally recovered by the healthcare provider as part of the payment for performing a procedure and not separately reimbursed. Accordingly, these updates could impact the demand for our drug candidates, if approved. An example of payment updates is the Medicare program updates to physician payments, which is done on an annual basis using a prescribed statutory formula. In the past, when the application of the formula resulted in lower payment, Congress has passed interim legislation to prevent the reductions. Most recently, the Protecting Access to Medicare Act of 2014, signed into law in April 2014, provided for a 0.5% update from 2013 payment rates under the Medicare Physician Fee Schedule through 2014 and a 0% update from January 1 until March 31, 2015. If Congress fails to intervene to prevent the negative update factor in future years, the resulting decrease in payment may adversely affect our revenue and results of operations. In addition, the Medicare physician fee schedule has been adapted by some private payors into their plan-specific physician payment schedule. We cannot predict how pending and future healthcare legislation will impact our business, and any changes in coverage and reimbursement that further restricts coverage of our drug candidates or lowers reimbursement for procedures using our products could harm our business.

Foreign governments also have their own healthcare reimbursement systems, which vary significantly by country and region, and we cannot be sure that coverage and adequate reimbursement will be made available with respect to the treatments in which our drugs are used under any foreign reimbursement system.

There can be no assurance that our drug candidates for the treatment of common warts, if they are approved for sale in the United States or in other countries, will be considered medically reasonable and

necessary, that they will be considered cost-effective by third-party payors, that coverage or an adequate level of reimbursement will be available, or that reimbursement policies and practices in the United States and in foreign countries where our products are sold will not adversely affect our ability to sell our drugs candidates profitably if they are approved for sale.

Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any drugs that we may develop.

We face an inherent risk of product liability exposure related to the testing of our drug candidates in human clinical trials and will face an even greater risk if we commercially sell any drugs that we may develop. If we cannot successfully defend ourselves against claims that our drug candidates or drugs caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- § decreased demand for any drug candidates or drugs that we may develop;
- § injury to our reputation and significant negative media attention;
- § withdrawal of clinical trial participants;
- § significant costs to defend the related litigation;
- § substantial monetary awards paid to trial participants or patients;
- § loss of revenue;
- § reduced resources of our management to pursue our business strategy; and
- § the inability to commercialize any drugs that we may develop.

We currently hold $5.0 million in product liability insurance coverage in the aggregate, with a per incident limit of $5.0 million, which may not be adequate to cover all liabilities that we may incur. We may need to increase our insurance coverage as we expand our clinical trials or if we commence commercialization of our drug candidates. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

Our business and operations would suffer in the event of computer system failures, cyber-attacks or a deficiency in our cyber-security.

Despite the implementation of security measures, our internal computer systems, and those of third parties on which we rely, are vulnerable to damage from computer viruses, malware, natural disasters, terrorism, war, telecommunication and electrical failures, cyber-attacks or cyber-intrusions over the Internet, attachments to emails, persons inside our organization, or persons with access to systems inside our organization. The risk of a security breach or disruption, particularly through cyber-attacks or cyber intrusion, including by computer hackers, foreign governments, and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. If such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our drug development programs. For example, the loss of clinical trial data from completed or ongoing or planned clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach was to result in a loss of or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur material legal claims and liability, damage to our reputation, and the further development of our drug candidates could be delayed.

Risks Related to Our Dependence on Third Parties

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

We have engaged a CRO to conduct our planned clinical trials of A-101 and expect to engage a CRO to conduct clinical trails of our other drug candidates that may progress to clinical development. We expect to continue to rely on third parties, such as clinical data management organizations, medical institutions and

clinical investigators, to conduct those clinical trials. If any of our relationships with these third parties terminate, we may not be able to timely enter into arrangements with alternative third parties or to do so on commercially reasonable terms, if at all. In addition, any third parties conducting our clinical trials will not be our employees, and except for remedies available to us under our agreements with such third parties, we cannot control whether or not they devote sufficient time and resources to our clinical programs. If these third parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols, regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our drug candidates. Consequently, our results of operations and the commercial prospects for our drug candidates would be harmed, our costs could increase substantially and our ability to generate revenue could be delayed significantly.

Switching or adding CROs involves substantial cost and requires management time and focus. In addition, there is a natural transition period when a new CRO commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines. Though we intend to carefully manage our relationships with our CROs, there can be no assurance that we will not encounter challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition and prospects.

We rely on these parties for execution of our preclinical studies and clinical trials, and generally do not control their activities. Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our responsibilities. For example, we will remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with standards, commonly referred to as good clinical practices, or GCPs, for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. We also are required to register ongoing clinical trials and post the results of completed clinical trials on a government-sponsored database, ClinicalTrials.gov, within specified timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions. If we or any of our CROs fail to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA, EMA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials complies with GCP regulations. In addition, our clinical trials must be conducted with product produced under cGMP regulations. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process.

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

We contract with third parties for the manufacture of A-101 for preclinical and clinical testing and expect to continue to do so for commercialization. This reliance on third parties increases the risk that we will not have sufficient quantities of A-101 or such quantities at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts.

We do not have any manufacturing facilities or personnel. We currently rely, and expect to continue to rely, on third parties for the manufacture of A-101 for preclinical and clinical testing, as well as for commercial manufacture if any of our drug candidates, including A-101, receive marketing approval. For example, we have entered into an exclusive, ten-year, automatically renewable supply agreement with PeroxyChem LLC, or PeroxyChem, a manufacturer of hydrogen peroxide, to provide the active pharmaceutical ingredient that

can be used in A-101 for the treatment of SK. This reliance on third parties increases the risk that we will not have sufficient quantities of A-101 or such quantities at an acceptable cost or quality, which could delay, prevent or impair our ability to timely conduct our clinical trials or our other development or commercialization efforts.

We also expect to rely on third-party manufacturers or third-party collaborators for the manufacture of commercial supply of A-101 or any other drug candidates for which we obtain marketing approval. The facilities used by our contract manufacturers to manufacture our drug candidates must be approved by the FDA or other regulatory authorities pursuant to inspections that will be conducted after we submit our NDA or comparable marketing application to the FDA or other regulatory authority. We do not have control over a supplier's or manufacturer's compliance with laws, regulations and applicable cGMP standards and other laws and regulations, such as those related to environmental health and safety matters. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or others, they will not be able to secure and maintain regulatory approval for their manufacturing facilities. In addition, we have no control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our drug candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our drug candidates, if approved.

We may be unable to establish any agreements with future third-party manufacturers or to do so on acceptable terms. Even if we are able to establish agreements with third-party manufacturers, reliance on third-party manufacturers entails additional risks, including:

- reliance on the third party for regulatory compliance and quality assurance;
- the possible breach of the manufacturing agreement by the third party;
- the possible misappropriation of our proprietary information, including our trade secrets and know-how;
- the possible increase in costs by PeroxyChem for the active pharmaceutical ingredient in A-101; and
- the possible termination or nonrenewal of the agreement by the third party at a time that is costly or inconvenient for us.

Third-party manufacturers may not be able to comply with cGMP regulations or similar regulatory requirements outside the United States. Our failure, or the failure of our third-party manufacturers, to comply with applicable regulations could result in sanctions being imposed on us, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of drug candidates or drugs, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our drugs.

Our drug candidates and any drugs that we may develop may compete with other drug candidates and drugs for access to manufacturing facilities. There are a limited number of manufacturers that operate under cGMP regulations and that might be capable of manufacturing for us. Any performance failure on the part of our existing or future manufacturers could delay clinical development or marketing approval. We do not currently have arrangements in place for redundant supply or a second source for the components of A-101. If our current contract manufacturers cannot perform as agreed, we may be required to replace such manufacturers. We may incur added costs and delays in identifying and qualifying any such replacement.

We expect to continue to depend on third-party contract manufacturers for the foreseeable future. Our current and anticipated future dependence upon others for the manufacture of our drug candidates or drugs may adversely affect our future profit margins and our ability to commercialize any drugs that receive marketing approval on a timely and competitive basis.

We may seek collaborations with third parties for the development or commercialization of our drug candidates. If those collaborations are not successful, we may not be able to capitalize on the market potential of these drug candidates.

We may seek third-party collaborators for the development and commercialization of our drug candidates, including for the commercialization of any of our drug candidates that are approved for marketing outside the United States. Our likely collaborators for any collaboration arrangements include large and mid-size pharmaceutical companies, regional and national pharmaceutical companies and biotechnology companies. If we do enter into any such arrangements with any third parties, we will likely have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of our drug candidates. Our ability to generate revenue from these arrangements will depend on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements.

Collaborations involving our drug candidates would pose the following risks to us:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators may not perform their obligations as expected;
- collaborators may not pursue development and commercialization of any drug candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborators' strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a drug candidate, repeat or conduct new clinical trials or require a new formulation of a drug candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our drug candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;
- drug candidates discovered in collaboration with us may be viewed by our collaborators as competitive with their own drug candidates or drugs, which may cause collaborators to cease to devote resources to the commercialization of our drug candidates;
- a collaborator with marketing and distribution rights to one or more of our drug candidates that achieve regulatory approval may not commit sufficient resources to the marketing and distribution of such drugs;
- disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays or termination of the research, development or commercialization of drug candidates, might lead to additional responsibilities for us with respect to drug candidates, or might result in litigation or arbitration, any of which would be time-consuming and expensive;
- collaborators may not properly maintain or defend our or their intellectual property rights or may use our or their proprietary information in such a way as to invite litigation that could jeopardize or invalidate such intellectual property or proprietary information or expose us to potential litigation;
- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability; and
- collaborations may be terminated for the convenience of the collaborator and, if terminated, we could be required to raise additional capital to pursue further development or commercialization of the applicable drug candidates.

Collaboration agreements may not lead to development or commercialization of drug candidates in the most efficient manner or at all. If a present or future collaborator of ours were to be involved in a business

combination, the continued pursuit and emphasis on our drug development or commercialization program could be delayed, diminished or terminated.

If we are not able to establish collaborations, we may have to alter our development and commercialization plans.

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

We face significant competition in seeking appropriate collaborators. Whether we reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject drug candidate, the costs and complexities of manufacturing and delivering such drug candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge and industry and market conditions generally. The collaborator may also consider alternative drug candidates or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our drug candidate. Collaborations are complex and time-consuming to negotiate and document. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators.

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

Risks Related to Our Intellectual Property

If we are unable to obtain and maintain patent protection for our drug candidates, or if the scope of the patent protection obtained is not sufficiently broad, our competitors could develop and commercialize technology and drugs similar or identical to ours, and our ability to successfully commercialize our technology and drug candidates may be impaired.

Our success depends in large part on our ability to obtain and maintain patent protection in the United States and other countries with respect to our drug candidates. We seek to protect our proprietary position by filing patent applications in the United States and abroad related to our drug candidates.

The patent prosecution process is expensive and time-consuming, however, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our development output before it is too late to obtain patent protection. We may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the rights to patents licensed to third parties. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation. In addition, the laws of foreign countries may not protect our rights to the same extent as the laws of the United States or vice versa. For example, European patent law restricts the patentability of methods of treatment of the human body more than United States law does. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot know with certainty whether we were the first to make the inventions claimed in our patents or pending patent applications, or that we were the first to file for patent protection of such inventions. As a result, the issuance, scope, validity, enforceability and commercial value of our patent rights are highly uncertain. Our pending and future patent applications may not result in patents being issued that protect our technology or drugs, in whole or in part, or which effectively prevent others from commercializing competitive technologies and drugs. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection.

Recent patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. On September 16, 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. The Leahy-Smith Act includes a number of significant changes to United States patent law. These include provisions that affect the way patent applications are prosecuted and may also affect patent litigation. The United States Patent Office recently developed new regulations and procedures to govern administration of the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, and in particular, the first to file provisions, only became effective on March 16, 2013. Accordingly, it is not clear what, if any, impact the Leahy-Smith Act will have on the operation of our business. However, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business and financial condition.

Moreover, we may be subject to a third-party preissuance submission of prior art to the U.S. Patent and Trademark Office, or USPTO, or become involved in opposition, derivation, reexamination, *inter partes* review, post-grant review or interference proceedings challenging our patent rights or the patent rights of others. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, our patent rights, allow third parties to commercialize our technology or drugs and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize drugs without infringing third-party patent rights. In addition, if the breadth or strength of protection provided by our patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future drug candidates.

Even if our patent applications issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors from competing with us or otherwise provide us with any competitive advantage. Our competitors may be able to circumvent our patents by developing similar or alternative technologies or drugs in a non-infringing manner.

In addition, the issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, and our patents may be challenged in the courts or patent offices in the United States and abroad. Such challenges may result in loss of exclusivity or freedom to operate or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and drugs, or limit the duration of the patent protection of our technology and drugs. Given the amount of time required for the development, testing and regulatory review of new drug candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing drugs similar or identical to ours.

We may become involved in lawsuits to protect or enforce our patents or other intellectual property, which could be expensive, time-consuming and unsuccessful.

Competitors may infringe our issued patents or other intellectual property. Our pending applications cannot be enforced against third parties practicing the technology claimed in such applications unless and until a patent issues from such applications. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. Any claims we assert against perceived infringers could provoke these parties to assert counterclaims against us alleging that we infringe their patents or that our patents are invalid or unenforceable. In a patent infringement proceeding, a court may decide that a patent of ours is invalid or unenforceable, in whole or in part, construe the patent's claims narrowly or refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology. An adverse result in any litigation proceeding could put one or more of our patents at risk of being invalidated or interpreted narrowly. We may find it impractical or undesirable to enforce our intellectual property against some third parties. For instance, we are aware of third parties that have marketed high-concentration hydrogen peroxide solutions over the internet for the treatment of SK. These parties do not appear to have regulatory authority, and we have not authorized them in any way to market these products. However, to date we have refrained from seeking to enforce our intellectual property rights against these third parties due to the transient nature of their activities.

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

Filing, prosecuting and defending patents on our drug candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. For example, the use of A-101 for the treatment of SK is currently covered in patents in the United States, Australia, India and New Zealand, but not in the European Union or other countries. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we may not be able to prevent third parties from practicing our invention in such countries. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and may export otherwise infringing products to territories where we have patent protection, but enforcement rights are not as strong as those in the United States. These products may compete with our drug candidates and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of some countries do not favor the enforcement of patents and other intellectual property protection, which could make it difficult for us to stop the infringement of our patents generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially meaningful.

Many countries, including European Union countries, India, Japan and China, have compulsory licensing laws under which a patent owner may be compelled under specified circumstances to grant licenses to third parties. In those countries, we may have limited remedies if patents are infringed or if we are compelled to grant a license to a third party, which could materially diminish the value of those patents. This could limit our potential revenue opportunities. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

We may need to license intellectual property from third parties, and such licenses may not be available or may not be available on commercially reasonable terms.

A third party may hold intellectual property, including patent rights that are important or necessary to the development of our drug candidates. It may be necessary for us to use the patented or proprietary technology of third parties to commercialize our drug candidates, in which case we would be required to obtain a license from these third parties on commercially reasonable terms, or our business could be harmed, possibly materially.

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.

Our commercial success depends upon our ability to develop, manufacture, market and sell our drug candidates and use our proprietary technologies without infringing the proprietary rights of third parties. There is considerable intellectual property litigation in the biotechnology and pharmaceutical industries. We may become party to, or threatened with, future adversarial proceedings or litigation regarding intellectual property rights with respect to our drugs and technology, including interference or derivation proceedings before the USPTO. Numerous U.S. and foreign issued patents and pending patent applications owned by third parties exist in the fields in which we are developing our drug candidates. Third parties may assert infringement claims against us based on existing patents or patents that may be granted in the future.

If we are found to infringe a third party's intellectual property rights, we could be required to obtain a license from such third party to continue developing and marketing our drugs and technology. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. We could be forced, including by court order, to cease commercializing the infringing technology or drug. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees if we are found to have willfully infringed a patent. A finding of infringement could prevent us from commercializing our drug candidates or force us to cease some of our business operations. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, pay royalties, redesign our infringing product or obtain one or more licenses from third parties, which may be impossible or require substantial time and monetary expenditure. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business.

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

Many of our employees were previously employed at other biotechnology or pharmaceutical companies. Although we try to ensure that our employees do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that these employees or we have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such employee's former employer. Litigation may be necessary to defend against these claims.

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

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

We may be involved in lawsuits to protect or enforce our patents, which could be expensive, time-consuming and unsuccessful. Further, our issued patents could be found invalid or unenforceable if challenged in court.

If we were to initiate legal proceedings against a third party to enforce a patent directed to our drug candidates, or one of our future drug candidates, the defendant could counterclaim that our patent is invalid or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness, non-enablement or insufficient written description. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO or made a misleading statement during prosecution. Third parties may also raise similar claims before the USPTO, even outside the context of litigation. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our drug candidates. Such a loss of patent protection would harm our business.

Interference proceedings provoked by third parties or brought by us or declared by the USPTO may be necessary to determine the priority of inventions with respect to our patents or patent applications. An unfavorable outcome could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation.

Most of our competitors are larger than we are and have substantially greater resources. They are, therefore, likely to be able to sustain the costs of complex patent litigation longer than we could. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing upon or misappropriating our intellectual property. Litigation could result in substantial costs and diversion of management resources, which could harm our business. In addition, the uncertainties associated with litigation could compromise our ability to raise the funds necessary to continue our clinical trials, continue our internal research programs, or in-license needed technology or other drug candidates. There could also be public announcements of the results of the hearing, motions, or other interim proceedings or developments. If securities analysts or investors perceive those results to be negative, it could cause the price of shares of our common stock to decline.

Intellectual property litigation could cause us to spend substantial resources and distract our personnel from their normal responsibilities.

Even if resolved in our favor, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses, and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce the resources available for development activities or any future sales, marketing or distribution activities. We may not have sufficient financial or other resources to conduct such litigation or proceedings adequately. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could compromise our ability to compete in the marketplace, including

compromising our ability to raise the funds necessary to continue our clinical trials, continue our research programs, license necessary technology from third parties, or enter into development collaborations that would help us commercialize our drug candidates, if approved.

If we are unable to protect the confidentiality of our trade secrets, our business and competitive position would be harmed.

In addition to seeking patents for our drug candidates, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position.

We seek to protect our trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts inside and outside the United States are less willing or unwilling to protect trade secrets. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position would be harmed.

The validity, scope and enforceability of any patents listed in the Orange Book that cover A-101 can be challenged by competitors.

If A-101 is approved by the FDA, one or more third parties may challenge the patents covering A-101, which could result in the invalidation of, or render unenforceable, some or all of the relevant patent claims or a finding of non-infringement. For example, if a third party files an Abbreviated New Drug Application, or ANDA, for a generic drug containing A-101, and relies in whole or in part on studies conducted by or for us, the third party will be required to certify to the FDA that either: (1) there is no patent information listed in the FDA's Orange Book with respect to our NDA for the applicable approved drug candidate; (2) the patents listed in the Orange Book have expired; (3) the listed patents have not expired, but will expire on a particular date and approval is sought after patent expiration; or (4) the listed patents are invalid or will not be infringed by the manufacture, use or sale of the third party's generic drug. A certification that the new drug will not infringe the Orange Book-listed patents for the applicable approved drug candidate, or that such patents are invalid, is called a paragraph IV certification. If the third party submits a paragraph IV certification to the FDA, a notice of the paragraph IV certification must also be sent to us once the third party's ANDA is accepted for filing by the FDA. We may then initiate a lawsuit to defend the patents identified in the notice. The filing of a patent infringement lawsuit within 45 days of receipt of the notice automatically prevents the FDA from approving the third party's ANDA until the earliest of 30 months or the date on which the patent expires, the lawsuit is settled, or the court reaches a decision in the infringement lawsuit in favor of the third party. If we do not file a patent infringement lawsuit within the required 45-day period, the third party's ANDA will not be subject to the 30-month stay of FDA approval. Litigation or other proceedings to enforce or defend intellectual property rights are often very complex in nature, may be very expensive and time-consuming, may divert our management's attention from our core business, and may result in unfavorable results that could limit our ability to prevent third parties from competing with our drug candidates.

If we do not obtain protection under the Hatch-Waxman Amendments by extending the patent term and obtaining data exclusivity for our drug candidates, our business may be materially harmed.

Our commercial success will largely depend on our ability to obtain and maintain patent and other intellectual property in the United States and other countries with respect to our proprietary technology, drug candidates and our target indications. Our issued U.S. patents, with claims directed to treatment of SK and acrochordons, are set to expire in 2022. Given the amount of time required for the development, testing and regulatory review of new drug candidates, patents protecting our drug candidates might expire before or shortly after such candidates begin to be commercialized. We expect to seek extensions of patent terms in the U.S. and, if available, in other countries where we are prosecuting patents.

Depending upon the timing, duration and specifics of FDA marketing approval of our drug candidates, one or more of our U.S. patents may be eligible for limited patent term restoration under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years beyond the normal expiration of the patent as compensation for patent term lost during development and the FDA regulatory review process, which is limited to the approved indication (or any additional indications approved during the period of extension). This extension is limited to only one patent that covers the approved product. However, the applicable authorities, including the FDA and the USPTO in the United States, and any equivalent regulatory authority in other countries, may not agree with our assessment of whether such extensions are available, and may refuse to grant extensions to our patents, or may grant more limited extensions than we request. We may not be granted an extension because of, for example, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request.

If we are unable to extend the expiration date of our existing patents or obtain new patents with longer expiry dates, our competitors may be able to take advantage of our investment in development and clinical trials by referencing our clinical and preclinical data to obtain approval of competing products following our patent expiration and launch their product earlier than might otherwise be the case.

Any trademarks we have obtained or may obtain may be infringed or successfully challenged, resulting in harm to our business.

We expect to rely on trademarks as one means to distinguish any of our drug candidates that are approved for marketing from the products of our competitors. Once we select new trademarks and apply to register them, our trademark applications may not be approved. Third parties may oppose or attempt to cancel our trademark applications or trademarks, or otherwise challenge our use of the trademarks. In the event that our trademarks are successfully challenged, we could be forced to rebrand our drugs, which could result in loss of brand recognition and could require us to devote resources to advertising and marketing new brands. Our competitors may infringe our trademarks and we may not have adequate resources to enforce our trademarks.

Outside of the United States we cannot be certain that any country's patent or trademark office will not implement new rules that could seriously affect how we draft, file, prosecute and maintain patents, trademarks and patent and trademark applications.

We cannot be certain that the patent or trademark offices of countries outside the United States will not implement new rules that increase costs for drafting, filing, prosecuting and maintaining patents, trademarks and patent and trademark applications or that any such new rules will not restrict our ability to file for patent protection. For example, we may elect not to seek patent protection in some jurisdictions or for some drug candidates in order to save costs. We may be forced to abandon or return the rights to specific patents due to a lack of financial resources.

Intellectual property rights do not necessarily address all potential threats to our competitive advantage.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect our business, or permit us to maintain our competitive advantage. The following examples are illustrative:

- § others may be able to make formulations or compositions that are the same as or similar to A-101 but that are not covered by the claims of the patents that we own;
- § we or any collaborators might not have been the first to make the inventions covered by the issued patents or pending patent applications that we own;
- § we might not have been the first to file patent applications covering certain of our inventions;
- § others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- § it is possible that our pending patent applications will not lead to issued patents;
- § issued patents that we own may not provide us with any competitive advantages, or may be held invalid or unenforceable as a result of legal challenges;
- § our competitors might conduct research and development activities in the United States and other countries that provide a safe harbor from patent infringement claims for certain research and development activities, as well as in countries where we do not have patent rights, and then use the information learned from such activities to develop competitive products for sale in our major commercial markets; and
- § we may not develop additional proprietary technologies that are patentable.

Risks Related to Regulatory Approval of Our Drug Candidates and Other Legal Compliance Matters

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

Our drug candidates and the activities associated with their development and commercialization, including their design, testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale and distribution, are subject to comprehensive regulation by the FDA and other regulatory agencies in the United States and by the European Commission and EU Member State Competent Authorities and similar regulatory authorities outside the United States. Failure to obtain marketing approval for a drug candidate will prevent us from commercializing the drug candidate. We have not received approval to market any of our drug candidates from regulatory authorities in any jurisdiction. We have only limited experience in filing and supporting the applications necessary to gain marketing approvals. Securing marketing approval requires the submission of extensive preclinical and clinical data and supporting information to regulatory authorities for each therapeutic indication to establish the drug candidate's safety and efficacy. Securing marketing approval also requires the submission of information about the drug manufacturing process to, and inspection of manufacturing facilities by, the regulatory authorities. Our drug candidates may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude our obtaining marketing approval or prevent or limit commercial use. If any of our drug candidates receives marketing approval, the accompanying label may limit the approved use of our drug in this way, which could limit sales of the drug.

The process of obtaining marketing approvals, both in the United States and abroad, is expensive and may take many years if additional clinical trials are required, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity and novelty of the drug candidates involved. Changes in marketing approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted drug application, may cause delays in the approval or rejection of an application. Regulatory authorities have substantial discretion in the approval process and may refuse to accept any application or may decide that our data is insufficient for approval and require additional preclinical, clinical or other studies. In addition,

varying interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent marketing approval of a drug candidate. Any marketing approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render the approved drug not commercially viable.

If we experience delays in obtaining approval or if we fail to obtain approval of our drug candidates, the commercial prospects for our drug candidates may be harmed and our ability to generate revenue will be materially impaired.

Failure to obtain marketing approval in international jurisdictions would prevent our drug candidates from being marketed abroad.

In order to market and sell our drugs in the European Union and any other jurisdictions, we must obtain separate marketing approvals and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and can involve additional testing. The time required to obtain approval may differ substantially from that required to obtain FDA approval. The regulatory approval process outside the United States generally includes all of the risks associated with obtaining FDA approval. In addition, in many countries outside the United States, it is required that the drug be approved for reimbursement before the drug can be approved for sale in that country. We may not obtain approvals from regulatory authorities outside the United States on a timely basis, if at all. Approval by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one regulatory authority outside the United States does not ensure approval by regulatory authorities in other countries or jurisdictions or by the FDA. However, failure to obtain approval in one jurisdiction may impact our ability to obtain approval elsewhere. We may not be able to file for marketing approvals and may not receive necessary approvals to commercialize our drugs in any market.

A variety of risks associated with marketing our drug candidates internationally could harm our business.

We may seek regulatory approval for A-101 and our other drug candidates outside of the United States and, accordingly, we expect that we will be subject to additional risks related to operating in foreign countries if we obtain the necessary approvals, including:

- § differing regulatory requirements in foreign countries;
- § the potential for so-called parallel importing, which is what happens when a local seller, faced with high or higher local prices, opts to import goods from a foreign market (with low or lower prices) rather than buying them locally;
- § unexpected changes in tariffs, trade barriers, price and exchange controls and other regulatory requirements;
- § economic weakness, including inflation, or political instability in particular foreign economies and markets;
- § foreign reimbursement, pricing and insurance regimes;
- § compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- § foreign taxes, including withholding of payroll taxes;
- § foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- § difficulties staffing and managing foreign operations;
- § workforce uncertainty in countries where labor unrest is more common than in the United States;
- § potential liability under the Foreign Corrupt Practices Act of 1977 or comparable foreign regulations;
- § challenges enforcing our contractual and intellectual property rights, especially in those foreign countries that do not respect and protect intellectual property rights to the same extent as the United States;

- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geo-political actions, including war and terrorism.

These and other risks associated with our international operations may compromise our ability to achieve or maintain profitability.

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

Any drug candidate for which we obtain marketing approval, along with the manufacturing processes, post-approval clinical data, labeling, advertising and promotional activities for such drug candidate, will be subject to continual requirements of and review by the FDA and other regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, registration and listing requirements, cGMP requirements relating to manufacturing, quality control, quality assurance and corresponding maintenance of records and documents, requirements regarding the distribution of samples to physicians and recordkeeping. Even if marketing approval of a drug candidate is granted, the approval may be subject to limitations on the indicated uses for which the drug candidate may be marketed or to the conditions of approval, including the requirement to implement a risk evaluation and mitigation strategy. If any of our drug candidates receives marketing approval, the accompanying label may limit the approved use of our drug, which could limit sales of the drug.

The FDA may also impose requirements for costly post-marketing studies or clinical trials and surveillance to monitor the safety or efficacy of the drug. The FDA closely regulates the post-approval marketing and promotion of drugs to ensure drugs are marketed only for the approved indications and in accordance with the provisions of the approved labeling. The FDA imposes stringent restrictions on manufacturers' communications regarding off-label use and if we do not market our drugs for their approved indications, we may be subject to enforcement action for off-label marketing. Violations of the Federal Food, Drug, and Cosmetic Act relating to the promotion of prescription drugs may lead to investigations alleging violations of federal and state healthcare fraud and abuse laws, as well as state consumer protection laws.

In addition, later discovery of previously unknown adverse events or other problems with our drugs, manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may have negative consequences, including:

- restrictions on such drugs, manufacturers or manufacturing processes;
- restrictions on the labeling or marketing of a drug;
- restrictions on drug distribution or use;
- requirements to conduct post-marketing studies or clinical trials;
- warning letters;
- recall or withdrawal of the drugs from the market;
- refusal to approve pending applications or supplements to approved applications that we submit;
- clinical holds;
- fines, restitution or disgorgement of profits or revenue;
- suspension or withdrawal of marketing approvals;
- refusal to permit the import or export of our drugs;
- drug seizure; or
- injunctions or the imposition of civil or criminal penalties.

Non-compliance with the European Union's requirements regarding safety monitoring or pharmacovigilance, and with requirements related to the development of drugs for the pediatric population, can also result in significant financial penalties. Similarly, failure to comply with the European Union's requirements regarding the protection of personal information can also lead to significant penalties and sanctions.

Our current and future relationships with third-party payors, health care professionals and customers in the United States and elsewhere may be subject, directly or indirectly, to applicable anti-kickback, fraud and abuse, false claims, physician payment transparency, health information privacy and security and other healthcare laws and regulations, which could expose us to significant penalties.

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

- § the federal Anti-Kickback Statute, which prohibits, among other things, persons and entities 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 federal and state healthcare programs such as Medicare and Medicaid. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it to have committed a violation. Moreover, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act;

- § federal civil and criminal false claims laws and civil monetary penalty laws, including the federal False Claims Act, which impose criminal and civil penalties, including 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, which imposes criminal and civil liability for, among other things, executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it to have committed a violation;

- § HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, which impose obligations on covered healthcare providers, health plans, and healthcare clearinghouses, as well as their business associates that create, receive, maintain or transmit individually identifiable health information for or on behalf of a covered entity, with respect to safeguarding the privacy, security and transmission of individually identifiable health information;

- § the federal Open Payments program, created under Section 6002 of Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or collectively the Affordable Care Act, and its implementing regulations, which requires specified manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program, with specific exceptions, to report annually to

the Centers for Medicare & Medicaid Services, or CMS, information related to payments or other "transfers of value" made to physicians, which is defined to include doctors, dentists, optometrists, podiatrists and chiropractors, and teaching hospitals and applicable manufacturers to report annually to CMS ownership and investment interests held by the physicians and their immediate family members by the 90th day of each calendar year. All such reported information is publicly available; and

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

Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations may involve substantial costs. It is possible that governmental authorities will conclude that our business practices, including our relationships with physicians and other healthcare providers, some of whom may recommend, purchase and/or prescribe our drug candidates, if approved, may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. By way of example, some of our consulting arrangements with physicians may not meet all of the criteria of the personal services safe harbor under the federal Anti-Kickback Statute. Accordingly, they may not qualify for safe harbor protection from government prosecution. A business arrangement that does not substantially comply with a safe harbor, however, is not necessarily illegal under the Anti-Kickback Statute, but may be subject to additional scrutiny by the government.

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, including, without limitation, damages, fines, disgorgement, imprisonment, exclusion from participation in government healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations, which could have a material adverse effect on our business. If any of the physicians or other healthcare providers or entities with whom we expect to do business is found not to be in compliance with applicable laws, it may be subject to criminal, civil or administrative sanctions, including exclusions from participation in government healthcare programs, which could also materially affect our business.

Recently enacted and future legislation may increase the difficulty and cost for us to obtain marketing approval of and commercialize our drug candidates and affect the prices we may obtain.

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of our drug candidates, restrict or regulate post-approval activities and affect our ability to profitably sell any drug candidates for which we obtain marketing approval.

Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives. In March 2010, President Obama signed into law the Affordable Care Act, a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud

and abuse, add new transparency requirements for the healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms.

Among the provisions of the Affordable Care Act of importance to our potential drug candidates are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents, apportioned among these entities according to their market share in certain government healthcare programs;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program to 23.1% and 13.0% of the average manufacturer price for branded and generic drugs, respectively;
- expansion of healthcare fraud and abuse laws, including the False Claims Act and the Anti-Kickback Statute, which include new government investigative powers and enhanced penalties for non-compliance;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals, thereby potentially increasing manufacturers' Medicaid rebate liability;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- the new requirements under the federal Open Payments program and its implementing regulations;
- a new requirement to annually report drug samples that manufacturers and distributors provide to physicians; and
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

In addition, other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. These changes included aggregate reductions to Medicare payments to providers of 2% per fiscal year effective April 1, 2013 and, due to subsequent legislative amendments to the statute, will stay in effect through 2024 unless additional Congressional action is taken. In January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, further reduced Medicare payments to several providers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on customers for our drugs, if approved, and, accordingly, our financial operations.

We expect that the Affordable Care Act, as well as other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for any approved drug. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our drugs.

Additionally, new litigation challenging the federal tax subsidies received by individuals to purchase health insurance under the Affordable Care Act is currently pending before the U.S, Supreme Court that could affect our business. Final regulations, guidance, and judicial orders are anticipated in the near future and

we will continue to assess the Affordable Care Act's impact on us as final regulations, guidance, and orders are issued.

Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for drugs. We cannot be sure whether additional legislative changes will be enacted, or whether the FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our drug candidates, if any, may be. In addition, increased scrutiny by the U.S. Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent drug labeling and post-marketing testing and other requirements.

We may not be able to obtain five-year FDA regulatory exclusivity as an NCE.

The FDA provides periods of regulatory exclusivity following their approval of an NDA, which provide the holder of an approved NDA limited protection from new competition in the marketplace for the innovation represented by its approved drug. Five-year exclusivity precludes approval of 505(b)(2) applications or ANDAs by delaying the submission or approval of such applications, while three-year exclusivity precludes the approval of such applications. We intend to seek new chemical entity, or NCE, status for A-101, and we may seek NCE status for other drug candidates as appropriate. Five years of exclusivity are available to NCEs following the approval of an NDA by the FDA. An NCE is a drug that contains no active moiety that has been approved by FDA in any other NDA. If a drug is not eligible for the NCE exclusivity, it may be eligible for three years of exclusivity. Three-year exclusivity is available to the holder of an NDA for a particular condition of approval, or change to a marketed product, such as a new formulation for a previously approved product, if one or more new clinical trials, other than bioavailability or bioequivalence trials, were essential to the approval of the application and were conducted or sponsored by the applicant.

There is a risk that the FDA may disagree with any claim that we may make that A-101 or any of our other drug candidates are NCEs and therefore entitled to five-year exclusivity.

If we do obtain either five or three years of exclusivity, such exclusivity will not block all potential competitors from the market. Five-year exclusivity does not block complete 505(b)(1) NDAs and the scope of three-year exclusivity is limited to the conditions for use approved in the NDA.

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

In some countries, particularly the countries of the European Union, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a drug. To obtain coverage and reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our drug candidate to other available procedures. If reimbursement of our drugs is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our business could be harmed, possibly materially.

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

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

our resources. We also could incur significant costs associated with civil or criminal fines and penalties for failure to comply with such laws and regulations.

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

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

The inherent dangers in production and transportation of hydrogen peroxide could cause disruptions and could expose us to potentially significant losses, costs or liabilities.

Our operations are subject to significant hazards and risks inherent in the use and transport of hydrogen peroxide, the active ingredient of A-101 and A-102. Hydrogen peroxide can decompose in the presence of organic materials and is categorized as an oxidizer and is corrosive. Hydrogen peroxide should be stored in cool, dry, well-ventilated areas and away from any flammable or combustible substances. The hazards and risks associated with producing and transporting hydrogen peroxide include fires, explosions, third-party interference (including terrorism) and mechanical failure of equipment at our facilities or those of our supplier of hydrogen peroxide. The occurrence of any of these events could result in production and distribution difficulties and disruptions, personal injury or wrongful death claims and other damage to properties.

We are subject to governmental economic sanctions and export and import controls that could impair our ability to compete in international markets or subject us to liability if we are not in compliance with applicable laws.

As a U.S. company, we are subject to U.S. import and export controls and economic sanctions laws and regulations, and we are required to import and export our drug candidates, technology and services in compliance with those laws and regulations, including the U.S. Export Administration Regulations, the International Traffic in Arms Regulations, and economic embargo and trade sanction programs administered by the Treasury Department's Office of Foreign Assets Control.

U.S. economic sanctions and export control laws and regulations prohibit the shipment of certain products and services to countries, governments and persons targeted by U.S. sanctions. While we are currently taking precautions to prevent doing any business, directly or indirectly, with countries, governments and persons targeted by U.S. sanctions and to ensure that our drug candidates, if approved, are not exported or used by countries, governments and persons targeted by U.S. sanctions, such measures may be circumvented.

Furthermore, if we export our drug candidates, if approved, the exports may require authorizations, including a license, a license exception or other appropriate government authorization. Complying with export control and sanctions regulations for a particular sale may be time-consuming and may result in the delay or loss of sales opportunities. Failure to comply with export control and sanctions regulations for a particular sale may expose us to government investigations and penalties.

If we are found to be in violation of U.S. sanctions or import or export control laws, it could result in civil and criminal, monetary and non-monetary penalties, including possible incarceration for those individuals responsible for the violations, the loss of export or import privileges and reputational harm.

We are subject to anti-corruption and anti-money laundering laws with respect to our operations and non-compliance with such laws can subject us to criminal and/or civil liability and harm our business.

We are subject to the U.S. Foreign Corrupt Practices Act of 1977, as amended, or the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act and possibly other anti-bribery and anti-money laundering laws in countries in which we conduct activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees and third-party intermediaries from authorizing, offering or providing, directly or indirectly, improper payments or benefits to recipients in the public or private sector. As we commercialize our drug candidates and eventually commence international sales and business, we may engage with collaborators and third-party intermediaries to sell our products abroad and to obtain necessary permits, licenses and other regulatory approvals. We or our third-party intermediaries may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities. We can be held liable for the corrupt or other illegal activities of these third-party intermediaries, our employees, representatives, contractors, partners and agents, even if we do not explicitly authorize such activities.

Noncompliance with anti-corruption and anti-money laundering laws could subject us to whistleblower complaints, investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, suspension and/or debarment from contracting with certain persons, the loss of export privileges, reputational harm, adverse media coverage and other collateral consequences. Responding to any action will likely result in a materially significant diversion of management's attention and resources and significant defense costs and other professional fees.

Risks Related to Employee Matters and Managing Our Growth

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

We are highly dependent on the management, development, clinical, financial and business development expertise of Dr. Neal Walker, our Chief Executive Officer, Christopher Powala, our Chief Operating Officer, Dr. Stuart Shanler, our Chief Scientific Officer, Frank Ruffo, our Chief Financial Officer, and Kamil Ali-Jackson, our Chief Legal Officer, as well as the other members of our scientific and clinical teams. Although we intend to enter into new employment agreements with our executive officers that will be effective upon the closing of this offering, each of them may currently terminate their employment with us at any time and will continue to be able to do so after the closing of this offering. We do not maintain "key person" insurance for any of our executives or employees other than Dr. Walker and Mr. Powala.

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

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

As of June 30, 2015, we had ten full-time employees. As our development progresses, we expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of drug development, regulatory affairs and, if any of our drug candidates receives marketing approval, sales, marketing and distribution. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

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

We are exposed to the risk that our employees, independent contractors, consultants, commercial collaborators, principal investigators, CROs and vendors may engage in fraudulent conduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violates FDA regulations, including those laws requiring the reporting of true, complete and accurate information to the FDA, manufacturing standards, federal and state healthcare laws and regulations, and laws that require the true, complete and accurate reporting of financial information or data. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Misconduct by these parties could also involve the improper use of individually identifiable information, including, without limitation, information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. Effective upon the closing of this offering, we will adopt a code of business conduct and ethics, but it is not always possible to identify and deter misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of significant civil, criminal and administrative penalties, including, without limitation, damages, fines, disgorgement, imprisonment, exclusion from participation in government healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations.

Risks Related to this Offering, Ownership of Our Common Stock and Our Status as a Public Company

An active trading market for our common stock may not develop and you may not be able to resell your shares of our common stock at or above the initial offering price, if at all.

Prior to this offering, there has been no public market for our common stock. The initial public offering price for our common stock will be determined through negotiations with the underwriters and may not be indicative of the price at which our common stock will trade after the closing of this offering. Although we have applied to list our common stock on The NASDAQ Global Market, an active trading market for our shares may never develop or be sustained following this offering. If an active market for our common stock

does not develop or is not sustained, it may be difficult for you to sell shares you purchased in this offering at an attractive price or at all.

The trading price of the shares of our common stock may be volatile, and purchasers of our common stock could incur substantial losses.

Our stock price may be volatile. The stock market in general and the market for biopharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may not be able to sell their common stock at or above the price paid for the shares. The market price for our common stock may be influenced by many factors, including:

- the commencement, enrollment or results of the planned clinical trials of A-101 in patients with SK or any future clinical trials we may conduct, or changes in the development status of our drug candidates;
- any delay in our regulatory filings for A-101 for the treatment of SK or any other drug candidate and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such filings, including without limitation the FDA's issuance of a "refusal to file" letter or a request for additional information;
- adverse results from, delays in or termination of clinical trials;
- adverse regulatory decisions, including failure to receive regulatory approval of our drug candidates;
- unanticipated serious safety concerns related to the use of A-101 or any other drug candidate;
- changes in financial estimates by us or by any securities analysts who might cover our stock;
- conditions or trends in our industry;
- changes in the market valuations of similar companies;
- stock market price and volume fluctuations of comparable companies and, in particular, those that operate in the biopharmaceutical industry;
- publication of research reports about us or our industry or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- announcements by us or our competitors of significant acquisitions, strategic partnerships or divestitures;
- announcements of investigations or regulatory scrutiny of our operations or lawsuits filed against us;
- investors' general perception of our company and our business;
- recruitment or departure of key personnel;
- overall performance of the equity markets;
- trading volume of our common stock;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- significant lawsuits, including patent or stockholder litigation;
- general political and economic conditions; and
- other events or factors, many of which are beyond our control.

In addition, in the past, stockholders have initiated class action lawsuits against pharmaceutical and biotechnology companies following periods of volatility in the market prices of these companies' stock. Such litigation, if instituted against us, could cause us to incur substantial costs and divert management's attention and resources from our business.

If equity research analysts do not publish research or reports, or publish unfavorable research or reports, about us, our business or our market, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that equity research analysts publish about us and our business. We do not currently have and may never obtain research coverage by equity research analysts. Equity research analysts may elect not to provide research coverage of our common stock after this offering, and such lack of research coverage may adversely affect the market price of our common stock. In the event we do have equity research analyst coverage, we will not have any control over the analysts or the content and opinions included in their reports. The price of our stock could decline if one or more equity research analysts downgrade our stock or issue other unfavorable commentary or research. If one or more equity research analysts ceases coverage of our company or fails to publish reports on us regularly, demand for our stock could decrease, which in turn could cause our stock price or trading volume to decline.

If you purchase shares of our common stock in this offering, you will suffer immediate dilution of your investment.

We expect the initial public offering price of our common stock to be substantially higher than the net tangible book value per share of our common stock. Therefore, if you purchase shares of our common stock in this offering, you will pay a price per share that substantially exceeds our pro forma as adjusted net tangible book value per share after this offering. Based on an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, you will experience immediate dilution of $ per share, representing the difference between our pro forma as adjusted net tangible book value per share after this offering and the assumed initial public offering price.

In addition, as of June 30, 2015, we had outstanding stock options to purchase an aggregate of 1,725,961 shares of common stock at a weighted average exercise price of $0.35 per share. To the extent these outstanding options are exercised, there will be further dilution to investors in this offering.

A significant portion of our total outstanding shares are restricted from immediate resale but may be sold into the market in the near future. This could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. If our stockholders sell, or the market perceives that our stockholders intend to sell, substantial amounts of our common stock in the public market following this offering, the market price of our common stock could decline significantly.

Upon the closing of this offering, we will have outstanding shares of common stock, after giving effect to the conversion of our redeemable convertible preferred stock outstanding as of June 30, 2015 into 27,341,057 shares of our common stock, and assuming no exercise of outstanding options. Of these shares, the shares sold in this offering and additional shares will be freely tradable, additional shares of common stock will be eligible for sale in the public market beginning 90 days after the date of this prospectus, subject to volume, manner of sale and other limitations of Rule 144 and Rule 701, and additional shares of common stock will be available for sale in the public market beginning 180 days after the date of this prospectus following the expiration of lock-up agreements between some of our stockholders and the underwriters. The representatives of the underwriters may release these stockholders from their lock-up agreements with the underwriters at any time and without notice, which would allow for earlier sales of shares in the public market.

In addition, promptly following the closing of this offering, we intend to file one or more registration statements on Form S-8 registering the issuance of approximately shares of common stock subject to options or other equity awards issued or reserved for future issuance under our equity incentive plans.

Shares registered under these registration statements on Form S-8 will be available for sale in the public market subject to vesting arrangements and exercise of options, the lock-up agreements described above and the restrictions of Rule 144 in the case of our affiliates.

Additionally, after this offering, the holders of an aggregate of shares of our common stock, or their transferees, will have rights, subject to some conditions, to require us to file one or more registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. If we were to register the resale of these shares, they could be freely sold in the public market. If these additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

Provisions in our corporate charter documents and under Delaware law may prevent or frustrate attempts by our stockholders to change our management and hinder efforts to acquire a controlling interest in us, and the market price of our common stock may be lower as a result.

There are provisions in our certificate of incorporation and bylaws as they will be in effect following this offering that may make it difficult for a third party to acquire, or attempt to acquire, control of our company, even if a change of control was considered favorable by you and other stockholders. For example, our board of directors will have the authority to issue up to shares of preferred stock. The board of directors can fix the price, rights, preferences, privileges, and restrictions of the preferred stock without any further vote or action by our stockholders. The issuance of shares of preferred stock may delay or prevent a change of control transaction. As a result, the market price of our common stock and the voting and other rights of our stockholders may be adversely affected. An issuance of shares of preferred stock may result in the loss of voting control to other stockholders.

Our charter documents will also contain other provisions that could have an anti-takeover effect, including:

- only one of our three classes of directors will be elected each year;
- stockholders will not be entitled to remove directors other than by a $66^{2}/_{3}$% vote and only for cause;
- stockholders will not be permitted to take actions by written consent;
- stockholders cannot call a special meeting of stockholders; and
- stockholders must give advance notice to nominate directors or submit proposals for consideration at stockholder meetings.

In addition, we are subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law, which regulates corporate acquisitions by prohibiting Delaware corporations from engaging in specified business combinations with particular stockholders of those companies. These provisions could discourage potential acquisition proposals and could delay or prevent a change of control transaction. They could also have the effect of discouraging others from making tender offers for our common stock, including transactions that may be in your best interests. These provisions may also prevent changes in our management or limit the price that investors are willing to pay for our stock.

Concentration of ownership of our common stock among our existing executive officers, directors and principal stockholders may prevent new investors from influencing significant corporate decisions.

Upon the closing of this offering, our executive officers, directors and current beneficial owners of 5% or more of our common stock and their respective affiliates will, in the aggregate, beneficially own approximately % of our outstanding common stock. As a result, these persons, acting together, would be able to significantly influence all matters requiring stockholder approval, including the election and removal of directors, any merger, consolidation, sale of all or substantially all of our assets, or other significant corporate transactions.

Some of these persons or entities may have interests different than yours. For example, because many of these stockholders purchased their shares at prices substantially below the price at which shares are being

sold in this offering and have held their shares for a longer period, they may be more interested in selling our company to an acquirer than other investors, or they may want us to pursue strategies that deviate from the interests of other stockholders.

We are an "emerging growth company" and, as a result of the reduced disclosure and governance requirements applicable to emerging growth companies, our common stock may be less attractive to investors.

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and we intend to take advantage of some of the exemptions from reporting requirements that are applicable to other public companies that are not emerging growth companies, including:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure in this prospectus;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- not being required to hold a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

We cannot predict if investors will find our common stock less attractive because we will rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile. We may take advantage of these reporting exemptions until we are no longer an emerging growth company. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the closing of this offering, (b) in which we have total annual gross revenue of at least $1.0 billion, or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

Under Section 107(b) of the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired.

After the closing of this offering, we will be subject to the reporting requirements of the Securities Exchange Act of 1934, the Sarbanes-Oxley Act and the rules and regulations of the stock market on which our common stock is listed. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. Commencing with our fiscal year ending December 31, 2016, we must perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting in our Form 10-K filing for that year, as required by Section 404 of the Sarbanes-Oxley Act. This will require that we incur substantial additional professional fees and internal costs to expand our accounting and finance functions and that we expend significant management efforts.

Prior to this offering, we have never been required to test our internal control within a specified period, and, as a result, we may experience difficulty in meeting these reporting requirements in a timely manner.

We may identify weaknesses in our system of internal financial and accounting controls and procedures that could result in a material misstatement of our financial statements. Our internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, or if we are unable to maintain proper and effective internal controls, we may not be able to produce timely and accurate financial statements. If that were to happen, the market price of our stock could decline and we could be subject to sanctions or investigations by the stock exchange on which our common stock is listed, the Securities and Exchange Commission, or SEC, or other regulatory authorities.

We will have broad discretion in the use of proceeds from this offering and may invest or spend the proceeds in ways with which you do not agree and in ways that may not increase the value of your investment.

We will have broad discretion over the use of proceeds from this offering. You may not agree with our decisions, and our use of the proceeds may not yield any return on your investment. We expect to use the net proceeds to us from this offering, together with our existing cash and cash equivalents, to complete our planned clinical trials and seek regulatory approval of A-101 for the treatment of SK, to fund continued research and development of A-101 for the treatment of common warts and A-102 gel dosage form for the treatment of SK and common warts, and for working capital and general corporate purposes. In addition, we may use a portion of the proceeds from this offering to pursue our strategy to in-license or acquire additional drug candidates. Our failure to apply the net proceeds from this offering effectively could compromise our ability to pursue our growth strategy and we might not be able to yield a significant return, if any, on our investment of these net proceeds. You will not have the opportunity to influence our decisions on how to use our net proceeds from this offering.

We might not be able to utilize a significant portion of our net operating loss carryforwards and research and development tax credit carryforwards.

As of December 31, 2014, we had federal and state net operating loss carryforwards of $13.8 million and $13.8 million, respectively, and federal research and development tax credit carryforwards of $0.2 million, each of which if not utilized will begin to expire in 2032. These net operating loss and tax credit carryforwards could expire unused and be unavailable to offset future income tax liabilities. In addition, under Section 382 of the Internal Revenue Code of 1986, as amended, and corresponding provisions of state law, if a corporation undergoes an "ownership change," which is 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 to offset its post-change income may be limited. We have not determined if we have experienced Section 382 ownership changes in the past and if a portion of our net operating loss and tax credit carryforwards are subject to an annual limitation under Section 382. In addition, we may experience ownership changes in the future as a result of subsequent shifts in our stock ownership, including this offering, some of which may be outside of our control. If we determine that an ownership change has occurred and our ability to use our historical net operating loss and tax credit carryforwards is materially limited, it would harm our future operating results by effectively increasing our future tax obligations.

Because we do not anticipate paying any cash dividends on our common stock in the foreseeable future, capital appreciation, if any, will be your sole source of gains and you may never receive a return on your investment.

You should not rely on an investment in our common stock to provide dividend income. We have not declared or paid cash dividends on our common stock to date. We currently intend to retain our future earnings, if any, to fund the development and growth of our business. In addition, the terms of any existing or future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future. Investors seeking cash dividends should not purchase our common stock.

We will incur increased costs and demands upon management as a result of being a public company.

As a public company listed in the United States, we will incur significant additional legal, accounting and other costs, which we anticipate could be between $1.0 million and $2.0 million annually. These additional costs could negatively affect our financial results. In addition, changing laws, regulations and standards relating to corporate governance and public disclosure, including regulations implemented by the SEC and The NASDAQ Stock Market, may increase legal and financial compliance costs and make some activities more time-consuming. These laws, regulations and standards are subject to varying interpretations and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities to compliance activities. If notwithstanding our efforts to comply with new laws, regulations and standards, we fail to comply, regulatory authorities may initiate legal proceedings against us and our business may be harmed.

Failure to comply with these rules might also make it more difficult for us to obtain some types of insurance, including director and officer liability insurance, and we might be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these events could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, on committees of our board of directors or as members of senior management.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that involve substantial risks and uncertainties. The forward-looking statements are contained principally in the sections entitled "Prospectus Summary," "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business," but are also contained elsewhere in this prospectus. In some cases, you can identify forward-looking statements by the words "may," "might," "will," "could," "would," "should," "expect," "intend," "plan," "objective," "anticipate," "believe," "estimate," "predict," "potential," "continue" and "ongoing," or the negative of these terms, or other comparable terminology intended to identify statements about the future. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus, we caution you that these statements are based on a combination of facts and important factors currently known by us and our expectations of the future, about which we cannot be certain. Forward-looking statements include statements about:

- our plans to develop and commercialize our drug candidates;
- the timing of our planned clinical trials of A-101 in patients with SK and our other drug candidates;
- the timing of our NDA filing for A-101 for the treatment of SK;
- the timing of and our ability to obtain and maintain regulatory approvals for our drug candidates;
- the clinical utility of our drug candidates;
- our commercialization, marketing and manufacturing capabilities and strategy;
- our expectations about the willingness of patients to pay out of pocket for procedures using our drug candidates for the treatment of SK;
- our expectations about the willingness of dermatologists to use A-101 for the treatment of SK;
- our intellectual property position;
- our plans to in-license or acquire additional drug candidates for other dermatological conditions to build a fully integrated dermatology company; and
- our estimates regarding future revenue, expenses and needs for additional financing.

You should refer to the "Risk Factors" section of this prospectus for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

INDUSTRY AND MARKET DATA

This prospectus includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties, as well estimates by our management based on such data. All of the market data and estimates used in this prospectus involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such data and estimates. We believe that the information from these industry publications, surveys and studies is reliable. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of important factors, including those described in the section titled "Risk Factors." These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

USE OF PROCEEDS

We estimate that the net proceeds from our issuance and sale of shares of our common stock in this offering will be $ million, or $ million if the underwriters exercise their option to purchase additional shares in full, based upon an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share would increase or decrease the net proceeds to us from this offering by $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions. We may also increase or decrease the number of shares we are offering. Each increase or decrease of 1.0 million in the number of shares we are offering would increase or decrease the net proceeds to us from this offering by $ million, assuming no change in the assumed initial public offering price and after deducting the estimated underwriting discounts and commissions.

We currently estimate that we will use the net proceeds from this offering, together with our existing cash and cash equivalents, as follows:

- approximately $ million to complete our three planned Phase 3 clinical trials and seek regulatory approval of A-101 for the treatment of SK;
- approximately $ million to fund continued research and development of A-101 for the treatment of common warts, including the completion of our planned Phase 2 clinical trials for this indication; and
- the remainder to fund other research and development activities, including the development of A-102 for the treatment of SK and common warts, as well as for working capital and other general corporate purposes, including to pursue our strategy to in-license or acquire additional drug candidates, although we have no agreements or commitments for any specific acquisitions or in-licenses as of the date of this prospectus.

This expected use of net proceeds from this offering and our existing cash and cash equivalents represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our development, the status of and results from clinical trials, as well as any collaborations that we may enter into with third parties for our drug candidates, and any unforeseen cash needs.

As a result, our management will have broad discretion in the application of the net proceeds from this offering, and investors will be relying on the judgment of our management regarding the application of those net proceeds. The timing and amount of our actual expenditures will be based on many factors, including cash flows from operations and the anticipated growth of our business. Pending these uses, we plan to invest these net proceeds in short-term, interest bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the United States.

We believe that the net proceeds from this offering will be sufficient to enable us to fund our operating expenses and capital expenditure requirements through at least the next months, including the completion of our three planned Phase 3 clinical trials for A-101 for the treatment of SK, the submission of our NDA to the FDA for the approval of A-101 for the treatment of SK in the United States and the completion of our planned Phase 2 clinical trials of A-101 for the treatment of common warts. We have based this estimate on assumptions that may prove to be incorrect, and we could use our available capital resources sooner than we currently expect.

DIVIDEND POLICY

We have never declared or paid any dividends on our common stock. We anticipate that we will retain all of our future earnings, if any, for use in the operation and expansion of our business and do not anticipate paying cash dividends in the foreseeable future.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and our capitalization as of June 30, 2015:

- on an actual basis;
- on a pro forma basis to give effect to:
  - the conversion of all outstanding shares of our redeemable convertible preferred stock into an aggregate of 27,341,057 shares of our common stock, which will occur upon the closing of this offering; and
  - the filing and effectiveness of our amended and restated certificate of incorporation immediately prior to the closing of this offering; and
- on a pro forma as adjusted basis to give further effect to our sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Our capitalization following the closing of this offering will depend on the actual initial public offering price and other terms of this offering determined at pricing. You should read this information in conjunction with our financial statements and the related notes thereto included elsewhere in this prospectus and the sections of this prospectus titled "Selected Financial Data," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Description of Capital Stock."

	As of June 30, 2015		
	Actual	Pro Forma	Pro Forma As Adjusted
	(in thousands, except share data)		
Cash and cash equivalents	$ 9,853	$ 9,853	$
Redeemable convertible preferred stock (Series A and B), $0.00001 par value; 34,090,000 shares authorized, 27,341,057 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	$ 38,010	$ —	$
Stockholders' equity (deficit):			
Preferred stock, $0.00001 par value; no shares authorized, issued or outstanding, actual; shares authorized and no shares issued or outstanding, pro forma and pro forma as adjusted	—	—	
Common stock, $0.00001 par value; 77,000,000 shares authorized, 9,420,000 shares issued and outstanding, actual; shares authorized, 36,761,057 shares issued and outstanding, pro forma; shares authorized, shares issued and outstanding, pro forma as adjusted	—	—	
Additional paid-in capital	—	38,010	
Accumulated deficit	(27,214)	(27,214)	
Total stockholders' equity (deficit)	(27,214)	10,796	
Total capitalization	$ 10,796	$ 10,796	$

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease the pro forma as adjusted amount of each of cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization by $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions. Each increase or decrease of 1.0 million in the number of shares we are offering would increase or decrease the pro forma as adjusted amount of each of cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization by $ million, assuming no change in the assumed initial public offering price per share.

The number of shares of common stock outstanding in the table above does not include:

- 1,725,961 shares of our common stock issuable upon the exercise of stock options outstanding under our 2012 equity compensation plan as of June 30, 2015, at a weighted average exercise price of $0.35 per share; and
- shares of our common stock reserved for future issuance under our 2015 equity incentive plan, which will become effective upon the closing of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this plan.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be diluted immediately to the extent of the difference between the initial public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock after this offering.

Our historical net tangible book value (deficit) as of June 30, 2015 was $(28.3) million, or $(3.01) per share of our common stock. Our historical net tangible book value (deficit) is the amount of our total tangible assets less our total liabilities and redeemable convertible preferred stock, which is not included within stockholders' equity (deficit). Historical net tangible book value per share represents historical net tangible book value (deficit) divided by the 9,420,000 shares of our common stock outstanding as of June 30, 2015.

Our pro forma net tangible book value as of June 30, 2015 was $9.7 million, or $0.26 per share of our common stock. Pro forma net tangible book value represents the amount of our total tangible assets less our total liabilities, after giving effect to the conversion of all shares of our redeemable convertible preferred stock outstanding as of June 30, 2015 into an aggregate of 27,341,057 shares of our common stock, which will occur upon the closing of this offering. Pro forma net tangible book value per share represents pro forma net tangible book value divided by the total number of shares outstanding as of June 30, 2015, after giving effect to the conversion of all shares of our redeemable convertible preferred stock outstanding as of June 30, 2015 into an aggregate of 27,341,057 shares of our common stock, which will occur upon the closing of this offering.

After giving further effect to our sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of June 30, 2015 would have been $ million, or $ per share. This represents an immediate increase in pro forma as adjusted net tangible book value of $ per share to existing stockholders and an immediate dilution in pro forma net tangible book value of $ per share to new investors purchasing common stock in this offering. Dilution per share to new investors is determined by subtracting pro forma as adjusted net tangible book value per share after this offering from the assumed initial public offering price per share paid by new investors. The following table illustrates this dilution on a per share basis:

Assumed initial public offering price per share		$
Historical net tangible book value (deficit) per share as of June 30, 2015	$ (3.01)	
Increase per share attributable to the conversion of all outstanding shares of redeemable convertible preferred stock	3.27	
Pro forma net tangible book value per share as of June 30, 2015	0.26	
Increase in pro forma as adjusted net tangible book value per share attributable to new investors purchasing shares in this offering		
Pro forma as adjusted net tangible book value per share after this offering		
Dilution per share to new investors purchasing shares in this offering		$

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share would increase or decrease our pro forma as adjusted net tangible book value by $ million, our pro forma as adjusted net tangible book value per share after this offering by $ and dilution per share to new

investors purchasing shares in this offering by $, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions. An increase of 1.0 million in the number of shares we are offering would increase the pro forma as adjusted net tangible book value per share after this offering by $ and decrease the dilution per share to new investors participating in this offering by $, assuming no change in the assumed initial public offering price per share and after deducting the estimated underwriting discounts and commissions. A decrease of 1.0 million in the number of shares we are offering would decrease the pro forma as adjusted net tangible book value per share after this offering by $ and increase the dilution per share to new investors participating in this offering by $, assuming no change in the assumed initial public offering price per share and after deducting the estimated underwriting discounts and commissions.

If the underwriters exercise their option to purchase additional shares in full, our pro forma as adjusted net tangible book value per share after this offering would be $ per share, representing an immediate increase in pro forma as adjusted net tangible book value per share of $ to existing stockholders and immediate dilution of $ in pro forma as adjusted net tangible book value per share to new investors purchasing common stock in this offering, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus.

The following table summarizes, on the pro forma as adjusted basis described above, the number of shares of our common stock, the total consideration and the average price per share (i) paid to us by existing stockholders and (ii) to be paid by investors purchasing shares of common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page on this prospectus, before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders		%	$	%	$
New investors					$
Total		100.0%	$	100.0%	

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share would increase or decrease the total consideration paid by new investors by $ million and, in the case of an increase, would increase the percentage of total consideration paid by new investors by percentage points and, in the case of a decrease, would decrease the percentage of total consideration paid by new investors by percentage points, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same. An increase or decrease of 1.0 million in the number of shares we are offering would increase or decrease the total consideration paid by new investors by $ million and, in the case of an increase, would increase the percentage of total consideration paid by new investors by percentage points and, in the case of a decrease, would decrease the percentage of total consideration paid by new investors by percentage points, assuming no change in the assumed initial public offering price per share.

The table above assumes no exercise of the underwriters' option to purchase additional shares in this offering. If the underwriters' option to purchase additional shares is exercised in full, the number of shares of our common stock held by existing stockholders would be reduced to % of the total number of shares

of our common stock outstanding after this offering, and the number of shares of common stock held by new investors participating in the offering would be increased to % of the total number of shares of our common stock outstanding after this offering.

The tables and discussion above do not include:

- 1,725,961 shares of our common stock issuable upon the exercise of stock options outstanding under our 2012 equity compensation plan as of June 30, 2015, at a weighted average exercise price of $0.35 per share; and

- shares of our common stock reserved for future issuance under our 2015 equity incentive plan, which will become effective upon the closing of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this plan.

To the extent that stock options are exercised, new stock options are issued under our equity incentive plan, or we issue additional shares of common stock in the future, there will be further dilution to investors participating in this offering. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

SELECTED FINANCIAL DATA

You should read the following selected financial data together with our 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 have derived the statement of operations data for the years ended December 31, 2013 and 2014 and the balance sheet data as of December 31, 2013 and 2014 from our audited financial statements included elsewhere in this prospectus. The statement of operations data for the six months ended June 30, 2014 and 2015 and the balance sheet data as of June 30, 2015 have been derived from our unaudited interim financial statements included elsewhere in this prospectus and have been prepared on the same basis as the audited financial statements. In the opinion of management, the unaudited data reflects all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the financial information in those statements. Our historical results are not necessarily indicative of the results that should be expected in the future and the results for the six months ended June 30, 2015 are not necessarily indicative of the results to be expected for the full year ending December 31, 2015 or any other future period.

	Year Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
	(in thousands, except per share data)			
Statement of Operations Data:				
Revenue	$ —	$ —	$ —	$ —
Operating expenses:				
Research and development	3,488	6,507	2,356	3,530
General and administrative	1,769	2,026	913	1,695
Total operating expenses	5,257	8,533	3,269	5,225
Loss from operations	(5,257)	(8,533)	(3,269)	(5,225)
Interest income	21	16	6	8
Net loss	(5,236)	(8,517)	(3,263)	(5,217)
Accretion of redeemable convertible preferred stock to redemption value	(1,740)	(2,054)	(914)	(1,333)
Net loss attributable to common stockholders	$ (6,976)	$ (10,571)	$ (4,177)	$ (6,550)
Net loss per share attributable to common stockholders, basic and diluted	$ (1.87)	$ (1.78)	$ (0.72)	$ (0.88)
Weighted average common shares outstanding, basic and diluted	3,731	5,934	5,780	7,435
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)		$ (0.30)		$ (0.15)
Pro forma weighted average common shares outstanding, basic and diluted (unaudited)		28,468		34,776

	As of December 31,		As of June 30,
	2013	2014	2015
		(in thousands)	
Balance Sheet Data:			
Cash, cash equivalents and marketable securities	$ 14,126	$ 16,648	$ 9,853
Working capital	13,019	14,883	9,020
Total assets	14,207	17,377	12,223
Redeemable convertible preferred stock	23,000	36,677	38,010
Total stockholders' deficit	(9,163)	(20,755)	(27,214)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with our financial statements and related notes thereto included elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the "Risk Factors" section of this prospectus, our actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a clinical-stage specialty pharmaceutical company focused on identifying, developing and commercializing innovative and differentiated topical drugs to address significant unmet needs in dermatology. Our lead drug candidate, A-101, is a proprietary high-concentration hydrogen peroxide topical solution that we are developing as a prescription treatment for seborrheic keratosis, or SK, a common non-malignant skin tumor. We have completed three Phase 2 clinical trials of A-101 in over 300 patients with SK. In these trials, following one or two applications of A-101, we observed clinically relevant and statistically significant improvements in clearing SK lesions on the face, trunk and extremities of the body. We plan to commence three Phase 3 clinical trials of A-101 in patients with SK in the second half of 2015 and, if the results of these trials are favorable, to submit a New Drug Application, or NDA, for A-101 for the treatment of SK to the U.S. Food and Drug Administration, or FDA, in the second half of 2016. We also intend to develop A-101 as a prescription treatment for common warts and A-102, a proprietary gel dosage form of hydrogen peroxide, as a prescription treatment for SK and common warts. In addition, we intend to in-license or acquire additional drug candidates for other dermatological conditions to build a fully integrated dermatology company.

Since our inception in July 2012, we have devoted substantially all of our resources to organizing and staffing our company, business planning, raising capital, developing A-101 for the treatment of SK, building our intellectual property portfolio, developing our supply chain and engaging in other discovery and clinical activities in dermatology. To date, we have not generated any revenue and have financed our operations with $31.5 million of gross proceeds from sales of our redeemable convertible preferred stock. We do not expect to generate significant revenue unless and until we obtain marketing approval for and commercialize A-101 for the treatment of SK or one of our other future drug candidates.

Since our inception, we have incurred significant operating losses. Our net loss was $5.2 million for the year ended December 31, 2013, $8.5 million for the year ended December 31, 2014 and $5.2 million for the six months ended June 30, 2015. As of June 30, 2015, we had an accumulated deficit of $27.2 million. We expect to incur significant expenses and operating losses for the foreseeable future as we advance our drug candidates from discovery through preclinical development and clinical trials, and seek regulatory approval and pursue commercialization of any approved drug candidate. In addition, if we obtain marketing approval for any of our drug candidates, we expect to incur significant commercialization expenses related to product manufacturing, marketing, sales and distribution. In addition, we may incur expenses in connection with the in-license or acquisition of additional drug candidates. Furthermore, upon the closing of this offering, we expect to incur additional costs associated with operating as a public company, including significant legal, accounting, investor relations and other expenses that we did not incur as a private company.

As a result, we will need substantial additional funding to support our continuing operations and pursue our growth strategy. Until such time as we can generate significant revenue from product sales, if ever, we expect to finance our operations through the sale of equity, debt financings or other capital sources,

including potential collaborations with other companies or other strategic transactions. We may be unable to raise additional funds or enter into such other agreements or arrangements when needed on favorable terms, or at all. If we fail to raise capital or enter into such agreements as, and when, needed, we may have to significantly delay, scale back or discontinue the development and commercialization of one or more of our drug candidates or delay our pursuit of potential in-licenses or acquisitions.

As of June 30, 2015, we had cash and cash equivalents of $9.9 million. We believe that the anticipated net proceeds from this offering, together with our existing cash and cash equivalents, will enable us to fund our operating expenses and capital expenditure requirements for at least the next months. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we expect. See "— Liquidity and Capital Resources."

Third-Party Agreements

Under an assignment agreement, pursuant to which we acquired intellectual property, we have agreed to pay royalties on sales of A-101 or related products at rates ranging in low single-digit percentages of net sales, as defined in the agreement. Under this assignment agreement, we have paid aggregate milestone payments of $0.2 million and there are no remaining milestone payment obligations under this agreement.

In connection with this acquisition of intellectual property, we also entered into a finder's services agreement under which we have paid aggregate milestone payments of $0.2 million and have agreed to make aggregate payments of up to $1.3 million upon the achievement of specified pre-commercialization milestones, such as clinical trials and regulatory approvals, as described in the agreement. We have also agreed to make aggregate payments of up to $4.5 million upon the achievement of specified commercial milestones. In addition, we have agreed to pay royalties on sales of A-101 or related products at a low single-digit percentage of net sales, as defined in the agreement.

Components of Our Results of Operations

Revenue

We have not generated any revenue since our inception and do not expect to generate any revenue from the sale of products in the near future.

Research and Development Expenses

Research and development expense consists of expenses incurred in connection with the discovery and development of our drug candidates. We expense research and development costs as incurred. These expenses include:

- expenses incurred under agreements with contract research organizations, or CROs, as well as investigative sites and consultants that conduct our clinical trials and preclinical studies;
- manufacturing scale-up expenses and the cost of acquiring and manufacturing preclinical and clinical trial materials and commercial materials, including manufacturing validation batches;
- outsourced professional scientific development services;
- employee-related expenses, which include salaries, benefits and stock-based compensation;
- payments made under a third-party assignment agreement, under which we acquired intellectual property;
- expenses relating to regulatory activities, including filing fees paid to regulatory agencies;
- laboratory materials and supplies used to support our research activities; and
- allocated expenses for utilities and other facility-related costs.

Research and development activities are central to our business model. Drug candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect our research and development expenses to increase significantly over the next several years as we increase

personnel costs, including stock-based compensation, commence Phase 3 clinical trials of A-101 in patients with SK and conduct other clinical trials and prepare regulatory filings for our drug candidates.

The successful development of our drug candidates is highly uncertain. At this time, we cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the remainder of the development of, or when, if ever, material net cash inflows may commence from any of our other drug candidates. This uncertainty is due to the numerous risks and uncertainties associated with the duration and cost of clinical trials, which vary significantly over the life of a project as a result of many factors, including:

- the number of clinical sites included in the trials;
- the length of time required to enroll suitable patients;
- the number of patients that ultimately participate in the trials;
- the number of doses patients receive;
- the duration of patient follow-up; and
- the results of our clinical trials.

Our expenditures are subject to additional uncertainties, including the terms and timing of regulatory approvals, and the expense of filing, prosecuting, defending and enforcing any patent claims or other intellectual property rights. We may never succeed in achieving regulatory approval for any of our drug candidates. We may obtain unexpected results from our clinical trials. We may elect to discontinue, delay or modify clinical trials of some drug candidates or focus on others. A change in the outcome of any of these variables with respect to the development of a drug candidate could mean a significant change in the costs and timing associated with the development of that drug candidate. For example, if the FDA or other regulatory authorities were to require us to conduct clinical trials beyond those that we currently anticipate, or if we experience significant delays in enrollment in any of our clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development. Drug commercialization will take several years and millions of dollars in development costs.

General and Administrative Expenses

General and administrative expenses consist principally of salaries and related costs for personnel in executive, administrative, finance and legal functions, including stock-based compensation, travel expenses and recruiting expenses. Other general and administrative expenses include facility related costs, patent filing and prosecution costs and professional fees for marketing, legal, auditing and tax services, insurance costs, as well as payments made under our related-party services agreement and milestone payments under our finder's services agreement.

We anticipate that our general and administrative expenses will increase as a result of increased payroll, expanded infrastructure and higher consulting, legal and tax-related services associated with maintaining compliance with stock exchange listing and SEC requirements, accounting and investor relations costs, and director and officer insurance premiums associated with being a public company. We anticipate the additional costs for these services will increase our general and administrative expenses by approximately $1.0 million to $2.0 million on an annual basis. Additionally, if and when we believe a regulatory approval of a drug candidate appears likely, we anticipate an increase in payroll and expense as a result of our preparation for commercial operations, especially as it relates to the sales and marketing of our drug candidate.

Interest Income

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

Income Taxes

Since our inception in 2012, we have not recorded any U.S. federal or state income tax benefits for the net losses we have incurred in each year or our earned research and development tax credits, due to our uncertainty of realizing a benefit from those items. As of December 31, 2014, we had federal and state net operating loss carryforwards of $13.8 million and $13.8 million, respectively, both of which begin to expire

in 2032. As of December 31, 2014, we also had federal research and development tax credit carryforwards of $0.2 million, which begin to expire in 2032, and we had no state research and development tax credit carryforwards.

Critical Accounting Policies and Significant Judgments and Estimates

Our financial statements are prepared in accordance with generally accepted accounting principles in the United States of America, or GAAP. The preparation of our financial statements and related disclosures requires us to make estimates and judgments that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of expenses during the reported period. We base our estimates on historical experience, known trends and events and various other factors that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions and conditions.

While our significant accounting policies are described in more detail in the notes to our financial statements appearing elsewhere in this prospectus, we believe that the following accounting policies are those most critical to the judgments and estimates used in the preparation of our financial statements.

Accrued Research and Development Expenses

As part of the process of preparing our financial statements, we are required to estimate our accrued research and development expenses. This process involves reviewing open contracts and purchase orders, communicating with our applicable personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual costs. The majority of our service providers require advance payments; however, some invoice us in arrears for services performed, on a pre-determined schedule or when contractual milestones are met. We make estimates of our accrued expenses as of each balance sheet date in the financial statements based on facts and circumstances known to us at that time. We periodically confirm the accuracy of the estimates with the service providers and makes adjustments if necessary. Examples of estimated accrued research and development expenses include fees paid to:

- vendors in connection with the preclinical development activities;
- contract manufacturers in connection with commercial scale-up activities and the production of preclinical and clinical trial materials;
- CROs in connection with clinical trials; and
- investigative sites in connection with clinical trials.

We base our expenses related to preclinical studies and clinical trials on our estimates of the services received and efforts expended pursuant to quotes and contracts with multiple research institutions and CROs that conduct and manage preclinical studies and clinical trials on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. There may be instances in which payments made to our vendors will exceed the level of services provided and result in a prepayment of the expense. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from the estimate, we adjust the accrual or prepaid accordingly. Although we do not expect our estimates to be materially different from amounts actually incurred, our understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in reporting amounts that are too high or too low in any particular period. To date, we have not made any material adjustments to our prior estimates of accrued research and development expenses.

Stock-Based Compensation

We measure stock options and other stock-based awards granted to employees and directors based on the fair value on the date of grant and recognize the corresponding compensation expense of those awards, net of estimated forfeitures, over the requisite service period, which is generally the vesting period of the respective award. Generally, we issue stock options and restricted stock awards with only service-based vesting conditions and record the expense for these awards using the straight-line method.

We measure stock-based awards granted to consultants and non-employees based on the fair value of the award on the date at which the related service is complete. Compensation expense is recognized over the period during which services are rendered by such consultants and non-employees until completed. At the end of each financial reporting period prior to completion of the service, the fair value of these awards is remeasured using the then-current fair value of our common stock and updated assumption inputs in the Black-Scholes option-pricing model.

We estimate the fair value of each stock option grant using the Black-Scholes option-pricing model, which uses as inputs the fair value of our common stock and assumptions we make for the volatility of our common stock, the expected terms of our stock options, the risk-free interest rate for a period that approximates the expected term of our stock options and our expected dividend yield.

As there has been no public market for our common stock to date, the estimated fair value of our common stock has been determined by our board of directors, with input from management, considering our most recently available third-party valuations of common stock and our board of directors' assessment of additional objective and subjective factors that it believed were relevant and which may have changed from the date of the most recent valuation through the date of the grant. We have periodically determined the estimated fair value of our common stock at various dates using contemporaneous valuations performed in accordance with the guidance outlined in the American Institute of Certified Public Accountants' Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*.

Our common stock valuations were performed using a hybrid method, which used market approaches to estimate our enterprise value. We selected the hybrid method based on the availability and the quality of information to develop the assumptions for the methodology. The hybrid method is a probability-weighted expected return method, or PWERM, where the equity value in one or more of the scenarios is calculated using an option-pricing method, or OPM. The PWERM is a scenario-based methodology that estimates the fair value of common stock based upon an analysis of future values for the company, assuming various outcomes. Under this method, the common stock value is based on the probability-weighted present value of expected future investment returns, considering each of the possible outcomes available, as well as the rights of each class of stock. The OPM treats common stock and preferred stock as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company's securities changes. Under this method, the common stock has value only if the funds available for distribution to stockholders exceed the value of the preferred stock liquidation preference at the time of a liquidity event, such as a strategic sale or merger.

In the hybrid method used in each of our third-party valuations, six types of future-event scenarios were considered: two different OPM scenarios, a strategic sale scenario, a low-value and a high-value IPO scenario, and a liquidation scenario. The relative probability of each type of future-event scenario was based on our analysis of market conditions at the time, including then-current IPO valuations of similarly situated companies and expectations as to the timing and likely prospects of the future-event scenarios. To determine our enterprise values under the two OPM scenarios, we used the OPM backsolve approach. To determine our enterprise values under the two IPO scenarios, we used the guideline public company method under the market approach, which analyzed enterprise values at the IPO date of publicly traded dermatology-focused biopharmaceutical companies. To determine our enterprise value under the strategic sale scenario, we considered sale transactions of comparable companies. Finally, to determine our

enterprise value for the liquidation scenario, we assumed a sale at the net book value of our assets and liabilities. To derive the fair value of the common stock for each future-event scenario under the hybrid method, the proceeds to the common stockholders were calculated based on the conversion rights and preferences of the preferred stock. We then applied a discount for lack of marketability to the common stock to account for the lack of access to an active public market.

We performed these contemporaneous valuations, with the assistance of a third-party valuation specialist, as of December 1, 2013, June 30, 2014 and December 8, 2014. In addition to these valuations, our board of directors considered various objective and subjective factors to determine the fair value of our common stock as of each grant date, including:

- the prices at which we sold shares of preferred stock and the superior rights and preferences of the preferred stock relative to our common stock at the time of each grant;
- the progress of our research and development programs, including the status of preclinical studies and clinical trials for our drug candidates;
- our stage of development and commercialization and our business strategy;
- external market conditions affecting the biotechnology industry, and trends within the biotechnology industry;
- our financial position, including cash on hand, and our historical and forecasted performance and operating results;
- the lack of an active public market for our common stock and our preferred stock;
- the likelihood of achieving a liquidity event, such as an initial public offering, or IPO, or sale of our company in light of prevailing market conditions; and
- the analysis of IPOs and the market performance of similar companies in the biopharmaceutical industry.

The assumptions underlying these valuations represent management's best estimates, which involve inherent uncertainties and the application of management judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our equity-based compensation could be materially different.

Following the closing of this offering, the fair value of our common stock will be determined based on the quoted market price of our common stock.

The following table summarizes by grant date the number of shares subject to options granted since January 1, 2014, the per share exercise price of the options, the fair value of common stock underlying the options on date of grant and the per share estimated fair value of the options:

Grant Date	Number of Shares Subject To Options Granted	Per Share Exercise Price of Options	Fair Value of Common Stock per Share on Option Grant Date	Per Share Estimated Fair Value of Options
January 29, 2014	180,000	$ 0.12	$ 0.12	$ 0.10
August 13, 2014	400,000	$ 0.21	$ 0.41(1)	$ 0.37
December 8, 2014	1,145,961	$ 0.44	$ 0.53(2)	$ 0.46

(1) At the time of the option grants on August 13, 2014, our board of directors determined that the fair value of our common stock of $0.21 per share calculated in the contemporaneous valuation as of June 30, 2014 reasonably reflected the per share fair value of common stock as of the grant date. However, as described below, the fair value of common stock at the date of these grants was adjusted to $0.41 per share in connection with a retrospective fair value assessment for accounting purposes.

(2) At the time of the option grants on December 8, 2014, our board of directors determined that the fair value of our common stock of $0.44 per share calculated in the contemporaneous valuation as of December 8, 2014 reasonably reflected the per share fair value of common stock as of the grant date. However, as described below, the fair value of common stock at the date of these grants was adjusted to $0.53 per share in connection with a retrospective fair value assessment for accounting purposes.

In the course of preparing for this offering, in March 2015, we performed a retrospective fair value assessment and concluded that the fair value of our common stock underlying stock options we granted in August 2014 was $0.41 per share for accounting purposes and that the fair value of our common stock underlying stock options we granted in December 2014 was $0.53 per share for accounting purposes. These reassessed values, which we applied to determine the fair values of the August 2014 and December 2014 option grants to determine stock-based compensation expense for accounting purposes, were based in part upon revised valuations of our common stock as of June 30, 2014 and December 8, 2014, performed on a retrospective basis with the assistance of a third-party specialist, taking into account an increased probability of executing a successful initial public offering in 2015 and an increased probability of a successful result in our Phase 2 clinical trial of A-101 in patients with SK on the trunk and extremities. These revised common stock valuations were performed using the hybrid method.

Results of Operations

Comparison of Six Months Ended June 30, 2014 and 2015

The following table summarizes our results of operations for the six months ended June 30, 2014 and 2015:

	Six Months Ended June 30,		
	2014	2015	Change
	(in thousands)		
Revenue	$ —	$ —	$ —
Operating expenses:			
Research and development	2,356	3,530	1,174
General and administrative	913	1,695	782
Total operating expenses	3,269	5,225	1,956
Loss from operations	(3,269)	(5,225)	(1,956)
Interest income	6	8	2
Net loss	$ (3,263)	$ (5,217)	$ (1,954)

Research and Development Expenses

Research and development expenses were $2.4 million for the six months ended June 30, 2014, compared to $3.5 million for the six months ended June 30, 2015. The increase of $1.2 million was primarily attributable to an increase of $0.6 million in direct costs associated with the three Phase 2 clinical trials of our lead drug candidate, A-101 for the treatment of SK, being conducted during the period, consisting of an increase of $0.9 million in manufacturing scale-up expenses partially offset by a $0.3 million decrease in development-related expenses. We also had an increase of $0.5 million in regulatory-related expenses.

General and Administrative Expenses

General and administrative expenses were $0.9 million for the six months ended June 30, 2014, compared to $1.7 million for the six months ended June 30, 2015. The increase of $0.8 million was primarily attributable to increases of $0.4 million in payroll-related expenses due to increased headcount,

$0.2 million in market research expenses and $0.2 million in professional fees for accounting and auditing services.

Comparison of Years Ended December 31, 2013 and 2014

The following table summarizes our results of operations for the years ended December 31, 2013 and 2014:

	Year Ended December 31,		
	2013	2014	Change
		(in thousands)	
Revenue	$ —	$ —	$ —
Operating expenses:			
Research and development	3,488	6,507	3,019
General and administrative	1,769	2,026	257
Total operating expenses	5,257	8,533	3,276
Loss from operations	(5,257)	(8,533)	(3,276)
Interest income	21	16	(5)
Net loss	$ (5,236)	$ (8,517)	$ (3,281)

Research and Development Expenses

Research and development expenses were $3.5 million for the year ended December 31, 2013, compared to $6.5 million for the year ended December 31, 2014. The increase of $3.0 million was primarily attributable to an increase of $3.1 million in direct costs associated with the three Phase 2 clinical trials of our lead drug candidate, A-101 for the treatment of SK, being conducted during the year, consisting of increases of $1.9 million in clinical expenses, $1.1 million in manufacturing scale-up expenses and $0.1 million in development-related expenses. We also had an increase of $0.1 million in personnel-related expenses. These increases were partially offset by a decrease of $0.2 million in expenses due to a $0.2 million milestone payment made in 2013 under our assignment agreement, compared to no milestone payments made in 2014.

General and Administrative Expenses

General and administrative expenses were $1.8 million for the year ended December 31, 2013, compared to $2.0 million for the year ended December 31, 2014. The increase of $0.2 million was primarily attributable to increases of $0.1 million in market research expenses and $0.1 million in related-party management services.

Liquidity and Capital Resources

Since our inception, we have not generated any revenue and have incurred net losses and negative cash flows from our operations. We have financed our operations since inception through sales of our redeemable convertible preferred stock, receiving aggregate gross proceeds of $31.5 million.

As of June 30, 2015, we had cash and cash equivalents of $9.9 million. Cash in excess of immediate requirements is invested in accordance with our investment policy, primarily with a view to liquidity and capital preservation.

We currently have no ongoing material financing commitments, such as lines of credit or guarantees, that are expected to affect our liquidity over the next five years, other than our lease obligations.

Cash Flows

The following table summarizes our cash flows for each of the periods presented:

	Year Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
	(in thousands)			
Cash used in operating activities	$ (4,920)	$ (7,636)	$ (3,288)	$ (5,664)
Cash provided by (used in) investing activities	(4,535)	(1,779)	3,045	5,655
Cash provided by (used in) financing activities	—	10,584	—	(895)
Net increase (decrease) in cash and cash equivalents	$ (9,455)	$ 1,169	$ (243)	$ (904)

Operating Activities. During the six months ended June 30, 2015, operating activities used $5.7 million of cash, primarily resulting from our net loss of $5.2 million and from cash used by our changes in our operating assets and liabilities of $0.6 million. Net cash used in changes in our operating assets and liabilities during the six months ended June 30, 2015 consisted primarily of a $0.4 million decrease in accounts payable and a $0.4 million increase in prepaid expenses and other current assets, both of which were partially offset by a $0.3 million increase in accrued expenses. The decrease in accounts payable was due to the timing of vendor invoicing and payments. The increase in prepaid expenses and other current assets was primarily due to prepayments for manufacturing scale-up expenses. The increase in accrued expenses was due to increases in accruals for payroll and payroll-related costs due primarily to bonuses.

During the six months ended June 30, 2014, operating activities used $3.3 million of cash, primarily resulting from our net loss of $3.3 million. Net cash used in changes in our operating assets and liabilities during the six months ended June 30, 2014 consisted primarily of a $0.2 increase in accounts payable and a $0.3 increase in accrued expenses, both of which were offset by a $0.5 increase in prepaid expenses and other current assets. The increases in accounts payable and accrued expenses were primarily due to clinical trial costs related to A-101. The increase in prepaid expenses and other current assets was primarily due to a prepayment for manufacturing scale-up expenses.

During the year ended December 31, 2014, operating activities used $7.6 million of cash, primarily resulting from our net loss of $8.5 million, partially offset by cash provided by changes in our operating assets and liabilities of $0.8 million. Net cash provided by changes in our operating assets and liabilities during the year ended December 31, 2014 consisted primarily of a $0.8 million increase in accounts payable and a $0.2 increase in accrued expenses, partially offset by a $0.2 million increase in prepaid expenses and other current assets. The increases in accounts payable and accrued expenses were primarily due to higher clinical trial costs incurred in 2014 than in 2013 related to A-101. The increase in prepaid expenses and other current assets was primarily due to a prepayment for manufacturing scale-up expenses.

During the year ended December 31, 2013, our operating activities used $4.9 million of cash, primarily resulting from our net loss of $5.2 million, partially offset by cash provided by net changes in our operating assets and liabilities of $0.3 million, which primarily consisted of an increase in accounts payable. The increase in accounts payable was primarily due to costs incurred in connection with the commencement of preclinical studies and a clinical trial of A-101 in 2013.

Investing Activities. During the six months ended June 30, 2015, investing activities provided $5.7 million of cash, consisting of proceeds from sales and maturities of marketable securities of $5.9 million, partially offset by purchases of equipment of $0.2 million.

During the six months ended June 30, 2014, investing activities provided $3.0 million of cash, consisting of proceeds from sales and maturities of marketable securities of $3.1 million, partially offset by purchases of equipment of $0.1 million.

During the year ended December 31, 2014, we used cash of $1.8 million in investing activities, consisting of purchases of marketable securities of $5.0 million and purchases of equipment of $0.4 million, partially offset by proceeds from sales and maturities of marketable securities of $3.7 million.

During the year ended December 31, 2013, we used cash of $4.5 million in investing activities, consisting of purchases of marketable securities.

Financing activities. During the six months ended June 30, 2015, financing activities used $0.9 million as a result of payments of initial public offering costs.

We had no cash flows from financing activities during the six months ended June 30, 2014.

During the year ended December 31, 2014, net cash provided by financing activities was $10.6 million as a result of net proceeds received from our issuance of Series B redeemable convertible preferred stock in September 2014. We had no cash flows from financing activities during the year ended December 31, 2013.

Funding Requirements

We plan to focus in the near term on the development, regulatory approval and potential commercialization of A-101 for the treatment of SK. We anticipate we will incur net losses for the next several years as we complete clinical development of A-101 for the treatment of SK and continue research and development of A-101 for the treatment of common warts and A-102 for the treatment of SK and common warts. In addition, we plan to continue to invest in discovery efforts to explore additional drug candidates, potentially build commercial capabilities and expand our corporate infrastructure. We may not be able to complete the development and initiate commercialization of these programs if, among other things, our clinical trials are not successful or if the FDA does not approve our drug candidate arising out of our current clinical trials when we expect, or at all.

Our primary uses of capital are, and we expect will continue to be, compensation and related expenses, clinical costs, external research and development services, laboratory and related supplies, legal and other regulatory expenses, and administrative and overhead costs. Our future funding requirements will be heavily determined by the resources needed to support development of our drug candidates.

Following this offering, we will be a publicly traded company and will incur significant legal, accounting and other expenses that we were not required to incur as a private company. In addition, the Sarbanes-Oxley Act of 2002, as well as rules adopted by the SEC and The NASDAQ Stock Market, requires public companies to implement specified corporate governance practices that are currently inapplicable to us as a private company. We expect these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly.

We believe that the anticipated net proceeds from this offering, together with our existing cash and cash equivalents, will enable us to fund our operating expenses and capital expenditure requirements for at least the next months, including the completion of our three planned Phase 3 clinical trials for A-101 for the treatment of SK, the submission of our NDA with the FDA for the approval of A-101 for the treatment of SK in the United States and the completion of our planned Phase 2 clinical trials for A-101 for the treatment of common warts. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we expect. We expect that we will require additional capital to commercialize A-101 for the treatment of SK, if we receive regulatory approval, and to pursue in-licenses or acquisitions of other drug candidates. If we receive regulatory approval for A-101 for the treatment of SK, we expect to incur significant commercialization expenses related to product manufacturing, sales, marketing and distribution, depending on where we choose to commercialize.

Additional funds may not be available on a timely basis, on favorable terms, or at all, and such funds, if raised, may not be sufficient to enable us to continue to implement our long-term business strategy. If we are unable to raise sufficient additional capital, we may need to substantially curtail our planned operations and the pursuit of our growth strategy.

We may raise additional capital through the sale of equity or convertible debt securities. In such an event, your ownership will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a holder of our common stock.

Because of the numerous risks and uncertainties associated with research, development and commercialization of pharmaceutical drugs, we are unable to estimate the exact amount of our working capital requirements. Our future funding requirements will depend on many factors, including:

- the number and characteristics of the drug candidates we pursue;
- the scope, progress, results and costs of researching and developing our drug candidates, and conducting preclinical studies and clinical trials;
- the timing of, and the costs involved in, obtaining regulatory approvals for our drug candidates;
- the cost of manufacturing our drug candidates and any drugs we successfully commercialize;
- our ability to establish and maintain strategic collaborations, licensing or other arrangements and the financial terms of such agreements;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims, including litigation costs and the outcome of such litigation; and
- the timing, receipt and amount of sales of, or milestone payments related to or royalties on, our current or future drug candidates, if any.

See "Risk Factors" for additional risks associated with our substantial capital requirements.

Contractual Obligations and Commitments

The following table summarizes our contractual obligations at December 31, 2014 and the effect such obligations are expected to have on our liquidity and cash flows in future periods:

	Payments Due by Period				
	Total	Less Than 1 Year	1 - 3 Years	4 - 5 Years	More than 5 Years
	(in thousands)				
Operating lease commitments[1]	$ 201	$ 104	$ 97	$ —	$ —
Total	$ 201	$ 104	$ 97	$ —	$ —

(1) We lease office space in Malvern, Pennsylvania under an operating lease agreement that, as amended, was scheduled to expire in November 2016. Amounts presented in the table reflect payments due under the lease as amended through December 31, 2014. In August 2015, we further amended the agreement to increase the square footage of the space and to extend the term of the lease to November 2019. As amended, the lease requires future rental payments of $0.1 million during the year ending December 31, 2015, an aggregate of $0.4 million during the years ending December 31, 2016 and 2017, and an aggregate of $0.4 million during the years ending December 31, 2018 and 2019. Such amounts are not reflected in the table.

Under various agreements, we will be required to make milestone payments and pay royalties and other amounts to third parties. We have not included any contingent payment obligations, such as milestones or royalties, in the table above as the amount, timing and likelihood of such payments are not known.

Under the assignment agreement pursuant to which we acquired intellectual property, we have agreed to pay royalties on sales of A-101 or related products at rates ranging in low single-digit percentages of net sales, as defined in the agreement. Under the related finder's services agreement, we have agreed to make aggregate payments of up to $1.3 million upon the achievement of specified pre-commercialization milestones, such as clinical trials and regulatory approvals, as described in the agreement. We have also agreed to make aggregate payments of up to $4.5 million upon the achievement of specified commercial milestones. In addition, we have agreed to pay royalties on sales of A-101 or related products at a low single-digit percentage of net sales, as defined in the agreement.

Under a commercial supply agreement with a third party, we have agreed to pay a termination fee of up to $0.4 million in the event we terminate the agreement without cause or the third party terminates the agreement for cause.

We enter into contracts in the normal course of business with CROs for clinical trials, preclinical research studies and testing, manufacturing and other services and products for operating purposes. These contracts generally provide for termination upon notice, and therefore we believe that our non-cancelable obligations under these agreements are not material.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the Securities and Exchange Commission.

Recently Issued and Adopted Accounting Pronouncements

In June 2014, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU 2014-10, *Development Stage Entities*. The amendments in this update removed all incremental financial reporting requirements, including inception-to-date information and certain other disclosures currently required under GAAP, in the financial statements of development stage companies. The amendments are effective for annual reporting periods beginning after December 15, 2014 and interim reporting periods beginning after December 15, 2015. Early adoption is permitted. We elected to early adopt this guidance and, therefore, have not presented inception-to-date information and other related disclosures in our financial statements.

In August 2014, the FASB issued ASU 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*. The amendments in this update will explicitly require a company's management to assess an entity's ability to continue as a going concern, and to provide related footnote disclosures in certain circumstances. The new standard will be effective in the first annual period ending after December 15, 2016. Early application is permitted. We are currently evaluating the potential impact of the adoption of this standard, but we believe its adoption will have no impact on our financial position, results of operations or cash flows.

Quantitative and Qualitative Disclosures about Market Risks

As of June 30, 2015, we had $9.7 million of cash equivalents, composed of overnight money market funds, and we had no debt. As a result, a change in market interest rates would not have any impact on our financial position or results of operations.

Emerging Growth Company Status

The Jumpstart Our Business Startups Act of 2012, or the JOBS Act, permits an "emerging growth company" such as us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies until those standards would otherwise apply to private companies. We have irrevocably elected to "opt out" of this provision and, as a result, we will comply with new or revised accounting standards when they are required to be adopted by public companies that are not emerging growth companies.

BUSINESS

Overview

We are a clinical-stage specialty pharmaceutical company focused on identifying, developing and commercializing innovative and differentiated topical drugs to address significant unmet needs in dermatology. Our lead drug candidate, A-101, is a proprietary high-concentration hydrogen peroxide topical solution that we are developing as a prescription treatment for seborrheic keratosis, or SK, a common non-malignant skin tumor. We have completed three Phase 2 clinical trials of A-101 in over 300 patients with SK. In these trials, following one or two applications of A-101, we observed clinically relevant and statistically significant improvements in clearing SK lesions on the face, trunk and extremities of the body. Clinically relevant means that the observed results suggest a potential meaningful medical benefit, and statistically significant means that there is a low statistical probability, typically less than 5%, that the observed results occurred by chance alone. We plan to commence three Phase 3 clinical trials of A-101 in patients with SK in the second half of 2015 and, if the results of these trials are favorable, to submit a New Drug Application, or NDA, for A-101 for the treatment of SK to the U.S. Food and Drug Administration, or FDA, in the second half of 2016. We also intend to develop A-101 as a prescription treatment for common warts and A-102, a proprietary gel dosage form of hydrogen peroxide, as a prescription treatment for SK and common warts. In addition, we intend to in-license or acquire additional drug candidates for other dermatological conditions to build a fully integrated dermatology company.

SK lesions are among the most common non-malignant skin tumors and one of the most frequent diagnoses made by dermatologists. SK lesions typically have a waxy, scaly, slightly elevated appearance, and multiple lesions are often present. Though the lesions are non-malignant, patients often elect to have their condition treated by a dermatologist, either because the lesions have become inflamed or because the patient feels they are cosmetically unattractive. SK lesions are usually treated by cryosurgery, electrodesiccation, curettage or excision. Each of these methods may be painful or can result in pigmentary changes or scarring at the treatment site. No drugs have been approved by the FDA for the treatment of SK.

A study published in the Journal of The American Academy of Dermatology in 2006, which we refer to as the AAD study, estimated that SK affects over 83 million people in the United States. Based on a market survey we commissioned in 2014, we estimate that there are 18.5 million patient visits to dermatologists for SK and dermatologists perform approximately 8.3 million procedures to remove SK lesions annually in the United States. We estimate that the cost of these procedures to third-party payors and patients is more than $1.2 billion annually.

In June 2014, we completed our Phase 2 clinical trial of A-101 in 35 patients with four SK lesions on the trunk; in December 2014, we completed our Phase 2 clinical trial of A-101 in 172 patients with four SK lesions on the trunk or extremities; and in March 2015, we completed our Phase 2 clinical trial of A-101 in 119 patients with a single SK lesion on the face. In each of these trials, following one or two applications of the two highest concentrations of A-101, we observed clinically relevant and statistically significant improvements in clearing SK lesions.

We held an end-of-Phase 2 meeting with the FDA in May 2015. Based on the FDA's feedback regarding our proposed design of the three planned Phase 3 clinical trials of A-101 in patients with SK lesions on the face, trunk and extremities, we plan to commence these trials in the second half of 2015. If the results of the Phase 3 clinical trials are favorable, we intend to submit our NDA for A-101 for the treatment of SK to the FDA in the second half of 2016 and build a specialty sales force to market the product to dermatologists in the United States. We have also received written guidance from the European Medicines Agency, or EMA, regarding the design of our Phase 3 clinical trials for A-101 for the treatment of SK. We plan to seek a collaborator to commercialize A-101, if approved, in the European Union. We have the exclusive right to commercialize A-101, if approved, in various countries throughout the world.

We also plan to develop A-101 for the treatment of common warts. Although common warts are generally not harmful and in most cases eventually clear without any medical treatment, they may be painful and aesthetically unattractive and are contagious. On an annual basis, 1.9 million people are diagnosed with common warts. The AAD study estimated that annual direct expenditures for patients seeking treatment for

warts of all types in a medical office were $939 million, including the cost of the office visit as well as the treatments. We estimate that approximately one-half of those expenditures were for the treatment of common warts. Common warts can be removed with slow-acting, over-the-counter products containing salicylic acid. As with SK, cryosurgery is the most frequently used in-office treatment for common warts. No prescription drugs have been approved by the FDA for the treatment of common warts. We are conducting toxicology studies and plan to commence Phase 2 clinical trials of A-101 for the treatment of common warts in the second half of 2015. In addition to A-101, we are also developing A-102, a proprietary topical gel dosage form of hydrogen peroxide, for the treatment of both SK and common warts.

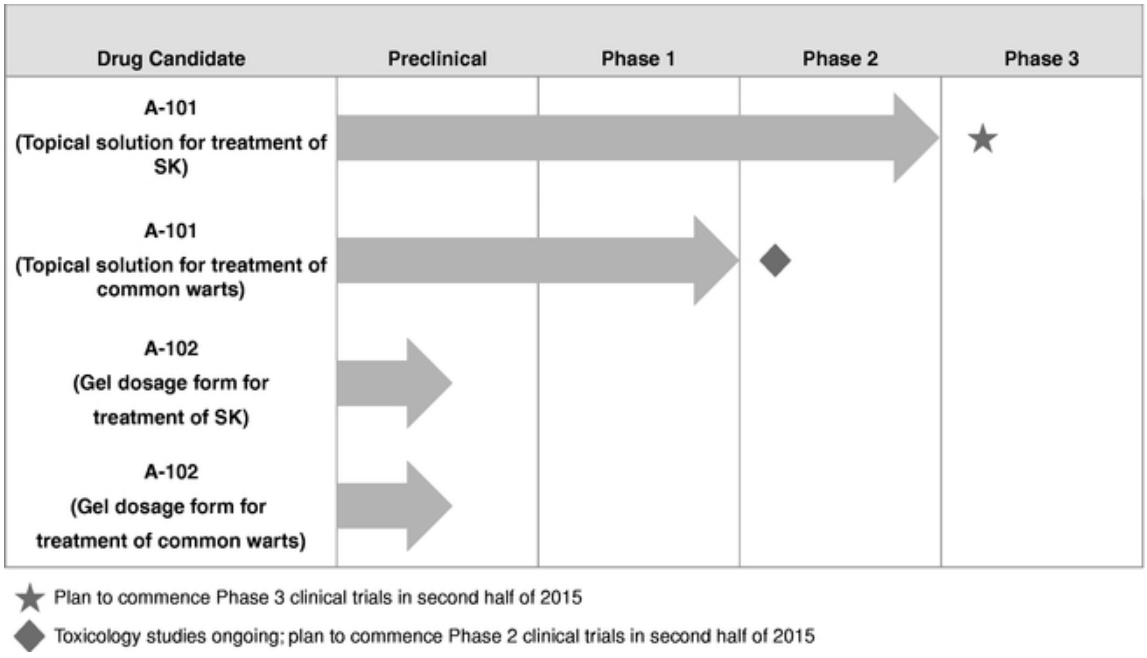
Our intellectual property portfolio contains issued patents directed to methods of use for A-101. Our issued patents begin to expire in 2022, subject to any applicable patent term adjustment or extension in a particular country. Our intellectual property portfolio also contains a U.S. and a PCT patent application directed to, among other things, formulations and methods of use for A-101 and a single-use, self-contained, pre-filled, disposable pen-type applicator for use with such formulations, including A-101. Our pending U.S. and PCT patent applications, if they issue as patents, would be expected to expire in 2035.

Corporate History and Management Experience

We were founded in 2012 and are headquartered in Malvern, Pennsylvania. Our management team has extensive experience in dermatological product development from drug discovery through commercialization, with experience as practicing dermatologists and in leadership roles at a number of dermatology companies. Members of our management team founded and led Vicept Therapeutics, Inc., a dermatology company that was acquired by Allergan, Inc. in 2011. In addition, several of our management team members worked together at CollaGenex Pharmaceuticals, Inc., a dermatology-focused specialty pharmaceutical company that was acquired by Galderma Laboratories, LP in 2008, and Trigenesis Therapeutics, Inc., a dermatology company that was acquired by Dr. Reddy's Laboratories Inc. in 2004. We believe that the experience of our management team and our broad network of relationships with leaders within the industry and medical community provides us with insight into product development and identification of other commercial opportunities in dermatology.

Our Drug Candidates

We have utilized our experience to establish a pipeline of drug candidates that we believe will address significant unmet needs in dermatology. Our pipeline of drug candidates is summarized in the table below:



Our Strategy

Our goal is to develop and commercialize innovative and differentiated dermatology products that address significant unmet medical needs. The key components of our strategy to achieve this goal are to:

- ***Complete Clinical Development and Obtain Regulatory Approval for A-101 for the Treatment of SK.*** We plan to focus in the near term on the development, regulatory approval and potential commercialization of A-101 for the treatment of SK. We recently held an end-of-Phase 2 meeting for A-101 with the FDA in May 2015. Based on the FDA's feedback at that meeting, we plan to commence three Phase 3 clinical trials in the second half of 2015 for the treatment of SK on the face, trunk and extremities. If the results of these clinical trials are favorable, we intend to submit our NDA for A-101 for the treatment of SK to the FDA in the second half of 2016. We have also received written guidance from the EMA regarding the design of our Phase 3 clinical trials for A-101 for the treatment of SK.

- ***Develop A-101 for the Treatment of Common Warts and Develop Our Other Drug Candidates.*** We are conducting toxicology studies and plan to commence Phase 2 clinical trials of A-101 for the treatment of common warts in the second half of 2015. In addition to A-101, we are also developing A-102 for the treatment of SK and common warts.

- ***Build a Specialized Sales and Marketing Organization.*** We intend to commercialize our dermatology products, if approved, by building a specialized sales and marketing organization focused solely on dermatologists and their patients in the United States. We believe a scientifically oriented, customer-focused team of approximately 50 to 60 sales representatives would allow us to reach the approximately 5,000 dermatologists in the United States with the highest potential for using A-101.

- ***In-license or Acquire Additional Drug Candidates to Build a Fully Integrated Dermatology Company.*** We intend to in-license or acquire drug candidates for other dermatological conditions from a number of sources by leveraging the expertise and experience of our management team. We will seek to maintain a well-balanced portfolio by in-licensing or acquiring additional drug candidates across various stages of development. We intend to focus on drug candidates that we believe have streamlined clinical development and regulatory pathways, including drug candidates that we believe have attractive profiles in early clinical testing and that we can advance into late-stage development. We may also seek to in-license or acquire dermatology products that have received regulatory approval in order to accelerate our commercial entry into the market or to expand the portfolio of products we can market to dermatologists. We have not entered into any collaboration or licensing agreements or acquired any additional drug candidates to date.

Our Lead Drug Candidate: A-101 for the Treatment of Seborrheic Keratosis

Overview

We are developing A-101 for the treatment of SK. SK lesions typically have a waxy, scaly, slightly elevated appearance, and multiple lesions are often present. The lesions can vary in color from light tan to dark brown or black and typically appear on the face, trunk and extremities. Though the lesions are non-malignant, patients often elect to have their condition treated by a dermatologist, either because the lesions have become inflamed or because the patient feels they are cosmetically unattractive.

We have completed three Phase 2 clinical trials in over 300 patients with SK and observed clinically relevant and statistically significant improvements in clearing SK lesions on the face, trunk and extremities

of the body following one or two applications of A-101. The following table summarizes the design of these clinical trials:

Name of Clinical Trial and Number of Subjects Enrolled	SK Lesion Area	Date Completed	Trial Design	Trial Objective
SEBK-203 (n=119)	Face	March 2015	§ Multicenter, randomized, double-blinded, vehicle-controlled, parallel group § One lesion treated § A-101 concentrations: 32.5%, 40.0% § Duration: 106 days	§ Evaluate safety, efficacy, tolerability and dose-response profile of two concentrations of A-101 vs. vehicle control
SEBK-202 (n=172)	Trunk and Extremities	December 2014	§ Multicenter, randomized, double-blind, vehicle-controlled, parallel group § Four lesions treated § A-101 concentrations: 32.5%, 40.0% § Duration: 106 days	§ Evaluate safety, efficacy, tolerability and dose-response profile of two concentrations of A-101 vs. vehicle control
SEBK-201 (n=35)	Trunk (Back)	June 2014	§ Double-blind, vehicle-controlled intra-subject § Four lesions treated § A-101 concentrations: 25.0%, 32.5%, 40.0% § Duration: 78 days	§ Evaluate safety, efficacy and tolerability of three concentrations of A-101 vs. vehicle control

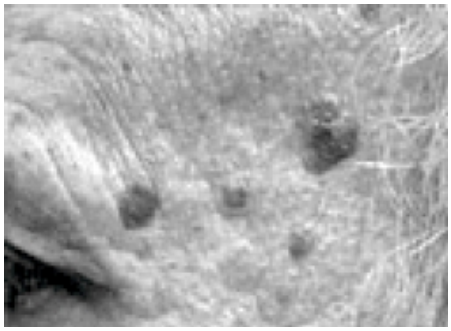
Market Overview

SK lesions are among the most common non-malignant skin tumors. Patients may be affected with just one SK lesion or dozens of SK lesions. SK lesions do not pose a health risk, although the lesions can become inflamed, which may lead to itching and bleeding from scratching or friction from clothing or shaving. SK lesions may appear to be skin cancer lesions and the presence of the lesions often motivates patients to seek a diagnosis, usually from a dermatologist. SK generally appears in middle-aged persons and the incidence of SK increases with age.

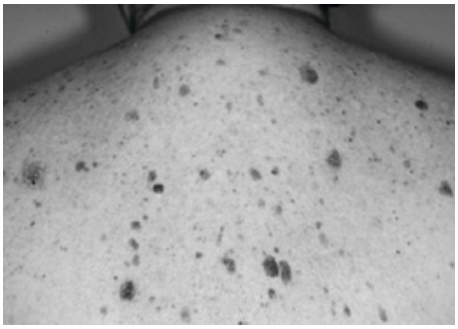
A study published in the Journal of The American Academy of Dermatology in 2006 estimated that SK affects over 83 million people in the United States. Based on a market survey we commissioned in 2014, we estimate that there are 18.5 million patient visits to dermatologists for SK and dermatologists perform approximately 8.3 million procedures to remove SK lesions annually in the United States. We estimate that the cost of these procedures to third-party payors and patients is more than $1.2 billion annually. We believe this market will grow if dermatologists have access to treatments that have better aesthetic outcomes, are less-invasive, cause minimal discomfort and can be administered by non-physician staff to treat multiple lesions.

The following pictures illustrate patients with SK lesions on the face and the back:

Face



Back



Limitations of Current Treatment Options for Seborrheic Keratosis

There are currently no FDA-approved drugs for the treatment of SK. However, dermatologists typically choose SK treatment based on a number of factors, including disease severity, patient characteristics and patient preference. The following table sets forth the most commonly used treatment options, the circumstances under which each procedure is typically used, and the key advantages, key drawbacks and frequency of use of each procedure:

Current Treatment Options for Seborrheic Keratosis

Procedure	Description	When Used	Key Advantages	Key Drawbacks	Frequency of Use
Cryosurgery	§ Spraying liquid nitrogen at a temperature of approximately negative 320 degrees Fahrenheit directly onto the SK lesions § Lesion falls off once frozen	§ Lighter-skinned patients § Multiple lesions	§ Easy, quick and inexpensive § Rarely causes bleeding and requires minimal wound care	§ Frequently painful § Multiple treatments may be required § Potential hypopigmentation § Potential scarring, pain and swelling § Requires physician to perform procedure	§ Approximately two-thirds of treated SK patients
Curettage	§ Scraping SK lesions off with the use of a tool known as a curette	§ Single or multiple thin lesions § In combination with electrodesiccation for thick lesions § In combination with cryosurgery	§ May quickly remove single or multiple growths	§ Requires local anesthesia § Potential bleeding and minor infection § Requires physician to perform procedure	§ 5% to 10% of treated SK patients
Electrodesiccation	§ Using an electric needle to burn off the SK lesion	§ Small and facial lesions § Darker skinned patients § In combination with curettage for thick lesions	§ Fast healing § Minimal scarring § Less risk of hypopigmentation than cryosurgery	§ More time-intensive than alternatives § May require local anesthesia § Requires electrosurgical equipment § Potential bleeding, infection and darkening of skin in treatment area § Requires physician to perform procedure	§ 5% to 10% of treated SK patients
Excision	§ Removing entire lesion with a scalpel	§ Raised or thick lesions § In cases of clinical uncertainty where a biopsy is needed to confirm diagnosis	§ Covered by insurance when a biopsy is needed	§ Requires local anesthesia § Requires wound management § Potential infection § More expensive then other alternatives § Requires physician to perform procedure	§ 5% to 10% of treated SK patients

Cryosurgery, which involves spraying liquid nitrogen at a temperature of negative 320 degrees Fahrenheit directly onto the SK lesions, is used in approximately two-thirds of treated SK patients. In this procedure, the lesion is frozen and subsequently falls off. Dermatologists use cryosurgery because it is easy, quick and inexpensive. However, depending on the severity of the patient's condition, more than one cryosurgery treatment is typically required to remove all of the targeted lesions. Adverse effects experienced by patients using cryosurgery include permanent hypopigmentation, or loss of skin color, hyperpigmentation, or darkening of the skin, scarring, pain and edema, or swelling.

Other treatments include curettage, or scraping, as well as electrodesiccation and excision. We estimate that each of these treatments is used for 5% to 10% of treated SK patients. Curettage involves scraping SK lesions off with the use of a tool known as a curette. As a result, this procedure typically leads to bleeding, may result in infection and requires a longer time for the skin to heal. Electrodesiccation is a form of electrosurgery that involves the use of an electric needle to burn off the SK lesion. Although labor- and time-intensive, this procedure is sometimes used for darker-skinned patients in order to avoid the permanent hypopigmentation or scarring that can occur with other procedures. With an excision procedure, the lesion is removed with a scalpel but remains intact for biopsy in cases where a definitive diagnosis has not been made. These procedures are sometimes used in combination to remove SK lesions. In addition, there are other dermatological treatments that are used less frequently.

A-101 Mechanism of Action

SK is a slowly growing epidermal tumor consisting of an abnormal accumulation of hyper-adherent senescent cells exhibiting decreased cell death. Senescent cells are no longer capable of dividing but are still alive and metabolically active. SK lesions may be amenable to a topically delivered agent that could both break down the abnormal intercellular connections between the cells and promote death of the abnormal SK cells.

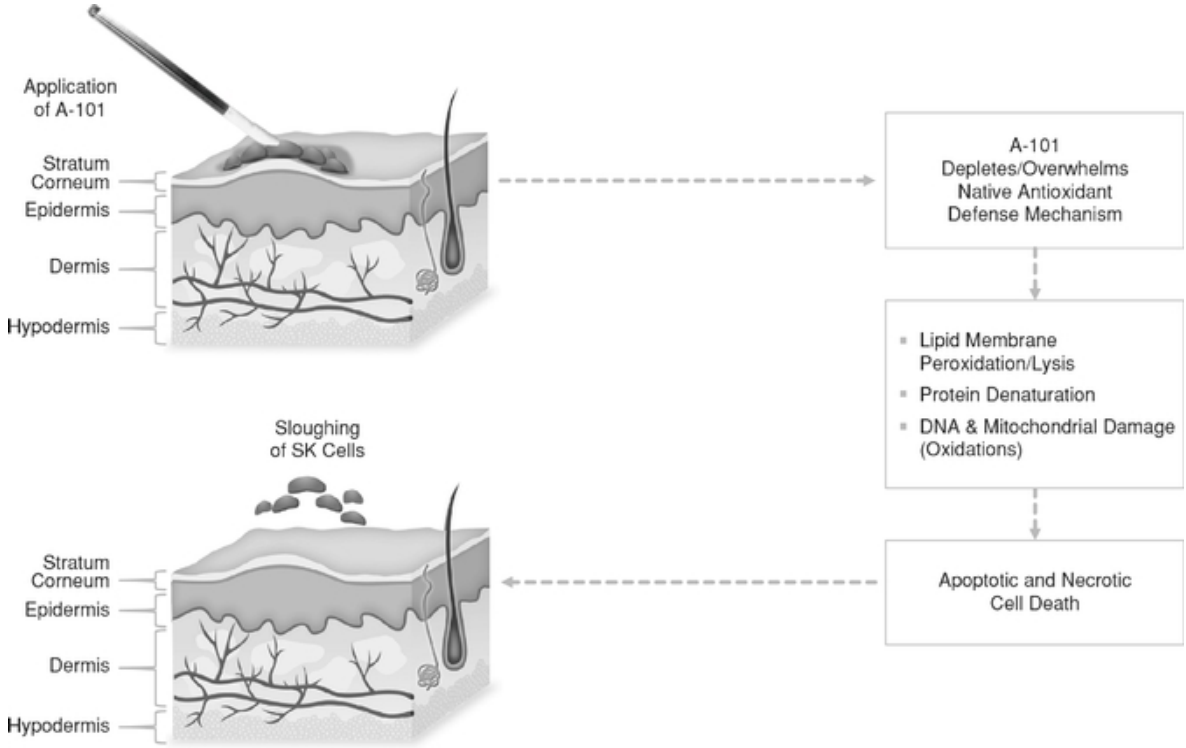
Hydrogen peroxide is a potent and important oxidizing agent in the human body. Local concentrations of hydrogen peroxide are carefully controlled by a complex antioxidant defense system consisting of both enzymes and nonenzymatic components. The topical application of high concentrations of hydrogen peroxide to SK lesions can locally overwhelm this antioxidant defense system in the skin, allowing hydrogen peroxide to penetrate the surface of the lesion, react with the abnormal SK cells, and remove or dissolve the SK lesions.

Through a process known as lipid peroxidation, free radical molecules generated by hydrogen peroxide degrade the phospholipids of the cell membrane, leading to the breakdown, or lysis, of the lipid membrane of the cell. This chemical reaction is followed by the denaturation, or loss of structure, of proteins within the cell, as well as oxidative DNA and mitochondrial damage. This series of events induces cell death of

abnormal SK cells, either through the process of programmed cell death, known as apoptosis, or through cell injury, known as necrosis.

The following graphic illustrates this mechanism of action for A-101:

Response of Seborrheic Keratosis Cells to A-101



Benefits of A-101

While traditional procedures for the treatment of SK have become useful options for dermatologists and their patients, they suffer from a number of limitations, including their poor aesthetic outcomes and pain profile. In some cases, these procedures are invasive, with the associated need for wound management and risk of infection. Many patients with SK remain unsatisfied with their treatment options. If A-101 is approved, we believe that it will offer the following potential benefits to dermatologists and their patients:

- ***Potential to be the First FDA-Approved Drug Treatment for SK.*** There are currently no FDA-approved drugs for the treatment of SK. If A-101 is approved by the FDA, it has the potential to be the first drug approved for the treatment of SK in the United States, thereby providing dermatologists confidence in A-101 as a treatment option.

- ***Attractive Efficacy Profile.*** In three Phase 2 clinical trials conducted to date in over 300 patients with A-101, we have observed clinically relevant and statistically significant clearance of SK lesions on the face, trunk and extremities after one or two applications.

- ***Non-invasive Treatment with Favorable Safety Profile.*** In each of our clinical trials, A-101 was well tolerated and caused minimal discomfort, with most patients experiencing only mild, transient tingling upon application. A-101 was observed to be appropriate for all skin types tested and for use on the face. The most commonly used treatment procedure, cryosurgery, is a painful process. A-101 is a topically applied medication and does not require the use of local anesthesia, with its well-known risks. We believe A-101, if approved, will be an attractive treatment option for SK patients seeking an alternative that is non-invasive and reduces the risk of pigmentary changes, scarring, bleeding and other adverse side effects associated with current treatment procedures.

- ***Ease of Administration.*** If approved, we expect that A-101 will be administered using a single-use, self-contained, pre-filled, disposable pen-type applicator, as an in-office treatment, without the need for anesthesia. After the initial diagnosis by a physician, we expect that A-101 will be appropriate for administration by non-physician staff, thereby freeing up physician time.

Clinical Development

We submitted an IND for A-101 for the treatment of SK to the FDA in September 2013 and have completed three Phase 2 clinical trials under this IND. In February 2015, we held a Type C meeting with the FDA at which we discussed clinical endpoints to support a claim of efficacy, as well as the statistical methodology we plan to use in our Phase 3 clinical trials. In May 2015, we held an end-of-Phase 2 meeting with the FDA to discuss our A-101 development program leading to a potential NDA submission.

Phase 2 Clinical Trial of A-101 in Subjects with Seborrheic Keratosis on the Face (SEBK-203)

Trial Design

We commenced a Phase 2 clinical trial in October 2014 that was a multicenter, randomized, double-blind, vehicle-controlled, parallel group trial designed to evaluate the safety, tolerability, initial efficacy and dose-response profile of A-101 topical solution at 32.5% and 40.0% concentrations and a topical solution vehicle control. We completed the trial in March 2015. We enrolled 119 subjects in the trial at four sites in the United States, and 116 subjects completed the trial. Three of the 119 subjects withdrew from the trial due to unrelated adverse events. Of the 116 subjects who completed the trial, 37 subjects received the 40.0% concentration, 39 subjects received the 32.5% concentration and 40 subjects received the vehicle control. The age of the subjects ranged from 33 to 93, with a mean age of 70. Of the 116 subjects who completed the trial, 53 were male, 63 were female and all were Caucasian, with a variety of skin types. Inclusion criteria included a clinical diagnosis of stable, clinically typical SK and one appropriate SK target lesion on the subject's face of specified size and thickness. Exclusion criteria included clinically atypical or rapidly growing SK lesions and the use of specified topical or systemic therapies within defined time period prior to the first visit.

The evaluation period consisted of 15 weeks after initial treatment. At the first visit, the investigator identified a single target lesion on the face of each subject for treatment. During the second visit, or baseline, which occurred on Day 1 of the evaluation period, eligible subjects were randomized to receive the vehicle control or one of the two active concentrations of A-101 and the applications were performed by non-physician staff. No applications were made at a visit on Day 8. At Day 22, any target lesion that met the retreatment criteria received a second application of the assigned concentration of A-101 or vehicle control. The subjects were evaluated at multiple visits through Day 106, but no applications were made after Day 22.

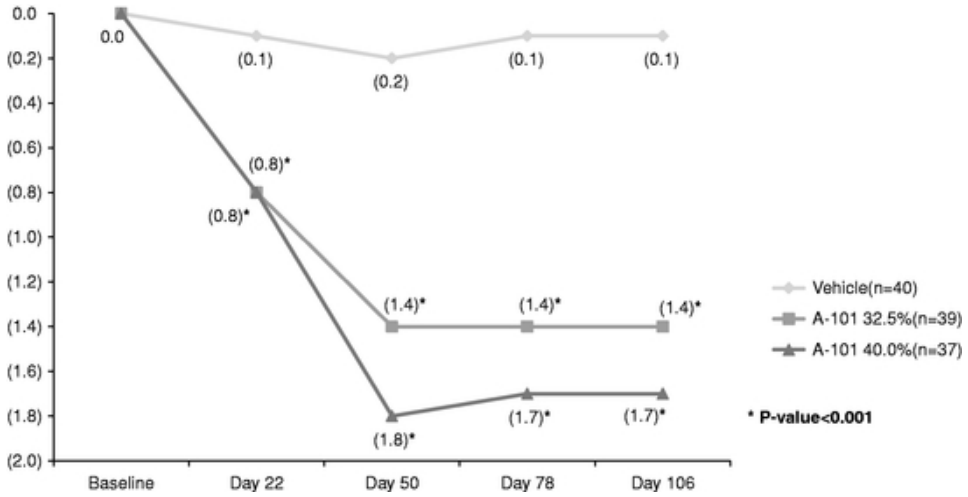
Endpoints

The primary endpoint of this clinical trial was the mean change from baseline in the Physician's Lesion Assessment, or PLA, score at the end of the trial. The PLA score is a method we have developed and validated to measure the severity of lesions and uses a scale ranging from zero to three. Secondary endpoints included responder analysis of PLA scores of zero or one. In this trial, a PLA score of zero represented no visible lesion; a PLA score of one represented near clearance, meaning a visible lesion that, while not elevated, has a surface appearance that is different from the surrounding skin; a PLA score of two represented a visible lesion that is elevated but with a thickness of less than or equal to one millimeter; and a PLA score of three represented a visible lesion with a thickness exceeding one millimeter.

Efficacy Results

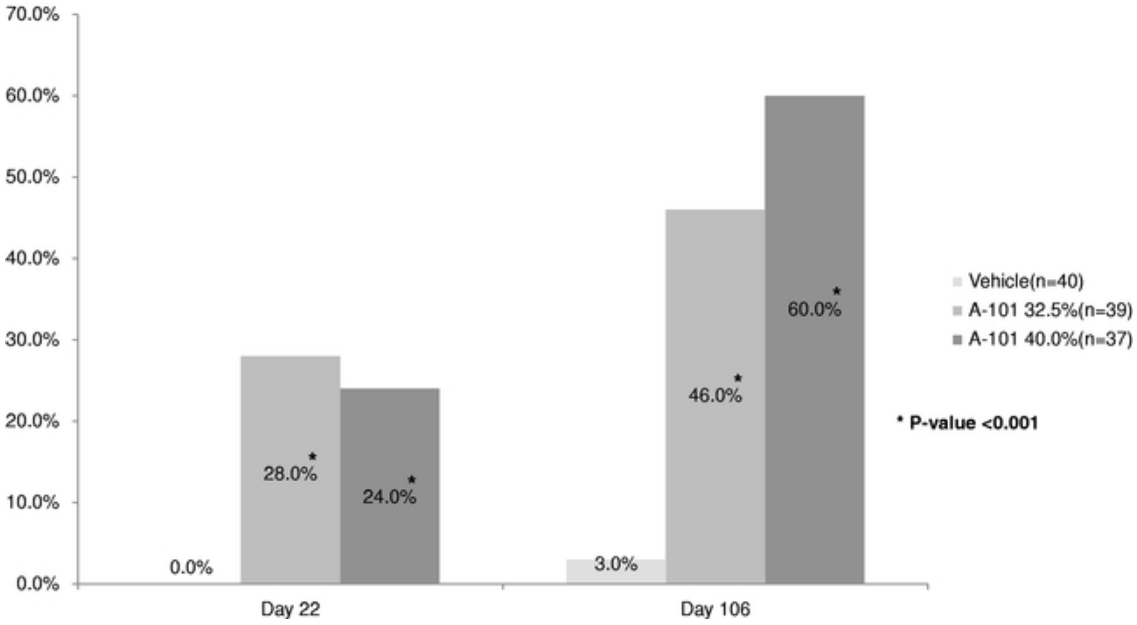
As shown in the table below, for the primary endpoint, mean change from baseline in PLA score, we observed statistically significant improvements as compared to the vehicle for both concentrations of A-101 evaluated, with the 40.0% concentration being the most effective. The results for the active treatment groups were statistically significant with a p-value of less than 0.001. P-value is a conventional statistical method for measuring the statistical significance of clinical results. A p-value of less than 0.05 is generally considered to represent statistical significance, meaning that there is a less than five percent likelihood that the observed results occurred by chance.

Mean Change from Baseline in PLA Score — Face



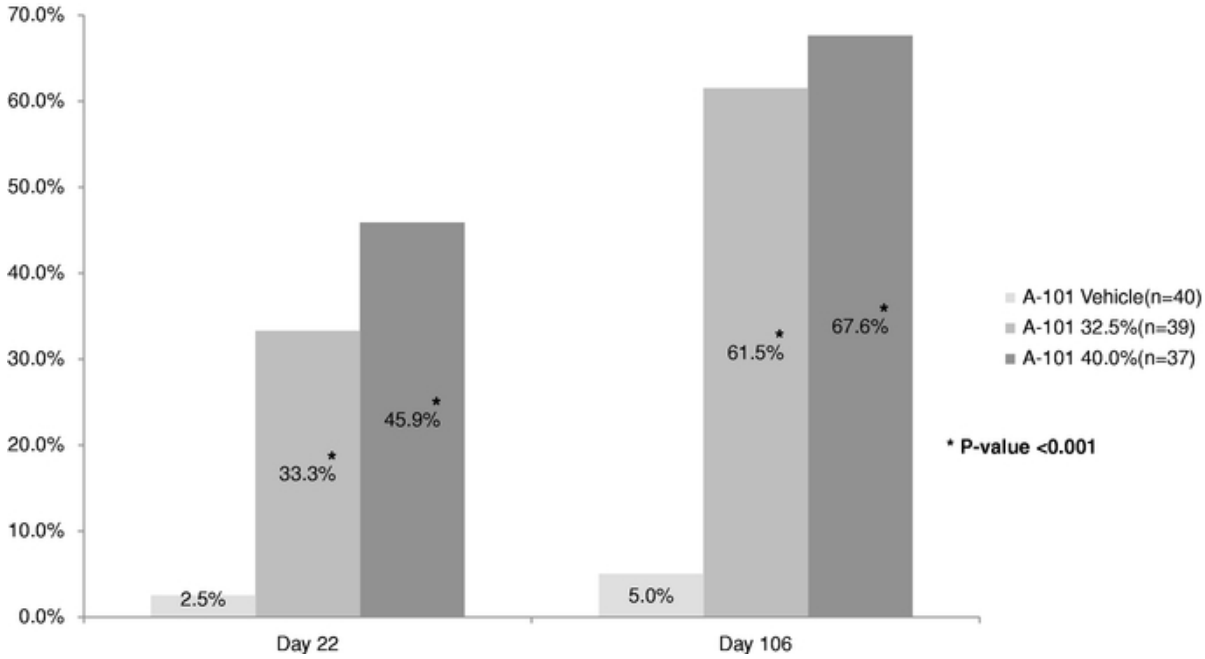
In addition, we measured the percentage of subjects who achieved total clearance, or a PLA of zero, at Day 22 and Day 106. These results are presented in the table below. At Day 22, 24.0% of the subjects receiving A-101 at the 40.0% concentration achieved total clearance and 28.0% of the subjects receiving A-101 at the 32.5% concentration achieved total clearance, compared to none in the vehicle control group. At Day 106, 60.0% of the subjects receiving A-101 at the 40.0% concentration achieved total clearance and 46.0% of subjects receiving A-101 at the 32.5% concentration achieved total clearance, compared to 3.0% in the vehicle control group. These results were statistically significant, with a p-value of less than 0.001.

Percentage of Subjects with Clear Lesions — Face



We also measured the percentage of subjects who achieved either total clearance or near clearance, or a PLA score of either zero or one, at Day 22 and Day 106. These results are presented in the table below. At Day 22, 45.9% of the subjects receiving A-101 at the 40.0% concentration achieved total clearance or near clearance and 33.3% of the subjects receiving A-101 at the 32.5% concentration achieved total clearance or near clearance, compared to 2.5% in the vehicle control group. At Day 106, 67.6% of the subjects receiving A-101 at the 40.0% concentration achieved total clearance or near clearance and 61.5% of subjects receiving A-101 at the 32.5% concentration achieved total clearance or near clearance, compared to 5.0% in the vehicle control group. These results were statistically significant, with a p-value of less than 0.001.

Percentage of Subjects with Clear or Near-Clear Target Lesions — Face



Safety Results

A-101 was generally well tolerated at both the 32.5% and 40.0% concentrations. While two subjects in each of the 32.5% and 40.0% concentration treatment groups reported severe stinging after administration, most local skin reactions were considered to be transient and mild or moderate. Treatment-emergent adverse events were reported by 29 subjects. However, only one of these adverse events, slight bleeding at the sight of administration, was determined by the investigator to be drug-related. Four subjects reported serious adverse events, but none were considered to be related to treatment by the investigator. Three subjects dropped out of the trial due to adverse events unrelated to treatment.

Phase 2 Clinical Trial of A-101 in Subjects with Seborrheic Keratosis on the Trunk and Extremities (SEBK-202)

Trial Design

In June 2014, we commenced a Phase 2 clinical trial that was a multicenter, randomized, double-blind, vehicle-controlled, parallel group trial designed to evaluate the safety, tolerability, initial efficacy and dose-response profile of A-101 topical solution with concentrations of 32.5% and 40.0% and a topical solution vehicle control. We completed the trial in December 2014. We enrolled 172 subjects in the trial at five sites in the United States, and 169 subjects completed the trial. Of the 172 subjects enrolled in the trial, 57 subjects received the 40.0% concentration, 57 subjects received the 32.5% concentration and 58

subjects received the vehicle control. Of the three subjects who withdrew from the trial, one subject withdrew due to inconvenience, one subject moved and one subject withdrew due to lack of follow-up by the investigator. The age of the subjects ranged from 48 to 97, with a mean age of 69. Of the 172 subjects enrolled in the trial, 91 were male, 81 were female and all but two were Caucasian. There were a variety of skin types within the trial population. Inclusion criteria included a clinical diagnosis of stable, clinically typical SK and at least four SK target lesions on the subject's trunk, defined as the upper body excluding the head and limbs, or extremities with a PLA of at least 2.0 and of specified size and thickness. Exclusion criteria included clinically atypical or rapidly growing SK lesions and the use of specified topical or systemic therapies within a defined time period prior to the first visit.

The evaluation period consisted of 15 weeks after initial treatment. At the first visit, the investigator identified four target lesions on the trunk or extremities of each subject for treatment. During the second visit, or baseline, which occurred on Day 1 of the evaluation period, eligible subjects were randomized to receive the vehicle control or one of the two active concentrations of A-101 and the applications were performed by non-physician staff. No applications were made at a visit on Day 8. At Day 22, any target lesion that met the retreatment criteria received a second application of the assigned concentration of A-101 or vehicle control. The subjects were then evaluated at multiple visits through Day 106, but no applications were made after Day 22.

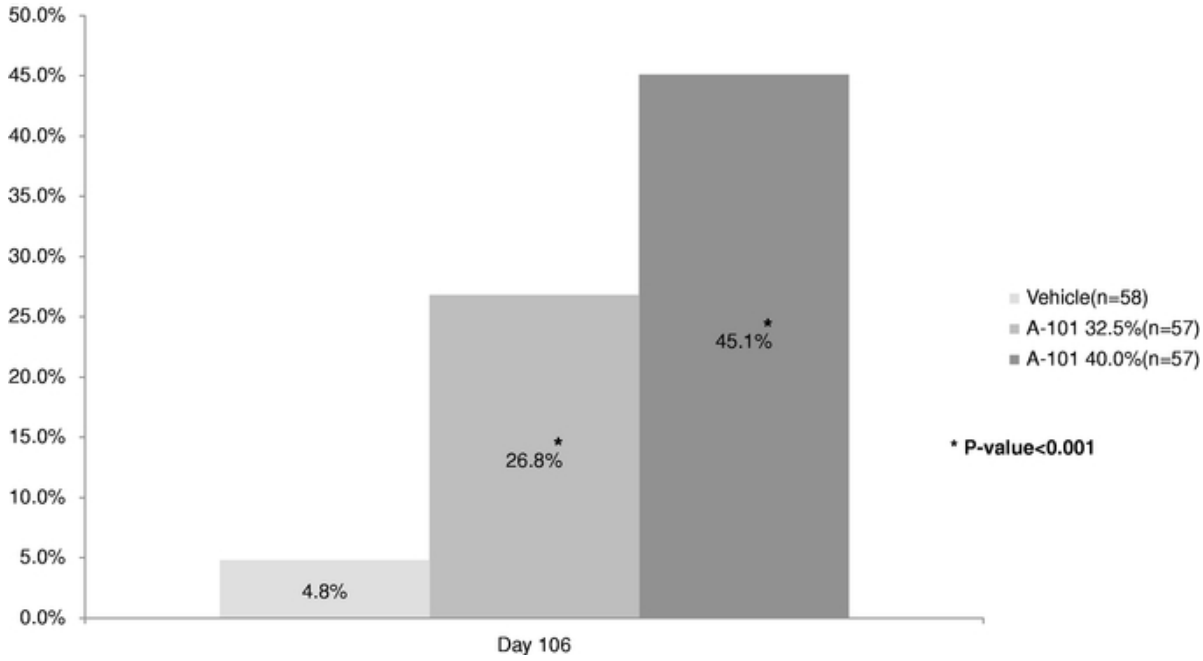
Endpoints

The primary endpoint of this clinical trial was the percentage of the four target SK lesions judged to be clear, meaning a PLA of zero, for each patient at the end of the trial. Secondary endpoints included the change from baseline PLA. In this trial, we used the same PLA score we used in our trial in subjects with SK lesions on the face (SEBK-203).

Efficacy Results

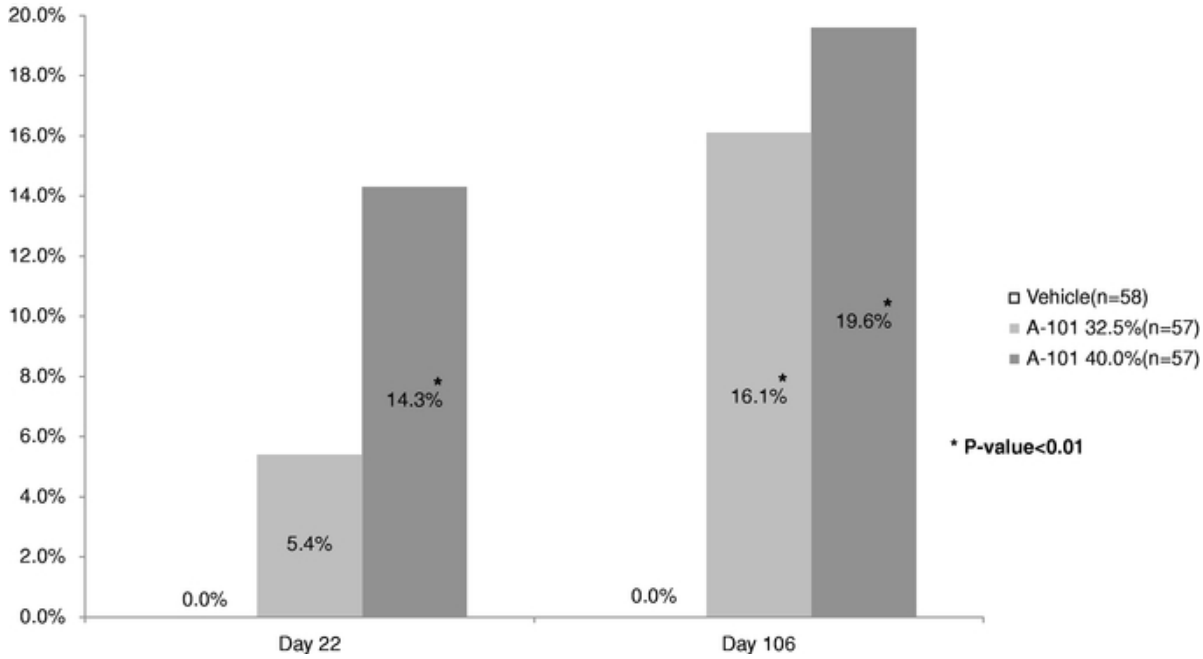
As shown in the table below, for the primary endpoint, the mean percentage of the four target SK lesions that were judged to be cleared for each patient at Day 106, we observed clinically relevant and statistically significant improvement for both concentrations of A-101 evaluated, with mean per-subject clearance of 26.8% and 45.1% at the 32.5% and 40.0% concentrations, respectively, compared to only 4.8% mean per-subject clearance in the vehicle control group. The results for the active treatment groups were statistically significant with a p-value of less than 0.001.

Mean Per-Subject Percentage Clearance — Trunk and Extremities



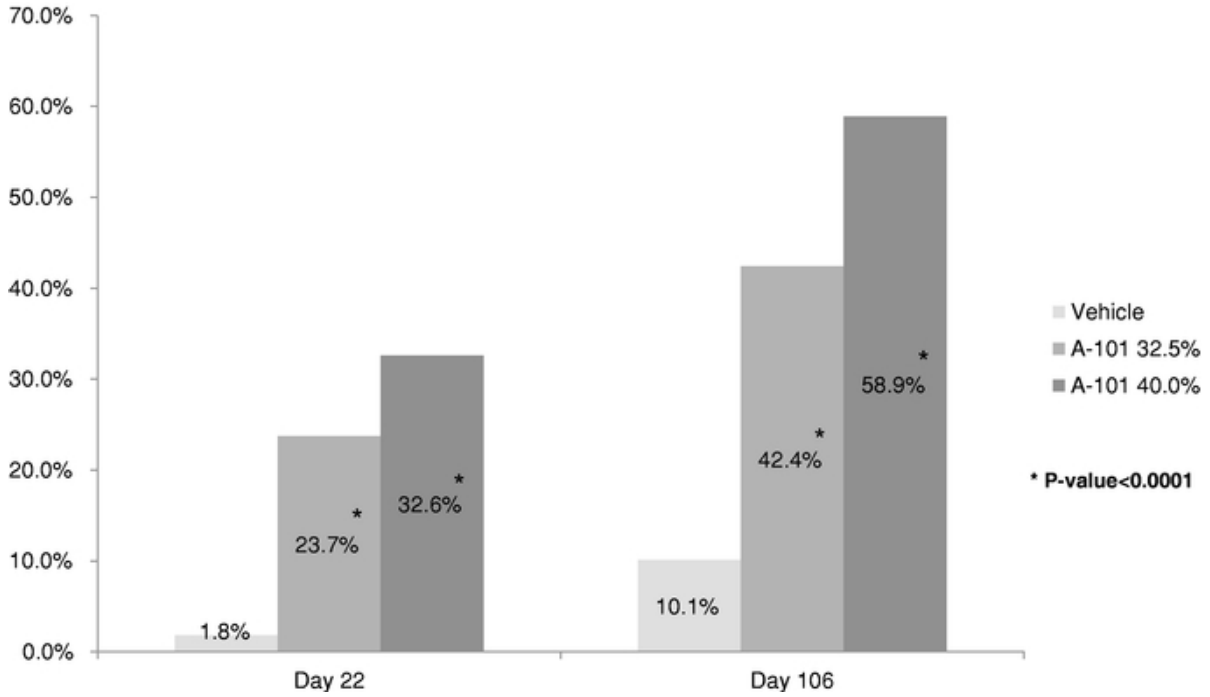
We also measured the percentage of subjects who achieved total clearance, or a PLA score of zero, in all four of their lesions. These results are presented in the table below. Of the subjects receiving A-101 with 40.0% and 32.5% concentrations, 19.6% and 16.1%, respectively, had clearance of all lesions at Day 106, compared to none in the vehicle control group. These results were statistically significant, with a p-value of less than 0.01. At Day 22, 14.3% of the subjects receiving A-101 at the 40.0% concentration had achieved clearance of all lesions, a result that was also statistically significant, with a p-value of less than 0.01. Only 5.4% of subjects receiving A-101 at the 32.5% concentration achieved clearance of all lesions at Day 22, compared to none in the vehicle control group, but this result for the 32.5% group was not statistically significant.

Percentage of Subjects Achieving Total Clearance — Trunk and Extremities



We also measured the percentage of subjects who achieved either total clearance or near clearance, or a PLA score of either zero or one, in all four of their lesions. These results are presented in the table below. At Day 22, 32.6% of the subjects receiving A-101 at the 40.0% concentration achieved total clearance or near clearance and 23.7% of the subjects receiving A-101 at the 32.5% concentration achieved total clearance or near clearance, compared to 1.8% in the vehicle control group. At Day 106, 58.9% of the subjects receiving A-101 at the 40.0% concentration achieved total clearance or near clearance and 42.4% of the subjects receiving A-101 at the 32.5% concentration achieved total clearance or near clearance, compared to 10.1% in the vehicle control group. These results were statistically significant with a p-value of less than 0.0001.

Percentage of Subjects Achieving Total Clearance or Near Clearance — Trunk and Extremities



Safety Results

A-101 was generally well tolerated at both the 32.5% and 40.0% concentrations. Local skin reactions were treatment- and dose-related, and most were considered to be transient and mild to moderate. Treatment-emergent adverse events were reported by 45 subjects. Only one of these events, moderate tenderness at a treatment site on the subject's thigh, was determined by the investigator to be drug-related. Three subjects reported serious adverse events, but none were considered to be related to treatment by the investigator. None of the subjects dropped out of the trial due to adverse events.

Phase 2 Clinical Trial of A-101 in Subjects with Seborrheic Keratosis on the Trunk (Back) (SEBK-201)

Trial Design

We commenced a Phase 2 clinical trial of A-101 in November 2013 that was a double-blind, vehicle-controlled intra-subject clinical trial designed to evaluate the safety, tolerability and initial efficacy of A-101 in clearing SK lesions. The trial compared three active concentrations of A-101, 40.0%, 32.5% and 25.0%, with a vehicle solution control. In the trial, each subject received each of the four treatments on four separate lesions on the back. We enrolled 35 adult subjects in the trial at one site in the United States. We completed the trial in June 2014. Of the 35 subjects enrolled in the trial, one subject withdrew from participation in the trial due to the distance between the subject's home and the clinical trial site. The age of the subjects ranged from 55 to 85, with a mean of 69 years. Of the 35 subjects enrolled in the trial, 20 of the subjects were female and 15 were male, and all subjects were Caucasian. Inclusion criteria included a clinical diagnosis of stable clinically typical SK and at least four appropriate SK target lesions on the subject's back. Exclusion criteria included clinically atypical or rapidly growing SK lesions and the use of specified topical or systemic therapies within a defined time period prior to the first visit.

The evaluation period consisted of 11 weeks after initial treatment. At the first visit, the investigator identified four target lesions on the back for treatment. During a second visit, or baseline, which occurred on Day 1 of the evaluation period, lesions on each subject were randomized to receive the vehicle control or one of the three active concentrations of A-101, and the applications were performed by non-physician

staff. No applications were made at visits on Day 8 and Day 15. On Day 22, any target lesion that met the retreatment criteria received a second application of the assigned concentration of A-101 or vehicle control. No applications were made at subsequent visits, which occurred on Days 29, 43, 57 and 78.

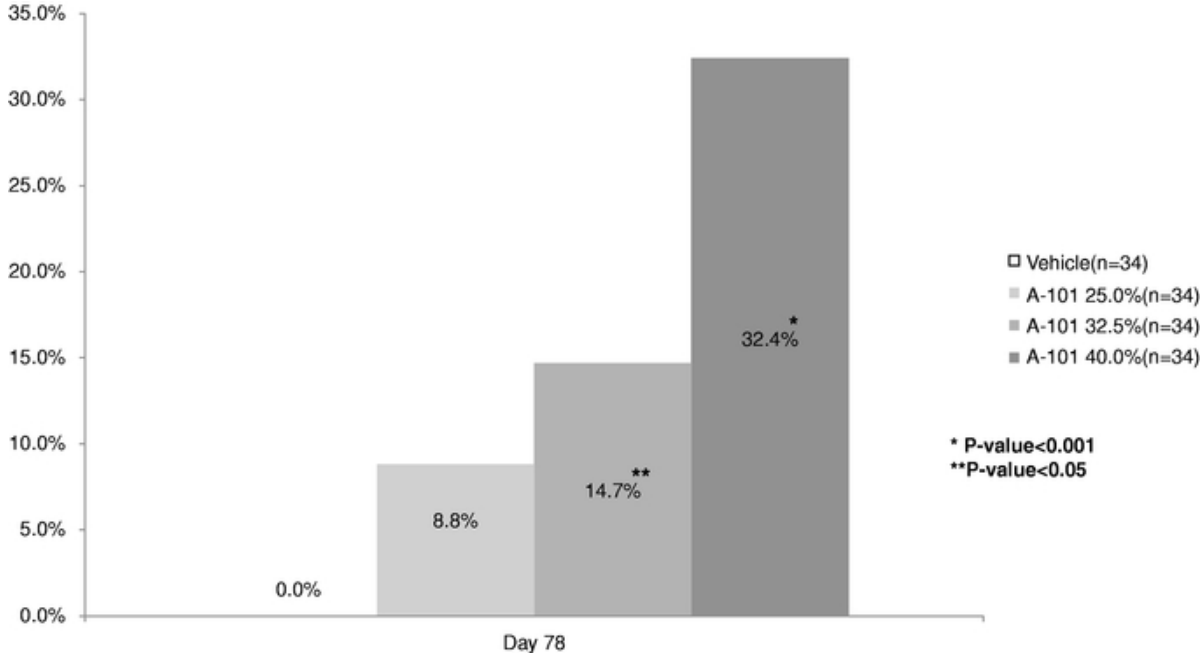
Endpoints

The primary endpoint of this clinical trial was reduction in PLA score from baseline over a period of 78 days, as well as the physician's subjective assessment of the condition of the lesion. In this trial, we used an earlier version of the PLA scale in which a PLA score of zero was considered to be complete clearance of the lesion, a PLA score of one represented the lesion was barely evident on examination, a PLA score of two represented an obvious lesion, while a PLA score of three represented a severe, prominent lesion. This PLA scale was subsequently refined in our later trials to make it more clinically objective.

Efficacy Results

For the 34 subjects that completed the trial, the efficacy results are presented in the table below. We measured the proportion of PLA complete responders, defined as a PLA score of zero at Day 78, in each treatment group. Of the 34 lesions treated with the 40.0% concentration, 11 lesions, or 32.4%, completely responded, a result that was statistically significant with a p-value of less than 0.001. Of the 34 lesions treated with the 32.5% concentration, 5 lesions, or 14.7%, completely responded, a result that was statistically significant with a p-value of less than 0.05. Of the 34 lesions treated with the 25.0% concentration, 3 lesions, or 8.8%, completely responded, a result that was not statistically significant. There were no complete responders in the vehicle control group.

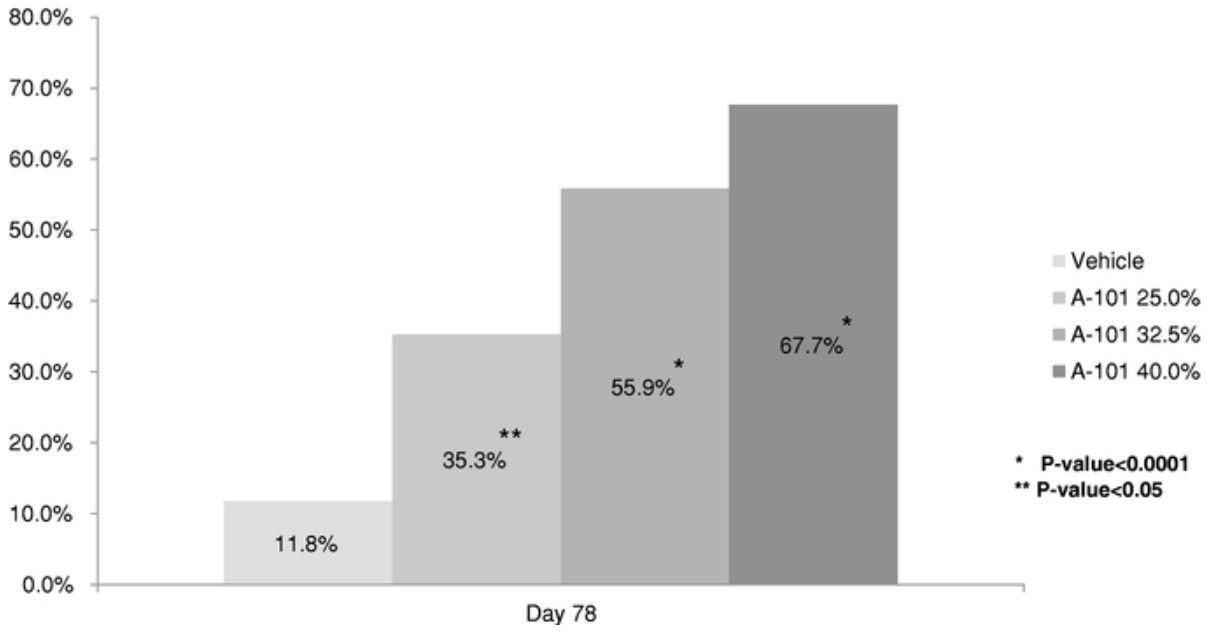
Percentage of Complete Responders — Trunk (Back)



We also measured the proportion of PLA complete responders or near complete responders, defined as a PLA score of zero or one, at Day 78, in each treatment group. These results are presented in the table below. Of the 34 lesions treated with the 40.0% concentration, 23 lesions, or 67.7%, were complete or near complete responders, a result that was statistically significant with a p-value of less than 0.0001. Of the 34 lesions treated with the 32.5% concentration, 19 lesions, or 55.9%, were complete or near complete responders, a result that was statistically significant with a p-value of less than 0.0001. Of the 34 lesions treated with the 25.0% concentration, 12 lesions, or 35.3%, were complete or near complete

responders, a result that was statistically significant with a p-value of less than 0.05. Four lesions, or 11.8%, of the lesions treated with vehicle control either were complete or near complete responders.

Percentage of Complete or Near Complete Responders — Trunk (Back)



Safety Results

A-101 was generally well tolerated at the 25.0%, 32.5% and 40.0% concentrations. Local skin reactions were transient and treatment- and dose-related, and most were considered to be mild to moderate. Treatment-emergent adverse events were reported by nine subjects, and none of those reported were considered to be treatment-related. The only treatment-emergent adverse events reported by more than one subject were seasonal allergy in ten subjects and arthritis in four subjects. One subject had a serious adverse event of kidney infection, which was considered by the investigator to be unrelated to treatment. None of the subjects dropped out of the trial due to an adverse event and no adverse event led to trial discontinuation.

Planned Phase 3 Clinical Program

We held an end-of-Phase 2 meeting with the FDA in May 2015. Based on the FDA's feedback at that meeting, we plan to initiate three Phase 3 clinical trials in the second half of 2015 for the treatment of SK on the face, trunk and extremities. We have also received written guidance from the EMA regarding the design of these Phase 3 clinical trails.

Our planned Phase 3 clinical program will consist of three clinical trials, in which we expect to enroll a total of approximately 1,000 subjects with SK. These clinical trials will be designed to demonstrate the efficacy of treatment with A-101 relative to vehicle for the treatment of SK on the face, trunk and extremities. The first two clinical trials will be randomized, multi-center, double-blinded, vehicle-controlled, parallel group Phase 3 clinical trials that will be conducted in the United States. We expect to enroll approximately 400 subjects with four SK lesions on the face, trunk and extremities in each of these two trials. In each of these first two trials, subjects will be randomized to receive A-101 topical solution at the 40.0% concentration on Day 1 and Day 22. Thereafter, we plan to conduct the third Phase 3 clinical trial in which approximately 200 subjects with four SK lesions on the face, trunk and extremities will receive up to four treatments of A-101 21 days apart on an open-label basis in order to gather additional data on the

extended use of A-101. In our three Phase 3 clinical trials, we intend to use the refined PLA scale that we used in our SEBK-202 and SEBK-203 clinical trials.

We anticipate that our NDA for A-101 in SK will be based on the data collected from each of the three Phase 3 clinical trials. We believe that if these results are favorable, such results would be sufficient to support an NDA for the treatment of SK in the United States.

Additional Development Programs — A-101 for Common Warts

Development Plan

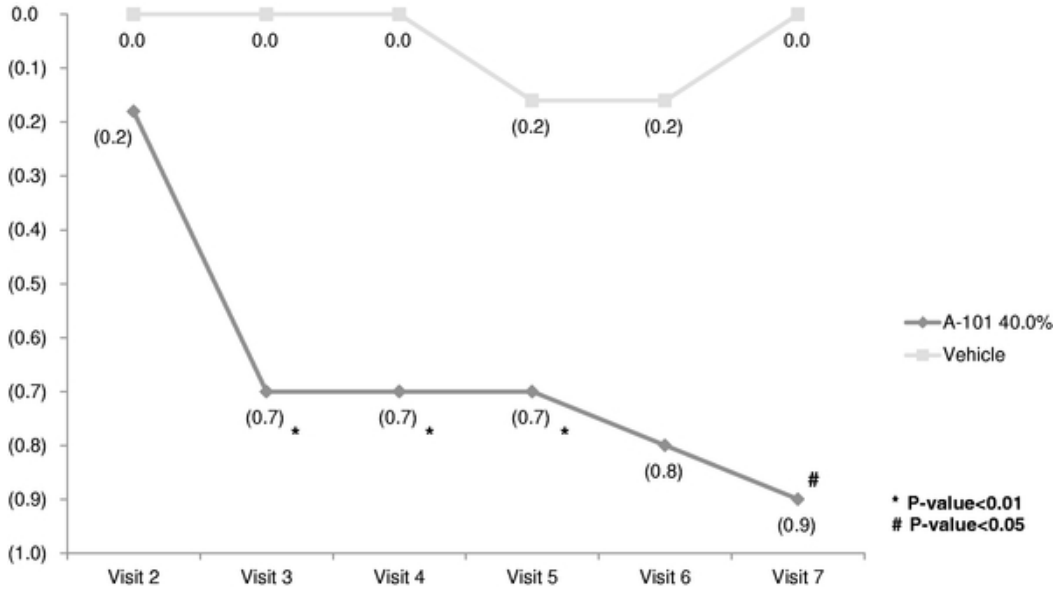
We are conducting toxicology studies and plan to commence Phase 2 clinical trials of A-101 for the treatment of common warts in the second half of 2015.

Investigator-Sponsored Trial

A trial was conducted by Steven Grekin, a dermatologist, using A-101 topical solution in subjects with common warts. This physician's IND for the treatment of common warts was submitted to the FDA in March 2014. This trial was a double-blind, vehicle-controlled trial comparing the 40.0% concentration of A-101 and a vehicle control. This trial was conducted at the Grekin Skin Institute in Michigan. In this trial, each subject received four treatments on one target wart. 22 subjects were enrolled in the trial, with 15 subjects completing the trial. Four subjects who were receiving vehicle control did not complete the trial because they were not satisfied with the results and three subjects who were receiving A-101 did not complete the trial for reasons unrelated to treatment. Of the subjects who completed the trial, nine subjects received the 40.0% concentration of A-101 and six subjects received the vehicle control. Subjects were at least 18 years old with a common wart on the hand.

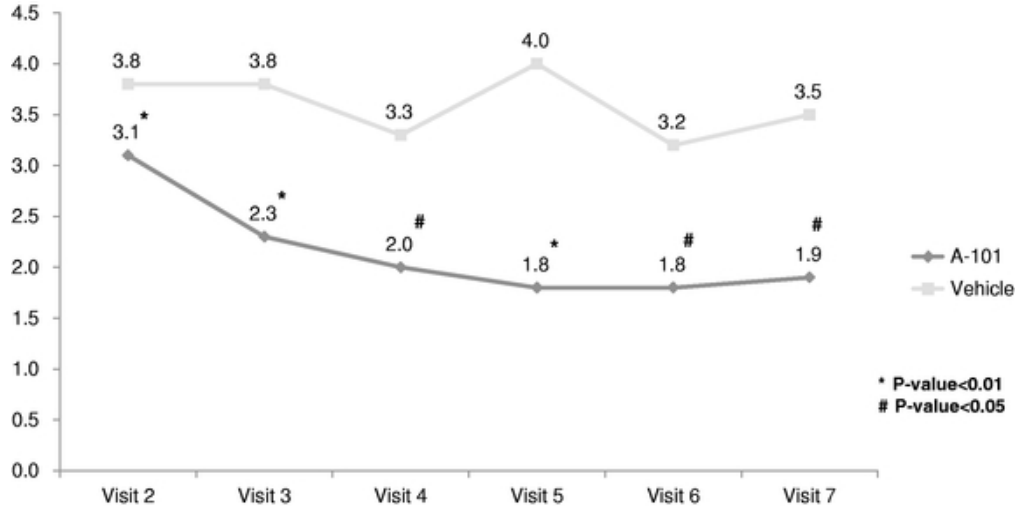
We believe the results of the investigator-sponsored trial provided proof-of-concept data for the treatment of common warts with A-101. Efficacy measures were evaluated at week 6, two weeks after the last treatment. The trial evaluated the mean change from baseline using a wart severity assessment scale ranging from zero to three. A wart severity assessment score of zero means the subject has no clinically diagnosable wart, a score of one means the subject has a barely evident clinically diagnosable wart, a score of two represents an obvious wart and a score of three represents a conspicuous wart. All of the subjects enrolled in this trial had a wart severity assessment score of at least two. The wart severity assessment score results are presented in the table below. The data from the trial showed statistically significant improvements in subjects treated with A-101 compared to vehicle control in the mean wart severity assessment score.

Mean Change from Baseline in Wart Severity Assessment Score



The trial also evaluated the mean wart improvement assessment score in subjects. The wart improvement assessment scale measures the level of improvement and ranges from zero to five. A wart improvement assessment score of zero means the common wart is completely cleared, a score of one means the wart markedly improved compared to baseline, a score of two means the wart moderately improved compared to baseline, a score of three means the wart mildly improved compared to baseline, a score of four means there was no change and a score of five means the wart worsened compared to baseline. The mean wart improvement assessment score results are presented in the table below. The data from the trial showed statistically significant improvements in subjects treated with A-101 compared to vehicle control in the mean wart improvement assessment score.

Mean Wart Improvement Assessment Score



A-101 was well tolerated in these subjects with no adverse events reported.

In addition, we conducted 12-week toxicology studies in rats and minipigs. These studies were designed to enable us to evaluate a dose range trial over an extended period evaluating two concentrations, 40% and 45%, of A-101 topical solution versus vehicle control in subjects with common warts. Based on these results and those of the investigator-sponsored trial, we are conducting additional toxicology studies and plan to commence Phase 2 clinical trials of A-101 for the treatment of common warts in the second half of 2015.

Manufacturing

We do not have any manufacturing facilities or personnel. We rely on third parties for the manufacture of A-101 for preclinical studies and clinical trials, and will continue to rely on third parties for the commercial manufacture of A-101 if it receives marketing approval. For hydrogen peroxide, the active pharmaceutical ingredient, or API, in A-101, we have entered into an exclusive, ten-year, automatically renewable supply agreement with PeroxyChem LLC, or PeroxyChem, a manufacturer of hydrogen peroxide, to provide the API that can be used in A-101 for the treatment of SK and a number of other specified dermatological indications. We or PeroxyChem may terminate the supply agreement with prior written notice immediately for specified financial reasons, after a 10-day and 60-day cure period for material monetary and non-monetary material breaches, respectively, and in the event of a force majeure event, including if the FDA does not approve A-101 for commercial sale in the United States, that continues for 90 consecutive days. In addition, we may terminate the PeroxyChem supply agreement, with prior written notice, for PeroxyChem's failure to supply API to us for more than 90 cumulative days in a year.

For some of the components used in connection with the manufacture and assembly of the pen-type applicator for A-101, we purchase our components from third-party manufacturers on a purchase order basis and do not have supply arrangements in place. In addition, we have engaged third parties for the supply and assembly of components of the pen-type applicator and the assembly, labeling and packaging of the finished drug product to be used in our planned Phase 3 clinical trials and for commercial purposes, if A-101 is approved for marketing.

Replacement of any of these third-party manufacturers would require us to qualify new manufacturers and negotiate and execute contractual agreements with them. If any of our supply or service agreements with third-party manufacturers are terminated, we will experience delays and additional expenses in the completion of the development of and obtaining regulatory approval for our lead drug candidate, A-101 for the treatment of SK.

Commercialization

For A-101, we expect to retain U.S. commercial rights and to establish collaborations with third parties to commercialize A-101 outside the United States. We have not established any meaningful sales, marketing or product distribution operations to date because A-101 is still in clinical development. We plan to establish the required capabilities within an appropriate time frame ahead of any potential drug approval and commercialization in order to support a commercial product launch. If we commercialize A-101, or any other drug candidates that we may successfully develop, in the United States, we intend to build a targeted sales force to establish relationships with dermatologists. We believe a scientifically oriented, customer-focused team of approximately 50 to 60 sales representatives would allow us to reach the approximately 5,000 dermatologists in the United States with the highest potential for using A-101, who we estimate account for over 70% of the procedures performed. We expect that our sales force will be supported by sales and marketing management, internal sales and marketing support and commercial product distribution support.

In a survey we commissioned in 2014, dermatologists who were presented the product profile for A-101 reacted favorably. Among 251 dermatologists who completed the survey, 85% indicated that they "definitely would" or "probably would" treat their patients with A-101. In addition, 77% said A-101 "improves treatment options extremely well" or "improves treatment options very well" for SK. Some of the

dermatologists who completed the survey noted A-101 would be a good alternative to cryosurgery, could be utilized in patients that are not candidates for cryosurgery, such as darker-skinned patients and patients with numerous lesions, and could help grow practice revenue.

We believe dermatologists will be inclined to adopt A-101 to treat their patients with SK, if it is approved, not only because of its clinical profile, but also because it may provide an expanded source of revenue for their practices. Dermatologists expect declining reimbursements from third-party payors for providing medical services. In addition, a greater portion of the cost of medical care has been shifted to patients, in the form of higher deductibles and co-insurance. Collecting from patients can be difficult and costly for physician practices. We believe many dermatologists are interested in expanding the cash-pay aesthetic portion of their practices, meaning the portion of procedures that are not medically necessary and not reimbursed by third-party payors, by treating new aesthetic patients and by offering new services to current aesthetic patients. Though SK patients typically come into the dermatology practice seeking a medical diagnosis, we believe they often are willing to pay for removal of SK lesions to improve appearance even after they learn that the lesions are non-malignant and that removal may not be reimbursed. We expect the cost to patients for A-101, if approved, to be lower than many of the other minimally invasive cash-pay aesthetic procedures offered by dermatologists, such as dermal fillers, neuromodulators, laser hair removal, and intense pulsed light treatments. In addition, since A-101 can be administered by non-physician staff, we believe it could provide incremental practice revenue with minimal time commitment by the dermatologist after the diagnosis is made.

In 2014, there were approximately 10,000 dermatologists practicing in the United States. We believe dermatologists tend to be particularly focused on the safety of pharmaceutical products because, while skin diseases can have profound effects on patients' quality of life, few are life-threatening. As a result, we believe that dermatologists, as well as their patients, often prefer to use topical treatments when possible to limit the risk of systemic side effects. Dermatologists also tend to place a high level of emphasis on products that are easy to use because they often manage high volumes of patients. We believe this also contributes to a general preference for topical treatments. Finally, in our experience, dermatologists tend to engage with sales and medical affairs personnel from the pharmaceutical industry regarding the scientific evidence supporting dermatology products and the challenges experienced by physicians and patients in the use of these products. Dermatologists often rely on trusted relationships with scientifically oriented, customer-focused sales representatives who can provide them with the necessary information to support their use of appropriate treatments.

Competition

The pharmaceutical industry is characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary drugs. While we believe that our knowledge, experience and scientific resources provide us with competitive advantages, we face potential competition from many different sources, including major pharmaceutical and specialty pharmaceutical companies, academic institutions and governmental agencies and public and private research institutions. Any drug candidates that we successfully develop and commercialize will compete with existing treatments and new treatments that may become available in the future.

The key competitive factors affecting the success of A-101, if approved for the treatment of SK, are likely to be its efficacy, safety, non-invasiveness, pain profile and ability to be administered by non-physician staff.

With respect to A-101 for the treatment of SK, we are aware of one biopharmaceutical company, BioLineRx Ltd., that is developing a combination drug candidate that targets SK, and another company, Skincential Sciences, Inc., that currently markets a line of cosmetic products targeting skin conditions, including SK. Neither of these products have been approved by the FDA for use in the United States.

With respect to A-101 for the treatment of common warts, we are aware of one company, Nielsen BioSciences, that is developing a prescription treatment for common warts. We are aware of another company, G&E Herbal Biotechnology Co., LTD, that intends to initiate a Phase 2 clinical trial of a gel as a prescription treatment for common warts. In addition, other drugs have been used off-label as treatments for common warts. We could also encounter competition from over-the-counter treatments for common warts.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize drugs that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than A-101 or any other drug that we may develop. Our competitors also may obtain FDA or other regulatory approval for their drugs more rapidly than we may obtain approval for our drug, which could result in our competitors establishing a strong market position before we are able to enter the market. Many of the companies against which we are competing, or against which we may compete in the future, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved drugs than we do. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and subject registration for clinical trials, as well as in acquiring technologies complementary to, or that may be necessary for, our programs.

Intellectual Property

Our success depends in large part upon our ability to obtain and maintain proprietary protection for our drug candidates and to operate without infringing the proprietary rights of others. We seek to avoid the latter by monitoring patents and publications that may affect our business, and to the extent we identify such developments, evaluate and take appropriate courses of action. Our policy is to protect our proprietary position by, among other methods, filing for patent applications on inventions that are important to the development and conduct of our business with the U.S. Patent and Trademark Office, or USPTO, and its foreign counterparts.

We own two issued U.S. patents, one issued patent in each of Australia, Germany, United Kingdom, India, New Zealand, Mexico, and Singapore, and a pending U.S. and PCT patent application. We do not currently rely on licenses to any third party's intellectual property. The two U.S. patents include claims that cover the use of high-concentration hydrogen peroxide for the alleviation of SK and acrochordons. The patents in Australia, New Zealand and India include claims that cover the use of high-concentration hydrogen peroxide for the alleviation of various skin conditions, including SK, acrochordons, corns, tags, acne, warts and rosacea. The patents in Germany, the United Kingdom, Mexico and Singapore include claims that cover the use of high-concentration hydrogen peroxide for the alleviation of acrochordons. The issued patents begin to expire in 2022, subject to any applicable patent term adjustment or extension that may be available in a particular country.

Our pending U.S. and PCT patent application are directed to various formulations comprising high- concentration hydrogen peroxide, dosing regimens for such formulations, applicators for use with such formulations, and methods of treating various skin conditions, including SK and common warts, by the topical administration of such formulations. We plan to pursue the PCT application in numerous foreign countries, including in the European Union. Any claims that issue from these formal filings will expire in 2035, subject to any applicable patent term adjustment or extension that may be available in a particular country.

We also use other forms of protection, such as trademark, copyright, and trade secret protection, to protect our intellectual property, particularly where we do not believe patent protection is appropriate or obtainable.

We aim to take advantage of all of the intellectual property rights that are available to us and believe that this comprehensive approach will provide us with proprietary positions for our drug candidates, where available.

Patents extend for varying periods according to the date of patent filing or grant and the legal term of patents in various countries where patent protection is obtained. The actual protection afforded by a patent, which can vary from country to country, depends on the type of patent, the scope of its coverage and the availability of legal remedies in the country. In most countries in which we file, the patent term is 20 years from the earliest date of filing a non-provisional patent application. In the United States, a patent term may be shortened if a patent is terminally disclaimed over another patent or as a result of delays in patent prosecution by the patentee, and a patent's term may be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the USPTO in granting a patent or by patent term extension, which compensates a patentee for delays at the FDA. The patent term of a European patent is 20 years from its filing date; however, unlike in the United States, the European patent does not grant patent term adjustments. The European Union does have a compensation program similar to patent term extension called supplementary patent certificate that would effectively extend patent protection for up to five years.

We also protect our proprietary information by requiring our employees, consultants, contractors and other advisors to execute nondisclosure and assignment of invention agreements upon commencement of their respective employment or engagement. Agreements with our employees also prevent them from bringing the proprietary rights of third parties to us. In addition, we also require confidentiality or service agreements from third parties that receive our confidential information or materials.

Assignment Agreement and Finder's Services Agreement

In August 2012, we entered into an assignment agreement with the Estate of Mickey Miller, or the Miller Estate, under which we acquired some of the intellectual property rights covering A-101. The assignment of intellectual property rights covers specified know-how, along with modifications of, improvements to and variations on A-101 that meet defined chemical properties. Under the agreement, we have the sole and exclusive right, but not the duty, to develop, obtain regulatory approval for and commercialize A-101 in various countries throughout the world. We are required to use commercially reasonable efforts to develop and commercialize at least one product for at least one indication in the United States. In connection with obtaining the assignment of the intellectual property from the Miller Estate, we also entered into a separate finder's services agreement with KPT Consulting, LLC.

Under the terms of the assignment agreement and the finder's services agreement, we made aggregate upfront payments of $0.6 million in 2012 and one-time milestone payments of $0.4 million in 2013 upon the dosing of the first human subject with A-101 in our Phase 2 clinical trial. There are no remaining potential milestone payments under the assignment agreement. Under the finder's services agreement, we are obligated to make additional milestone payments of up to $1.3 million in the aggregate upon the achievement of specified development and regulatory milestones and up to $4.5 million upon the achievement of specified commercial milestones. Under each of the assignment agreement and the finder's services agreement, we are also obligated to pay royalties on sales of A-101 or related products, at low single-digit percentages of net sales, subject to reduction in specified circumstances. We have not made any royalty payments to date under either agreement. Both agreements will terminate upon the expiration of the last pending, viable patent claim of the patents acquired under the assignment agreement, but no sooner than 15 years from the effective date of the agreements.

Government Regulation and Product Approval

Governmental authorities in the United States, at the federal, state and local level, and analogous authorities in other countries extensively regulate, among other things, the research, development, testing, manufacture, safety surveillance, efficacy, quality control, labeling, packaging, distribution, record keeping,

promotion, storage, advertising, distribution, marketing, sale, export and import, and the reporting of safety and other post-market information of products such as the one we are developing. A drug candidate, such as A-101, must be approved by the FDA before it may be legally promoted in the United States and by comparable foreign regulatory authorities before marketing in other jurisdictions. A-101 and any future drug candidates we may develop will be subject to similar requirements in other countries outside of the European Union and the United States prior to marketing in those countries. The process of obtaining regulatory approvals and the subsequent compliance with applicable federal, state, local and foreign statutes and regulations require the expenditure of substantial time and resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval may subject an applicant and/or sponsor to a variety of administrative or judicial sanctions, including refusal by regulatory authorities to approve applications, withdrawal of an approval, imposition of a clinical hold, import/export delays, issuance of warning letters and untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement of profits, or civil or criminal investigations and penalties brought by FDA and the Department of Justice or other governmental entities.

United States Government Regulation

NDA Approval Processes

In the United States, the FDA regulates drug and medical device products under the Federal Food, Drug, and Cosmetic Act, or FDCA, and its implementing regulations. Our drug candidates are comprised of both a drug component (the hydrogen peroxide solution or gel) and a pen-type applicator. In the case of our drug candidates, the FDA's Center for Drug Evaluation and Research has primary jurisdiction over the premarket development, review and approval of our drug candidates. Accordingly, we are investigating our drug candidates pursuant to IND applications and expect to seek approval through the NDA pathway. Based on our discussions with the FDA to date, we do not anticipate that the FDA will require us to submit a separate marketing application for the pen-type applicator that will be used with our drug candidates, but this could change during the course of the FDA's review of our NDA.

An applicant seeking approval to market and distribute a new drug product in the United States must typically undertake the following:

- § completion of preclinical laboratory tests, animal studies and formulation studies in compliance with the FDA's good laboratory practice regulations;
- § submission to the FDA of an IND which must take effect before clinical trials may begin;
- § approval by an independent institutional review board, or IRB, representing each clinical site before clinical testing may be initiated at the clinical site;
- § performance of adequate and well-controlled clinical trials in accordance with good clinical practice, or GCP, regulations to establish the safety and efficacy of the proposed drug product for each indication;
- § preparation and submission to the FDA of an NDA;
- § review of the NDA by a FDA advisory committee, if applicable;
- § satisfactory completion of one or more FDA inspections of the manufacturing facility or facilities at which the product or its components are produced to assess compliance with current good manufacturing practices, or cGMP, regulations to assure that the facilities, methods and controls are adequate to preserve the product's identity, strength, quality and purity;
- § payment of user fees and securing FDA approval of the NDA; and
- § compliance with any post-approval requirements, including potential requirements for a risk evaluation and mitigation strategy and post-approval studies required by the FDA.

Once a drug candidate is identified for development, it enters the preclinical or nonclinical testing stage. Preclinical studies include laboratory evaluations of product chemistry, pharmacology, toxicity and formulation. An IND sponsor must submit the results of the preclinical studies, together with manufacturing information and analytical data, to the FDA as part of the IND. Some preclinical studies may continue even

after the IND is submitted. In addition to including the results of the preclinical studies, the IND will also include a protocol detailing, among other things, the objectives of the clinical trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated if the first phase lends itself to an efficacy determination. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, places the IND on clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before clinical trials can begin. A clinical hold may occur at any time during the life of an IND, and may affect one or more specific clinical trials or all clinical trials conducted under the IND.

All clinical trials must be conducted under the supervision of one or more qualified investigators in accordance with current Good Clinical Practices regulations. They must be conducted under protocols detailing the objectives of the trial, dosing procedures, research subject selection and exclusion criteria and the safety and effectiveness criteria to be evaluated. Each protocol must be submitted to the FDA as part of the IND, and progress reports detailing the status of the clinical trials must be submitted to the FDA annually. Sponsors also must timely report to FDA serious and unexpected adverse reactions, any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure, or any findings from other studies or animal or in vitro testing that suggest a significant risk in humans exposed to the drug. An institutional review board, or IRB, at each institution participating in the clinical trial must review and approve the protocol before the clinical trial commences at that institution and must also approve the information regarding the trial and the consent form that must be provided to each research subject or the subject's legal representative, monitor the study until completed and otherwise comply with IRB regulations.

Clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- ***Phase 1.*** The drug is initially introduced into healthy human subjects and tested for safety, dosage tolerance, absorption, metabolism, distribution and elimination. In the case of some products for severe or life-threatening diseases, such as cancer, and especially when the product may be inherently too toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients who already have the condition.

- ***Phase 2.*** Clinical trials are performed on a limited patient population intended to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance and optimal dosage.

- ***Phase 3.*** If a drug candidate is found to be potentially effective and to have an acceptable safety profile in Phase 2 clinical trials, the clinical trial program will be expanded to Phase 3 clinical trials to further evaluate dosage, clinical efficacy and safety in an expanded patient population at geographically dispersed clinical trial sites. These studies are intended to establish the overall risk-benefit ratio of the product and provide an adequate basis for product approval and labeling claims.

Phase 4 clinical trials are conducted after approval to gain additional experience from the treatment of patients in the intended therapeutic indication and to document a clinical benefit in the case of drugs approved under accelerated approval regulations, or when otherwise requested by the FDA in the form of post-market requirements or commitments. Failure to promptly conduct any required Phase 4 clinical trials could result in withdrawal of approval.

Clinical trials are inherently uncertain and Phase 1, Phase 2 and Phase 3 testing may not be successfully completed. The FDA or the sponsor may suspend a clinical trial at any time for a variety of reasons, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug has been associated with unexpected serious harm to patients. In some cases, clinical trials are overseen by an independent group of qualified experts organized by the trial sponsor, which is called the clinical monitoring board or data safety

monitoring board. This group provides authorization for whether or not a trial may move forward at designated check points. These decisions are based on the limited access to data from the ongoing trial.

During the development of a new drug, sponsors are given opportunities to meet with the FDA at certain points. These points may be prior to the submission of an IND, at the end-of-Phase 2 and before an NDA is submitted. Meetings at other times may be requested. These meetings can provide an opportunity for the sponsor to share information about the data gathered to date and for the FDA to provide advice on the next phase of development. Sponsors typically use the meeting at the end-of-Phase 2 to discuss their Phase 2 clinical trial results and present their plans for the pivotal Phase 3 clinical trial or trials that they believe will support the approval of the new drug.

Concurrent with clinical trials, sponsors usually complete additional animal safety studies and also develop additional information about the chemistry and physical characteristics of the drug and finalize a process for manufacturing commercial quantities of the product in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the drug and the manufacturer must develop methods for testing the quality, purity and potency of the drug. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the drug candidate does not undergo unacceptable deterioration over its proposed shelf-life.

The results of product development, preclinical studies and clinical trials, along with descriptions of the manufacturing process, analytical tests and other control mechanisms, proposed labeling and other relevant information are submitted to the FDA as part of an NDA requesting approval to market the product. The submission of an NDA is subject to the payment of user fees, but a waiver of such fees may be obtained under specified circumstances. The FDA reviews all NDAs submitted for a period of 60 days to ensure that they are sufficiently complete for substantive review before it accepts them for filing. It may request additional information rather than accept an NDA for filing. In this event, the NDA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing.

During the approval process, the FDA also will determine whether a risk evaluation and mitigation strategy, or REMS, is necessary to assure the safe use of the product. If the FDA concludes a REMS is needed, the sponsor of the application must submit a proposed REMS, and the FDA will not approve the application without an approved REMS, if required. A REMS can substantially increase the costs of obtaining approval. The FDA could also require a special warning, known as a boxed warning, to be included in the product label in order to highlight a particular safety risk.

Once the submission is accepted for filing, the FDA begins an in-depth review. The FDA reviews an NDA to determine, among other things, whether a product is safe and effective for its intended use and whether its manufacturing is cGMP-compliant. The FDA may refer the NDA to an advisory committee for review and recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations. NDAs receive either standard or priority review. A drug representing a significant improvement in treatment, prevention or diagnosis of disease may receive priority review. A priority review designation is intended to direct overall attention and resources to the evaluation of such applications, and to shorten the FDA's goal for taking action on the NDA from ten months to six months from FDA filing of the NDA. After the FDA evaluates the NDA and conducts inspections of manufacturing facilities where the drug product and/or its API will be produced, it may issue an approval letter or a Complete Response Letter. An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications. A Complete Response Letter indicates that the review cycle of the application is complete and the application is not ready for approval. A Complete Response Letter may require additional clinical data and/or an additional pivotal Phase 3 clinical trial(s), and/or other significant, expensive and time-consuming requirements related to clinical trials, preclinical studies or manufacturing. Even if such data and information are submitted, the FDA may ultimately decide that the NDA does not satisfy the criteria for approval.

Post-approval Requirements

Drugs manufactured or distributed pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA and other governmental agencies, including, among other things, requirements relating to recordkeeping, periodic reporting, product sampling and distribution, advertising and promotion and reporting of adverse experiences with the product. Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory requirements is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product may result in restrictions on the product or even complete withdrawal of the product from the market. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes and additional labeling claims, are subject to further FDA review and approval. There also are continuing, annual user fee requirements for products and the establishments at which such products are manufactured, as well as new application fees for certain supplemental applications. In addition, the FDA may require testing and surveillance programs to monitor the effect of approved products that have been commercialized, and the FDA has the power to prevent or limit further marketing of a product based on the results of these post-marketing programs.

Drug manufacturers and other entities involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and some state agencies for compliance with GMP regulations and other laws. The FDA has promulgated specific requirements for drug cGMPs and device cGMPs embodied in the Quality System Regulation. Changes to the manufacturing process are strictly regulated and often require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP requirements and impose reporting and documentation requirements upon the sponsor and any third-party manufacturers that the sponsor may decide to use. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance.

Failure to comply with the applicable United States requirements at any time during the product development process or approval process, or after approval, may subject us to administrative or judicial sanctions, any of which could have a material adverse effect on us. These sanctions could include:

- § refusal to approve pending applications;
- § withdrawal of an approval;
- § imposition of a clinical hold;
- § warning letters;
- § product seizures or detention, or refusal to permit the import or export of products;
- § restrictions on the marketing or manufacturing of the product;
- § total or partial suspension of production or distribution or product recalls; or
- § injunctions, fines, disgorgement, or civil or criminal penalties.

The FDA strictly regulates the marketing, labeling, advertising and promotion of drug products that are placed on the market. Drugs may be promoted only for the approved indications and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability.

From time to time, legislation is drafted, introduced and passed in Congress that could significantly change the statutory provisions governing the approval, manufacturing and marketing of products regulated by the FDA. In addition, FDA regulations and guidance are often issued revised or reinterpreted by the agency in ways that may significantly affect our business and our products. It is impossible to predict whether legislative changes will be enacted, or whether FDA regulations, guidance or interpretations will be issued or changed or what the impact of such changes, if any, may be.

Non-patent Exclusivity

The FDCA provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to obtain approval of an NDA for a new chemical entity, or NCE. A drug is an NCE if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the action of the drug substance. Because we believe that an NDA has never been approved for hydrogen peroxide, we believe that our product qualifies as an NCE and is entitled to a five-year period of market exclusivity under the FDCA if approved, but FDA may disagree with our interpretation.

If market exclusivity is granted, during the exclusivity period, the FDA may not accept for review an abbreviated new drug application, or ANDA, or a 505(b)(2) NDA submitted by another company for another version of such drug where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a certification of patent invalidity or non-infringement to one of the patents listed with the FDA by the innovator NDA holder. The FDCA also provides three years of marketing exclusivity for an NDA, or supplement to an existing NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example new indications, dosages, dosage forms or strengths of an existing drug. This three-year exclusivity covers only the conditions associated with the new clinical investigations and does not prohibit the FDA from approving ANDAs for drugs containing the original active agent. Five-year and three-year exclusivity will not delay the submission or approval of an NDA. However, an applicant submitting an NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

Regulation Outside of the United States

In addition to regulations in the United States, we will be subject to regulations of other countries governing our business activities, including, our clinical trials and the commercial sale and distribution of our product. Even if we obtain FDA approval for a product, we must obtain approval by the comparable regulatory authorities of countries outside of the United States before we can commence clinical trials in such countries and approval of the regulators of such countries or economic areas, such as the European Union before we may market products in those countries or areas. The approval process and requirements governing the conduct of clinical trials, product licensing and promotion, pricing and reimbursement vary greatly by geographic region, and the time may be longer or shorter than that required for FDA approval.

In the European Economic Area, or EEA, which is composed of the 28 Member States of the European Union plus Norway, Iceland and Liechtenstein, medicinal products can only be commercialized after obtaining a Marketing Authorization, or MA.

There are two types of MAs:

- The Community MA, which is issued by the European Commission through the Centralized Procedure, based on the opinion of the Committee for Medicinal Products for Human Use (CHMP) of the EMA, and which is valid throughout the entire territory of the EEA. The Centralized Procedure is mandatory for certain types of products, such as biotechnology medicinal products, orphan medicinal products, and medicinal products indicated for the treatment of AIDS, cancer, neurodegenerative disorders, diabetes, auto-immune and viral diseases. The Centralized Procedure is optional for products containing a new active substance not yet authorized in the EEA, or for products that constitute a significant therapeutic, scientific or technical innovation or which are in the interest of public health in the EU. Under the Centralized Procedure, the maximum timeframe for the evaluation of a marketing authorization application is 210 days (excluding clock stops, when additional written or oral information is to be provided by the applicant in response to questions asked by the CHMP). Accelerated evaluation might be granted by the CHMP in exceptional cases, when the authorization of a medicinal product is of major interest from the point of view of public health and, in particular,

from the viewpoint of therapeutic innovation. Under the accelerated procedure, the standard 210 days review period is reduced to 150 days.

- § National MAs, which are issued by the competent authorities of the Member States of the EEA and only cover their respective territory, are available for products not falling within the mandatory scope of the Centralized Procedure. Where a product has already been authorized for marketing in a Member State of the EEA, this National MA can be recognized in another Member States through the Mutual Recognition Procedure. If the product has not received a National MA in any Member State at the time of application, it can be approved simultaneously in various Member States through the Decentralized Procedure.

In the EEA, upon receiving marketing authorization, new chemical entities generally receive eight years of data exclusivity and an additional two years of market exclusivity. If granted, data exclusivity prevents regulatory authorities in the European Union from referencing the innovator's data to assess a generic application. During the additional two-year period of market exclusivity, a generic marketing authorization can be submitted, and the innovator's data may be referenced, but no generic product can be marketed until the expiration of the market exclusivity. However, there is no guarantee that a product will be considered by the European Union's regulatory authorities to be a new chemical entity, and products may not qualify for data exclusivity.

Other Healthcare Laws

Although we currently do not have any products on the market we are subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which we conduct our business. Such laws include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, physician sunshine and privacy and security laws.

The federal Anti-Kickback Statute makes it illegal for any person or entity, including a prescription drug manufacturer (or a party acting on its behalf) to knowingly and willfully, directly or indirectly, solicit, receive, offer, or pay any remuneration that is intended to induce the referral of business, including the purchase, order, lease of any good, facility, item or service for which payment may be made under a federal healthcare program, such as Medicare or Medicaid. The term "remuneration" has been broadly interpreted to include anything of value. The Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand and prescribers, purchasers, formulary managers, and beneficiaries on the other. Although there are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, the exceptions and safe harbors are drawn narrowly. Practices that involve remuneration that may be alleged to be intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not qualify for an exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all its facts and circumstances. Several courts have interpreted the statute's intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the Anti-Kickback Statute has been violated. Violations of this law are punishable by up to five years in prison, and can also result in criminal fines, civil money penalties, administrative penalties and exclusion from participation in federal healthcare programs.

Additionally, the intent standard under the Anti-Kickback Statute was amended by the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, collectively the Affordable Care Act, to a stricter standard such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, the Affordable Care Act codified case law that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal civil False Claims Act.

Federal false claims and false statement laws, including the federal civil False Claims Act, prohibits, among other things, any person or entity from knowingly presenting, or causing to be presented, for payment to, or approval by, federal programs, including Medicare and Medicaid, claims for items or services, including drugs, that are false or fraudulent or not provided as claimed. Entities can be held liable under these laws if they are deemed to "cause" the submission of false or fraudulent claims by, for example, providing inaccurate billing or coding information to customers, promoting a product off-label, or for providing medically unnecessary services or items. In addition, our future activities relating to the sale and marketing of our product are subject to scrutiny under this law. Penalties for the federal civil False Claims Act violations may include up to three times the actual damages sustained by the government, plus mandatory civil penalties of between $5,500 and $11,000 for each separate false claim, the potential for exclusion from participation in federal healthcare programs, and, although the federal False Claims Act is a civil statute, False Claims Act violations may also implicate various federal criminal statutes. The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, created additional federal criminal statutes that prohibit among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors, knowingly and willfully embezzling or stealing from a healthcare benefit program, willfully obstructing a criminal investigation of a healthcare offense, and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Like the Anti-Kickback Statute, the Affordable Care Act amended the intent standard for certain healthcare fraud statutes under HIPAA such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

The civil monetary penalties statute imposes penalties against any person or entity that, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent.

Also, many states have similar fraud and abuse statutes or regulations that may be broader in scope and may apply regardless of payor, in addition to items and services reimbursed under Medicaid and other state programs. Additionally, to the extent that our product is sold in a foreign country, we may be subject to similar foreign laws.

There has also been a recent trend of increased federal and state regulation of payments made to physicians and other healthcare providers. The Affordable Care Act imposed, among other things, new annual reporting requirements for covered manufacturers for certain payments and other transfers of value provided to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Failure to submit timely, accurately and completely the required information for all payments, transfers of value and ownership or investment interests may result in civil monetary penalties of up to an aggregate of $150,000 per year and up to an aggregate of $1 million per year for "knowing failures." Covered manufacturers must submit reports to the Centers for Medicare and Medicaid Services by the 90th day of each calendar year. Certain states also mandate implementation of compliance programs, impose restrictions on drug manufacturer marketing practices and/or require the tracking and reporting of gifts, compensation and other remuneration to physicians.

Because we intend to commercialize a product that could be reimbursed under a federal healthcare program and other governmental healthcare programs, we intend to develop a comprehensive compliance program that establishes internal controls to facilitate adherence to the rules and program requirements to which we will or may become subject. Although the development and implementation of compliance programs designed to establish internal controls and facilitate compliance can mitigate the risk of investigation, prosecution, and penalties assessed for violations of these laws, or any other laws that may apply to us, the risks cannot be entirely eliminated. If our operations are found to be in violation of any of such laws or any other governmental regulations, we may be subject to penalties, including, without limitation,

administrative, civil, and criminal penalties, damages, fines, disgorgement, contractual damages, reputational harm, diminished profits and future earnings, the curtailment or restructuring of our operations, exclusion from participation in federal and state healthcare programs and individual imprisonment, any of which could adversely affect our ability to operate our business and our financial results.

We may also be subject to data privacy and security regulation by both the federal government and the states in which we conduct our business. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and their implementing regulations, including the final omnibus rule published on January 25, 2013, mandates, among other things, the adoption of uniform standards for the electronic exchange of information in common healthcare transactions, as well as standards relating to the privacy and security of individually identifiable health information, which require the adoption of administrative, physical and technical safeguards to protect such information. Among other things, HITECH makes HIPAA's security standards directly applicable to "business associates", namely independent contractors or agents of covered entities that create, receive or obtain protected health information in connection with providing a service for or on behalf of a covered entity. HITECH also increased the civil and criminal penalties that may be imposed against covered entities and business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorney's fees and costs associated with pursuing federal civil actions. In addition, certain state laws govern the privacy and security of health information in certain circumstances, some of which are more stringent than HIPAA and many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts. Failure to comply with these laws, where applicable, can result in the imposition of significant civil and/or criminal penalties.

Health Care Reform

In the United States, there have been and continue to be a number of significant legislative initiatives to contain healthcare costs. For example, in March 2010, the Affordable Care Act was passed, which has had, and is expected to continue to have, a significant impact on the healthcare industry. The Affordable Care Act was designed to expand coverage for the uninsured while at the same time containing overall healthcare costs. With regard to pharmaceutical products, among other things, the Affordable Care Act expanded and increased industry rebates for drugs covered under Medicaid programs; addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected; extended the rebate program to individuals enrolled in Medicaid managed care organizations; established annual fees and taxes on manufacturers of certain branded prescription drugs; and made changes to the coverage requirements under the Medicare prescription drug benefit; and established a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D. Moreover, the Affordable Care Act provided incentives to programs that increase the federal government's comparative effectiveness research and implemented payment system reforms including a national pilot program on payment bundling to encourage hospitals, physicians and other providers to improve the coordination, quality and efficiency of certain healthcare services through bundled payment models. We continue to evaluate the effect that the Affordable Care Act will have on our business. In the coming years, additional legislative and regulatory changes could be made to governmental health programs that could significantly impact pharmaceutical companies and the success of our drug candidates.

In addition, other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. For example, in August 2011, the President signed into law the Budget Control Act of 2011, which, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals in spending reductions. The Joint Select Committee on Deficit Reduction did not achieve a targeted deficit reduction of at least $1.2 trillion for fiscal years 2012 through 2021, triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions to

Medicare payments to providers of 2% per fiscal year, which went into effect beginning on April 1, 2013 and, due to subsequent legislative amendments to the statute, will stay in effect through 2024 unless additional Congressional action is taken. Additionally, in January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, reduced Medicare payments to several providers, including hospitals, cancer treatment centers and imaging centers. Moreover, the Drug Supply Chain Security Act imposes new obligations on manufacturers of pharmaceutical products related to product tracking and tracing. Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products.

The Affordable Care Act, as well as other federal and state healthcare reform measures that have been and may be adopted in the future, could harm our future revenue. We are not sure whether additional legislative changes will be enacted, or whether the current regulations, guidance or interpretations will be changed, or what the impact of such changes on our business, if any, may be.

The Hatch Waxman Amendments to the FDC Act

Orange Book Listing

In seeking approval for a drug through an NDA, applicants are required to list with the FDA each patent whose claims cover the applicant's product or a method of using the product. Upon approval of a drug, each of the patents listed in the application for the drug is then published in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations, commonly known as the Orange Book. Drugs listed in the Orange Book can, in turn, be cited by potential competitors in support of approval of an ANDA or an application covered by Section 505(b)(2) of the Federal Food, Drug, and Cosmetic Act, or FDCA. An ANDA provides for marketing of a drug product that has the same active ingredients, generally in the same strengths and dosage form, as the listed drug and has been shown through pharmacokinetic, or PK, testing to be bioequivalent to the listed drug. Drugs approved in this way are commonly referred to as "generic equivalents" to the listed drug, and can often be substituted by pharmacists under prescriptions written for the original listed drug. Other than the requirement for bioequivalence testing, ANDA applicants are generally not required to conduct, or submit results of, preclinical studies or clinical tests to prove the safety or effectiveness of their drug product. Section 505(b)(2) applications provide for marketing of a drug product that may have the same active ingredients as the listed drug and contains full safety and effectiveness data as an NDA, but at least some of this information comes from studies not conducted by or for the applicant. This alternate regulatory pathway enables the applicant to rely, in part, on the FDA's findings of safety and efficacy for an existing product, or published literature, in support of its application. The FDA may then approve the new drug candidate for all or some of the labeled indications for which the referenced product has been approved, as well as for any new indication sought by the 505(b)(2) applicant.

The ANDA or Section 505(b)(2) applicant is required to certify to the FDA concerning any patents listed for the approved product in the FDA's Orange Book. Specifically, the applicant must certify that: (i) the required patent information has not been filed; (ii) the listed patent has expired; (iii) the listed patent has not expired, but will expire on a particular date and approval is sought after patent expiration; or (iv) the listed patent is invalid or will not be infringed by the new product. The ANDA or Section 505(b)(2) applicant may also elect to submit a statement certifying that its proposed ANDA label does not contain ,or carves out, any language regarding a patented method of use rather than certify to such listed method of use patent. If the applicant does not challenge the listed patents by filing a certification that the listed patent is invalid or will not be infringed by the new product, the ANDA or Section 505(b)(2) application will not be approved until all the listed patents claiming the referenced product have expired.

A certification that the new product will not infringe the already approved product's listed patents, or that such patents are invalid, is called a Paragraph IV certification. If the ANDA or Section 505(b)(2) applicant has provided a Paragraph IV certification to the FDA, the applicant must also send notice of the Paragraph IV certification to the NDA and patent holders once the ANDA or Section 505(b)(2) application has been accepted for filing by the FDA. The NDA and patent holders may then initiate a patent infringement lawsuit in response to the notice of the Paragraph IV certification. The filing of a patent

infringement lawsuit within 45 days of the receipt of a Paragraph IV certification automatically prevents the FDA from approving the ANDA or Section 505(b)(2) application until the earliest of 30 months, expiration of the patent, settlement of the lawsuit, and a decision in the infringement case that is favorable to the ANDA or Section 505(b)(2) applicant. This prohibition is generally referred to as the 30-month stay. Thus, approval of an ANDA or 505(b)(2) NDA could be delayed for a significant period of time depending on the patent certification the applicant makes and the reference drug sponsor's decision to initiate patent litigation.

The ANDA or Section 505(b)(2) application also will not be approved until any applicable non patent exclusivity listed in the Orange Book for the referenced product has expired.

We intend to list any patents that are eligible for listing in the Orange Book in our NDA.

Patent Term Extension

In the United States, after NDA approval, owners of relevant drug patents may apply for up to a five year patent extension, which provides patent term restoration as compensation for the patent term lost during the FDA regulatory review process. The Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Act, permits a patent term extension of up to five years beyond the expiration of the patent. The allowable patent term extension is calculated as half of the drug's testing phase, which is the time between the IND submission becoming effective and the NDA submission, and all of the review phase, which is the time between NDA submission and approval, up to a maximum extension of five years. The time can be shortened if the FDA determines that the applicant did not pursue approval with due diligence. Patent extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only one patent applicable to an approved drug may be extended.

Similar provisions are available in the European Union and other foreign jurisdictions to extend the term of a patent that covers an approved drug. For example, in Japan, it may be possible to extend the patent term for up to five years and in the European Union, it may be possible to obtain a supplementary patent certificate that would effectively extend patent protection for up to five years. In the future, if our drug candidates receive FDA approval, we expect to apply for patent term extensions on patents covering those drugs.

Coverage and Reimbursement

We do not expect third-party payors to cover and reimburse customers who use A-101 or A-102 on patients for the treatment of SK. Payors generally do not reimburse the provider for the product used to remove non-malignant lesions, including SK. In addition, they do not generally reimburse providers for the procedure removing such lesions, since the procedure is considered to be cosmetic in nature, unless there is a medical need to remove the lesion such as confirming a diagnosis with a biopsy or treating SK that are causing the patient physical discomfort. We anticipate that in some cases, our drug candidates will be used to remove SK lesions that are inflamed and causing the patient discomfort. Any reduction in reimbursement for the procedure to remove inflamed SK may result in a higher percentage of patients needing to pay out of pocket for treatment with our drug candidates. Accordingly, the commercial success with A-101 and A-102 depends on the extent to which patients will be willing to pay out of pocket for the in-office procedure using these drug candidates.

By contrast, in the case of A-101 and A-102 for the treatment of common warts, we believe our success depends on continued coverage and adequate reimbursement for in-office wart treatment procedures or in the absence of coverage and adequate reimbursement, on the extent to which patients will be willing to pay out of pocket for the in-office procedures that include our product.

Third-party payors determine which medical procedures they will cover and establish reimbursement levels. Even if a third-party payor covers a particular procedure, the resulting reimbursement payment rates may not be adequate. Patients who are treated in-office for a medical condition generally rely on third-party payors to reimburse all or part of the costs associated with the procedure and may be unwilling to undergo such procedures for the removal of warts in the absence of such coverage and reimbursement. Physicians

may be unlikely to offer procedures for the treatment of warts if they are not covered by insurance and may be unlikely to purchase and use our product for warts unless coverage is provided and reimbursement is adequate.

Reimbursement by a third-party payor may depend upon a number of factors, including: the third-party payor's determination that a procedure is neither cosmetic, experimental, nor investigational; safe, effective, and medically necessary; appropriate for the specific patient; cost-effective; supported by peer-reviewed medical journals; and included in clinical practice guidelines.

In the United States, no uniform policy of coverage and reimbursement for medical procedures exists among third-party payors. Therefore, coverage and reimbursement for procedures can differ significantly from payor to payor. Decisions regarding the extent of coverage and amount of reimbursement to be provided for an in-office procedure to remove warts are made on a plan by plan basis. One payor's determination to provide coverage for a procedure does not assure that other payors will also provide coverage, and adequate reimbursement.

In addition to uncertainties surrounding coverage policies, there are periodic changes to reimbursement. Third-party payors regularly update reimbursement amounts and also from time to time revise the methodologies used to determine reimbursement amounts. This includes annual updates to payments to physicians for procedures during which our drug candidates will be used. To the extent the procedure using our drug candidates would be covered, the cost of our drugs generally is recovered by the healthcare provider as part of the payment for performing a procedure and not separately reimbursed. Accordingly, these updates could impact the demand for our drug candidates. An example of payment updates is the Medicare program's updates to hospital and physician payments, which are done on an annual basis using a prescribed statutory formula. In the past, when the application of the formula resulted in lower payment, Congress has passed interim legislation to prevent the reductions. Most recently, the Protecting Access to Medicare Act of 2014, signed into law in April 2014, provided for a 0.5% update from 2013 payment rates under the Medicare Physician Fee Schedule through 2014 and a 0% update from January 1 until March 31, 2015. If Congress fails to intervene to prevent the negative update factor in future years, we could face a decline in revenue to the extent any of our drug candidates receive regulatory approval and procedures using these drug candidates are covered for reimbursement.

Foreign governments also have their own healthcare reimbursement systems, which vary significantly by country and region, and we cannot be sure that coverage and adequate reimbursement will be made available with respect to the treatments in which our drugs are used under any foreign reimbursement system.

Employees

As of June 30, 2015, we had ten employees. All of our employees are located in the United States. None of our employees is represented by a labor union or covered by a collective bargaining agreement. We consider our relationship with our employees to be good.

Properties

We sublease approximately 9,000 square feet of space for our headquarters in Malvern, Pennsylvania under a sublease with a term through November 30, 2019, subject to renewal for at least two six-month terms. We sublease this space from an entity affiliated with some of our executive officers and directors. See "Certain Relationships and Related Party Transactions — Subleases" for a description of the terms of this sublease. We believe that our current facilities are suitable and adequate to meet our current needs. We intend to add new facilities or expand existing facilities as we add employees, and we believe that suitable additional or substitute space will be available as needed to accommodate any such expansion of our operations.

Legal Proceedings

We are not subject to any material legal proceedings.

MANAGEMENT

Directors and Executive Officers

The following table sets forth information concerning our directors and executive officers, including their ages as of June 30, 2015:

Name	Age	Position
Executive Officers:		
Neal Walker	45	President, Chief Executive Officer and Director
Christopher Powala[(1)]	56	Chief Operating Officer
Stuart Shanler, M.D.[(1)]	54	Chief Scientific Officer
Kamil Ali-Jackson[(1)]	56	Chief Legal Officer
Frank Ruffo[(1)]	49	Chief Financial Officer
Non-Management Directors:		
Stephen A. Tullman	50	Chairman of the Board of Directors
Albert Cha, M.D., Ph.D.	43	Director
Anand Mehra, M.D.	39	Director
Christopher Molineaux	49	Director
Ketan Patel, M.D.[(2)]	40	Director

(1) This executive officer provides part-time services to another company under common control with us. Under a services agreement with NST, we are reimbursed by NST for the services provided by the executive officer to the other company. See "Certain Relationships and Related Party Transactions — Services Agreements with Ceptaris and NST" for additional information.

(2) Dr. Patel will resign from the board of directors contingent upon, and effective immediately prior to, the effectiveness of the registration statement of which this prospectus is a part.

Executive Officers

Neal Walker

Neal Walker co-founded our company and has served as President and Chief Executive Officer and a member of our board of directors since our inception in July 2012. Dr. Walker co-founded NeXeption, LLC, a biopharmaceutical assets management company, in August 2012. Between July 2011 and July 2012, Dr. Walker served as a consultant to a number of pharmaceutical companies. Dr. Walker co-founded and served as President and Chief Executive Officer and a member of the board of directors of Vicept Therapeutics, Inc., a dermatology-focused specialty pharmaceutical company, from 2009 until its acquisition by Allergan, Inc. in July 2011. Previously, Dr. Walker co-founded and led a number of life science companies, including Octagon Research Solutions, Inc., a software and services provider to biopharmaceutical companies (acquired by Accenture plc), Trigenesis Therapeutics, Inc., a specialty dermatology company, where he served as Chief Medical Officer (acquired by Dr. Reddy's Laboratories Inc.), and Cutix Inc., a commercial dermatology company. He began his pharmaceutical industry career at Johnson and Johnson, Inc. Dr. Walker is a director of Alderya Therapeutics, Inc, a publicly held biotechnology company, as well as several private biotechnology companies. Dr. Walker received his M.B.A. degree from The Wharton School, University of Pennsylvania, his Doctor of Osteopathic Medicine degree from the Philadelphia College of Osteopathic Medicine and a B.A. degree in Biology from Lehigh University. Dr. Walker's experience as a board-certified dermatologist and the founder of our company and other pharmaceutical companies, his background in clinical and product development in dermatology and other fields, and his knowledge of the pharmaceutical industry contributed to the conclusion of our board of directors that he should serve as a director of our company.

Christopher Powala

Christopher Powala co-founded our company and has served as our Chief Operating Officer since our inception in July 2012. Between July 2011 and July 2012, Mr. Powala served as a consultant to a number of pharmaceutical companies. Mr. Powala co-founded and served as Chief Operating Officer of Vicept Therapeutics, Inc. from 2009 until its acquisition by Allergan, Inc. in July 2011. Prior to joining Vicept Therapeutics, Inc., from 2008 to 2009, he served as Vice President, Clinical Operations & Global Regulatory Affairs for Vital Therapies, Inc., a biotechnology company. From 1993 to 2008, Mr. Powala was with CollaGenex Pharmaceuticals, Inc, a dermatology-focused specialty pharmaceutical company, where he served as Vice President, Drug Development and Regulatory Affairs. Previously, Mr. Powala also held various positions in product development and regulatory affairs at Wyeth Laboratories, Inc. Mr. Powala received his bachelor's degree in Biology from State University of New York-Regents College.

Stuart D. Shanler, M.D.

Stuart D. Shanler, M.D. co-founded our company and has served as our Chief Scientific Officer since our inception in July 2012. Between July 2011 and July 2012, Dr. Shanler served as a consultant to a number of pharmaceutical companies. Dr. Shanler co-invented a topical rosacea drug for, and co-founded and served as Chief Scientific Officer of, Vicept Therapeutics, Inc. from 2009 until its acquisition by Allergan, Inc. in July 2011. Previously, Dr. Shanler was a dermatologic surgeon in private practice. Dr. Shanler is a board-certified dermatologist and received his M.D. degree from Albany Medical College of Union University and received B.S. degrees in Biology and the Biological Basis of Behavior from the University of Pennsylvania.

Kamil Ali-Jackson

Kamil Ali-Jackson co-founded our company and has served as our Chief Legal Officer and Assistant Secretary since our inception in July 2012. In addition, since May 2011, Ms. Ali-Jackson has served as the Chief Legal Officer of NeXeption, Inc. and its affiliates, and has served as the Chief Legal Officer of Alexar Therapeutics, Inc. since January 2014. From May 2011 to September 2013, Ms. Ali-Jackson served as Chief Legal Officer, Chief Compliance Officer and Secretary of Ceptaris Therapeutics, Inc., a biotechnology company. From October 2010 to September 2011, she was a consultant to a private specialty pharmaceutical company. From 2006 to May 2010, she served as General Counsel and Corporate Secretary of Ception Therapeutics, Inc., a biotechnology company that was acquired by Cephalon, Inc. Previously, Ms. Ali-Jackson served as legal counsel and a licensing business executive for a number of pharmaceutical companies, including Merck & Co., Inc., Dr. Reddy's Laboratories Inc. and Endo Pharmaceuticals, Inc. Ms. Ali-Jackson received her J.D. degree from Harvard Law School and A.B. degree in Politics from Princeton University.

Frank Ruffo

Frank Ruffo co-founded our company and has served as our Chief Financial Officer and Secretary since our inception in July 2012. Mr. Ruffo also served part-time as the Chief Financial Officer of VenatoRx Pharmaceuticals Inc., a pharmaceutical company, from October 2011 to November 2014 and the Chief Financial Officer of BioLeap, Inc. from January 2010 to January 2013. Prior to joining our company, Mr. Ruffo co-founded and served as Chief Financial Officer of Vicept Therapeutics, Inc. from 2009 until its acquisition by Allergan, Inc. in July 2011. Prior to joining Vicept Therapeutics, Inc., from 1996 to 2008, Mr. Ruffo served as the Vice President, Finance and Controller of CollaGenex Pharmaceuticals, Inc. He is a former Certified Public Accountant (certification voluntarily went inactive in 2008). Mr. Ruffo received a B.S. degree in Accounting from LaSalle University.

Non-Management Directors

Stephen A. Tullman

Stephen A. Tullman has served as Chairman of our board of directors since August 2012. Mr. Tullman co-founded NeXeption, Inc. in May 2011 and NeXeption, LLC in August 2012 and currently serves as the managing member of NeXeption, LLC. He previously served as Chairman, President and Chief Executive

Officer of Ceptaris Therapeutics, Inc., a biopharmaceutical company, from May 2011 until its acquisition by Actelion US Holdings Company, a subsidiary of Actelion Ltd, in September 2013. Mr. Tullman served as Chairman of Vicept Therapeutics, Inc. from 2009 until its acquisition by Allergan, Inc. in July 2011. In 2005, Mr. Tullman co-founded Ception Therapeutics, Inc. and served as its President and Chief Executive Officer until its acquisition by Cephalon, Inc. in 2010. In 2003, Mr. Tullman co-founded Trigenesis Therapeutics, Inc., where he served as its Chief Business Officer (acquired by Dr. Reddy's Laboratories Inc.) Mr. Tullman began his career at SmithKline Beecham, a pharmaceutical company, where he held positions of increasing responsibility in finance, sales, marketing, and research and development. Mr. Tullman currently serves as the chairman of the board of directors of Alexar Therapeutics, Inc., a specialty dermatology company, and on the boards of directors of several other privately held companies. Mr. Tullman received a B.S. degree in Accounting from Rutgers University. Our board of directors believes that Mr. Tullman's leadership, executive, managerial and business experience with several life sciences companies qualify him to serve as a director of our company.

Albert Cha, M.D., Ph.D.

Albert Cha, M.D., Ph.D. has served as a member of our board of directors since August 2012. In 2000, Dr. Cha joined Vivo Capital, a healthcare investment firm, where he has served in various positions, and he currently serves as a managing partner. Dr. Cha currently serves as a member of the boards of directors of several privately held biotechnology and medical device companies. Dr. Cha holds B.S. and M.S. degrees in Electrical Engineering from Stanford University and an M.D. degree and Ph.D. degree in Neuroscience from the University of California at Los Angeles. Our board of directors believes that Dr. Cha's substantial experience with companies in the healthcare sector and his financial and business experience qualify him to serve as a director of our company.

Anand Mehra, M.D.

Anand Mehra, M.D. has served as a member of our board of directors since September 2014. Dr. Mehra joined Sofinnova Ventures, a venture capital firm, in 2007 and currently serves as a general partner. Prior to joining Sofinnova, Dr. Mehra worked in J.P. Morgan's private equity and venture capital group, and before that, Dr. Mehra was a consultant in McKinsey & Company's pharmaceutical practice. Dr. Mehra currently serves on the boards of directors of the publicly held companies Spark Therapeutics, Inc., Aerie Pharmaceuticals, Inc. and Marinus Pharmaceuticals, Inc., as well as several private companies. Dr. Mehra received his B.A. degree in political philosophy from the University of Virginia and an M.D. degree from Columbia University's College of Physicians and Surgeons. Our board of directors believes that Dr. Mehra is qualified to serve on our board of directors because of his extensive experience in the life sciences industry, his service on the boards of directors of other public life sciences companies and his extensive leadership experience.

Christopher Molineaux

Christopher Molineaux has served as a member of our board of directors since January 2014. Since 2009, Mr. Molineaux has served as President and Chief Executive Officer of Pennsylvania BIO, a pharmaceutical and biotech industry advocacy organization. Prior to joining Pennsylvania BIO, Mr. Molineaux served as worldwide Vice President of pharmaceutical communication and public affairs for Johnson & Johnson. Mr. Molineaux previously served as Vice President for Public Affairs at the Pharmaceutical Research and Manufacturers Association. He holds a B.A. degree from the College of the Holy Cross. Our board of directors believes that Mr. Molineaux's substantial pharmaceutical and biotechnology industry experience qualifies him to serve as a director of our company.

Ketan Patel, M.D.

Ketan Patel, M.D. has served as a member of our board of directors since August 2012. In 2007, Dr. Patel joined Fidelity Biosciences, an investment firm, where he currently serves as principal. Previously, he was an engagement manager in the MEDACorp consulting division of Leerink Swann & Company. Prior to this, Dr. Patel was a physician at the Weill-Cornell Medical Center of New York Presbyterian Hospital and at the Memorial Sloan Kettering Cancer Center. He received his B.A. degree in biology and economics at Rutgers

University and his M.D. degree from Tufts University School of Medicine. Our board of directors believes that Dr. Patel's substantial experience with companies in the healthcare sector and his venture capital, financial and business experience qualify him to serve as a director of our company. Dr. Patel will resign from the board of directors contingent upon, and effective immediately prior to, the effectiveness of the registration statement of which this prospectus is a part.

Board Composition

Our board of directors currently consists of six members. Mr. Tullman is the chairman of our board of directors. Each director is currently elected to the board for a one-year term, to serve until the election and qualification of successor directors at the annual meeting of stockholders, or until the director's earlier removal, resignation or death.

Our directors were elected to and currently serve on the board pursuant to a voting agreement among us and several of our largest stockholders. This agreement will terminate upon the closing of this offering, after which there will be no further contractual obligations regarding the election of our directors.

In accordance with our amended and restated certificate of incorporation, which will be in effect upon the closing of this offering, our board of directors will be divided into three classes, each of which will consist, as nearly as possible, of one-third of the total number of directors constituting our entire board and which will serve staggered three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors will be divided among the three classes as follows:

- Class I, which will consist of and , and their term will expire at our first annual meeting of stockholders to be held after the closing of this offering;
- Class II, which will consist of and , and their term will expire at our second annual meeting of stockholders to be held after the closing of this offering; and
- Class III, which will consist of and , and their term will expire at our third annual meeting of stockholders to be held after the closing of this offering.

Our amended and restated bylaws, which will become effective upon the closing of this offering, will provide that the authorized number of directors may be changed only by resolution approved by a majority of our board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors.

The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change of control.

Director Independence

Our board of directors has undertaken a review of the independence of the directors and considered whether any director has a material relationship with us that could compromise his ability to exercise independent judgment in carrying out his responsibilities. As a result of this review, our board of directors has determined that Messrs. Tullman and Molineaux and Drs. Cha, Patel and Mehra, representing five of our six directors, are "independent directors" as defined under NASDAQ rules.

Committees of the Board of Directors

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee, each of which has the composition and responsibilities described below. From time to time, the board may establish other committees to facilitate the management of our business.

Audit Committee

Our audit committee reviews our internal accounting procedures and consults with and reviews the services provided by our independent registered public accountants. Our audit committee consists of three directors, , and . Mr. is the chairman of the audit committee and our board of directors has determined that Mr. is an "audit committee financial expert" as defined by SEC rules and regulations. Our board of directors has determined that each of Messrs. , and are independent directors under NASDAQ listing rules and under Rule 10A-3 under the Exchange Act, as amended. We intend to continue to evaluate the requirements applicable to us and we intend to comply with future requirements to the extent that they become applicable to our audit committee. The principal duties and responsibilities of our audit committee include:

- § appointing and retaining an independent registered public accounting firm to serve as independent auditor to audit our financial statements, overseeing the independent auditor's work and determining the independent auditor's compensation;
- § approving in advance all audit services and non-audit services to be provided to us by our independent auditor;
- § establishing procedures for the receipt, retention and treatment of complaints received by us regarding accounting, internal accounting controls, auditing or compliance matters, as well as for the confidential, anonymous submission by our employees of concerns regarding questionable accounting or auditing matters;
- § reviewing and discussing with management and our independent auditor the results of the annual audit and the independent auditor's review of our quarterly financial statements; and
- § conferring with management and our independent auditor about the scope, adequacy and effectiveness of our internal accounting controls, the objectivity of our financial reporting and our accounting policies and practices.

Compensation Committee

Our compensation committee reviews and determines the compensation of all our executive officers. Our compensation committee consists of directors, , and , each of whom is a non-employee member of our board of directors as defined in Rule 16b-3 under the Exchange Act. Mr. is the chairman of the compensation committee. Our board of directors has determined that the composition of our compensation committee satisfies the applicable independence requirements under, and the functioning of our compensation committee complies with the applicable requirements of, stock exchange listing rules and SEC rules and regulations. We intend to continue to evaluate and intend to comply with all future requirements applicable to our compensation committee. The principal duties and responsibilities of our compensation committee include:

- § establishing and approving, and making recommendations to the board of directors regarding, performance goals and objectives relevant to the compensation of our chief executive officer, evaluating the performance of our chief executive officer in light of those goals and objectives and setting, or recommending to the full board of directors for approval, the chief executive officer's compensation, including incentive-based and equity-based compensation, based on that evaluation;
- § setting the compensation of our other executive officers, based in part on recommendations of the chief executive officer;
- § exercising administrative authority under our stock plans and employee benefit plans;
- § establishing policies and making recommendations to our board of directors regarding director compensation;
- § reviewing and discussing with management the compensation discussion and analysis that we may be required from time to time to include in SEC filings; and

- preparing a compensation committee report on executive compensation as may be required from time to time to be included in our annual proxy statements or annual reports on Form 10-K filed with the SEC.

Nominating and Corporate Governance Committee

The nominating and corporate governance committee consists of directors, , and . Mr. is the chairman of the nominating and corporate governance committee. Our board of directors has determined that the composition of our nominating and corporate governance committee satisfies the applicable independence requirements under, and the functioning of our nominating and corporate governance committee complies with the applicable requirements of, stock exchange listing standards and SEC rules and regulations. We will continue to evaluate and will comply with all future requirements applicable to our nominating and corporate governance committee. The nominating and corporate governance committee's responsibilities include:

- assessing the need for new directors and identifying individuals qualified to become directors;
- recommending to the board of directors the persons to be nominated for election as directors and to each of the board's committees;
- assessing individual director performance, participation and qualifications;
- developing and recommending to the board corporate governance principles;
- monitoring the effectiveness of the board and the quality of the relationship between management and the board; and
- overseeing an annual evaluation of the board's performance.

Code of Business Conduct and Ethics for Employees, Executive Officers and Directors

Effective upon closing of this offering, we will adopt a Code of Business Conduct and Ethics, or the Code of Conduct, applicable to all of our employees, executive officers and directors. Following the closing of this offering, the Code of Conduct will be available on our website at *www.aclaristx.com*. The nominating and corporate governance committee of our board of directors will be responsible for overseeing the Code of Conduct and must approve any waivers of the Code of Conduct for employees, executive officers and directors. We expect that any amendments to the Code of Conduct, or any waivers of its requirements, will be disclosed on our website.

Compensation Committee Interlocks and Insider Participation

None of our directors who currently serve as members of our compensation committee is, or has at any time during the past year been, one of our officers or employees. None of our executive officers currently serves, or in the past year has served, as a member of the board of directors or compensation committee of any other entity that has one or more executive officers serving on our board of directors or compensation committee.

Non-Employee Director Compensation

With the exception of payments to NST Consulting, LLC for the services of Mr. Tullman, the chairman of our board of directors, we have not historically paid cash retainers or other cash compensation with respect to service on our board of directors, except for reimbursement of direct expenses incurred in connection with attending meetings of the board or committees. In January, August and December 2014, we awarded options to purchase 30,000 shares, 1,663 shares and 3,638 shares, respectively, of our common stock to Mr. Molineaux at exercise prices of $0.12, $0.21 and $0.44 per share, respectively. In August and December 2014, we awarded options to purchase 66,528 shares and 150,000 shares of our common stock, respectively, to Mr. Tullman at exercise prices of $0.21 and $0.44 per share, respectively. Other than Messrs. Molineaux and Tullman, none of our non-employee directors held any options to purchase our common stock as of December 31, 2014.

The following table sets forth information regarding compensation earned for service on our board of directors during the year ended December 31, 2014 by our non-employee directors. Dr. Walker, our President and Chief Executive Officer, is also a director but does not receive any additional compensation for his service as director. Dr. Walker's compensation as an executive officer is set forth below under "Executive Compensation — Summary Compensation Table."

Name	Fees Earned or Paid in Cash ($)	Option Awards[1] ($)	Non-equity Incentive Plan Compensation ($)	Total ($)
Stephen A. Tullman	100,000[2]	92,559[3]	30,000[4]	222,559
Albert Cha	—	—	—	—
Ketan Patel	—	—	—	—
Christopher Molineaux	—	5,407[5]	—	5,407
Anand Mehra	—	—	—	—

(1) The amounts reflect the full grant date fair value for options granted during 2014. The grant date fair value was computed in accordance with ASC Topic 718, *Compensation — Stock Compensation*. Unlike the calculations contained in our financial statements, this calculation does not give effect to any estimate of forfeitures related to service-based vesting, but assumes that the director will perform the requisite service for the award to vest in full. The assumptions we used in valuing options are described in Note 8 to our audited financial statements included in this prospectus.

(2) Represents the portion of Mr. Tullman's salary paid by NST Consulting, LLC that we reimburse pursuant to our services agreement with them. See "Certain Relationships and Related Party Transactions — Services Agreements with Ceptaris and NST."

(3) As of December 31, 2014, Mr. Tullman held options to purchase 216,528 shares of our common stock. 25% of the total shares underlying these options vest one year from the grant date and the remaining shares vest in 36 equal monthly installments thereafter.

(4) Mr. Tullman is eligible to receive a target bonus for up to 30% of the amounts we pay to NST Consulting, LLC for his services provided to us. Mr. Tullman's bonus is based upon our achievement of specified corporate goals. Based on our level of achievement for 2014, our compensation committee awarded Mr. Tullman 100% of his target bonus.

(5) As of December 31, 2014, Mr. Molineaux held options to purchase 35,301 shares of common stock. 25% of the total shares underlying these options vest one year from the grant date and the remaining shares vest in 36 equal monthly installments thereafter.

We expect that our board of directors will adopt a director compensation policy for non-employee directors to be effective following the closing of this offering.

EXECUTIVE COMPENSATION

Our Chief Executive Officer and our two other most highly compensated executive officers for the year ended December 31, 2014 were:

- Neal Walker, our President and Chief Executive Officer;
- Christopher Powala, our Chief Operating Officer; and
- Stuart Shanler, our Chief Scientific Officer.

We refer to these executive officers in this prospectus as our named executive officers.

Summary Compensation Table

The following table presents the compensation awarded to, earned by or paid to each of our named executive officers for the year ended December 31, 2014. Under a services agreement, we provided the part-time services of Mr. Powala and Dr. Shanler to Alexar Therapeutics, Inc., a company under common control with us, and NST reimbursed us for these services based on the percentage of time the named executive officer spent on matters related to Alexar Therapeutics, Inc. The salary amounts set forth in the table below represent the total salary earned by the named executive officer during the year ended December 31, 2014, including amounts reimbursed by NST to us.

Name and Principal Position	Year	Salary ($)	Option Awards ($)[1]	Non-Equity Incentive Plan Compensation ($)[2]	All Other Compensation ($)[3]	Total ($)
Neal Walker President and Chief Executive Officer	2014	339,900	241,420	101,970	10,400	693,690
Christopher Powala Chief Operating Officer	2014	300,760	79,875	90,228	10,400	481,263
Stuart Shanler Chief Scientific Officer	2014	283,250	77,602	84,975	44,000	489,827

(1) The amounts reflect the full grant date fair value for awards granted during 2014. The grant date fair value was computed in accordance with ASC Topic 718, *Compensation — Stock Compensation*. Unlike the calculations contained in our financial statements, this calculation does not give effect to any estimate of forfeitures related to service-based vesting, but assumes that the executive will perform the requisite service for the award to vest in full. The assumptions we used in valuing options are described in Note 8 to our audited financial statements included in this prospectus.

(2) The amounts reflect the bonus paid based on the achievement of specified corporate goals, as discussed further below under "— Narrative to Summary Compensation Table — Annual Bonus.

(3) We reimbursed Dr. Shanler an amount of $33,600 for corporate housing expenses that he incurred. The other amounts shown in the "All Other Compensation" column consist of company contributions made to the officer's 401(k) plan account.

Narrative to Summary Compensation Table

We review compensation annually for all employees, including our named executive officers. In setting executive base salaries and bonuses and granting equity incentive awards, we consider compensation for comparable positions in the market, the historical compensation levels of our executives, individual performance as compared to our expectations and objectives, our desire to motivate our employees to achieve short- and long-term results that are in the best interests of our stockholders, and a long-term commitment to our company. We do not target a specific competitive position or a specific mix of compensation among base salary, bonus or long-term incentives.

The compensation committee of our board of directors has historically determined our executive officers' compensation. Our compensation committee typically reviews and discusses management's proposed compensation with the Chief Executive Officer for all executives other than the Chief Executive Officer. Based on those discussions and its discretion, the compensation committee then recommends the compensation for each executive officer. Our compensation committee, without members of management present, discusses and ultimately approves the compensation of our executive officers.

Annual Base Salary

In 2012, we entered into employment agreements or offer letters with each of our named executive officers that established initial base salaries and target bonus opportunities. The base salaries are reviewed periodically by our compensation committee. The following table presents the base salaries for each of our named executive officers for 2014 and 2015. The 2014 base salaries became effective on January 1, 2014 and the 2015 base salaries became effective on January 1, 2015 for all of the named executive officers.

Name	2014 Base Salary ($)	2015 Base Salary ($)
Neal Walker	339,900	344,999
Christopher Powala	300,760	305,221
Stuart Shanler	283,250	287,499

Annual Bonus

We seek to motivate and reward our executives for achievements relative to our corporate goals and expectations for each fiscal year. For 2014 and 2015, the target bonus was and is 30% of each named executive officer's base salary.

For 2014, target bonuses were based on our achievement of specified corporate goals, including our clinical development and capital raising activities. Based on the level of achievement, our compensation committee awarded each named executive officer 100% of his target bonus for the year. These actual bonus amounts are reflected in the "Non-Equity Incentive Plan Compensation" column of the Summary Compensation Table above.

Long-Term Incentives

Our 2012 equity compensation plan, or the 2012 plan, authorizes us to make grants to eligible recipients of non-qualified stock options, incentive stock options and other stock-based awards. All of our awards under this plan to date have been in the form of stock options.

We award stock options on the date the compensation committee approves the grant. We set the option exercise price and grant date fair value based on our per-share valuation on the date of grant. The shares underlying options granted under our 2012 typically vest 25% one year from the date of grant and the remaining shares vest in 36 equal monthly installments thereafter.

In August 2014, our compensation committee awarded options to Dr. Walker, Mr. Powala and Dr. Shanler to purchase 150,243 shares, 49,896 shares and 49,896 shares of our common stock, respectively. Each of these options has an exercise price of $0.21 per share. In December 2014, our compensation committee approved additional option grants to Dr. Walker, Mr. Powala and Dr. Shanler to purchase 410,000 shares, 135,500 shares and 130,500 shares of our common stock, respectively. Each of these options has an exercise price of $0.44 per share.

Other Compensation

Except for the benefits described above, we do not provide perquisites or personal benefits to our named executive officers. We do, however, pay the premiums for life, medical and dental insurance for all of our employees, including our named executive officers.

Employment Arrangements and Potential Payments upon Termination of Employment

In August 2012, we entered into an employment agreement with Dr. Walker under which he serves as our Chief Executive Officer and President. Under this agreement, Dr. Walker is eligible to receive severance benefits in specified circumstances.

In the event that we terminate Dr. Walker without cause, he resigns for good reason or his employment is terminated due to death or disability, Dr. Walker, or his estate, will be entitled to receive, upon execution and effectiveness of a release of claims, (i) an amount equal to 12 months of his then-current salary payable in accordance with our normal payroll practices, (ii) a lump sum payment of any approved but unpaid bonuses or portion thereof, (iii) any and all accrued employee benefits to which he is entitled and (iv) a direct payment by us to the applicable healthcare provider of 100% of the medical, vision, and dental coverage premiums due to maintain any COBRA coverage for which he is eligible and has appropriately elected for 12 months following termination; except that, in the event he is terminated following a change of control, he will be entitled to an additional lump sum payment equal to six months of base salary, less applicable deductions and withholdings, and up to six additional months of paid COBRA premiums.

In the event that Dr. Walker's employment is terminated upon nonrenewal of the employment contract by us, Dr. Walker will be entitled to receive, upon execution and effectiveness of a release of claims, (i) continued payment of his salary during a 120-day nonrenewal notice period, (ii) an amount equal to 12 months of his then-current salary payable in accordance with our normal payroll practices, (iii) any and all unpaid salary accrued and earned up to and including the effective date of termination, (iv) a lump sum of any approved but unpaid bonuses or portion thereof and (v) a direct payment by us to the applicable healthcare provider of 100% of the medical, vision, and dental coverage premiums due to maintain any COBRA coverage for which he is eligible and has appropriately elected, for eight months following termination. In the event that we terminate Dr. Walker with cause, he resigns without good reason, or his employment is terminated due to his nonrenewal of the employment contract by him, then he will not be entitled to receive severance benefits.

The following definitions are used in Dr. Walker's employment agreement:

- "cause" means: (i) Dr. Walker's conviction of, or guilty plea to, a crime of moral turpitude, whether or not a felony, or a felony, other than traffic violations; (ii) any act or omission by him which constitutes gross negligence or a material breach of his duty of loyalty; (iii) if he is regularly under the influence of alcohol or illegal substances while performing services for us; (iv) any material breach by him of our personnel policies, including those prohibiting acts of discrimination, harassment or retaliation; or (v) a material violation or breach by him of his employment agreement, subject to specified exceptions;

- "good reason" means, in the absence of events that would support a termination for cause: (i) there is a material failure by us to pay Dr. Walker's salary or additional compensation or benefits in accordance with the employment agreement; (ii) his annual base salary is materially decreased without his prior written consent; (iii) he is assigned duties substantially inconsistent with his title and the responsibilities set forth in his job description without his prior written consent; (iv) his place of employment is changed to a location that is greater than 50 miles from his current place of employment; or (v) any other material violation or breach by us of his employment agreement; provided, however, none of the above events will constitute good reason absent Dr. Walker providing us with proper notice and our failure to cure such event within 30 days of such notice; and

- "change of control" means: (i) our consolidation or merger with or into any other corporation or other entity or person, or any other corporate reorganization, in which our stockholders immediately prior to

such consolidation, merger or reorganization, own, in the aggregate, less than 50% of the surviving entity's voting power or outstanding capital stock immediately after such consolidation, merger or reorganization, or any transaction or series of related transactions to which we, or any of our stockholders is a party in which greater than 50% of our voting power or outstanding capital stock is transferred, or pursuant to which any person or group of affiliated persons obtains greater than 50% of our voting power or outstanding capital stock, excluding any consolidation or merger effected exclusively to change our domicile; or (ii) any sale, lease, or other disposition, including through a division or spin-off transaction, of all or substantially all of our assets or any of our subsidiaries' assets or any sale, lease or exclusive license or other disposition of all or substantially all of our intellectual property; provided, however that neither of the following constitutes a change of control: (A) transfers of capital stock by an existing stockholder as a result of death or otherwise for estate planning purposes or to such stockholder's affiliates or to any of our other existing stockholders; or (B) issuances of our equity securities in connection with financings for working capital and other general purposes.

In addition, we have entered into letter agreements with each of Mr. Powala and Dr. Shanler. Under the terms of the letter agreements, each of Mr. Powala and Dr. Shanler is entitled to receive severance benefits if there is a change of control of our company or we terminate his employment without cause.

The following definitions have been adopted in these letters agreements:

- "cause" means: (i) the officer's conviction of, or guilty plea to, a crime of moral turpitude, whether or not a felony, or a felony, other than traffic violations; (ii) any act or omission by the officer which constitutes gross negligence or a material breach of his duty of loyalty; (iii) if the officer is regularly under the influence of alcohol or illegal substances while performing services for us; or (iv) any material breach by the officer of our personnel policies, including those prohibiting acts of discrimination, harassment or retaliation; and

- "change of control" means: (i) our consolidation or merger with or into any other corporation or other entity or person, or any other corporate reorganization, in which our stockholders immediately prior to such consolidation, merger or reorganization, own, in the aggregate, less than 50% of the surviving entity's voting power or outstanding capital stock immediately after such consolidation, merger or reorganization, or any transaction or series of related transactions to which we, or any of our stockholders is a party in which greater than 50% of our voting power or outstanding capital stock is transferred, or pursuant to which any person or group of affiliated persons obtains greater than 50% of our voting power or outstanding capital stock, excluding any consolidation or merger effected exclusively to change our domicile; or (ii) any sale, lease, or other disposition, including through a division or spin-off transaction, of all or substantially all of our assets or any of our subsidiaries' assets or any sale, lease or exclusive license or other disposition of all or substantially all of our intellectual property; provided, however that neither of the following constitutes a change of control: (A) transfers of capital stock by an existing stockholder as a result of death or otherwise for estate planning purposes or to such stockholder's affiliates or to any of our other existing stockholders; or (B) issuances of our equity securities in connection with financings for working capital and other general purposes.

In the event of a change of control, each of Mr. Powala and Dr. Shanler, upon execution and effectiveness of a release of claims, will be entitled to receive a bonus in an amount equal to 12 months of his regular monthly base salary as of the effective date of the change of control. In addition to these payments, if the officer is terminated without cause within 90 days after a change of control, then, upon execution and effectiveness of a release of claims, we will also pay directly to the applicable healthcare provider 100% of the medical, vision, and dental coverage premiums due to maintain any COBRA coverage for which the officer is eligible and has appropriately elected, for 12 months following termination.

We expect to enter into amended and restated employment agreements with each of our named executive officers prior to the closing of this offering.

In addition, each of our named executive officers hold restricted shares of common stock, which vest in equal monthly installments through July 13, 2016. These restricted shares are subject to full acceleration of vesting (a) upon the closing of this offering or a change of control, (b) upon the officer's death or disability or (c) if we terminate the officer without cause or the officer resigns for good reason.

Outstanding Equity Awards at End of 2014

The following table provides information about outstanding stock options and stock awards held by each of our named executive officers at December 31, 2014. All stock options were granted under our 2012 plan.

	Option Awards				Stock Awards	
	Number of Securities Underlying Unexercised Options (#)		Option Exercise Price ($)	Option Expiration Date	Number of Shares of Stock That Have Not Vested (#)	Market Value of Shares of Stock That Have Not Vested ($)[6]
Name	Exercisable	Unexercisable[1]				
Neal Walker	—	150,243[2]	0.21	08/12/2024		
	—	410,000[3]	0.44	12/07/2024		
					1,072,708[5]	568,535
Christopher Powala	—	49,896[2]	0.21	08/12/2024		
	—	135,500[3]	0.44	12/07/2024		
					356,250[4]	188,813
Stuart Shanler	—	49,896[2]	0.21	08/12/2024		
	—	130,500[3]	0.44	12/07/2024		
					356,250[5]	188,813

(1) All options granted to date under our 2012 plan to the named executive officers are exercisable immediately, subject to a repurchase right in our favor that lapses as the option vests. This column reflects the number of options held by our named executive officers that were unvested, as opposed to unexercisable, as of December 31, 2014.

(2) The unvested shares underlying this option vest as to 25% of the shares on August 13, 2015, with the remainder vesting in 36 equal monthly installments thereafter, subject to the officer's continued service through each applicable vesting date.

(3) The unvested shares underlying this option vest as to 25% of the shares on December 8, 2015, with the remainder vesting in 36 equal monthly installments thereafter, subject to the officer's continued service through each applicable vesting date.

(4) Consists of 178,125 restricted shares held by Mr. Powala directly and 178,125 restricted shares held by the Christopher V. Powala Aclaris Irrevocable Trust, of which Mr. Powala serves as the trustee. These restricted shares will vest in equal monthly installments through July 13, 2016. These restricted shares are subject to full acceleration of vesting (a) upon the closing of this offering or a change of control, (b) upon the officer's death or disability or (c) if we terminate the officer without cause or the officer resigns for good reason.

(5) These restricted shares will vest in equal monthly installments through July 13, 2016. These restricted shares are subject to full acceleration of vesting (a) upon the closing of this offering or a change of control, (b) upon the officer's death or disability or (c) if we terminate the officer without cause or the officer resigns for good reason.

(6) Based on the valuation of our common stock of $0.53 per share as of December 8, 2014.

Pension Benefits

Our named executive officers did not participate in, or otherwise receive any benefits under, any pension or retirement plan sponsored by us during 2014.

Nonqualified Deferred Compensation

Our named executive officers did not participate in, or otherwise receive any benefits under, any nonqualified deferred compensation plan sponsored by us during 2014.

Equity Incentive Plans

2015 Equity Incentive Plan

We expect that our board of directors will adopt, and our stockholders will approve, prior to the closing of this offering our 2015 Equity Incentive Plan, or our 2015 plan. We do not expect to issue equity awards under our 2015 plan until after the closing of this offering. Our 2015 plan will provide for the grant of incentive stock options within the meaning of Section 422 of the Internal Revenue Code, or the Code, to our employees and our parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options, restricted stock awards, restricted stock unit awards, stock appreciation rights, performance stock awards and other forms of stock compensation to our employees, including officers, consultants and directors. Our 2015 plan will also provide for the grant of performance cash awards to our employees, consultants and directors.

Authorized Shares

The maximum number of shares of our common stock that may be issued under our 2015 plan is shares. The number of shares of our common stock reserved for issuance under our 2015 plan will automatically increase on January 1 of each year, beginning on January 1 of the year after the closing of this offering and ending on January 1, 2025, by % of the total number of shares of our common stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares as may be determined by our board of directors. The maximum number of shares that may be issued pursuant to exercise of incentive stock options under the 2015 plan is .

Shares issued under our 2015 plan may be authorized but unissued or reacquired shares of our common stock. Shares subject to stock awards granted under our 2015 plan that expire or terminate without being exercised in full, or that are paid out in cash rather than in shares, will not reduce the number of shares available for issuance under our 2015 plan. Additionally, shares issued pursuant to stock awards under our 2015 plan that we repurchase or that are forfeited, as well as shares reacquired by us as consideration for the exercise or purchase price of a stock award or to satisfy tax withholding obligations related to a stock award, will become available for future grant under our 2015 plan.

Administration

Our board of directors, or a duly authorized committee thereof, has the authority to administer our 2015 plan. Our board of directors has delegated its authority to administer our 2015 plan to our compensation committee under the terms of the compensation committee's charter. Our board of directors may also delegate to one or more of our officers the authority to (i) designate employees other than officers to receive specified stock awards and (ii) determine the number of shares of our common stock to be subject to such stock awards. Subject to the terms of our 2015 plan, the administrator has the authority to determine the terms of awards, including recipients, the exercise price or strike price of stock awards, if any, the number of shares subject to each stock award, the fair market value of a share of our common stock, the vesting schedule applicable to the awards, together with any vesting acceleration, the form of consideration, if any, payable upon exercise or settlement of the stock award and the terms and conditions of the award agreements for use under our 2015 plan.

The administrator has the power to modify outstanding awards under our 2015 plan. Subject to the terms of our 2015 plan, the administrator has the authority to reprice any outstanding option or stock appreciation right, cancel and re-grant any outstanding option or stock appreciation right in exchange for new stock awards, cash or other consideration or take any other action that is treated as a repricing under GAAP with the consent of any adversely affected participant.

Section 162(m) Limits

No participant may be granted stock awards covering more than shares of our common stock under our 2015 plan during any calendar year pursuant to stock options, stock appreciation rights and other stock awards whose value is determined by reference to an increase over an exercise price or strike price of at least 100% of the fair market value of our common stock on the date of grant. Additionally, no participant may be granted in a calendar year a performance stock award covering more than shares of our common stock or a performance cash award having a maximum value in excess of $ million under our 2015 plan. These limitations enable us to grant awards that will be exempt from the $1.0 million limitation on the income tax deductibility of compensation paid per covered executive officer imposed by Section 162(m) of the Code.

Performance Awards

Our 2015 plan permits the grant of performance-based stock and cash awards that may qualify as performance-based compensation that is not subject to the $1.0 million limitation on the income tax deductibility of compensation paid per covered executive officer imposed by Section 162(m) of the Code. To enable us to grant performance-based awards that will qualify, our compensation committee can structure such awards so that the stock or cash will be issued or paid pursuant to such award only following the achievement of specified pre-established performance goals during a designated performance period.

Corporate Transactions

Our 2015 plan provides that in the event of a specified corporate transaction, including without limitation a consolidation, merger or similar transaction involving our company, the sale, lease or other disposition of all or substantially all of the assets of our company or the consolidated assets of our company and our subsidiaries, or a sale or disposition of at least 50% of the outstanding capital stock of our company, the administrator will determine how to treat each outstanding equity award. The administrator may:

- arrange for the assumption, continuation or substitution of a stock award by a successor corporation;
- arrange for the assignment of any reacquisition or repurchase rights held by us to a successor corporation;
- accelerate the vesting of the stock award and provide for its termination prior to the effective time of the corporate transaction;
- arrange for the lapse, in whole or in part, of any reacquisition or repurchase right held by us; or
- cancel the stock award prior to the transaction in exchange for a cash payment, which may be reduced by the exercise price payable in connection with the stock award.

The administrator is not obligated to treat all equity awards or portions of equity awards, even those that are of the same type, in the same manner. The administrator may take different actions with respect to the vested and unvested portions of an equity award.

Change of Control

The administrator may provide, in an individual award agreement or in any other written agreement between us and the participant, that the equity award will be subject to additional acceleration of vesting and exercisability in the event of a change of control. In the absence of such a provision, no such acceleration of the award will occur.

Plan Amendment or Termination

Our board has the authority to amend, suspend or terminate our 2015 plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent. No incentive stock options may be granted after the tenth anniversary of the date our board of directors adopts our 2015 plan.

2012 Equity Compensation Plan

In August 2012, our board of directors adopted and our stockholders approved our 2012 equity compensation plan, or our 2012 plan. Our 2012 plan was most recently amended and restated by our board of directors and our stockholders in September 2014. Our 2012 plan provides for the grant of

incentive stock options within the meaning of Section 422 of the Code to our employees, and for the grant of nonqualified stock options and stock awards to our officers, directors, employees, consultants and advisers.

Authorized Shares

We have reserved an aggregate of 1,725,961 shares of our common stock for issuance under our 2012 plan. As of June 30, 2015, no shares of our common stock have been issued upon the exercise of options granted under our 2012 plan, options to purchase 1,725,961 shares of our common stock were outstanding at a weighted average exercise price of $0.35 per share and no shares remained available for grant under our 2012 plan. Effective upon the closing of this offering, no further options or stock awards may be granted under our 2012 plan, but all outstanding stock awards will continue to be governed by their existing terms.

Administration

Our board of directors, or a committee thereof appointed by our board of directors, administers our 2012 plan and the option and stock awards granted under it. Our board of directors delegated its authority to administer our 2012 plan to our compensation committee.

Corporate Transactions

Our 2012 plan provides that the administrator may provide that, in the event of a specified change of control transaction, including without limitation a merger, consolidation or reorganization of our company with one or more other entities in which our company is not the surviving entity, a sale of substantially all of the assets of our company or any corporate reorganization which results in the disposition of at least 50% of the voting power of our company, one or more of the following actions may be taken:

- § provide that the options become exercisable, and that restrictions applicable to outstanding stock awards and restricted stock shall lapse;
- § the assumption or substitution of the options by a successor corporation;
- § the substitution of the stock awards and restricted stock by a successor corporation;
- § the purchase of outstanding options for an amount of cash or property that could have been received upon the exercise of the options had the options been fully vested; or
- § the termination of the options, provided that the holders of options are given a reasonable period of time to exercise the options, notwithstanding any limits on exercisability.

Amendment and Termination

Our board of directors may at any time amend our 2012 plan. However, our board of directors must obtain approval of our stockholders for any amendment requiring such approval under federal tax or federal securities laws, including an increase to the maximum number of shares of our common stock that may be issued under our 2012 plan. In addition, our board of directors may not materially impair the rights of a holder of any award previously granted under our 2012 plan without the consent of the holder of such award. Our 2012 plan will terminate in August 2022 or, if earlier, a date determined by our board of directors.

401(k) Plan

We maintain a tax-qualified retirement plan that provides eligible U.S. employees with an opportunity to save for retirement on a tax advantaged basis. Eligible employees are able to defer eligible compensation subject to applicable annual Code limits. Currently, we match 100% of each eligible employee's contributions up to 4.0% of total eligible compensation. Employees' pre-tax contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participants' directions. Employees are immediately and fully vested in their contributions, and our matching contribution is subject to a six-year vesting schedule. The 401(k) plan is intended to be qualified under Section 401(a) of the Code with the 401(k) plan's related trust intended to be tax exempt under Section 501(a) of the Code. As a tax-qualified retirement plan, contributions to the 401(k) plan and earnings on those contributions are not taxable to the employees until distributed from the 401(k) plan.

Limitations on Liability and Indemnification Matters

Upon the closing of this offering, our amended and restated certificate of incorporation will contain provisions that limit the liability of our current and former directors for monetary damages to the fullest extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to the corporation or its stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- any transaction from which the director derived an improper personal benefit.

This limitation of liability does not apply to liabilities arising under federal securities laws and does not affect the availability of equitable remedies such as injunctive relief or rescission.

Our amended and restated certificate of incorporation and our amended and restated bylaws will provide that we are required to indemnify our directors to the fullest extent permitted by Delaware law. Our amended and restated bylaws will also provide that, upon satisfaction of certain conditions, we are required to advance expenses incurred by a director in advance of the final disposition of any action or proceeding, and permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in that capacity regardless of whether we would otherwise be permitted to indemnify him or her under the provisions of Delaware law. Our amended and restated bylaws will also provide our board of directors with discretion to indemnify our officers and employees when determined appropriate by the board.

We have entered into indemnification agreements with each of our directors, and we expect to enter into indemnification agreements with each of our executive officers prior to the closing of this offering. With certain exceptions, these agreements provide for indemnification for related expenses including, among other things, attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors. We also maintain customary directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions. At present, there is no pending litigation or proceeding involving any of our directors, officers or employees for which indemnification is sought and we are not aware of any threatened litigation that may result in claims for indemnification.

Rule 10b5-1 Sales Plans

Our directors and executive officers may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell shares of our common stock on a periodic basis. Under a Rule 10b5-1 plan, a broker executes trades pursuant to parameters established by the director or officer when entering into the plan, without further direction from them. The director or officer may amend a Rule 10b5-1 plan in some circumstances and may terminate a plan at any time. Our directors and executive officers also may buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material nonpublic information subject to compliance with the terms of our insider trading policy. Prior to 180 days after the date of this offering, subject to early termination, the sale of any shares under such plan would be prohibited by the lock-up agreement that the director or officer has entered into with the underwriters.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following is a description of transactions since January 1, 2012 to which we have been a participant in which the amount involved exceeded or will exceed $120,000, and in which any of our directors, executive officers or holders of more than 5% of our voting securities, or any members of their immediate family, had or will have a direct or indirect material interest, other than compensation arrangements which are described under "Executive Compensation."

Sales of Series A Redeemable Convertible Preferred Stock

In August 2012, we sold an aggregate of 20,890,000 shares of our Series A redeemable convertible preferred stock at a price of $1.00 per share for an aggregate price of $20.9 million, 19,445,000 shares of which were sold to holders of more than 5% of our voting securities, executive officers and members of our board of directors. Each share of Series A redeemable convertible preferred stock is convertible into one share of our common stock.

The table below summarizes these sales:

Purchaser	Shares of Series A Redeemable Convertible Preferred Stock Purchased	Aggregate Purchase Price
Entities affiliated with Vivo Ventures Fund VII, L.P.[1]	8,652,500	$ 8,652,500
Beacon Bioventures Fund III Limited Partnership[2]	8,652,500	8,652,500
Sofinnova Venture Partners VIII, L.P.[3]	2,000,000	2,000,000
Kamil Ali-Jackson[4]	10,000	10,000
Frank Ruffo	20,000	20,000
Stephen A. Tullman[5]	110,000	110,000
Total	19,445,000	$ 19,445,000

(1) Consists of 8,467,943 shares purchased by Vivo Ventures Fund VII, L.P. and 184,557 shares purchased by Vivo Ventures VII Affiliates Fund, L.P. Entities affiliated with Vivo Ventures Fund VII, L.P. are holders of more than 5% of our voting securities, and Albert Cha, M.D., Ph.D., a member of our board of directors, is a managing member of the general partner of these entities.

(2) Beacon Bioventures Fund III Limited Partnership is a holder of more than 5% of our voting securities, and Ketan Patel, M.D., a member of our board of directors, is affiliated with this entity.

(3) Sofinnova Venture Partners VIII, L.P. is a holder of more than 5% of our voting securities, and Anand Mehra, M.D., a member of our board of directors, is a managing member of the general partner of this entity.

(4) Consists of shares held jointly with Ms. Ali-Jackson's spouse.

(5) Consists of shares held by a trust of which Mr. Tullman's wife is the trustee.

Sales of Series B Redeemable Convertible Preferred Stock

In September 2014, we sold an aggregate of 6,451,057 shares of our Series B redeemable convertible preferred stock at a price of $1.65 per share for an aggregate price of $10.6 million, 6,101,222 shares of which were sold to holders of more than 5% of our voting securities, executive officers and members of our board of directors. Each share of Series B redeemable convertible preferred stock is convertible into one share of our common stock.

The table below summarizes these sales:

Purchaser	Shares of Series B Redeemable Convertible Preferred Stock Purchased	Aggregate Purchase Price
Entities affiliated with Vivo Ventures Fund VII, L.P.[1]	1,818,182	$ 3,000,000
Beacon Bioventures Fund III Limited Partnership	1,818,182	3,000,000
Sofinnova Venture Partners VIII, L.P.	2,424,242	4,000,000
Kamil Ali-Jackson[2]	2,901	4,787
Frank Ruffo	5,802	9,573
Stephen A. Tullman[3]	31,913	52,656
Total	6,101,222	$ 10,067,016

(1) Consists of 1,779,400 shares purchased by Vivo Ventures Fund VII, L.P. and 38,782 shares purchased by Vivo Ventures VII Affiliates Fund, L.P.

(2) Consists of shares held jointly with Ms. Ali-Jackson's spouse.

(3) Consists of shares held by a trust of which Mr. Tullman's wife is the trustee.

Investors' Rights Agreement, Voting Agreement and Right of First Refusal and Co-Sale Agreement

In connection with the sales of redeemable convertible preferred stock described above, we entered into an investors' rights agreement, a voting agreement and a right of first refusal and co-sale agreement with the holders of preferred stock, including each of the persons and entities listed in the table above.

The investors' rights agreement, among other things:

- grants our preferred stockholders specified registration rights with respect to shares of our common stock, including shares of common stock issued or issuable upon conversion of the shares of redeemable convertible preferred stock held by them;
- obligates us to deliver periodic financial statements to some of the stockholders who are parties to the investors' rights agreement; and
- grants a right of first refusal with respect to sales of our shares by us, subject to specified exclusions, which exclusions include the sale of the shares pursuant to this prospectus, to the stockholders who are parties to the investors' rights agreement.

For more information regarding the registration rights provided in this agreement, please refer to the section titled "Description of Capital Stock — Registration Rights." The provisions of this agreement other than those relating to registration rights will terminate upon the closing of this offering.

The voting agreement, among other things, provides for the voting of shares with respect to the constituency of our board of directors and the voting of shares in favor of specified transactions approved by our board of directors and the requisite majority of holders of our outstanding preferred stock. The voting agreement will terminate upon the closing of this offering.

The right of first refusal and co-sale agreement, among other things, grants our investors rights of first refusal and co-sale with respect to proposed transfers of our securities by specified stockholders and grants us rights of first refusal with respect to proposed transfers of our securities by specified stockholders. The right of first refusal and co-sale agreement will terminate upon the closing of this offering.

Services Agreements with Ceptaris and NST

In November 2012, we entered into a services agreement with Ceptaris Therapeutics, Inc., or the initial Ceptaris services agreement, under which Ceptaris Therapeutics, Inc., or Ceptaris, provided us with professional services, administrative support and office services. In September 2013, Ceptaris terminated the agreement in accordance with its terms, and we entered into a second services agreement with Ceptaris under which Ceptaris provided us with pharmaceutical development and management services. The second Ceptaris services agreement was amended in January 2014 pursuant to which we revised the scope of the services provided by Ceptaris to exclude personnel-related services and to eliminate our obligation to pay service fees related to those services. Ceptaris terminated the second Ceptaris services agreement in accordance with its terms in February 2014.

The chairman of our board of directors, Stephen A. Tullman, was the Chief Executive Officer of Ceptaris, and our Chief Legal Officer, Kamil Ali-Jackson, was the Chief Legal Officer of Ceptaris during the periods covered by the services agreements with Ceptaris. Our directors and executive officers in the aggregate owned approximately 3% of the equity interests in Ceptaris.

Under the terms of the initial Ceptaris services agreement, we were obligated to pay Ceptaris a monthly service fee of $16,487. Under the terms of the second Ceptaris services agreement, we were obligated to pay Ceptaris a monthly service fee of $7,510. For the years ended December 31, 2012, 2013 and 2014 and the six months ended June 30, 2014, we paid Ceptaris an aggregate of $64,716, $166,211, $10,310 and $10,310, respectively, under the two services agreements.

In February 2014, we entered into a services agreement with NST, LLC, or the NST services agreement, pursuant to which NST, LLC provides us with pharmaceutical development, management and other administrative services, and we provide services to NST, LLC. Mr. Tullman is the manager of NST, LLC. In addition, several of our directors and executive officers are members of NST, LLC, including Mr. Tullman, Neal Walker, Frank Ruffo and Ms. Ali-Jackson. These directors and executive officers in the aggregate own approximately 44% of the membership interests in NST, LLC.

The NST services agreement was amended in January 2015 pursuant to which NST, LLC assigned all interests, rights, duties and obligations under the NST services agreement to NST Consulting, LLC, a wholly owned subsidiary of NST, LLC. Mr. Tullman is also the manager of NST Consulting, LLC. We refer to NST, LLC and NST Consulting, LLC together in this prospectus as NST.

Under the terms of the NST services agreement, as amended, we are obligated to pay NST a monthly service fee of $37,990, including benefits-related expenses. In addition, we have agreed to indemnify NST and its officers, employees and directors against all losses (i) arising out of, due to or in connection with the provision of services under the NST services agreement, subject to specified exceptions, and (ii) resulting from our or our affiliates' gross negligence or intentional misconduct. The NST services agreement may be terminated by either party upon 30 days' written notice.

In addition, through NST, we provide the part-time services of some of our executive officers to Alexar Therapeutics, Inc., a company under common control with us, and NST reimburses us for the services of these executive officers to Alexar Therapeutics, Inc. Specifically, NST reimburses us for 30% of the salaries of Messrs. Powala and Ruffo, 25% of Dr. Shanler's salary and 35% of Ms. Ali-Jackson's salary, plus 25% of each of these executive officers' benefits-related expenses. These personnel reimbursements from NST equal an aggregate payment of $37,800 per month. Our directors and executive officers in the aggregate own 19.0% of Alexar Therapeutics, Inc.

NST provides us with the part-time services of some NST employees, including Mr. Tullman, and we reimburse NST for those services. We reimburse NST for 25% of Mr. Tullman's salary, plus 25% of his benefits-related expenses.

For the year ended December 31, 2014 and the six months ended June 30, 2014 and 2015, the reimbursements to us from NST aggregated $412,596, $206,640 and $243,834, respectively, and the reimbursements from us to NST aggregated $466,993, $239,486 and $252,610, respectively.

Subleases

In September 2012, we entered into a sub-sublease agreement with Ceptaris for its leased office space in Malvern, Pennsylvania. Pursuant to this sub-sublease agreement, for the years ended December 31, 2012 and 2013, we made aggregate payments of $21,251 and $51,669, respectively.

Upon the acquisition of Ceptaris in September 2013, we terminated the sub-sublease agreement with Ceptaris and entered into a sublease agreement with NeXeption, Inc. for the leased space. In March 2014, we entered into an Amended and Restated Sublease with NeXeption, Inc., which was subsequently amended in December 2014 and August 2015. Mr. Tullman is the President and Chief Executive Officer and owns 50.0% of the ownership interests of NeXeption, Inc. and Ms. Ali-Jackson is the Chief Legal Officer of NeXeption, Inc. For the years ended December 31, 2013 and 2014 and the six months ended June 30, 2014 and 2015, we made aggregate payments pursuant to these sublease agreements with NeXeption, Inc. of $16,435, $66,145, $33,147 and $52,283, respectively.

Indemnification Agreements

Our amended and restated certificate of incorporation will contain provisions limiting the liability of directors, and our amended and restated bylaws will provide that we will indemnify each of our directors to the fullest extent permitted under Delaware law. Our amended and restated certificate of incorporation and amended and restated bylaws will also provide our board of directors with discretion to indemnify our officers and employees when determined appropriate by the board.

In addition, we have entered into indemnification agreements with each of our directors, and we expect to enter into indemnification agreements with each of our executive officers prior to the closing of this offering. For more information regarding these agreements, see "Executive Compensation — Limitations on Liability and Indemnification Matters."

Related Person Transaction Policy

Prior to this offering, we have not had a formal policy regarding approval of transactions with related parties. We have adopted a related person transaction policy that sets forth our procedures for the identification, review, consideration and approval or ratification of related person transactions that will become effective immediately upon the execution of the underwriting agreement for this offering. For purposes of our policy only, a related person transaction will be a transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which we and any related person are, were or will be participants in which the amount involved exceeds $120,000. Transactions involving compensation for services provided to us as an employee or director will not be covered by this policy. A related person will be any executive officer, director or beneficial owner of more than 5% of any class of our voting securities, including any of their immediate family members and any entity owned or controlled by such persons.

Under the policy, if a transaction has been identified as a related person transaction, including any transaction that was not a related person transaction when originally consummated or any transaction that was not initially identified as a related person transaction prior to consummation, our management must present information regarding the related person transaction to our audit committee, or, if audit committee approval would be inappropriate, to another independent body of our board of directors, for review, consideration and approval or ratification. The presentation must include a description of, among other things, the material facts, the interests, direct and indirect, of the related persons, the benefits to us of the transaction and whether the transaction is on terms that are comparable to the terms available to or from,

as the case may be, an unrelated third party or to or from employees generally. Under the policy, we will collect information that we deem reasonably necessary from each director, executive officer and, to the extent feasible, significant stockholder to enable us to identify any existing or potential related-person transactions and to effectuate the terms of the policy. In addition, under our Code of Conduct that we expect to adopt prior to the closing of this offering, our employees and directors will have an affirmative responsibility to disclose any transaction or relationship that reasonably could be expected to give rise to a conflict of interest. In considering related person transactions, our audit committee, or other independent body of our board of directors, will take into account the relevant available facts and circumstances including:

- the risks, costs and benefits to us;
- the impact on a director's independence in the event that the related person is a director, immediate family member of a director or an entity with which a director is affiliated;
- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties or to or from employees generally.

The policy will require that, in determining whether to approve, ratify or reject a related person transaction, our audit committee, or other independent body of our board of directors, must consider, in light of known circumstances, whether the transaction is in, or is not inconsistent with, our best interests and those of our stockholders, as our audit committee, or other independent body of our board of directors, determines in the good faith exercise of its discretion.

PRINCIPAL STOCKHOLDERS

The following table sets forth the beneficial ownership of our common stock as of June 30, 2015 for:

- each person, or group of affiliated persons, who is known by us to beneficially own more than 5% of our common stock;
- each of our named executive officers;
- each of our directors; and
- all of our current executive officers and directors as a group.

The percentage ownership information shown in the table is based upon 36,761,057 shares of common stock outstanding as of June 30, 2015, after giving effect to the conversion of all of our redeemable convertible preferred stock into 27,341,057 shares of common stock, which will occur upon the closing of this offering.

We have determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities. In addition, the rules include shares of common stock issuable pursuant to the exercise of stock options that are either immediately exercisable or exercisable on or before August 29, 2015, which is 60 days after June 30, 2015. These shares are deemed to be outstanding and beneficially owned by the person holding those options for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws.

Except as otherwise noted below, the address for persons listed in the table is c/o Aclaris Therapeutics, Inc., 101 Lindenwood Drive, Suite 400, Malvern, PA 19355.

Name of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned	
		Before Offering	After Offering
5% or Greater Stockholders:			
Entities affiliated with Vivo Ventures Fund VII, L.P.[1]	11,470,682	31.2%	%
Beacon Bioventures Fund III Limited Partnership[2]	10,470,682	28.5	
Sofinnova Venture Partners VIII, L.P.[3]	4,424,242	12.0	
Named Executive Officers and Directors:			
Neal Walker[4]	3,270,243	8.8	
Christopher Powala[5]	1,085,396	2.9	
Stuart Shanler, M.D.[6]	1,080,396	2.9	
Stephen A. Tullman[7]	3,358,441	9.1	
Albert Cha, M.D., Ph.D.[1]	11,470,682	31.2	
Ketan Patel, M.D.	—	—	
Christopher Molineaux[8]	35,301	*	
Anand Mehra, M.D.[3]	4,424,242	12.0	
All current directors and executive officers as a group (10 persons)[9]	25,428,212	66.8	

* Represents beneficial ownership of less than 1%.

(1) Consists of (a) 10,267,363 shares of common stock issuable upon conversion of shares of preferred stock held by Vivo Ventures Fund VII, L.P., or Vivo VII, and (b) 1,000,000 shares of common stock and 223,339 shares of common stock issuable upon conversion of shares of preferred stock held by Vivo Ventures VII Affiliates Fund, L.P., or Vivo VII Affiliates. The shares directly held by Vivo VII and Vivo VII Affiliates are indirectly held by Vivo Ventures VII, LLC, or Vivo VII LLC, the sole general partner of each of Vivo VII and Vivo VII Affiliates. The managing members of Vivo VII LLC are Drs. Albert Cha (a member of our board of directors), Edgar Engleman and Frank Kung, each of whom may be deemed to have shared voting and dispositive power over the shares listed in the table. The principal business address of Vivo VII and Vivo VII Affiliates is 575 High Street, Suite 201, Palo Alto, California 94301.

(2) Consists of 10,470,682 shares of common stock issuable upon conversion of shares of preferred stock held by Beacon Bioventures Fund III Limited Partnership, or Beacon III. The shares directly held by Beacon III are indirectly held by Beacon Bioventures Advisors Fund III Limited Partnership, or Beacon Advisors, its general partner, and Impresa Management LLC, the general partner of Beacon Advisors. Paul L. Mucci is the President of Impresa Management LLC and may be deemed to have voting and dispositive power with respect to the shares held by Beacon III. The principal business address of Beacon III is One Main Street, 13th Floor, Cambridge, Massachusetts 02142.

(3) Consists of 4,424,242 shares of common stock issuable upon conversion of shares of preferred stock held by Sofinnova Venture Partners VIII, L.P., or Sofinnova VIII. Sofinnova Management VIII, L.L.C. is the general partner of Sofinnova VIII, and Anand Mehra, M.D. (a member of our board of directors), James Healy, M.D., Michael Powell, Ph.D. and Srinivas Akkaraju, M.D., Ph.D., the managing members of Sofinnova Management VIII, L.L.C., may be deemed to have shared voting and dispositive power with respect to such shares. The address of Sofinnova VIII is c/o Sofinnova Ventures, Inc., 3000 Sand Hill Road, Bldg. 4, Suite 250, Menlo Park, California 94025.

(4) Consists of (a) 2,710,000 shares of common stock and (b) 560,243 shares of common stock underlying options that are exercisable within 60 days of June 30, 2015. Of the shares of common stock, 621,041 shares will be subject to a right of repurchase in our favor within 60 days of June 30, 2015 upon the occurrence of certain events. Does not include 1,800,000 shares of common stock held by NeXeption, LLC. Dr. Walker is a member of NeXeption, LLC, but does not have or share voting or dispositive power over the shares held by NeXeption, LLC.

(5) Consists of (a) 450,000 shares of common stock held directly by Mr. Powala, (b) 450,000 shares of common stock held by the Christopher V. Powala Aclaris Irrevocable Trust, of which Mr. Powala serves as the trustee, and (c) 185,396 shares of common stock underlying options that are exercisable within 60 days of June 30, 2015. Of the shares of common stock, 103,125 shares held by Mr. Powala directly and 103,125 shares held by the trust will be subject to a right of repurchase in our favor within 60 days of June 30, 2015 upon the occurrence of certain events.

(6) Consists of (a) 900,000 shares of common stock and (b) 180,396 shares of common stock underlying options that are exercisable within 60 days of June 30, 2015. Of the shares of common stock, 206,250 shares will be subject to a right of repurchase in our favor within 60 days of June 30, 2015 upon the occurrence of certain events.

(7) Consists of (a) 1,200,000 shares of common stock held by the 2007 Irrevocable Trust of Stephen A. Tullman, of which Mr. Tullman's wife serves as the trustee, (b) 31,913 shares of common stock issuable upon conversion of shares of preferred stock held by the 2007 Irrevocable Trust of Stephen A. Tullman, (c) 1,800,000 shares of common stock held by NeXeption, LLC, of which Mr. Tullman is the Manager and, accordingly, may be deemed to share voting and dispositive power, and (d) 216,528 shares of common stock underlying options that are exercisable within 60 days of June 30, 2015. Of the shares of common stock held by the 2007 Irrevocable Trust of Stephen A. Tullman, 275,000 shares will be subject to a right of repurchase in our favor within 60 days of June 30, 2015 upon the occurrence of certain events.

(8) Consists of shares of common stock underlying options that are exercisable within 60 days of June 30, 2015.

(9) Consists of (a) 9,030,000 shares of common stock, (b) 15,075,540 shares of common stock issuable upon conversion of shares of preferred stock and (c) 1,322,672 shares of common stock underlying options that are exercisable within 60 days of June 30, 2015. Of the shares of common stock, 1,427,708 shares will be subject to a right of repurchase in our favor within 60 days of June 30, 2015 upon the occurrence of certain events.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock and provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries. You should also refer to the amended and restated certificate of incorporation and the amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus is part.

General

Upon the closing of this offering, our amended and restated certificate of incorporation will authorize us to issue up to shares of common stock, $0.00001 par value per share, and shares of preferred stock, $0.00001 par value per share, all of which shares of preferred stock will be undesignated. Our board of directors may establish the rights and preferences of the preferred stock from time to time. As of June 30, 2015, we had outstanding 9,420,000 shares of common stock, held by 14 stockholders of record. As of June 30, 2015, after giving effect to the conversion of all outstanding preferred stock into 27,341,057 shares of common stock, there would have been 36,761,057 shares of common stock issued and outstanding, held of record by approximately 40 stockholders.

Common Stock

Voting Rights

Each holder of our common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Under our amended and restated certificate of incorporation and amended and restated bylaws, our stockholders will not have cumulative voting rights. Because of this, the holders of a majority of the shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they should so choose.

Dividends

Subject to preferences that may be applicable to any then-outstanding preferred stock, holders of common stock are entitled to receive ratably those dividends, if any, as may be declared from time to time by the board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then-outstanding shares of preferred stock.

Rights and Preferences

Holders of common stock have no preemptive, conversion or subscription rights and there are no redemption or sinking fund provisions applicable to the common stock. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate in the future.

Preferred Stock

As of June 30, 2015, there were outstanding 27,341,057 shares of redeemable convertible preferred stock, consisting of 20,890,000 shares of Series A redeemable convertible preferred stock and 6,451,057 shares of Series B redeemable convertible preferred stock. All currently outstanding shares of redeemable convertible preferred stock will be converted into an aggregate of 27,341,057 shares of common stock upon the closing of this offering.

Following the closing of this offering, our board of directors will have the authority, without further action by our stockholders, to issue up to shares of preferred stock in one or more series, to establish from

time to time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The purpose of authorizing our board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change of control of our company and may adversely affect the market price of our common stock and the voting and other rights of the holders of our common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock on the rights of holders of common stock until the board of directors determines the specific rights attached to that preferred stock.

We have no present plans to issue any shares of preferred stock following the closing of this offering.

Options

As of June 30, 2015, under our 2012 plan, options to purchase an aggregate of 1,725,961 shares of common stock were outstanding. For additional information regarding the terms of this plan, see "Executive Compensation — Equity Incentive Plans."

Registration Rights

We and the holders of our existing redeemable convertible preferred stock have entered into an amended and restated investors' rights agreement. The registration rights provisions of this agreement provide those holders with demand, piggyback and Form S-3 registration rights with respect to the shares of common stock currently held by them and issuable to them upon conversion of our redeemable convertible preferred stock in connection with our initial public offering.

Demand Registration Rights

At any time beginning six months following the effective date of the registration statement of which this prospectus is a part, the holders of at least 5% of the outstanding shares issuable upon conversion of our redeemable convertible preferred stock in the aggregate have the right to demand that we file up to a total of two registration statements, as long as the anticipated aggregate offering price, net of underwriting discounts and commissions, would exceed $5.0 million. These registration rights are subject to specified conditions and limitations, including the right of the underwriters, if any, to limit the number of shares included in any such registration under specified circumstances. Upon such a request, we are required to effect the registration as soon as practicable, but in any event no later than 90 days after the receipt of such request. An aggregate of shares of common stock will be entitled to these demand registration rights.

Piggyback Registration Rights

At any time after the closing of this offering, if we propose to register any of our securities under the Securities Act either for our own account or for the account of other stockholders, the holders of shares of common stock that are issued upon conversion of our redeemable convertible preferred stock and the holders of shares of our common stock will each be entitled to notice of the registration and will be entitled to include their shares of common stock in the registration statement. These piggyback registration rights are subject to specified conditions and limitations, including the right of the underwriters to limit the number of shares included in any such registration under specified circumstances. An aggregate of shares of common stock will be entitled to these piggyback registration rights.

Registration on Form S-3

At any time after we become eligible to file a registration statement on Form S-3, the holders of shares of common stock that are issued upon conversion of our redeemable convertible preferred stock and the holders of shares of our common stock will each be entitled, upon any such holder's written request, to have such shares registered by us on a Form S-3 registration statement at our expense. These Form S-3 registration rights are subject to other specified conditions and limitations, including the condition that the anticipated aggregate offering price, net of underwriting discounts and commissions, exceeds $5.0 million. Upon receipt of this request, the holders of shares of common stock that are issued upon conversion of our redeemable convertible preferred stock and the holders of shares of our common stock will each be entitled to participate in this registration. An aggregate of shares of common stock will be entitled to these Form S-3 registration rights.

Expenses of Registration

We will pay all expenses relating to any demand, piggyback or Form S-3 registration, other than underwriting discounts and commissions, subject to specified conditions and limitations.

Termination of Registration Rights

The registration rights granted under the investors' rights agreement will terminate upon the earlier of the fifth anniversary of the closing of this offering, a liquidation event or at such time as all shares held by the preferred stockholders are eligible to be sold without restriction pursuant to Rule 144 under the Securities Act of 1933, as amended, within any 90-day period.

Anti-Takeover Provisions

Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, those shares owned (i) by persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least $66^{2}/_{3}\%$ of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines a "business combination" to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or

- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines an "interested stockholder" as an entity or person who, together with the person's affiliates and associates, beneficially owns, or within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

Certificate of Incorporation and Bylaws to be in Effect Upon the Closing of this Offering

Our amended and restated certificate of incorporation to be in effect upon the closing of this offering, or our restated certificate, will provide for our board of directors to be divided into three classes with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Because our stockholders do not have cumulative voting rights, stockholders holding a majority of the shares of common stock outstanding will be able to elect all of our directors. Our restated certificate and our amended and restated bylaws to be effective upon the closing of this offering, or our restated bylaws, will also provide that directors may be removed by the stockholders only for cause upon the vote of $66^{2}/_{3}\%$ or more of our outstanding common stock. Furthermore, the authorized number of directors may be changed only by resolution of the board of directors, and vacancies and newly created directorships on the board of directors may, except as otherwise required by law or determined by the board, only be filled by a majority vote of the directors then serving on the board, even though less than a quorum.

Our restated certificate and restated bylaws will also provide that all stockholder actions must be effected at a duly called meeting of stockholders and will eliminate the right of stockholders to act by written consent without a meeting. Our restated bylaws will also provide that only our chairman of the board, chief executive officer or the board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors may call a special meeting of stockholders.

Our restated bylaws will also provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide timely advance notice in writing, and will specify requirements as to the form and content of a stockholder's notice.

Our restated certificate and restated bylaws will provide that the stockholders cannot amend many of the provisions described above except by a vote of $66^{2}/_{3}\%$ or more of our outstanding common stock.

The combination of these provisions will make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of us by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change our control.

These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to reduce our vulnerability to hostile takeovers and to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of delaying changes in our control or management. As a consequence, these provisions may also inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts. We believe that the benefits of these provisions, including increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure our company, outweigh the disadvantages of discouraging takeover proposals, because negotiation of takeover proposals could result in an improvement of their terms.

Choice of Forum

Our restated certificate will provide that the Court of Chancery of the State of Delaware will be the exclusive forum for:

- any derivative action or proceeding brought on our behalf;
- any action asserting a breach of fiduciary duty;
- any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our restated certificate, or our amended and restated bylaws; or
- any action asserting a claim against us that is governed by the internal affairs doctrine.

The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that, in connection with any action, a court could find the choice of forum provisions contained in our restated certificate to be inapplicable or unenforceable in such action.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Broadridge Corporate Issuer Solutions, Inc. The transfer agent's address is 1717 Arch Street, Suite 1300, Philadelphia, Pennsylvania 19103.

NASDAQ Global Market Listing

We have applied for listing of our common stock on The NASDAQ Global Market under the trading symbol "ACRS."

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, no public market existed for our common stock. Future sales of shares of our common stock in the public market after this offering, or the perception that these sales could occur, could adversely affect prevailing market prices for our common stock and could impair our future ability to raise equity capital.

Based on the number of shares outstanding as of , upon the closing of this offering and assuming no exercise of the underwriters' option to purchase additional shares, shares of common stock will be outstanding, assuming no outstanding options are exercised. All of the shares of common stock sold in this offering will be freely tradable without restrictions or further registration under the Securities Act, except for any shares sold to our "affiliates," as that term is defined under Rule 144 under the Securities Act. The remaining shares of common stock held by existing stockholders are "restricted securities," as that term is defined in Rule 144 under the Securities Act. Restricted securities may be sold in the public market only if registered or if their resale qualifies for exemption from registration described below under Rule 144 promulgated under the Securities Act.

As a result of contractual restrictions described below and the provisions of Rules 144 and 701, the shares sold in this offering and the restricted securities will be available for sale in the public market as follows:

- the shares sold in this offering and of the existing restricted shares will be eligible for immediate sale upon the closing of this offering;
- approximately restricted shares will be eligible for sale in the public market 90 days after the date of this prospectus, subject to the volume, manner of sale and other limitations under Rule 144 and Rule 701; and
- approximately restricted shares will be eligible for sale in the public market upon expiration of lock-up agreements 180 days after the date of this prospectus, subject in certain circumstances to the volume, manner of sale and other limitations under Rule 144 and Rule 701.

Rule 144

In general, persons who have beneficially owned restricted shares of our common stock for at least six months, and any affiliate of the company who owns either restricted or unrestricted shares of our common stock, are entitled to sell their securities without registration with the SEC under an exemption from registration provided by Rule 144 under the Securities Act.

Non-Affiliates

Any person who is not deemed to have been one of our affiliates at the time of, or at any time during the three months preceding, a sale may sell an unlimited number of restricted securities under Rule 144 if:

- the restricted securities have been held for at least six months, including the holding period of any prior owner other than one of our affiliates;
- we have been subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale; and
- we are current in our Exchange Act reporting at the time of sale.

Any person who is not deemed to have been an affiliate of ours at the time of, or at any time during the three months preceding, a sale and has held the restricted securities for at least one year, including the holding period of any prior owner other than one of our affiliates, will be entitled to sell an unlimited number of restricted securities without regard to the length of time we have been subject to Exchange Act periodic reporting or whether we are current in our Exchange Act reporting.

Affiliates

Persons seeking to sell restricted securities who are our affiliates at the time of, or any time during the three months preceding, a sale, would be subject to the restrictions described above. They are also subject to additional restrictions, by which such person would be required to comply with the manner of sale and notice provisions of Rule 144 and would be entitled to sell within any three-month period only that number of securities that does not exceed the greater of either of the following:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately shares immediately after the closing of this offering based on the number of shares outstanding as of ; or
- the average weekly trading volume of our common stock on The NASDAQ Global Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Additionally, persons who are our affiliates at the time of, or any time during the three months preceding, a sale may sell unrestricted securities under the requirements of Rule 144 described above, without regard to the six-month holding period of Rule 144, which does not apply to sales of unrestricted securities.

Rule 701

Rule 701 under the Securities Act, as in effect on the date of this prospectus, permits resales of shares in reliance upon Rule 144 but without compliance with certain restrictions of Rule 144, including the holding period requirement. Most of our employees, executive officers or directors who purchased shares under a written compensatory plan or contract may be entitled to rely on the resale provisions of Rule 701, but all holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling their shares. However, substantially all Rule 701 shares are subject to lock-up agreements as described below and in the section of this prospectus titled "Underwriting" and will become eligible for sale upon the expiration of the restrictions set forth in those agreements.

Form S-8 Registration Statements

As soon as practicable after the closing of this offering, we intend to file with the SEC one or more registration statements on Form S-8 under the Securities Act to register the shares of our common stock that are issuable pursuant to our 2012 plan and 2015 plan. These registration statements will become effective immediately upon filing. Shares covered by these registration statements will then be eligible for sale in the public markets, subject to vesting restrictions, any applicable lock-up agreements described below and Rule 144 limitations applicable to affiliates.

Lock-Up Agreements

We and the holders of substantially all of our common stock outstanding on the date of this prospectus, including each of our executive officers and directors, have entered into lock-up agreements with the underwriters or otherwise agreed, subject to certain exceptions, that we and they will not, directly or indirectly, offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale, or otherwise dispose of or hedge any of our shares of common stock, any options to purchase shares of our common stock, or any securities convertible into, or exchangeable for or that represent the right to receive shares of our common stock, without the prior written consent of the representatives of the underwriters for a period of 180 days from the date of this prospectus.

MATERIAL U.S. FEDERAL INCOME AND ESTATE TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following is a general discussion of the material U.S. federal income and estate tax considerations applicable to non-U.S. holders with respect to their ownership and disposition of shares of our common stock issued pursuant to this offering. All prospective non-U.S. holders of our common stock should consult their tax advisors with respect to the U.S. federal, state, local and non-U.S. tax consequences of the purchase, ownership and disposition of our common stock. In general, a non-U.S. holder means a beneficial owner of our common stock (other than a partnership or an entity or arrangement treated as a partnership for U.S. federal income tax purposes) that is not, for U.S. federal income tax purposes:

- an individual who is a citizen or resident of the United States;
- a corporation, or an entity treated as a corporation for U.S. federal income tax purposes, created or organized in the United States or under the laws of the United States or of any state thereof or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust if (1) a U.S. court can exercise primary supervision over the trust's administration and one or more U.S. persons have the authority to control all of the trust's substantial decisions or (2) the trust has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person.

This discussion is based on current provisions of the U.S. Internal Revenue Code of 1986, as amended, which we refer to as the Code, existing U.S. Treasury Regulations promulgated thereunder, published administrative rulings and judicial decisions, all as in effect as of the date of this prospectus. These laws are subject to change and to differing interpretation, possibly with retroactive effect. Any change or differing interpretation could alter the tax consequences to non-U.S. holders described in this prospectus.

We assume in this discussion that a non-U.S. holder holds shares of our common stock as a capital asset within the meaning of Section 1221 of the Code (generally, held for investment). This discussion does not address all aspects of U.S. federal income and estate taxation that may be relevant to a particular non-U.S. holder in light of that non-U.S. holder's individual circumstances, nor does it address any aspects of U.S. state, local or non-U.S. taxes. This discussion also does not consider any specific facts or circumstances that may apply to a non-U.S. holder and does not address the special tax rules applicable to particular non-U.S. holders, such as holders that own, or are deemed to own, more than 5% of our capital stock (except to the extent specifically set forth below), corporations that accumulate earnings to avoid U.S. federal income tax, tax-exempt organizations, banks, financial institutions, insurance companies, real estate investment trusts, brokers, dealers or traders in securities, commodities or currencies, tax-qualified retirement plans, holders subject to the alternative minimum tax or the Medicare contribution tax, holders who hold or receive our common stock pursuant to the exercise of employee stock options or otherwise as compensation, holders holding our common stock as part of a hedge, straddle or other risk reduction strategy, conversion transaction or other integrated investment, holders deemed to sell our common stock under the constructive sale provisions of the Code, controlled foreign corporations, passive foreign investment companies and certain former U.S. citizens or long-term residents.

In addition, this discussion does not address the tax treatment of partnerships (or entities or arrangements that are treated as partnerships for U.S. federal income tax purposes) or persons that hold their common stock through such partnerships. If a partnership, including any entity or arrangement treated as a partnership for U.S. federal income tax purposes, holds shares of our common stock, the U.S. federal income tax treatment of a partner in such partnership will generally depend upon the status of the partner and the activities of the partnership. Such partners and partnerships should consult their tax advisors regarding the tax consequences of the purchase, ownership and disposition of our common stock.

There can be no assurance that the Internal Revenue Service, which we refer to as the IRS, will not challenge one or more of the tax consequences described herein, and we have not obtained, nor do we intend to obtain, a ruling with respect to the U.S. federal income or estate tax consequences to a non-U.S. holder of the purchase, ownership or disposition of our common stock.

Distributions on Our Common Stock

Distributions, if any, on our common stock generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the non-U.S. holder's investment, up to such holder's adjusted tax basis in the common stock. Any remaining excess will be treated as capital gain from the sale or exchange of such common stock, subject to the tax treatment described below in "Gain on Sale, Exchange or Other Disposition of Our Common Stock." Any such distribution will also be subject to the discussion below under the heading "Foreign Accounts."

Dividends paid to a non-U.S. holder will generally be subject to withholding of U.S. federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence.

Dividends that are treated as effectively connected with a trade or business conducted by a non-U.S. holder within the United States and, if an applicable income tax treaty so provides, that are attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder within the United States, are generally exempt from the 30% withholding tax if the non-U.S. holder satisfies applicable certification and disclosure requirements. However, such U.S. effectively connected income, net of specified deductions and credits, is taxed at the same graduated U.S. federal income tax rates applicable to U.S. persons (as defined in the Code). Any U.S. effectively connected income received by a non-U.S. holder that is a corporation may also, under certain circumstances, be subject to an additional "branch profits tax" at a 30% rate or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder's country of residence.

A non-U.S. holder of our common stock who claims the benefit of an applicable income tax treaty between the United States and such holder's country of residence generally will be required to provide a properly executed IRS Form W-8BEN or W-8BEN-E (or successor form) and satisfy applicable certification and other requirements. Non-U.S. holders are urged to consult their tax advisors regarding their entitlement to benefits under a relevant income tax treaty.

A non-U.S. holder that is eligible for a reduced rate of U.S. withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

Gain on Sale, Exchange or Other Disposition of Our Common Stock

Subject to the discussion below regarding backup withholding and foreign accounts, in general, a non-U.S. holder will not be subject to any U.S. federal income tax on any gain realized upon such holder's sale, exchange or other disposition of shares of our common stock unless:

- the gain is effectively connected with a U.S. trade or business of the non-U.S. holder and, if an applicable income tax treaty so provides, is attributable to a permanent establishment or a fixed base maintained in the United States by such non-U.S. holder, in which case the non-U.S. holder generally will be taxed at the graduated U.S. federal income tax rates applicable to U.S. persons (as defined in the Code) and, if the non-U.S. holder is a foreign corporation, the branch profits tax described above in "Distributions on Our Common Stock" also may apply;

- the non-U.S. holder is a nonresident alien individual who is present in the United States for 183 days or more in the taxable year of the disposition and certain other conditions are met, in which case the non-U.S. holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax treaty) on the net gain derived from the disposition, which may be offset by U.S. source capital losses of the non-U.S. holder, if any (even though the individual is not considered a resident of the United States) provided the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses; or

- our common stock constitutes a U.S. real property interest because we are, or have been, at any time during the five-year period preceding such disposition (or the non-U.S. holder's holding period, if shorter) a "U.S. real property holding corporation." Even if we are or become a U.S. real property holding corporation, provided that our common stock is regularly traded on an established securities market, our common stock will be treated as a U.S. real property interest only with respect to a non-U.S. holder that holds more than 5% of our outstanding common stock, directly or indirectly, actually or constructively, during the shorter of the 5-year period ending on the date of the disposition or the period that the non-U.S. holder held our common stock. In such case, such non-U.S. holder generally will be taxed on its net gain derived from the disposition at the graduated U.S. federal income tax rates applicable to U.S. persons (as defined in the Code). Generally, a corporation is a U.S. real property holding corporation only if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. Although there can be no assurance, we do not believe that we are, or have been, a U.S. real property holding corporation, or that we are likely to become one in the future. No assurance can be provided that our common stock will continue to be regularly traded on an established securities market for purposes of the rules described above.

Backup Withholding and Information Reporting

We must report annually to the IRS and to each non-U.S. holder the gross amount of the dividends on our common stock paid to such holder and the tax withheld, if any, with respect to such dividends. Non-U.S. holders will have to comply with specific certification procedures to establish that the holder is not a U.S. person (as defined in the Code) in order to avoid backup withholding at the applicable rate with respect to dividends on our common stock. Dividends paid to non-U.S. holders subject to the U.S. withholding tax, as described above in "Distributions on Our Common Stock," generally will be exempt from U.S. backup withholding.

Information reporting and backup withholding will generally apply to the proceeds of a disposition of our common stock by a non-U.S. holder effected by or through the U.S. office of any broker, U.S. or foreign, unless the holder certifies its status as a non-U.S. holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a non-U.S. holder where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker. Non-U.S. holders should consult their tax advisors regarding the application of the information reporting and backup withholding rules to them.

Copies of information returns may be made available to the tax authorities of the country in which the non-U.S. holder resides or is incorporated under the provisions of a specific treaty or agreement.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder may be allowed as a credit against the non-U.S. holder's U.S. federal income tax liability, if any, and may entitle such holder to a refund, provided that the required information is timely furnished to the IRS.

Foreign Accounts

The Foreign Account Tax Compliance Act provisions of the Hiring Incentives to Restore Employment Act, or FATCA, generally imposes a U.S. federal withholding tax of 30% on dividends and the gross proceeds of a disposition of our common stock paid to a "foreign financial institution" (as specifically defined for this purpose), unless such institution enters into an agreement with the U.S. government to, among other things, withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners). A U.S. federal withholding tax of 30% also applies to dividends and the gross proceeds of a disposition of our common stock paid to a non-financial foreign entity (as specifically defined for this purpose), unless such entity provides the withholding agent with either a certification that it does not have any substantial direct or indirect U.S. owners or provides information regarding substantial direct and indirect U.S. owners of the entity. The withholding provisions described above currently apply to dividends paid on our common stock and will generally apply with respect to gross proceeds of a sale or other disposition of our common stock on or after January 1, 2017. Under certain circumstances, a non-U.S. holder might be eligible for refunds or credits of such taxes. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this paragraph.

EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS TAX ADVISOR REGARDING THE PARTICULAR U.S. FEDERAL, STATE AND LOCAL AND NON-U.S. TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGES IN APPLICABLE LAWS.

U.S. Federal Estate Tax

Shares of our common stock that are owned or treated as owned at the time of death by an individual who is not a citizen or resident of the United States, as specifically defined for U.S. federal estate tax purposes, are considered U.S. situs assets and will be included in the individual's gross estate for U.S. federal estate tax purposes. Such shares, therefore, may be subject to U.S. federal estate tax, unless an applicable estate tax or other treaty provides otherwise.

UNDERWRITING

Subject to the terms and conditions set forth in the underwriting agreement, dated , 2015, among us and Jefferies LLC and Citigroup Global Markets Inc., as the representatives of the underwriters named below and the joint book-running managers of this offering, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the respective number of shares of common stock shown opposite its name below:

Underwriter	Number of Shares
Jefferies LLC	
Citigroup Global Markets Inc.	
William Blair & Company, L.L.C.	
Total	

The underwriting agreement provides that the obligations of the several underwriters are subject to certain conditions precedent such as the receipt by the underwriters of officers' certificates and legal opinions and approval of certain legal matters by their counsel. The underwriting agreement provides that the underwriters will purchase all of the shares of common stock if any of them are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the nondefaulting underwriters may be increased or the underwriting agreement may be terminated. We have agreed to indemnify the underwriters and certain of their controlling persons against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

The underwriters have advised us that, following the pricing of this offering, they currently intend to make a market in the common stock as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for the common stock, that you will be able to sell any of the common stock held by you at a particular time or that the prices that you receive when you sell will be favorable.

The underwriters are offering the shares of common stock subject to their acceptance of the shares of common stock from us and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commission and Expenses

The underwriters have advised us that they propose to offer the shares of common stock to the public at the initial public offering price set forth on the cover page of this prospectus and to certain dealers, which may include the underwriters, at that price less a concession not in excess of $ per share of common stock. The underwriters may allow, and certain dealers may reallow, a discount from the concession not in excess of $ per share of common stock to certain brokers and dealers. After the offering, the initial public offering price, concession and reallowance to dealers may be reduced by the representatives. No such reduction will change the amount of proceeds to be received by us as set forth on the cover page of this prospectus.

The following table shows the public offering price, the underwriting discounts and commissions that we are to pay the underwriters and the proceeds, before expenses, to us in connection with this offering. Such

amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Per Share		Total	
	Without Option to Purchase Additional Shares	With Option to Purchase Additional Shares	Without Option to Purchase Additional Shares	With Option to Purchase Additional Shares
Public offering price	$	$	$	$
Underwriting discounts and commissions paid by us	$	$	$	$
Proceeds to us, before expenses	$	$	$	$

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately $. We have also agreed to reimburse the underwriters for certain expenses, including an amount not to exceed $ in connection with the clearance of this offering with the Financial Industry Regulatory Authority, as set forth in the underwriting agreement.

Determination of Offering Price

Prior to this offering, there has not been a public market for our common stock. Consequently, the initial public offering price for our common stock will be determined by negotiations between us and the representatives. Among the factors to be considered in these negotiations will be prevailing market conditions, our financial information, market valuations of other companies that we and the underwriters believe to be comparable to us, estimates of our business potential, the present state of our development and other factors deemed relevant.

We offer no assurances that the initial public offering price will correspond to the price at which the common stock will trade in the public market subsequent to the offering or that an active trading market for the common stock will develop and continue after the offering.

Listing

We have applied to have our common stock approved for listing on The NASDAQ Global Market under the trading symbol "ACRS."

Stamp Taxes

If you purchase shares of common stock offered in this prospectus, you may be required to pay stamp taxes and other charges under the laws and practices of the country of purchase, in addition to the offering price listed on the cover page of this prospectus.

Option to Purchase Additional Shares

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase, from time to time, in whole or in part, up to an aggregate of shares from us at the public offering price set forth on the cover page of this prospectus, less underwriting discounts and commissions. If the underwriters exercise this option, each underwriter will be obligated, subject to specified conditions, to purchase a number of additional shares proportionate to that underwriter's initial purchase commitment as indicated in the table above. This option may be exercised only if the underwriters sell more shares than the total number set forth on the cover page of this prospectus.

No Sales of Similar Securities

We, our officers, directors and holders of all or substantially all our outstanding capital stock have agreed, subject to specified exceptions, not to directly or indirectly:

- sell, offer, contract or grant any option to sell (including any short sale), pledge, transfer, establish an open "put equivalent position" within the meaning of Rule 16a-l(h) under the Securities Exchange Act of 1934, as amended, or
- otherwise dispose of any shares of common stock or options to acquire shares of common stock, or securities exchangeable or exercisable for or convertible into shares of common stock currently or hereafter owned either of record or beneficially, or
- publicly announce an intention to do any of the foregoing for a period of 180 days after the date of this prospectus without the prior written consent of Jefferies LLC and Citigroup Global Markets Inc.

This restriction terminates after the close of trading of the common stock on and including the 180th day after the date of this prospectus.

Jefferies LLC and Citigroup Global Markets Inc. may, in their discretion and at any time or from time to time before the termination of the 180-day period release all or any portion of the securities subject to lock-up agreements. There are no existing agreements between the underwriters and any of our shareholders who will execute a lock-up agreement, providing consent to the sale of shares prior to the expiration of the lock-up period.

Stabilization

The underwriters have advised us that they, pursuant to Regulation M under the Securities Exchange Act of 1934, as amended, certain persons participating in the offering may engage in short sale transactions, stabilizing transactions, syndicate covering transactions or the imposition of penalty bids in connection with this offering. These activities may have the effect of stabilizing or maintaining the market price of the common stock at a level above that which might otherwise prevail in the open market. Establishing short sales positions may involve either "covered" short sales or "naked" short sales.

"Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares of our common stock in this offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares of our common stock or purchasing shares of our common stock in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option to purchase additional shares.

"Naked" short sales are sales in excess of the option to purchase additional shares of our common stock. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

A stabilizing bid is a bid for the purchase of shares of common stock on behalf of the underwriters for the purpose of fixing or maintaining the price of the common stock. A syndicate covering transaction is the bid for or the purchase of shares of common stock on behalf of the underwriters to reduce a short position incurred by the underwriters in connection with the offering. Similar to other purchase transactions, the underwriter's purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. A penalty bid is an arrangement permitting the underwriters to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if the common stock

originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member.

Neither we, nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. The underwriters are not obligated to engage in these activities and, if commenced, any of the activities may be discontinued at any time.

Electronic Distribution

A prospectus in electronic format may be made available by e-mail or on the websites or through online services maintained by one or more of the underwriters or their affiliates. In those cases, prospective investors may view offering terms online and may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of shares of common stock for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' websites and any information contained in any other website maintained by any of the underwriters is not part of this prospectus, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

Other Activities and Relationships

The underwriter and certain of its affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The underwriter and certain of its affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriter and certain of its affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments issued by us and our affiliates. If the underwriters or their respective affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The underwriters and their respective affiliates may hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the common stock offered hereby. Any such short positions could adversely affect future trading prices of the common stock offered hereby. The underwriters and certain of their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Selling Restrictions

Australia

This prospectus is not a disclosure document for the purposes of Australia's Corporations Act 2001 (Cth) of Australia, or Corporations Act, has not been lodged with the Australian Securities & Investments Commission and is only directed to the categories of exempt persons set out below. Accordingly, if you receive this prospectus in Australia:

You confirm and warrant that you are either:

- a "sophisticated investor" under section 708(8)(a) or (b) of the Corporations Act;

- a "sophisticated investor" under section 708(8)(c) or (d) of the Corporations Act and that you have provided an accountant's certificate to the Company which complies with the requirements of section 708(8)(c)(i) or (ii) of the Corporations Act and related regulations before the offer has been made;

- a person associated with the Company under Section 708(12) of the Corporations Act; or

- a "professional investor" within the meaning of section 708(11)(a) or (b) of the Corporations Act.

To the extent that you are unable to confirm or warrant that you are an exempt sophisticated investor, associated person or professional investor under the Corporations Act any offer made to you under this prospectus is void and incapable of acceptance.

You warrant and agree that you will not offer any of the securities issued to you pursuant to this prospectus for resale in Australia within 12 months of those securities being issued unless any such resale offer is exempt from the requirement to issue a disclosure document under section 708 of the Corporations Act.

Canada

The offering of our common shares in Canada is being made on a private placement basis in reliance on exemptions from the prospectus requirements under the securities laws of each applicable Canadian province and territory where the common shares may be offered and sold, and therein may only be made with investors that are purchasing as principal and that qualify as both an accredited investor, as such term is defined in National Instrument 45-106 Prospectus and Registration Exemptions and as a permitted client, as such term is defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligation. Any offer and sale of our common shares in any province or territory of Canada may only be made through a dealer that is properly registered under the securities legislation of the applicable province or territory wherein our common shares are offered and/or sold or, alternatively, by a dealer that qualifies under and is relying upon an exemption from the registration requirements therein.

Any resale of our common shares by an investor resident in Canada must be made in accordance with applicable Canadian securities laws, which may require resales to be made in accordance with prospectus and registration requirements, statutory exemptions from the prospectus and registration requirements or under a discretionary exemption from the prospectus and registration requirements granted by the applicable Canadian securities regulatory authority. These resale restrictions may under certain circumstances apply to resales of our common shares outside of Canada.

Upon receipt of this document, each Canadian investor hereby confirms that it has expressly requested that all documents evidencing or relating in any way to the sale of the securities described herein (including for greater certainty any purchase confirmation or any notice) be drawn up in the English language only. *Par la réception de ce document, chaque investisseur canadien confirme par les présentes qu'il a expressément exigé que tous les documents faisant foi ou se rapportant de quelque manière que ce soit à la vente des valeurs mobilières décrites aux présentes (incluant, pour plus de certitude, toute confirmation d'achat ou tout avis) soient rédigés en anglais seulement.*

European Economic Area

In relation to each member state of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State"), an offer to the public of any common shares which are the subject of the offering contemplated by this prospectus may not be made in that Relevant Member State except that an offer to the public in that Relevant Member State of any common shares may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- to any legal entity which is a "qualified investor" as defined in the Prospectus Directive;

- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the underwriters or the underwriters nominated by us for any such offer; or

§ in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of common shares shall require us or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer common shares to the public" in relation to the common shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the common shares to be offered so as to enable an investor to decide to purchase or subscribe to the common shares, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State and the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

Hong Kong

No securities have been offered or sold, and no securities may be offered or sold, in Hong Kong, by means of any document, other than to persons whose ordinary business is to buy or sell shares or debentures, whether as principal or agent; or to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong ("SFO") and any rules made under that Ordinance; or in other circumstances which do not result in the document being a "prospectus" as defined in the Companies Ordinance (Cap. 32) of Hong Kong ("CO") or which do not constitute an offer or invitation to the public for the purpose of the CO or the SFO. No document, invitation or advertisement relating to the securities has been issued or may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made under that Ordinance.

This prospectus has not been registered with the Registrar of Companies in Hong Kong. Accordingly, this prospectus may not be issued, circulated or distributed in Hong Kong, and the securities may not be offered for subscription to members of the public in Hong Kong. Each person acquiring the securities will be required, and is deemed by the acquisition of the securities, to confirm that he is aware of the restriction on offers of the securities described in this prospectus and the relevant offering documents and that he is not acquiring, and has not been offered any securities in circumstances that contravene any such restrictions.

Japan

The offering has not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948 of Japan, as amended), or FIEL, and the Initial Purchaser will not offer or sell any securities, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the FIEL and any other applicable laws, regulations and ministerial guidelines of Japan.

Singapore

This prospectus has not been and will not be lodged or registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the common stock may not be circulated or distributed, nor may the common stock be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an

institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA"), (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the common stock is subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor, securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the common stock pursuant to an offer made under Section 275 of the SFA except:
- to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;
- where no consideration is or will be given for the transfer;
- where the transfer is by operation of law;
- as specified in Section 276(7) of the SFA; or
- as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Switzerland

The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange ("SIX") or on any other stock exchange or regulated trading facility in Switzerland. This prospectus has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this prospectus nor any other offering or marketing material relating to the securities or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this prospectus nor any other offering or marketing material relating to the offering, the Company or the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this prospectus will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of securities has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes ("CISA"). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of securities.

United Kingdom

This prospectus is only being distributed to, and is only directed at, persons in the United Kingdom that are qualified investors within the meaning of Article 2(1)(e) of the Prospectus Directive that are also (i) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "Order") and/or (ii) high net worth entities falling within Article 49(2)(a) to (d) of the Order and other persons to whom it may lawfully be communicated (each such person being referred to as a "relevant person").

This prospectus and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other persons in the United Kingdom. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

LEGAL MATTERS

The validity of the shares of common stock being offered by this prospectus will be passed upon for us by Cooley LLP, Reston, Virginia. Certain legal matters related to this offering will be passed upon for the underwriters by Latham & Watkins LLP.

EXPERTS

The financial statements as of December 31, 2013 and 2014 and for each of the two years in the period ended December 31, 2014 included in this prospectus have been so included in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act, with respect to the shares of common stock being offered by this prospectus. This prospectus, which constitutes part of the registration statement, does not contain all of the information in the registration statement and its exhibits. For further information with respect to our company and the common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at *www.sec.gov*. You may also read and copy any document we file with the SEC at its public reference room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the Public Reference Section of the SEC at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities.

Upon the closing of this offering, we will be subject to the information reporting requirements of the Exchange Act, and we will file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available for inspection and copying at the public reference room and website of the SEC referred to above. We also maintain a website at *www.aclaristx.com*, at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not part of, and is not incorporated into, this prospectus.

INDEX TO FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
Aclaris Therapeutics, Inc.

In our opinion, the accompanying balance sheets and the related statements of operations and comprehensive loss, of redeemable convertible preferred stock and stockholders' deficit and of cash flows, present fairly, in all material respects, the financial position of Aclaris Therapeutics, Inc. at December 31, 2013 and 2014, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2014 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP

Philadelphia, Pennsylvania
April 2, 2015

ACLARIS THERAPEUTICS, INC.
BALANCE SHEETS

(In thousands, except share and per share data)

	December 31, 2013	December 31, 2014	June 30, 2015 (unaudited)	Pro Forma June 30, 2015 (unaudited)
Assets				
Current assets:				
Cash and cash equivalents	$ 9,588	$ 10,757	$ 9,853	$ 9,853
Marketable securities	3,736	5,373	—	—
Prepaid expenses and other current assets	62	204	591	591
Total current assets	13,386	16,334	10,444	10,444
Marketable securities	802	518	—	—
Property and equipment, net	19	515	641	641
Deferred offering costs	—	—	1,128	1,128
Other assets	—	10	10	10
Total assets	$ 14,207	$ 17,377	$ 12,223	$ 12,223
Liabilities, Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)				
Current liabilities:				
Accounts payable	$ 353	$ 1,263	$ 957	$ 957
Accrued expenses	14	188	467	467
Total current liabilities	367	1,451	1,424	1,424
Deferred rent	3	4	3	3
Total liabilities	370	1,455	1,427	1,427
Commitments and contingencies (Note 10)				
Redeemable convertible preferred stock (Series A and B), $0.00001 par value; 20,890,000, 34,090,000 and 34,090,000 shares authorized at December 31, 2013 and 2014 and June 30, 2015 (unaudited), respectively; 20,890,000, 27,341,057 and 27,341,057 shares issued and outstanding at December 31, 2013 and 2014 and June 30, 2015 (unaudited), respectively; aggregate liquidation preference of $35,882 and $37,275 at December 31, 2014 and June 30, 2015 (unaudited), respectively; no shares issued or outstanding, pro forma at June 30, 2015 (unaudited)	23,000	36,677	38,010	—
Stockholders' equity (deficit):				
Common stock, $0.00001 par value; 41,000,000, 77,000,000 and 77,000,000 shares authorized at December 31, 2013 and 2014 and June 30, 2015 (unaudited), respectively; 9,420,000 shares issued and outstanding at December 31, 2013 and 2014 and June 30, 2015 (unaudited); 36,761,057 shares issued and outstanding, pro forma at June 30, 2015 (unaudited)	—	—	—	—
Additional paid-in capital	—	—	—	38,010
Accumulated other comprehensive income (loss)	3	(6)	—	—
Accumulated deficit	(9,166)	(20,749)	(27,214)	(27,214)
Total stockholders' equity (deficit)	(9,163)	(20,755)	(27,214)	10,796
Total liabilities, redeemable convertible preferred stock and stockholders' equity (deficit)	$ 14,207	$ 17,377	$ 12,223	$ 12,223

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

ACLARIS THERAPEUTICS, INC.
STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS

(In thousands, except share and per share data)

	Year Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
			(unaudited)	
Revenue	$ —	$ —	$ —	$ —
Operating expenses:				
Research and development	3,488	6,507	2,356	3,530
General and administrative	1,769	2,026	913	1,695
Total operating expenses	5,257	8,533	3,269	5,225
Loss from operations	(5,257)	(8,533)	(3,269)	(5,225)
Interest income	21	16	6	8
Net loss	(5,236)	(8,517)	(3,263)	(5,217)
Accretion of redeemable convertible preferred stock to redemption value	(1,740)	(2,054)	(914)	(1,333)
Net loss attributable to common stockholders	$ (6,976)	$ (10,571)	$ (4,177)	$ (6,550)
Net loss per share attributable to common stockholders, basic and diluted	$ (1.87)	$ (1.78)	$ (0.72)	$ (0.88)
Weighted average common shares outstanding, basic and diluted	3,730,654	5,934,302	5,779,609	7,434,613
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)		$ (0.30)		$ (0.15)
Pro forma weighted average common shares outstanding, basic and diluted (unaudited)		28,467,995		34,775,670
Other comprehensive income (loss):				
Unrealized gain (loss) on marketable securities, net of tax of $0	3	(9)	—	6
Total other comprehensive income (loss)	3	(9)	—	6
Comprehensive loss	$ (5,233)	$ (8,526)	$ (3,263)	$ (5,211)

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

ACLARIS THERAPEUTICS, INC.
STATEMENTS OF REDEEMABLE CONVERTIBLE PREFERRED STOCK
AND STOCKHOLDERS' DEFICIT

(In thousands, except share data)

	Series A and B Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Par Value				
Balance at December 31, 2012	20,890,000	$ 21,260	9,420,000	$ —	$ —	$ —	$ (2,190)	$ (2,190)
Unrealized gain on marketable securities	—	—	—	—	—	3	—	3
Accretion of redeemable convertible preferred stock to redemption value	—	1,740	—	—	—	—	(1,740)	(1,740)
Net loss	—	—	—	—	—	—	(5,236)	(5,236)
Balance at December 31, 2013	20,890,000	23,000	9,420,000	—	—	3	(9,166)	(9,163)
Issuance of Series B redeemable convertible preferred stock and purchased put option, net of issuance costs of $60	6,451,057	11,623	—	—	—	—	(1,039)	(1,039)
Unrealized loss on marketable securities	—	—	—	—	—	(9)	—	(9)
Stock-based compensation expense	—	—	—	—	27	—	—	27
Accretion of redeemable convertible preferred stock to redemption value	—	2,054	—	—	(27)	—	(2,027)	(2,054)
Net loss	—	—	—	—	—	—	(8,517)	(8,517)
Balance at December 31, 2014	27,341,057	36,677	9,420,000	—	—	(6)	(20,749)	(20,755)
Unrealized gain on marketable securities	—	—	—	—	—	6	—	6
Stock-based compensation expense	—	—	—	—	85	—	—	85
Accretion of redeemable convertible preferred stock to redemption value	—	1,333	—	—	(85)	—	(1,248)	(1,333)
Net loss	—	—	—	—	—	—	(5,217)	(5,217)
Balance at June 30, 2015 (unaudited)	27,341,057	$ 38,010	9,420,000	$ —	$ —	$ —	$ (27,214)	$ (27,214)

ACLARIS THERAPEUTICS, INC.
STATEMENTS OF CASH FLOWS

(In thousands)

	Year Ended December 31,		Six Months Ended June, 30	
	2013	2014	2014	2015
			(unaudited)	
Cash flows from operating activities:				
Net loss	$ (5,236)	$ (8,517)	$ (3,263)	$ (5,217)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation expense	11	12	6	25
Stock-based compensation expense	—	27	2	85
Deferred rent	3	1	1	(1)
Changes in operating assets and liabilities:				
Prepaid expenses and other assets	7	(152)	(492)	(387)
Accounts payable	303	819	166	(448)
Accrued expenses	(8)	174	292	279
Net cash used in operating activities	(4,920)	(7,636)	(3,288)	(5,664)
Cash flows from investing activities:				
Purchases of property and equipment	—	(417)	(132)	(242)
Purchases of marketable securities	(4,535)	(5,035)	—	—
Proceeds from sales and maturities of marketable securities	—	3,673	3,177	5,897
Net cash provided by (used in) investing activities	(4,535)	(1,779)	3,045	5,655
Cash flows from financing activities:				
Proceeds from issuance of redeemable convertible preferred stock, net of issuance costs	—	10,584	—	—
Payments of initial public offering costs	—	—	—	(895)
Net cash provided by (used in) financing activities	—	10,584	—	(895)
Net increase (decrease) in cash and cash equivalents	(9,455)	1,169	(243)	(904)
Cash and cash equivalents at beginning of period	19,043	9,588	9,588	10,757
Cash and cash equivalents at end of period	$ 9,588	$ 10,757	$ 9,345	$ 9,853
Supplemental disclosure of non-cash investing and financing activities:				
Additions to property and equipment purchases included in accounts payable	$ —	$ 91	$ —	$ —
Accretion of redeemable convertible preferred stock to redemption value	$ 1,740	$ 2,054	$ 914	$ 1,333
Fair value of preferred stock purchased put option on date of issuance	$ —	$ 1,039	$ —	$ —
Deferred offering costs included in accounts payable	$ —	$ —	$ —	$ 233

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

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS

(Amounts in thousands, except share and per share data)

1. Nature of Business and Basis of Presentation

Aclaris Therapeutics, Inc. (the "Company") was incorporated under the laws of the State of Delaware in 2012. The Company is a clinical-stage specialty pharmaceutical company focused on identifying, developing and commercializing innovative and differentiated topical drugs to address significant unmet needs in dermatology. The Company's lead drug candidate, A-101, is a proprietary high-concentration hydrogen peroxide topical solution that the Company is developing as a prescription treatment for seborrheic keratosis ("SK"), a common non-malignant skin tumor. The Company has completed three clinical trials of A-101 in patients with SK.

The Company has not generated any revenue and has incurred losses since inception. Operations of the Company are subject to certain risks and uncertainties, including, among others, uncertainty of drug candidate development; technological uncertainty; uncertainty regarding patents and proprietary rights; having no commercial manufacturing experience, marketing or sales capability or experience; and dependence on key personnel, compliance with government regulations and the need to obtain additional financing. Drug candidates currently under development will require significant additional research and development efforts, including extensive preclinical and clinical testing and regulatory approval, prior to commercialization. These efforts require significant amounts of additional capital, adequate personnel infrastructure and extensive compliance-reporting capabilities.

The Company's drug candidates are in the development stage. There can be no assurance that the Company's research and development will be successfully completed, that adequate protection for the Company's intellectual property will be obtained, that any products developed will obtain necessary government regulatory approval or that any approved products will be commercially viable. Even if the Company's product development efforts are successful, it is uncertain when, if ever, the Company will generate significant revenue from product sales. The Company operates in an environment of rapid change in technology and substantial competition from pharmaceutical and biotechnology companies. In addition, the Company is dependent upon the services of its employees and consultants.

The Company's financial statements have been prepared on the basis of continuity of operations, realization of assets and the satisfaction of liabilities in the ordinary course of business. The Company has experienced negative cash flows and had an accumulated deficit of $20,749 and $27,214 as of December 31, 2014 and June 30, 2015 (unaudited), respectively. As of December 31, 2014, the Company had cash, cash equivalents and marketable securities of $16,648. As of April 2, 2015, the Company expected that its cash, cash equivalents and marketable securities at December 31, 2014 would be sufficient to fund its operating expenses and capital expenditure requirements through at least December 31, 2015. As of June 30, 2015 (unaudited), the Company had cash and cash equivalents of $9,853. The Company expects that its cash and cash equivalents as of June 30, 2015, together with the funding available to the Company upon its exercise of a purchased put option (see Note 6), should be sufficient to fund its operations through at least June 30, 2016 (unaudited). The future viability of the Company is dependent on its ability to generate cash from operating activities or to raise additional capital to finance its operations. The Company's failure to raise capital as and when needed could have a negative impact on its financial condition and ability to pursue its business strategies.

The Company is seeking to complete an initial public offering of its common stock, which would provide additional capital to fund its operations. Upon the closing of a qualified public offering on specified terms, all of the Company's outstanding redeemable convertible preferred stock will convert into shares of common stock. In the event the Company does not complete an initial public offering, the Company expects to seek

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

1. Nature of Business and Basis of Presentation (Continued)

additional funding through private financings, debt financing, collaboration agreements or government grants. The Company may not be able to obtain financing on acceptable terms, or at all, and the Company may not be able to enter into collaboration arrangements or obtain government grants. The terms of any financing may adversely affect the holdings or the rights of the Company's stockholders. If the Company is unable to obtain funding, the Company could be forced to delay, reduce or eliminate its research and development programs, product portfolio expansion or commercialization efforts, which could adversely affect its business prospects. Although management continues to pursue these plans, there is no assurance that the Company will be successful in obtaining sufficient funding on terms acceptable to the Company to fund continuing operations, if at all.

The accompanying financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP").

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting periods. Significant estimates and assumptions reflected in these financial statements include, but are not limited to, the accrual of research and development expenses and the valuation of common stock, stock-based awards and a purchased put option.

Estimates are periodically reviewed in light of changes in circumstances, facts and experience. Actual results could differ from the Company's estimates.

Unaudited Interim Financial Information

The accompanying balance sheet as of June 30, 2015, the statements of operations and comprehensive loss and of cash flows for the six months ended June 30, 2014 and 2015, and the statement of redeemable convertible preferred stock and stockholders' deficit for the six months ended June 30, 2015 are unaudited. The unaudited interim financial statements have been prepared on the same basis as the audited annual financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary for the fair statement of the Company's financial position as of June 30, 2015 and the results of its operations and its cash flows for the six months ended June 30, 2014 and 2015. The financial data and other information disclosed in these notes related to the six months ended June 30, 2014 and 2015 are unaudited. The results for the six months ended June 30, 2015 are not necessarily indicative of results to be expected for the year ending December 31, 2015, any other interim periods, or any future year or period.

Unaudited Pro Forma Information

The accompanying unaudited pro forma balance sheet as of June 30, 2015 has been prepared to give effect to the conversion of all outstanding shares of redeemable convertible preferred stock into 27,341,057 shares of common stock as if the proposed initial public offering had occurred on June 30, 2015.

In the accompanying statements of operations, unaudited pro forma basic and diluted net loss per share attributable to common stockholders for the year ended December 31, 2014 and the six months ended

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

2. Summary of Significant Accounting Policies (Continued)

June 30, 2015 have been prepared to give effect to the conversion of all outstanding shares of redeemable convertible preferred stock into shares of common stock as if the proposed initial public offering had occurred on the later of January 1, 2014 or the issuance date of the redeemable convertible preferred stock.

Research and Development Costs

Research and development costs are expensed as incurred. Research and development expenses include salaries, stock-based compensation and benefits of employees, fees paid under a third-party assignment agreement and other operational costs related to the Company's research and development activities, including allocated facility-related expenses and external costs of outside vendors engaged to conduct both preclinical studies and clinical trials.

Research Contract Costs and Accruals

The Company has entered into various research and development contracts with research institutions and other companies. These agreements are generally cancelable, and related payments are recorded as research and development expenses as incurred. The Company records accruals for estimated ongoing research costs. When evaluating the adequacy of the accrued liabilities, the Company analyzes progress of its studies and clinical trials, including the phase or completion of events, invoices received and contracted costs. Significant judgments and estimates are made in determining the accrued balances at the end of any reporting period. Actual results could differ from the Company's estimates. The Company's historical accrual estimates have not been materially different from the actual costs.

Stock-Based Compensation

The Company measures all stock options and other stock-based awards granted to employees and directors based on the fair value on the date of grant and recognizes compensation expense of those awards, net of estimated forfeitures, over the requisite service period, which is generally the vesting period of the respective award. Generally, the Company issues stock options and restricted stock awards with only service-based vesting conditions and records the expense for these awards using the straight-line method.

The Company measures stock-based awards granted to consultants and non-employees based on the fair value of the award on the date on which the related service is complete. Compensation expense is recognized over the period during which services are rendered by such consultants and non-employees until completed. At the end of each financial reporting period prior to completion of the service, the fair value of these awards is remeasured using the then-current fair value of the Company's common stock and updated assumption inputs in the Black-Scholes option-pricing model.

The Company classifies stock-based compensation expense in its statement of operations and comprehensive loss in the same manner in which the award recipient's payroll costs are classified or in which the award recipients' service payments are classified.

The Company recognizes compensation expense for only the portion of awards that are expected to vest. In developing a forfeiture rate estimate, the Company has considered its historical experience to estimate pre-vesting forfeitures for service-based awards. The impact of a forfeiture rate adjustment will be recognized in full in the period of adjustment, and if the actual forfeiture rate is materially different from the Company's estimate, the Company may be required to record adjustments to stock-based compensation expense in future periods.

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

2. Summary of Significant Accounting Policies (Continued)

The fair value of each stock option grant is estimated on the date of grant using the Black-Scholes option-pricing model. The Company historically has been a private company and lacks company-specific historical and implied volatility information. Therefore, it estimates its expected stock volatility based on the historical volatility of a publicly traded set of peer companies and expects to continue to do so until such time as it has adequate historical data regarding the volatility of its own traded stock price. The expected term of the Company's stock options has been determined utilizing the "simplified" method for awards that qualify as "plain-vanilla" options. The expected term of stock options granted to non-employees is equal to the contractual term of the option award. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. Expected dividend yield is based on the fact that the Company has never paid cash dividends and does not expect to pay any cash dividends in the foreseeable future.

The fair value of each restricted stock award is measured as the aggregate difference between the purchase price per share of the award, if any, and the fair value per share of the Company's common stock on the date of grant.

Patent Costs

All patent-related costs incurred in connection with filing and prosecuting patent applications are expensed as incurred due to the uncertainty about the recovery of the expenditure. Amounts incurred are classified as general and administrative expenses.

Income Taxes

The Company accounts for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the financial statements or in the Company's tax returns. Deferred taxes are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect in the years in which the differences are expected to reverse. Changes in deferred tax assets and liabilities are recorded in the provision for income taxes. The Company assesses the likelihood that its deferred tax assets will be recovered from future taxable income and, to the extent it believes, based upon the weight of available evidence, that it is more likely than not that all or a portion of the deferred tax assets will not be realized, a valuation allowance is established through a charge to income tax expense. Potential for recovery of deferred tax assets is evaluated by estimating the future taxable profits expected and considering prudent and feasible tax planning strategies.

The Company accounts for uncertainty in income taxes recognized in the financial statements by applying a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained upon external examination by the taxing authorities. If the tax position is deemed more-likely-than-not to be sustained, the tax position is then assessed to determine the amount of benefit to recognize in the financial statements. The amount of the benefit that may be recognized is the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement. The provision for income taxes includes the effects of any resulting tax reserves, or unrecognized tax benefits, that are considered appropriate as well as the related net interest and penalties.

Accretion of Redeemable Convertible Preferred Stock

Accretion of redeemable convertible preferred stock includes the accretion of accruing dividends on and issuance costs of the Company's Series A and Series B redeemable convertible preferred stock. The carrying

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

2. Summary of Significant Accounting Policies (Continued)

values of the Series A and Series B redeemable convertible preferred stock are being accreted to their respective redemption values, using the effective interest method, from the date of issuance to the earliest date the holders can demand redemption.

Comprehensive Loss

Comprehensive loss includes net loss as well as other changes in stockholders' equity (deficit) that result from transactions and economic events other than those with stockholders. Comprehensive loss is comprised of net loss and unrealized gains (losses) on marketable securities.

Net Loss per Share

Basic net loss per share is computed using the weighted average number of common shares outstanding during the period. Diluted net loss per share is computed using the sum of the weighted average number of common shares outstanding during the period and, if dilutive, the weighted average number of potential shares of common stock, including the assumed exercise of stock options and unvested restricted stock. The Company applies the two-class method to calculate its basic and diluted net loss per share attributable to common stockholders, as its redeemable convertible preferred stock and common stock are participating securities. The two-class method is an earnings allocation formula that treats a participating security as having rights to earnings that otherwise would have been available to common stockholders. However, the two-class method does not impact the net loss per share of common stock as the Company was in a net loss position for each of the periods presented and preferred stockholders do not participate in losses.

The Company's redeemable convertible preferred stock contractually entitles the holders of such shares to participate in dividends but does not contractually require the holders of such shares to participate in losses of the Company. Similarly, restricted stock awards granted by the Company entitle the holder of such awards to dividends declared or paid by the board of directors, regardless of whether such awards are unvested, as if such shares were outstanding common shares at the time of the dividend. However, the unvested restricted stock awards are not entitled to share in the residual net assets (deficit) of the Company. Accordingly, in periods in which the Company reports a net loss attributable to common stockholders, diluted net loss per share attributable to common stockholders is the same as basic net loss per share attributable to common stockholders, since dilutive common shares are not assumed to have been issued if their effect is anti-dilutive.

Cash Equivalents

The Company considers all short-term, highly liquid investments with original maturities of 90 days or less at acquisition date to be cash equivalents. Cash equivalents, which consist of money market accounts, are stated at fair value.

Marketable Securities

Marketable securities with original maturities of greater than three months and remaining maturities of less than one year from the balance sheet date are classified as short term. Marketable securities with remaining maturities of greater than one year from the balance sheet date are classified as long term.

The Company classifies all of its marketable securities as available-for-sale securities. The Company's marketable securities are measured and reported at fair value using quoted prices in markets that are not active for identical or similar securities. Unrealized gains and losses are reported as a separate component of stockholders' equity (deficit). The cost of securities sold is determined on a specific identification basis, and realized gains and losses are included in other income (expense) within the statement of operations and comprehensive loss. If any adjustment to fair value reflects a decline in the value of the investment, the

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

2. Summary of Significant Accounting Policies (Continued)

Company considers available evidence to evaluate the extent to which the decline is "other than temporary" and reduces the investment to fair value through a charge to the statement of operations and comprehensive loss.

Fair Value Measurements

Certain assets and liabilities are carried at fair value under GAAP. Fair value is defined 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. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

- Level 1 — Quoted prices in active markets for identical assets or liabilities.
- Level 2 — Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.
- Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

The Company's cash equivalents and marketable securities are carried at fair value, determined according to the fair value hierarchy described above. The carrying values of the Company's accounts payable and accrued expenses approximate their fair values due to the short-term nature of these liabilities.

Concentration of Credit Risk and of Significant Suppliers

Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash, cash equivalents and marketable securities. The Company holds all cash, cash equivalents and marketable securities balances at one accredited financial institution, in amounts that exceed federally insured limits. The Company does not believe that it is subject to unusual credit risk beyond the normal credit risk associated with commercial banking relationships.

The Company is dependent on third-party manufacturers to supply products for research and development activities of its programs, including preclinical and clinical testing. These programs could be adversely affected by a significant interruption in the supply of active pharmaceutical ingredients and other components.

Deferred Offering Costs

The Company capitalizes certain legal, accounting and other third-party fees that are directly associated with in-process equity financings as deferred offering costs (non-current) until such financings are consummated. After consummation of the equity financing, these costs are recorded in stockholders' equity (deficit) as a reduction of additional paid-in capital generated as a result of the offering. As of June 30, 2015 (unaudited), the Company had recorded $1,128 of deferred offering costs in contemplation of a probable 2015 equity financing. Should the equity financing no longer be considered probable of being consummated, all deferred offering costs will be charged to operating expenses in the statement of operations. The Company did not record any deferred offering costs as of December 31, 2013 or 2014.

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

2. Summary of Significant Accounting Policies (Continued)

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation. Depreciation expense is recognized using the straight-line method over the useful life of the asset. Computer equipment is depreciated over three years. Manufacturing equipment is depreciated over five years. Expenditures for repairs and maintenance of assets are charged to expense as incurred. Upon retirement or sale, the cost and related accumulated depreciation of assets disposed of are removed from the accounts and any resulting gain or loss is included in loss from operations.

Impairment of Long-Lived Assets

Long-lived assets consist of property and equipment. Long-lived assets to be held and used are tested for recoverability whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. Factors that the Company considers in deciding when to perform an impairment review include significant underperformance of the business in relation to expectations, significant negative industry or economic trends and significant changes or planned changes in the use of the assets. If an impairment review is performed to evaluate a long-lived asset for recoverability, the Company compares forecasts of undiscounted cash flows expected to result from the use and eventual disposition of the long-lived asset to its carrying value. An impairment loss would be recognized when estimated undiscounted future cash flows expected to result from the use of an asset are less than its carrying amount. The impairment loss would be based on the excess of the carrying value of the impaired asset over its fair value, determined based on discounted cash flows. To date, the Company has not recorded any impairment losses on long-lived assets.

Segment Data

The Company manages its operations as a single segment for the purposes of assessing performance and making operating decisions. The Company's singular focus is identifying, developing and commercializing innovative and differentiated topical drugs to address significant unmet needs in dermatology. No revenue has been generated since inception, and all tangible assets are held in the United States.

Recently Issued and Adopted Accounting Pronouncements

In June 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-10, *Development Stage Entities*. The amendments in this update removed all incremental financial reporting requirements, including inception-to-date information and certain other disclosures currently required under GAAP, in the financial statements of development stage companies. The amendments are effective for annual reporting periods beginning after December 15, 2014 and interim reporting periods beginning after December 15, 2015. Early adoption is permitted. The Company elected to early adopt this guidance and, therefore, has not presented inception-to-date disclosures in its financial statements.

In August 2014, the FASB issued ASU 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*. The amendments in this update will explicitly require a company's management to assess an entity's ability to continue as a going concern, and to provide related footnote disclosures in certain circumstances. The new standard will be effective in the first annual period ending after December 15, 2016. Early application is permitted. The Company is currently evaluating the potential impact of the adoption of this standard, but believes its adoption will have no impact on its financial position, results of operations or cash flows.

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

3. Fair Value of Financial Assets and Liabilities

The following tables present information about the Company's assets and liabilities measured at fair value on a recurring basis and indicate the level of the fair value hierarchy utilized to determine such fair values:

	Fair Value Measurements as of December 31, 2013 Using:			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents	$ 9,465	$ —	$ —	$ 9,465
Marketable securities	—	4,538	—	4,538
	$ 9,465	$ 4,538	$ —	$ 14,003

	Fair Value Measurements as of December 31, 2014 Using:			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents	$ 10,012	$ —	$ —	$ 10,012
Marketable securities	—	5,891	—	5,891
	$ 10,012	$ 5,891	$ —	$ 15,903

	Fair Value Measurements as of June 30, 2015 Using:			
	Level 1	Level 2	Level 3	Total
		(unaudited)		
Assets:				
Cash equivalents	$ 9,716	$ —	$ —	$ 9,716
	$ 9,716	$ —	$ —	$ 9,716

As of December 31, 2013 and 2014 and June 30, 2015 (unaudited), the Company's cash equivalents, which were invested in money market funds, were valued based on Level 1 inputs. In determining the fair value of its corporate debt securities and U.S. government agency debt securities as of December 31, 2013 and 2014, the Company relied on quoted prices for identical securities in markets that are not active, a Level 2 input. These quoted prices were obtained by the Company with the assistance of a third-party pricing service based on available trade, bid and other observable market data for identical securities. Quarterly, the Company compares the quoted prices obtained from the third-party pricing service to other available independent pricing information to validate the reasonableness of the quoted prices provided. The Company evaluates whether adjustments to third-party pricing is necessary and, historically, the Company has not made adjustments to quoted prices obtained from the third-party pricing service. During the years ended December 31, 2013 and 2014 and the six months ended June 30, 2015 (unaudited), there were no transfers between Level 1, Level 2 and Level 3.

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

3. Fair Value of Financial Assets and Liabilities (Continued)

As of December 31, 2013 and 2014, the fair value of the Company's available-for-sale marketable securities by type of security was as follows:

	December 31, 2013			
	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss	Fair Value
Marketable securities:				
Corporate debt securities	$ 3,734	$ 2	$ —	$ 3,736
U.S. government agency debt securities	801	1	—	802
	$ 4,535	$ 3	$ —	$ 4,538

	December 31, 2014			
	Amortized Cost	Gross Unrealized Gain	Gross Unrealized Loss	Fair Value
Marketable securities:				
Corporate debt securities	$ 5,096	$ —	$ (6)	$ 5,090
U.S. government agency debt securities	801	—	—	801
	$ 5,897	$ —	$ (6)	$ 5,891

As of December 31, 2013 and 2014, the Company's corporate debt securities had credit ratings of A and above and remaining maturities of less than 10 months and less than 13 months, respectively. The Company had no marketable securities as of June 30, 2015 (unaudited).

4. Property and Equipment, Net

Property and equipment, net consisted of the following:

	December 31,		
	2013	2014	June 30, 2015 (unaudited)
Computer equipment	$ 34	$ 36	$ 38
Manufacturing equipment	—	—	578
Construction in progress	—	506	77
	34	542	693
Less: Accumulated depreciation	(15)	(27)	(52)
	$ 19	$ 515	$ 641

Depreciation expense was $11 and $12 for the years ended December 31, 2013 and 2014, respectively, and $6 and $25 for the six months ended June 30, 2014 and 2015 (unaudited), respectively. Construction in progress as of December 31, 2014 consisted of manufacturing equipment, which was placed into service in 2015.

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

5. Accrued Expenses

Accrued expenses consisted of the following:

	December 31, 2013	December 31, 2014	June 30, 2015 (unaudited)
Payroll and payroll-related costs	$ —	$ —	$ 322
Clinical trial expenses	—	163	101
Other	14	25	44
	$ 14	$ 188	$ 467

6. Redeemable Convertible Preferred Stock

The Company has issued Series A and Series B redeemable convertible preferred stock (collectively, the "Redeemable Preferred Stock"). The Redeemable Preferred Stock is classified outside of stockholders' equity (deficit) because the shares contain redemption features that are not solely within the control of the Company. As of December 31, 2013 and 2014 and June 30, 2015 (unaudited), the Company's certificate of incorporation, as amended and restated, authorized the Company to issue 20,890,000 shares, 34,090,000 shares and 34,090,000 shares, respectively, of $0.00001 par value preferred stock.

In September 2014, the Company entered into a stock purchase agreement pursuant to which the Company agreed to sell to the investors an initial issuance (the "First Tranche") of 6,451,057 shares of Series B redeemable convertible preferred stock at $1.65 per share for gross proceeds of $10,644. Per the terms of that stock purchase agreement, upon the successful attainment of two specified milestones, the Company may call a second tranche of 6,451,057 shares of Series B redeemable convertible preferred stock at $1.65 per share (the "purchased put option"). The Company has the right, but not the obligation, to exercise its purchased put option after successful attainment of the specified milestones as confirmed by a vote of five-sixths of the members of the Company's board of directors and 60% of voting stockholders of the Company. The two milestones relate to (i) the successful achievement of the primary efficacy endpoint and demonstrated safety of a specified Phase 2b clinical trial of A-101 in patients with SK, and (ii) the occurrence of an end-of-Phase 2 meeting with the U.S. Food and Drug Administration ("FDA"), as a result of which the FDA has not raised any objection to the Company proceeding to a Phase 3 clinical trial of A-101 in patients with SK. Upon the closing of a qualified initial public offering, the Company will amend its certificate of incorporation to eliminate all authorized shares of Series A and Series B redeemable preferred stock, which will eliminate the Company's purchased put option.

In connection with the initial issuance of Series B redeemable convertible preferred stock in September 2014, the Company recorded the First Tranche transaction, net of issuance costs of $60, and the $1,039 issuance-date fair value of the purchased put option. The purchased put option was recorded as a charge to accumulated deficit within stockholders' deficit and as an increase to the carrying value of Series B redeemable convertible preferred stock based on the Company's conclusion that the purchased put option met the equity classification criteria at time of issuance as the purchased put option (i) is a freestanding financial instrument that does not require the Company to issue shares that are potentially redeemable and (ii) requires gross physical settlement in all circumstances.

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

6. Redeemable Convertible Preferred Stock (Continued)

The fair value of the purchased put option was determined on the date of its issuance using the Black-Scholes option-pricing model with the following assumptions and inputs: risk-free interest rate of 0.08%, expected term of nine months, expected volatility of 80.0%, no expected dividends and fair value of underlying instruments of $1.65. The fair value calculation also included an estimate of a 60% probability of occurrence of the successful attainment of the specified milestones that trigger the Company's ability to exercise the purchased put option, as well as an estimate of a 60% probability of the Company exercising the purchased put option, if it became exercisable.

Redeemable Preferred Stock consisted of the following:

	December 31, 2013				
	Preferred Shares Authorized	Preferred Shares Issued and Outstanding	Carrying Value	Liquidation Preference	Common Stock Issuable Upon Conversion
Series A redeemable convertible preferred stock	20,890,000	20,890,000	$ 23,000	$ 23,169	20,890,000
	20,890,000	20,890,000	$ 23,000	$ 23,169	20,890,000

	December 31, 2014				
	Preferred Shares Authorized	Preferred Shares Issued and Outstanding	Carrying Value	Liquidation Preference	Common Stock Issuable Upon Conversion
Series A redeemable convertible preferred stock	20,890,000	20,890,000	$ 24,879	$ 25,023	20,890,000
Series B redeemable convertible preferred stock	13,200,000	6,451,057	11,798	10,859	6,451,057
	34,090,000	27,341,057	$ 36,677	$ 35,882	27,341,057

	June 30, 2015 (unaudited)				
	Preferred Shares Authorized	Preferred Shares Issued and Outstanding	Carrying Value	Liquidation Preference	Common Stock Issuable Upon Conversion
Series A redeemable convertible preferred stock	20,890,000	20,890,000	$ 25,860	$ 25,992	20,890,000
Series B redeemable convertible preferred stock	13,200,000	6,451,057	12,150	11,283	6,451,057
	34,090,000	27,341,057	$ 38,010	$ 37,275	27,341,057

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

6. Redeemable Convertible Preferred Stock (Continued)

The holders of the Redeemable Preferred Stock have the following rights and preferences:

Dividends

The holders of Redeemable Preferred Stock are entitled to receive, on a *pari passu* basis, cumulative dividends, in cash, at the rate of 8% per year on the applicable Original Issue Price (as defined below) and accrued but unpaid dividends. Dividends accrue on a daily basis, whether or not earned or declared, irrespective of the availability of profits or surplus and compound annually on the anniversary of the date of original issuance. Dividends on the Redeemable Preferred Stock are payable upon redemption of the Redeemable Preferred Stock or upon liquidation. The Original Issue Price for Series A and Series B redeemable convertible preferred stock is $1.00 and $1.65, respectively, per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or recapitalization affecting the Redeemable Preferred Stock.

Liquidation Preference

In the event of any liquidation dissolution or winding up of the Company, either voluntary or involuntary, or in the event of Deemed Liquidation Event (as defined below), holders of Redeemable Preferred Stock are entitled to receive, in preference to all other stockholders, and to the extent available, an amount equal to the Original Issue Price, adjusted for any stock dividends, stock splits or recapitalizations, plus any accruing dividend accrued but unpaid, whether or not earned or declared. In the event that proceeds are not sufficient to permit payment in full to these holders, the proceeds will be ratably distributed among the holders of Redeemable Preferred Stock on a *pari passu* basis to the full preferential amount each such holder is otherwise entitled to receive.

After payments have been made in full to the holders of Redeemable Preferred Stock, then, to the extent available, holders of the common stock and Redeemable Preferred Stock are entitled to participate in the distribution of the remaining assets, pro rata based on the number of shares of common stock held by each (on an as-converted to common basis).

Unless the holders of at least 60% of the then outstanding shares of the Redeemable Preferred Stock, voting together as a single class on an as-converted basis, elect otherwise, a Deemed Liquidation Event shall include a merger or consolidation (other than one in which stockholders of the Company own a majority by voting power of the outstanding shares of the surviving or acquiring corporation) or a sale, lease, transfer, exclusive license or other disposition of all or substantially all of the assets of the Company.

Conversion

Each share of Redeemable Preferred Stock is convertible into common stock at the option of the stockholder at any time after the date of issuance. Each share of the Redeemable Preferred Stock will be converted into shares of common stock, at the applicable conversion ratio of each series of Redeemable Preferred Stock then in effect, upon the earlier of (i) a qualified public offering with net proceeds of not less than $50,000 and a price of not less than $4.95 per share, subject to appropriate adjustment for any stock dividend, stock split, combination or other similar recapitalization, and (ii) the date specified by written consent or agreement of the holders of 60% of the then-outstanding shares of Series A redeemable convertible preferred stock and the holders of 60% of the then-outstanding shares of Series B redeemable convertible preferred stock.

The conversion ratio of each series of Redeemable Preferred Stock is determined by dividing the Original Issue Price of each series of preferred stock by the Conversion Price of each series. The Conversion Price of

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

6. Redeemable Convertible Preferred Stock (Continued)

each series is $1.00 for Series A and $1.65 for Series B and is subject to adjustment as set forth in the Company's certificate of incorporation, as amended and restated. As of December 31, 2014 and June 30, 2015 (unaudited), all outstanding shares of Series A and Series B redeemable convertible preferred stock were convertible into common stock on a one-for-one basis.

Redemption

At the written election of the holders of at least 60% of the outstanding Series A redeemable convertible preferred stock, voting together as a single class, the shares of Series A redeemable convertible preferred stock outstanding shall be redeemed at any time on or after September 30, 2019, in three annual installments commencing sixty days after receipt of the required vote, at the Original Issue Price per share of Series A redeemable convertible preferred stock plus all accruing dividends accrued thereon, whether or not declared, together with any other dividends declared but unpaid thereon.

At the written election of the holders of at least 60% of the outstanding Series B redeemable convertible preferred stock, voting together as a single class, the shares of Series B redeemable convertible preferred stock outstanding shall be redeemed at any time on or after September 30, 2019, in three annual installments commencing sixty days after receipt of the required vote, at the Original Issue Price per share of Series B redeemable convertible preferred stock plus all accruing dividends accrued thereon, whether or not declared, together with any other dividends declared but unpaid thereon.

The Company shall redeem the shares on a pro rata basis in accordance with the number of shares of Series A or Series B redeemable convertible preferred stock held by each stockholder. No shares of Series A redeemable convertible preferred stock shall be redeemed so long as any shares of Series B redeemable convertible preferred stock remain issued and outstanding.

The carrying values of the Series A and Series B redeemable convertible preferred stock are being accreted to their redemption values through September 30, 2019.

Voting Rights

The holders of Redeemable Preferred Stock are entitled to vote, together with the holders of common stock, on all matters submitted to stockholders for a vote. Holders of Redeemable Preferred Stock have the right to vote the number of shares equal to the number of shares of common stock into which such Redeemable Preferred Stock could convert on the record date for determination of stockholders entitled to vote. The holders of the majority of Redeemable Preferred Stock, voting separately as a class, are entitled to elect three directors of the Company.

7. Stockholders' Equity (Deficit)

Common Stock

As of December 31, 2013 and 2014 and June 30, 2015 (unaudited), the Company's certificate of incorporation, as amended and restated, authorized the Company to issue 41,000,000 shares, 77,000,000 shares and 77,000,000 shares, respectively, of $0.00001 par value common stock.

Each share of common stock entitles the holder to one vote on all matters submitted to a vote of the Company's stockholders. Common stockholders are entitled to receive dividends, as may be declared by the board of directors, if any, subject to the preferential dividend rights of the Redeemable Preferred Stock. When dividends are declared on shares of common stock, the Company must declare at the same time a dividend payable to the holders of Redeemable Preferred Stock equivalent to the dividend amount they

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

7. Stockholders' Equity (Deficit) (Continued)

would receive if each preferred share were converted into common stock. The Company may not pay dividends to common stockholders until all dividends accrued or declared but unpaid on the Redeemable Preferred Stock have been paid in full. No dividends had been declared through June 30, 2015 (unaudited).

As of December 31, 2013 and 2014 and June 30, 2015 (unaudited), the Company had reserved 21,470,000 shares, 29,067,018 shares and 29,067,018 shares, respectively, for the conversion of the outstanding shares of Series A and Series B redeemable convertible stock (see Note 6) and the exercise of outstanding stock options and the number of shares remaining available for future grant under the Company's 2012 Plan (see Note 8).

Restricted Common Stock

The Company has granted restricted common stock with time-based vesting conditions. Unvested shares of restricted common stock may not be sold or transferred by the holder. These restrictions lapse according to the time-based vesting conditions of each award.

In July 2012, the Company issued 9,420,000 shares of common stock to its founders in connection with the Company's formation, of which 6,620,000 shares were subject to vesting pursuant to restricted stock agreements, with 25% of such shares vesting in July 2013 and the remaining 75% vesting in equal monthly installments over a three-year period thereafter. The estimated grant-date fair value of these restricted common shares was $0.00001 per share, equal to the par value of each share. As of December 31, 2013 and 2014 and June 30, 2015 (unaudited), 4,275,417 shares, 2,620,417 shares and 1,792,917 shares, respectively, were subject to repurchase.

The table below summarizes the Company's restricted stock activity since January 1, 2013:

	Number of Shares	Weighted Average Grant Date Fair Value Per Share
Unvested restricted common stock as of December 31, 2012	6,620,000	$ 0.00001
Vested	(2,344,583)	$ 0.00001
Unvested restricted common stock as of December 31, 2013	4,275,417	$ 0.00001
Vested	(1,655,000)	$ 0.00001
Unvested restricted common stock as of December 31, 2014	2,620,417	$ 0.00001
Vested	(827,500)	$ 0.00001
Unvested restricted common stock as of June 30, 2015 (unaudited)	1,792,917	$ 0.00001

The aggregate intrinsic value of restricted stock awards that vested during the years ended December 31, 2013 and 2014 and the six months ended June 30, 2014 and 2015 (unaudited) was $281, $488, $99 and $935, respectively.

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

8. Stock-Based Awards

2012 Equity Compensation Plan

The Company's 2012 Equity Compensation Plan, as amended and restated, (the "2012 Plan") provides for the Company to sell or issue common stock or restricted common stock, or to grant incentive stock options or nonqualified stock options for the purchase of common stock, to employees, members of the board of directors and consultants of the Company. The 2012 Plan is administered by the board of directors or, at the discretion of the board of directors, by a committee of the board. The exercise prices, vesting and other restrictions are determined at the discretion of the board of directors, or their committee if so delegated, except that the exercise price per share of stock options may not be less than 100% of the fair market value of the share of common stock on the date of grant and the term of stock options may not be greater than ten years. The Company generally grants stock-based awards with service conditions only ("service-based" awards).

Stock options granted under the 2012 Plan generally vest over four years and expire after ten years.

The total number of shares of common stock that may be issued under the 2012 Plan was 580,000 shares as of December 31, 2013, all of which shares remained available for future grant at December 31, 2013. On September 30, 2014, the Company effected an increase in the number of shares of common stock reserved for issuance under the 2012 Plan to 1,725,961 shares. The number of shares reserved for issuance under the 2012 Plan will be automatically increased to 1,980,708 shares upon the Company's exercise of the purchased put option (see Note 6). As of December 31, 2014 and June 30, 2015 (unaudited), no shares remained available for grant under the 2012 Plan.

As required by the 2012 Plan, the exercise price for stock options granted is not to be less than the fair value of common shares as determined by the Company as of the date of grant. The Company values its common stock by taking into consideration its most recently available valuation of common shares performed by management and the board of directors as well as additional factors which may have changed since the date of the most recent contemporaneous valuation through the date of grant.

Stock Option Valuation

The assumptions that the Company used to determine the fair value of the stock options granted to employees and directors were as follows, presented on a weighted average basis:

	Year Ended December 31, 2014	Six Months Ended June 30, 2014 (unaudited)
Risk-free interest rate	1.87%	1.84%
Expected term (in years)	6.4	6.1
Expected volatility	113.9%	121.7%
Expected dividend yield	0%	0%

The Company recognizes compensation expense for only the portion of awards that are expected to vest. For the year ended December 31, 2014 and the six months ended June 30, 2014 (unaudited), the Company applied an expected forfeiture rate of 0%.

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

8. Stock-Based Awards (Continued)

Stock Options

There were no stock options granted, exercised, forfeited or canceled during year ended December 31, 2013 or the six months ended June 30, 2015 (unaudited). The following table summarizes stock option activity under the 2012 Plan from January 1, 2014 through June 30, 2015 (unaudited):

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding as of December 31, 2013	—	$ —	—	$ —
Granted	1,725,961	0.35		
Exercised	—	—		
Forfeited and canceled	—	—		
Outstanding as of December 31, 2014	1,725,961	$ 0.35	9.77	$ 305
Granted	—	—		
Exercised	—	—		
Forfeited and canceled	—	—		
Outstanding as of June 30, 2015 (unaudited)	1,725,961	$ 0.35	9.27	$ 2,376
Options vested and expected to vest as of December 31, 2014	1,725,961	$ 0.35	9.77	$ 305
Options exercisable as of December 31, 2014	—(1)	$ —	—	$ —
Options vested and expected to vest as of June 30, 2015 (unaudited)	1,725,961	$ 0.35	9.27	$ 2,376
Options exercisable as of June 30, 2015 (unaudited)	63,750(1)	$ 0.12	8.58	$ 290

(1) All options granted to date under the 2012 Plan are exercisable immediately, subject to a repurchase right in the Company's favor that lapses as the option vests. This amount reflects the number of shares under options that were vested, as opposed to exercisable, as of December 31, 2014 or June 30, 2015 (unaudited).

The weighted average grant-date fair value of stock options granted during the year ended December 31, 2014 was $0.40 per share. The weighted average grant-date fair value of stock options granted during the six months ended June 30, 2014 (unaudited) was $0.10 per share.

The aggregate intrinsic value of stock options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's common stock for those stock options that had exercise prices lower than the fair value of the Company's common stock.

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

8. Stock-Based Awards (Continued)

Stock-Based Compensation

The Company recorded no stock-based compensation expense for the year ended December 31, 2013. For the year ended December 31, 2014 and the six months ended June 30, 2014 and 2015 (unaudited), the Company recorded stock-based compensation in the following expense categories of its statements of operations and comprehensive loss:

	Year Ended December 31, 2014	Six Months Ended June 30, 2014	Six Months Ended June 30, 2015
		(unaudited)	
Research and development	$ 10	$ 2	$ 27
General and administrative	17	—	58
	$ 27	$ 2	$ 85

As of December 31, 2014 and June 30, 2015 (unaudited), the Company had an aggregate of $670 and $576 of unrecognized stock-based compensation cost, which is expected to be recognized over weighted average periods of 3.78 years and 3.28 years, respectively.

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

9. Net Loss per Share and Unaudited Pro Forma Net Loss per Share

Net Loss per Share

Basic and diluted net loss per share attributable to common stockholders was calculated as follows:

	Year Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
			(unaudited)	
Numerator:				
Net loss	$ (5,236)	$ (8,517)	$ (3,263)	$ (5,217)
Accretion of redeemable convertible preferred stock to redemption value	(1,740)	(2,054)	(914)	(1,333)
Net loss attributable to common stockholders	$ (6,976)	$ (10,571)	$ (4,177)	$ (6,550)
Denominator:				
Weighted average shares of common stock outstanding	9,420,000	9,420,000	9,420,000	9,420,000
Less: Weighted average shares of unvested restricted common stock outstanding	(5,689,346)	(3,485,698)	(3,640,391)	(1,985,387)
Weighted average common shares outstanding used in calculating net loss per share attributable to common stockholders, basic and diluted	3,730,654	5,934,302	5,779,609	7,434,613
Net loss per share attributable to common stockholders, basic and diluted	$ (1.87)	$ (1.78)	$ (0.72)	$ (0.88)

The Company's potential dilutive securities, which include stock options, unvested restricted common stock and redeemable convertible preferred stock, have been excluded from the computation of diluted net loss per share as the effect would be to reduce the net loss per share. Therefore, the weighted average number of common shares outstanding used to calculate both basic and diluted net loss per share attributable to common stockholders is the same. The following potential common shares, presented based on amounts outstanding at each period end, were excluded from the calculation of diluted net loss per share

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

9. Net Loss per Share and Unaudited Pro Forma Net Loss per Share (Continued)

attributable to common stockholders for the periods indicated because including them would have had an anti-dilutive effect:

	Year Ended December 31,		Six Months Ended June 30,	
	2013	2014	2014	2015
			(unaudited)	
Stock options to purchase common stock	—	1,725,961	180,000	1,725,961
Unvested restricted common stock	4,275,417	2,620,417	3,447,917	1,792,917
Redeemable convertible preferred stock (as converted to common stock)	20,890,000	27,341,057	20,890,000	27,341,057
	25,165,417	31,687,435	24,517,917	30,859,935

Unaudited Pro Forma Net Loss per Share

The unaudited pro forma basic and diluted net loss per share attributable to common stockholders for the year ended December 31, 2014 and the six months ended June 30, 2015 gives effect to adjustments arising upon the closing of a qualified initial public offering. The unaudited pro forma net loss attributable to common stockholders used in the calculation of unaudited basic and diluted pro forma net loss per share attributable to common stockholders does not include the effects of the accretion of redeemable convertible preferred stock to redemption value because the calculation assumes that the conversion of redeemable convertible preferred stock into common stock had occurred on the later of January 1, 2014 or the issuance date of the redeemable convertible preferred stock.

The unaudited pro forma basic and diluted weighted average common shares outstanding used in the calculation of unaudited pro forma basic and diluted net loss per share attributable to common stockholders for the year ended December 31, 2014 and the six months ended June 30, 2015 give effect to the conversion upon a qualified initial public offering of all outstanding shares of Redeemable Preferred Stock as of December 31, 2014 and June 30, 2015 into 27,341,057 shares of common stock as if the conversion had occurred on the later of January 1, 2014 or the issuance date of the Redeemable Preferred Stock.

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

9. Net Loss per Share and Unaudited Pro Forma Net Loss per Share (Continued)

Unaudited pro forma basic and diluted net loss per share attributable to common stockholders was calculated as follows:

	Year Ended December 31, 2014	Six Months Ended June 30, 2015
	(unaudited)	
Numerator:		
Net loss attributable to common stockholders	$ (10,571)	$ (6,550)
Accretion of redeemable convertible preferred stock to redemption value	2,054	1,333
Pro forma net loss attributable to common stockholders	$ (8,517)	$ (5,217)
Denominator:		
Weighted average common shares outstanding, basic and diluted	5,934,302	7,434,613
Pro forma adjustment for assumed conversion of all outstanding shares of redeemable convertible preferred stock upon the closing of the proposed initial public offering	22,533,693	27,341,057
Pro forma weighted average common shares outstanding, basic and diluted	28,467,995	34,775,670
Pro forma net loss per share attributable to common stockholders, basic and diluted	$ (0.30)	$ (0.15)

10. Commitments and Contingencies

Assignment Agreement and Finder's Services Agreement

In August 2012, the Company entered into an assignment agreement with the Miller Estate under which it acquired intellectual property. The initial consideration paid by the Company during the year ended December 31, 2012 was $405. In November 2013, upon the achievement of a clinical milestone, the Company made a milestone payment of $200. These two payments were recorded as research and development expense during the years ended December 31, 2012 and 2013, respectively. In addition, the Company is obligated to pay royalties on sales of A-101 or related products at rates ranging in low single-digit percentages of net sales, as defined in the agreement. No royalty payments were made during the years ended December 31, 2013 or 2014 or the six months ended June 30, 2015 (unaudited) pursuant to the agreement.

In August 2012, the Company entered into a finder's services agreement with KPT Consulting, LLC ("KPT") to provide certain business development consulting services to the Company in connection with the intellectual property acquired by the Company under the assignment agreement. The initial consideration paid by the Company during the year ended December 31, 2012 was $200. In November 2013, upon the achievement of a milestone specified in the agreement, the Company paid an additional $200. These two payments were recorded as general and administrative expense during the years ended December 31, 2012 and 2013, respectively.

Under the finder's services agreement, the Company is obligated to make additional future milestone payments to KPT of up to $1,300 upon the achievement of specified pre-commercialization milestones,

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

10. Commitments and Contingencies (Continued)

such as clinical trials and regulatory approvals, as well as milestone payments of up to $4,500 upon the achievement of specified commercial milestones. In addition, the Company is obligated to pay royalties on sales of A-101 or related products at a low single-digit percentage of net sales, as defined in the agreement. No royalty payments were made during the years ended December 31, 2013 or 2014 or the six months ended June 30, 2015 (unaudited) pursuant to the agreement.

Both agreements will terminate upon the expiration of the last pending, viable patent claim of the patents acquired under the assignment agreement, but no sooner than 15 years from the effective date of the agreements.

Lease

In September 2012, the Company entered into a sublease agreement for its office space with related parties (see Note 12), which, as amended, has a term ending on November 30, 2016. Rent expense under operating leases was $71 and $66 for the years ended December 31, 2013 and 2014, respectively, and $33 and $52 for the six months ended June 30, 2014 and 2015 (unaudited), respectively. The Company recognizes rent expense on a straight-line basis over the lease period and has accrued for rent expense incurred but not yet paid. As part of the most recent amendment to the sublease agreement on December 2, 2014, the Company increased the amount of office space to be leased and, accordingly, agreed to new monthly lease terms commencing in January 2015.

As of December 31, 2014, future minimum lease payments under the sublease were as follows:

Years Ending December 31,	
2015	$ 104
2016	97
Total	$ 201

Indemnification Agreements

In the ordinary course of business, the Company may provide indemnification of varying scope and terms to vendors, lessors, business partners and other parties with respect to certain matters including, but not limited to, losses arising out of breach of such agreements or from intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with members of its board of directors that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date, the Company has not incurred any material costs as a result of such indemnifications. The Company does not believe that the outcome of any claims under indemnification arrangements will have a material effect on its financial position, results of operations or cash flows, and it has not accrued any liabilities related to such obligations in its financial statements as of December 31, 2013 or 2014 or June 30, 2015 (unaudited).

Supply Agreement

In January 2015, the Company executed a clinical and commercial supply agreement with a third party for the manufacture and assembly of certain components for the product applicator that the Company intends to use to dispense A-101 in Phase 3 clinical trials and for the commercial drug product. The agreement has a term of three years and automatically renews for consecutive one-year terms. If the agreement is

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

10. Commitments and Contingencies (Continued)

terminated by the Company without cause or by the third party for cause prior to the FDA's approval of A-101, the Company will owe a termination fee equal to $375. If the agreement is terminated by the Company without cause or by the third party for cause after the FDA approval of A-101, the Company will owe a termination fee equal to $275. The Company's obligation to pay the termination fee expires after the third anniversary date of the FDA's approval of A-101.

11. Income Taxes

During the years ended December 31, 2013 and 2014 and the six months ended June 30, 2014 and 2015 (unaudited), the Company recorded no income tax benefits for the net operating losses incurred in each year, due to its uncertainty of realizing a benefit from those items.

A reconciliation of the U.S. federal statutory income tax rate to the Company's effective income tax rate is as follows:

	Year Ended December 31,	
	2013	2014
Federal statutory income tax rate	(34.0)%	(34.0)%
Research and development tax credits	(1.6)	(1.0)
State taxes, net of federal benefit	(6.6)	(6.6)
Change in deferred tax asset valuation allowance	42.2	41.6
Effective income tax rate	0.0%	0.0%

Net deferred tax assets as of December 31, 2013 and 2014 consisted of the following:

	December 31,	
	2013	2014
Deferred tax assets:		
Net operating loss carryforwards	$ 2,289	$ 5,606
Research and development tax credit carryforwards	113	203
Capitalized research and development expenses	501	620
Stock-based compensation expenses	—	11
Other	—	4
Total deferred tax assets	2,903	6,444
Deferred tax liabilities:		
Other	(4)	—
Total deferred tax liabilities	(4)	—
Valuation allowance	(2,899)	(6,444)
Net deferred tax assets	$ —	$ —

As of December 31, 2014, the Company had federal and state net operating loss carryforwards of $13,810 and $13,810, respectively, both of which begin to expire in 2032. As of December 31, 2014, the Company

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

11. Income Taxes (Continued)

also had federal research and development tax credit carryforwards of $203, which begin to expire in 2032, and the Company had no state research and development tax credit carryforwards. During the six months ended June 30, 2015 (unaudited), gross deferred assets increased by approximately $2,100 due to the operating loss incurred by the Company during the period. Utilization of the net operating loss carryforwards and research and development tax credit carryforwards may be subject to a substantial annual limitation under Section 382 of the Internal Revenue Code of 1986 due to ownership changes that have occurred previously or that could occur in the future. These ownership changes may limit the amount of carryforwards that can be utilized annually to offset future taxable income. In general, an ownership change, as defined by Section 382, results from transactions increasing the ownership of certain shareholders or public groups in the stock of a corporation by more than 50% over a three-year period. The Company has not conducted a study to assess whether a change of control has occurred or whether there have been multiple changes of control since inception due to the significant complexity and cost associated with such a study. If the Company has experienced a change of control, as defined by Section 382, at any time since inception, utilization of the net operating loss carryforwards or research and development tax credit carryforwards would be subject to an annual limitation under Section 382, which is determined by first multiplying the value of the Company's stock at the time of the ownership change by the applicable long-term tax-exempt rate, and then could be subject to additional adjustments, as required. Any limitation may result in expiration of a portion of the net operating loss carryforwards or research and development tax credit carryforwards before utilization. Further, until a study is completed and any limitation is known, no amounts are being presented as an uncertain tax position.

The Company has evaluated the positive and negative evidence bearing upon its ability to realize the deferred tax assets. Management has considered the Company's history of cumulative net losses incurred since inception and its lack of commercialization of any products or generation of any revenue from product sales since inception and has concluded that it is more likely than not that the Company will not realize the benefits of the deferred tax assets. Accordingly, a full valuation allowance has been established against the deferred tax assets as of December 31, 2013 and 2014 and June 30, 2015 (unaudited). Management reevaluates the positive and negative evidence at each reporting period.

Changes in the valuation allowance for deferred tax assets during the years ended December 31, 2013 and 2014 related primarily to the increases in net operating loss carryforwards and research and development tax credit carryforwards and were as follows:

	Year Ended December 31,	
	2013	2014
Valuation allowance at beginning of year	$ (690)	$ (2,899)
Decreases recorded as benefit to income tax provision	—	—
Increases recorded to income tax provision	(2,209)	(3,545)
Valuation allowance as of end of year	$ (2,899)	$ (6,444)

The Company has not recorded any amounts for unrecognized tax benefits as of December 31, 2013 or 2014. The Company files tax returns as prescribed by the tax laws of the jurisdictions in which it operates. In the normal course of business, the Company is subject to examination by federal and state jurisdictions, where applicable. There are currently no pending income tax examinations. The Company's tax years are still open under statute from 2012 to the present. All open years may be examined to the extent that tax credit or net operating loss carryforwards are used in future periods. The Company's policy is to record interest and penalties related to income taxes as part of its income tax provision.

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

12. Related Party Transactions

In September 2012, the Company entered into a sublease agreement for its leased office space in Malvern, Pennsylvania with Ceptaris Therapeutics ("Ceptaris"), a company that was acquired in September 2013. Upon the acquisition, the Company terminated the sublease agreement with Ceptaris and entered into a direct sublease agreement with NeXeption, Inc. ("NeXeption") for the leased space. A member of the Company's board of directors was an executive officer of Ceptaris and is a current executive officer of NeXeption. Total payments made during the years ended December 31, 2013 and 2014 and the six months ended June 30, 2014 and 2015 (unaudited) under these sublease agreements were $68, $66, $33 and $52, respectively (see Note 10).

In November 2012, the Company entered into a services agreement with Ceptaris under which Ceptaris provided certain professional services, administrative support and office services to the Company. In September 2013, Ceptaris terminated the agreement in accordance with its terms. In September 2013, the Company entered into a second services agreement with Ceptaris under which Ceptaris provided certain pharmaceutical development and management services to the Company. In December 2013, Ceptaris terminated the agreement in accordance with its terms, effective February 4, 2014. Total payments made to Ceptaris in connection with these agreements during the years ended December 31, 2013 and 2014 and the six months ended June 30, 2014 and 2015 (unaudited) were $166, $10, $10 and $0, respectively. As of December 31, 2013, there was $8 included in accounts payable to Ceptaris.

In February 2014, the Company entered into a services agreement with NST, LLC ("NST") under which NST provides certain pharmaceutical development, management and other administrative services to the Company. Certain officers of the Company are also founding partners of NST. Under the same agreement, the Company also provides services to NST and is reimbursed for those services. The Company may offset any payments owed by the Company to NST against payments that are owed by NST to the Company for the provision of NST personnel, including consultants, to the Company. During the year ended December 31, 2014 and six months ended June 30, 2014 and 2015 (unaudited), gross expenses incurred by the Company under the services agreement totaled $467, $239 and $253, respectively, and gross expenses charged to NST by the Company totaled $413, $207 and $244, respectively. For the year ended December 31, 2014 and six months ended June 30, 2014 and 2015 (unaudited), the Company recorded $309, $159 and $136, respectively, of general and administrative expenses and $255, $127 and $127, respectively, as a reduction of research and development expenses related to these transactions. During the year ended December 31, 2014 and six months ended June 30, 2014 and 2015 (unaudited), payments made to NST by the Company totaled $131, $32 and $16, respectively, and receipts received from NST by the Company totaled $77, $0 and $0, respectively. Related to this agreement, no amounts were due to or due from NST at December 31, 2014, and $7 was due from NST to the Company at June 30, 2015 (unaudited).

13. 401(k) Savings Plan

The Company has a defined contribution savings plan under Section 401(k) of the Internal Revenue Code. This plan covers substantially all employees who meet minimum age and service requirements and allows participants to defer a portion of their annual compensation on a pre-tax basis. Company contributions to the plan may be made at the discretion of the Company's board of directors. The Company has elected to match employee contributions to the 401(k) Plan of up to 100% of the employee's first 3% of earnings plus up to 50% of the next 2% of earnings, subject to certain limitations. Company contributions under the

ACLARIS THERAPEUTICS, INC.

NOTES TO FINANCIAL STATEMENTS (Continued)

(Amounts in thousands, except share and per share data)

13. 401(k) Savings Plan (Continued)

401(k) Plan were $51 and $60 for the year ended December 31, 2013 and 2014, respectively, and $32 and $42 for the six months ended June 30, 2014 and 2015 (unaudited), respectively.

14. Subsequent Events

For its financial statements as of December 31, 2014 and for the year then ended, the Company evaluated subsequent events through April 2, 2015, the date on which those financial statements were issued.

15. Subsequent Events (unaudited)

For its financial statements as of June 30, 2015 and for the six months then ended, the Company evaluated subsequent events through August 17, 2015, the date on which those financial statements were issued.

Amendment of Lease for Office Space

On August 14, 2015, the Company amended its operating lease agreement for office space (see Note 10) to increase the square footage of the space and to extend the term of the lease to November 2019. Minimum lease payments due under the amended lease are $128 during the year ending December 31, 2015, $193 during the year ending December 31, 2016, $198 during of the year ending December 31, 2017, $202 during the year ending December 31, 2018 and $189 during the year ending December 31, 2019.

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Shares

Aclaris Therapeutics, Inc.

Common Stock

Preliminary Prospectus

Jefferies

Citigroup

William Blair

, 2015

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth all costs and expenses, other than underwriting discounts and commissions, payable by us in connection with the sale of the common stock being registered. All amounts shown are estimates except for the SEC registration fee, the Financial Industry Regulatory Authority, or FINRA, filing fee and The NASDAQ Global Market initial listing fee.

	Amount to be Paid
SEC registration fee	$ 10,022
FINRA filing fee	13,438
NASDAQ Global Market initial listing fee	*
Printing and engraving expenses	*
Legal fees and expenses	*
Accounting fees and expenses	*
Transfer agent and registrar fees and expenses	*
Miscellaneous fees and expenses	*
Total	$ *

* To be filed by amendment.

Item 14. Indemnification of Directors and Officers.

We are incorporated under the laws of the State of Delaware. Section 102 of the Delaware General Corporation Law permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit.

Section 145 of the Delaware General Corporation Law provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he is or is threatened to be made a party by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification will be made with respect to any claim, issue or matter as to which such person will have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court may deem proper.

As permitted by the Delaware General Corporation Law, our amended and restated certificate of incorporation and bylaws to be in effect upon the closing of this offering will provide that: (i) we are

required to indemnify our directors to the fullest extent permitted by the Delaware General Corporation Law; (ii) we may, in our discretion, indemnify our officers, employees and agents as set forth in the Delaware General Corporation Law; (iii) we are required, upon satisfaction of certain conditions, to advance all expenses incurred by our directors in connection with certain legal proceedings; (iv) the rights conferred in the bylaws are not exclusive; and (v) we are authorized to enter into indemnification agreements with our directors, officers, employees and agents.

We have entered into indemnification agreements with each of our directors, and we expect to enter into indemnification agreements with each of our executive officers. These indemnification agreements require us to indemnify the officer or director against expenses, judgments, fines, settlements and other amounts that any such person becomes legally obligated to pay (including with respect to a derivative action) in connection with any proceeding, whether actual or threatened, to which such person may be made a party by reason of the fact that such person is or was a director or officer of us or any of our affiliates, provided such person acted in good faith and in a manner such person reasonably believed to be in, or not opposed to, our best interests. The indemnification agreements also set forth certain procedures that will apply in the event of a claim for indemnification thereunder. We intend to enter into similar indemnification agreements with our executive officers in connection with this offering. At present, no litigation or proceeding is pending that involves any of our directors or officers regarding which indemnification is sought, nor are we aware of any threatened litigation that may result in claims for indemnification.

We maintain a directors' and officers' liability insurance policy. The policy insures directors and officers against unindemnified losses arising from certain wrongful acts in their capacities as directors and officers and reimburses us for those losses for which we have lawfully indemnified the directors and officers. The policy contains various exclusions.

In addition, the underwriting agreement filed as Exhibit 1.1 to this Registration Statement provides for indemnification by the underwriters of us and our officers and directors for certain liabilities arising under the Securities Act, or otherwise. Our investors' rights agreement with certain investors also provides for cross-indemnification in connection with the registration of our common stock on behalf of such investors.

Item 15. Recent Sales of Unregistered Securities.

Issuances of Capital Stock

The following list sets forth information regarding all unregistered securities sold by us since January 1, 2012 through the date of the prospectus that forms a part of this registration statement.

1) In July 2012, we issued an aggregate of 9,420,000 shares of our common stock to 14 investors at a purchase price of $0.00001 per share, for aggregate consideration of $94.

2) In August 2012, we issued an aggregate of 20,890,000 shares of our Series A redeemable convertible preferred stock to 31 investors at a purchase price of $1.00 per share, for aggregate consideration of $20.9 million.

3) In September 2014, we issued an aggregate of 6,451,057 shares of our Series B redeemable convertible preferred stock to 25 investors at a purchase price of $1.65 per share, for aggregate consideration of $10.6 million.

The offers, sales and issuances of the securities described in the paragraphs above were exempt from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act. Each of the purchasers represented to us that they acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the securities issued in these transactions. The purchasers also represented to us that they were accredited investors as defined in Rule 501 promulgated under the Securities Act.

Stock Option Grants

From January 1, 2012 through the date of the prospectus that is a part of this registration statement, we have granted options under our 2012 equity compensation plan to purchase an aggregate of 1,725,961 shares of our common stock to employees, consultants and directors, having exercise prices ranging from $0.12 to $0.44 per share. We have not issued any shares of our common stock upon the exercise of stock options.

The offers, sales and issuances of the securities described in the foregoing paragraph were exempt from registration under Rule 701 promulgated under the Securities Act in that the transactions were under compensatory benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of such securities were our employees, directors or consultants and received the securities under our 2012 equity compensation plan. Appropriate legends were affixed to the securities issued in these transactions.

Item 16. Exhibits and Financial Statement Schedules.

The exhibits to the registration statement are listed in the Exhibit Index attached hereto and are incorporated by reference herein.

Item 17. Undertakings.

The undersigned Registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Malvern, Commonwealth of Pennsylvania, on the 17th day of August, 2015.

ACLARIS THERAPEUTICS, INC.

By: /s/ Neal Walker

Neal Walker
President and Chief Executive Officer

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Neal Walker, Kamil Ali-Jackson, Frank Ruffo and Brent B. Siler, and each of them, his true and lawful agent, proxy and attorney-in-fact, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to (i) act on, sign and file with the Securities and Exchange Commission any and all amendments (including post-effective amendments) to this registration statement together with all schedules and exhibits thereto and any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, together with all schedules and exhibits thereto, (ii) act on, sign and file such certificates, instruments, agreements and other documents as may be necessary or appropriate in connection therewith, (iii) act on and file any supplement to any prospectus included in this registration statement or any such amendment or any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and (iv) take any and all actions which may be necessary or appropriate to be done, as fully for all intents and purposes as he might or could do in person, hereby approving, ratifying and confirming all that such agent, proxy and attorney-in-fact or any of his substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Neal Walker Neal Walker	President, Chief Executive Officer and Director *(Principal Executive Officer)*	August 17, 2015
/s/ Frank Ruffo Frank Ruffo	Chief Financial Officer *(Principal Financial Officer and Principal Accounting Officer)*	August 17, 2015
/s/ Stephen A. Tullman Stephen A. Tullman	Chairman of the Board of Directors	August 17, 2015
/s/ Albert Cha, M.D., Ph.D. Albert Cha, M.D., Ph.D.	Director	August 17, 2015

Signature	Title	Date
/s/ Ketan Patel, M.D. Ketan Patel, M.D.	Director	August 17, 2015
/s/ Christopher Molineaux Christopher Molineaux	Director	August 17, 2015
/s/ Anand Mehra, M.D. Anand Mehra, M.D.	Director	August 17, 2015

EXHIBIT INDEX

Exhibit Number	Description of Document
1.1†	Form of Underwriting Agreement.
3.1	Second Amended and Restated Certificate of Incorporation, as currently in effect.
3.2†	Form of Certificate of Amendment of Certificate of Incorporation to be filed prior to the closing of this offering.
3.3†	Form of Amended and Restated Certificate of Incorporation to be effective upon the closing of this offering.
3.4	Bylaws, as currently in effect.
3.5†	Form of Amended and Restated Bylaws to be effective upon closing of this offering.
4.1†	Specimen stock certificate evidencing shares of Common Stock.
5.1†	Opinion of Cooley LLP as to legality.
10.1#	Clinical and Commercial Supply Agreement, by and between the Registrant and PeroxyChem LLC, dated as of August 6, 2014.
10.2#	Services Agreement, by and between the Registrant and NST, LLC, dated as of February 5, 2014, as amended on December 19, 2014 and August 11, 2015.
10.3#	Assignment Agreement, by and between the Registrant and Mickey J. Miller, II, as personal representative of the estate of Mickey J. Miller, dated as of August 20, 2012.
10.4#	Finder's Services Agreement, by and between the Registrant and KPT Consulting, LLC, dated as of August 25, 2012.
10.5	Amended and Restated Investors' Rights Agreement, dated as of September 30, 2014, by and among the Registrant and certain of its stockholders.
10.6	Amended and Restated Sublease, by and between the Registrant and NeXeption, Inc., dated as of March 3, 2014, as amended on December 2, 2014 and August 14, 2015.
10.7+	Amended and Restated 2012 Equity Compensation Plan, as currently in effect.
10.8+	Form of Stock Option Grant under Amended and Restated 2012 Equity Compensation Plan.
10.9+†	Form of 2015 Equity Incentive Plan.
10.10+†	Form of Stock Option Grant Notice and Stock Option Agreement under 2015 Equity Incentive Plan.
10.11+†	Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement under 2015 Equity Incentive Plan.
10.12	Form of Indemnification Agreement.
10.13+†	Form of Employment Agreement with Named Executive Officers to be effective upon the closing of this offering.
21.1	Subsidiaries of the Registrant.
23.1	Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm.

Exhibit Number	Description of Document
23.2†	Consent of Cooley LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included on signature page).

† To be filed by amendment.

+ Indicates management contract or compensatory plan.

Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment and have been separately filed with the Securities and Exchange Commission.

SECOND AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION

OF

ACLARIS THERAPEUTICS, INC.
(incorporated on July 13, 2012)

ACLARIS THERAPEUTICS, INC., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware, as it may be amended from time to time (the "General Corporation Law"), hereby certifies as follows:

1. The name of this corporation is Aclaris Therapeutics, Inc.

2. The original Certificate of Incorporation of this corporation was filed with the Secretary of State of the State of Delaware on July 13, 2012.

3. The Amended and Restated Certificate of Incorporation (the "Amended and Restated Certificate of Incorporation'') of this corporation was filed with the Secretary of State of the State of Delaware on August 30, 2012.

4. This Second Amended and Restated Certificate of Incorporation restates, integrates and amends the Amended and Restated Certificate of Incorporation of this corporation.

5. This Second Amended and Restated Certificate of Incorporation was duly adopted in accordance with the provisions of Sections 242 and 245 of the General Corporation Law, and the stockholders of this corporation have given their consent hereto in accordance with Section 228 of the General Corporation Law.

6. This corporation's Amended and Restated Certificate of Incorporation is hereby amended and restated in full so as to read as follows:

ARTICLE I

The name of this corporation is Aclaris Therapeutics, Inc. (the "Corporation").

ARTICLE II

The address of the Corporation's registered office in the State of Delaware is 1209 Orange Street, Wilmington, Delaware 19801, in the County of New Castle. The registered agent at this address is The Corporation Trust Company.

ARTICLE III

The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

ARTICLE IV

(A) **Classes of Stock**. The Corporation is authorized to issue two classes of stock to be designated, respectively, "Common Stock" and "Preferred Stack." The total number of shares which the Corporation is authorized to issue is One Hundred Eleven Million Ninety Thousand (111,090,000) shares, each with a par value of $.00001 per share. Seventy Seven Million (77,000,000) shares shall be Common Stock and Thirty Four Million Ninety Thousand (34,090,000) shares shall be Preferred Stock.

(B) **Rights; Preferences and Restrictions of Preferred Stock.**

The Preferred Stock authorized by this Second Amended and Restated Certificate of Incorporation (the "Restated Certificate") shall be designated as "Series A Preferred Stock", consisting of Twenty Million Eight Hundred Ninety Thousand (20,890,000) shares, and "Series B Preferred Stock", consisting of thirteen Million Two Hundred Thousand (13,200,000) shares. The rights, preferences, privileges, and restrictions granted to and imposed on the Series A Preferred Stock and Series B Preferred Stock are as set forth, below in this Article IV(B).

1. **Dividend Provisions.**

(a) The holders of shares of Series A Preferred Stock and Series B Preferred Stock shall be entitled to receive, on a *part passu* basis, out of funds legally available therefor, for each share of Series A Preferred Stock and Series B Preferred Stock, cumulative cash dividends at the annual rate of 8% of the Series A Accrued Value or Series B Accrued Value, as applicable (each as defined below), prior and in preference to any declaration or payment of any dividend to the holders of shares of Common Stock. Dividends on the Series A Preferred Stock and Series B Preferred Stock shall be payable by the Corporation's Board of Directors (the "Board of Directors") upon redemption or liquidation, shall be cumulative and Shall accrue daily from and after, but shall compound annually on each anniversary of, the date of original issuance of each share of Series A Preferred Stock or Series B Preferred Stock, as applicable, whether or not earned or declared and whether or not there are earnings or profits, surplus or other funds or assets of the Corporation legally available for the payment of dividends. If any accrued dividends have not been paid in cash on or prior to the date of redemption or liquidation, as applicable, the amount of such accrued dividend shall be included in the Series A Accrued Value or Series B Accrued Value, as applicable, as provided in the definition thereof.

"Series A Accrued Value" shall mean, with respect to each share of Series A Preferred Stock, the sum (as adjusted for stock dividends, stock splits, combinations, recapitalizations or other similar events affecting the Series A Preferred Stock) of (i) the original purchase price of the Series A Preferred Stock, plus (ii) an amount equal to any dividends on the Series A Preferred Stock, which, have accrued prior to the date of redemption or liquidation, as applicable, whether or not declared, and that have not been paid as of such date,

"Series B Accrued Value" shall mean, with respect to each share of Series B Preferred Stock, the sum (as adjusted for stock dividends, stock splits, combinations, recapitalizations or other similar events affecting the Series B Preferred Stock) of (i) the original purchase price of the Series B Preferred Stock, plus (ii) an amount equal to any dividends on the Series B Preferred

Stock, which have accrued prior to the date of redemption of liquidation, as applicable, whether or not declared, and that have not been paid as of such date.

(b) After payment of such dividends, any additional dividends shall be distributed among the holders of Series A Preferred Stock, Series B Preferred Stock and Common Stock *pro rata* baaed on the number of shares of Common Stock then held by each holder (assuming conversion of all such Series A Preferred Stock and Series B Preferred Stock into Common Stock).

2. **Liquidation.**

(a) **Preference.** In the event of any liquidation, dissolution or winding up of the Corporation, either voluntary or involuntary, the holders of the Series A Preferred Stock and Series B Preferred Stock shall be entitled to receive, on a *pari passu* basis and prior and in preference to any distribution of any of the assets of the Corporation to the holders of Common Stock by reason of their ownership thereof, an amount equal to (on a per share of Series A Preferred Stock and Series B Preferred Stock basis), the Series A Accrued Value or the Series B Accrued Value, as applicable. If, upon the occurrence of such event, the assets and funds thus distributed, among the holders of the Series A Preferred Stock and the Series B Preferred Stock shall be insufficient to permit the payment to such holders of the full aforesaid preferential amounts, the entire assets and funds of the Corporation legally available for distribution shall be distributed ratably among the holders of the Series A Preferred Stock and Series B Preferred Stock in proportion to the preferential amount each such holder is otherwise entitled to receive.

(b) **Remaining Assets.** Upon the completion of the distribution required by Section 2(a) above, if assets remain in the Corporation, the holders of the Common Stock and the Preferred Stock of the Corporation, shall receive all of the remaining assets of the Corporation which shall be distributed ratably among such holders in proportion to their respective number of issued and outstanding shares of Common Stock and Preferred Stock (on an as-converted basis) then held.

(c) **Certain Acquisitions.**

(i) **Deemed Liquidation.** For purposes of this Section 2, a liquidation, dissolution, or winding up of the Corporation shall be deemed to occur if the Corporation shall, in a transaction or series of related transactions, sell, convey, or otherwise dispose of all or substantially all of its property or business, grant an exclusive and irrevocable license of all or substantially all of the Corporation's intellectual property to a third party or merge with or into or consolidate with any other corporation, limited liability company or other entity (other than a wholly owned subsidiary of the Corporation), unless the holders of at least 50% of the then outstanding shares of Series A Preferred Stock and Series B Preferred Stock, voting together as a single class (on an as-converted basis), elect not to treat the transaction as a Liquidation Transaction by written notice sent to the Corporation within a reasonable period of time prior to the effective date of a Liquidation Transaction (any such transaction, a "Liquidation Transaction", unless elected otherwise), provided, however, that none of the following shall be considered a Liquidation Transaction: (A) a merger effected exclusively for the purpose of changing the domicile of the Corporation; (B) a bona fide equity financing for capital raising

purposes in which the Corporation is the surviving corporation; or (C) a transaction in which the stockholders of the Corporation existing immediately prior to the transaction own 50% or more of the voting stock of the surviving corporation following the transaction (taking into account only stock of the Corporation held by such stockholders prior to the transaction).

(ii) **Valuation of Consideration.** In the event of a Liquidation Transaction, as described in Section 2(c)(i) above, if the consideration received by the Corporation is other than cash, its value will be deemed its fair market value as determined in good faith by the Board of Directors (including one of the Preferred Directors as defined below), provided that any securities shall be valued as follows:

(A) Securities not subject to investment letter or other similar restrictions on free marketability:

(1) If traded on a securities exchange or The Nasdaq Stock Market ("Nasdaq"), the value shall be based on a formula approved by the Board of Directors and derived from the closing prices of the securities on such exchange or Nasdaq over a specified time period;

(2) If actively traded over-the-counter, the value shall be based on a formula approved by the Board of Directors and derived from the closing bid or sales prices (whichever is applicable) of such securities over a specified time period; and

(3) If there is no active public market, the value shall be the fair market value thereof, as determined in good faith by the Board of Directors.

(B) The method of valuation, of securities subject to: investment letter or other restrictions on free marketability (other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate) shall be to make on appropriate discount from the market value determined as specified above in Section 2(c)(ii)(1) to reflect the approximate fair market value thereof, as determined in good faith by the Board of Directors.

(iii) **Notice of Liquidation Transaction.** The Corporation shall give each holder of record of Series A Preferred Stock and Series B Preferred Stock written notice of any impending Liquidation Transaction not later than 10 days prior to the stockholders' meeting called to approve such Liquidation Transaction, or 10 days prior to the closing of such Liquidation Transaction, whichever is earlier, and shall also notify such holders in writing of the final approval of such Liquidation Transaction. The first of such notices shall describe the material terms and conditions of the impending Liquidation Transaction and the provisions of this Section 2, and the Corporation shall thereafter give such holders prompt notice of any material changes. Unless such notice requirements are waived, the Liquidation Transaction shall not take place sooner than 10 days after the Corporation has given the first notice provided for herein or sooner than 10 days after the Corporation has given notice of any material changes provided for herein. Notwithstanding the other provisions of this Restated Certificate, all notice periods or requirements in this Restated Certificate may be shortened or waived, either before or after the action for which notice is required, upon the written consent of the holders of at least . 60% of the Series A Preferred Stock that are entitled to such notice rights.

(iv) **Effect of Noncompliance.** In the event the requirements of this Section 2(c) are not complied with, the Corporation shall forthwith either cause the closing of the Liquidation Transaction to be postponed until the requirements of this Section 2 have been complied with, or cancel such Liquidation Transaction, in which event the rights, preferences, privileges and restrictions of the holders of Series A Preferred Stock and Series B Preferred Stock shall revert to and be the same as such rights, preferences, privileges and restrictions existing immediately prior to the date of the first notice referred to in Section 2(c)(iii).

3. **Redemption.**

(a) Redemption.

(i) Series A. Subject to Section 3 (a)(iii), shares of Series A Preferred Stock shall be redeemed by the Corporation out of funds lawfully available therefor at a price equal to the Series A Accrued Value (the "A Redemption Price"), in three annual installments commencing not more than 60 days after receipt by the Corporation at any time on or after September 30, 2019, from the holders of at least 60% of the then outstanding shares of Series A Preferred Stock, voting together as a single class, of written notice requesting redemption of all shares of Series A Preferred Stock, The date of each such installment shall be referred to as an "A Redemption Date". On each A Redemption Date, the Corporation shall redeem, on a pro *rata* basis in accordance with the number of shares of Series A Preferred Stock owned by each holder, that number of outstanding shares of Series A Preferred Stock determined by dividing (i) the total number of shares of Series A Preferred Stock outstanding immediately prior to such, A Redemption Date by (ii) the number of remaining A Redemption Dates (including the A Redemption Data to which such calculation applies). If the Corporation does not have sufficient funds legally available to redeem on any A Redemption Date all shares of Series A Preferred Stock to be redeemed on such Redemption Date, the Corporation shall redeem a *pra rata* portion of each holder's redeemable shares of such capital stock out of funds legally available therefor, based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the legally available funds were sufficient to redeem all such shares, and shall redeem the remaining shares to have been redeemed as soon as practicable after the Corporation has funds legally available therefor.

(ii) Series B. Shares of Series B Preferred Stock shall be redeemed by the Corporation out of funds lawfully available therefor at a price equal to the Series B Accrued Value (the "B Redemption Price"; and the A Redemption Price or B Redemption Price, as the context may require, the "Redemption Price"), in three annual installments commencing not more than 60 days after receipt by the Corporation at any time on or after September 30, 2019, from the holders of at least 60% of the then outstanding shares of Series B Preferred Stock, voting together as a single class, of written notice requesting redemption of all shares of Series B Preferred Stock. The date of each such installment shall be referred to as a "B Redemption Date" (and the A Redemption Date or B Redemption Date, as the context may require, a "Redemption Date"). On each B Redemption Date, the Corporation shall redeem, on a *pro rata* basis in accordance with the number of shares of Series B Preferred Stock owned by each holder, that number of outstanding shares of Series B Preferred Stock determined by dividing (i) the total number of shares of Series B Preferred Stock outstanding immediately prior to such Redemption Date by (ii) the number of remaining B Redemption Dates (including the B Redemption Date to which such calculation applies). If the Corporation does not have sufficient funds legally available to redeem on any B Redemption Date all shares of Series B Preferred

Stock to be redeemed on such B Redemption Date, the Corporation shall redeem a *pro rata* portion of each holder's redeemable shares of such capital stock out of funds legally available therefor, baaed on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the legally available funds were sufficient to redeem all such shares, and shall redeem the remaining shares to have been redeemed as soon as practicable after the Corporation has funds legally available therefor.

(iii) Notwithstanding anything else to the contrary in this Certificate, no shares of Series A Preferred Stock shall be redeemed so long as any shares of Series B Preferred Stock remain issued and outstanding.

(b) Redemption Notice. Subject to Section 3(a)(iii), the Corporation shall send written notice of the mandatory redemption (the "Redemption Notice") to each holder of record of Series A Preferred Stock or Series B Preferred Stock, as applicable, not less than 40 days prior to each applicable Redemption Date. Each Redemption Notice shall state:

(i) the number of Shares of Series A Preferred Stock or Series B Preferred Stock, as applicable, held by the holder that the Corporation shall redeem on the Redemption Date specified in the Redemption Notice;

(ii) the Redemption Date and the Redemption Price for each series of Preferred Stock held by the holder of record;

(iii) the date upon which the holder's right to convert such shares terminates (as determined in accordance with Section 4(a)); and

(iv) that the holder is to surrender to the Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares of Series A Preferred Stock or Series B Preferred Stock, as applicable, to be redeemed.

(c) Surrender of Certificates: Payment. On or before the applicable Redemption Date, each holder of shares of Series A Preferred Stock or Series B Preferred Stock, as applicable, to be redeemed on such Redemption Date, unless such holder has exercised his, her or its right to convert such shares as provided in Section 4, shall surrender the certificate or certificates representing such shares (or, if such registered holder alleges that such certificate has been, lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to Indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated in the Redemption Notice, and thereupon the Redemption Price for such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof. In the event less than all of the shares of Series A Preferred Stock or Series B Preferred Stock, as applicable, represented by a certificate are redeemed, a new certificate representing the Unredeemed shares of Series A Preferred Stock or Series B Preferred Stock, as applicable, shall promptly be issued to such holder.

(d) Rights Subsequent to Redemption. If the Redemption Notice shall have been duly given, and if on the applicable Redemption Date the Redemption Price payable upon redemption of the shares of Series A Preferred Stock or Series B Preferred Stock, as

applicable, to be redeemed On such Redemption Date is paid Of tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, then notwithstanding that the certificates evidencing any of the shares of Series A Preferred Stock or Series B Preferred Stock, as applicable, so called for redemption shall not have been surrendered, dividends with respect to such shares of Series A Preferred Stock or Series B Preferred Stock as applicable, shall cease to accrue after such Redemption Date and all rights with respect to such shares shall forthwith after the Redemption Date terminate, except only the right of the holders to receive the Redemption Price without interest upon surrender of their certificate or certificates therefor.

4. **Conversion.** The holders of the Preferred Stock shall have conversion rights as follows (the "Conversion Rights''):

(a) **Right to Convert.**

(i) Subject to Section 4(c), each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Original Issue Price (as defined below) by the Conversion Price (as defined below) in effect at the time of conversion. The "Original Issue Price" shall mean (x) in the case of the Series A Preferred Stock, $1,00 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock, and (y) in the case of the Series B Preferred Stock, $ 1.65 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock. The "Conversion Price" shall initially be equal to (x) in the case of the Series A Preferred Stock, $1.00 and (y) in the case of the Series B Preferred Stock, $1.65. Such initial Conversion Price, and the rate at which shares of Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as set forth in Section 4(d) hereof

(b) **Automatic Conversion.**

(i) Each share of Preferred Stock shall automatically be converted into shares of Common Stock at the applicable Conversion Price at the time in effect for such share immediately upon the earlier of (A) except as provided below in Section 4(c), immediately prior to the closing of the Corporation's sale of its Common Stock in a firm commitment underwritten public offering pursuant to a registration statement under the Securities Act of 1933, as amended (the "Securities Act"), the public offering price of which is not less than $4.95 per share (as adjusted for stock splits, stock dividends, reclassification and the like) and which results in aggregate cash proceeds to the Corporation of not less than $50 million (net of underwriting discounts and commissions) (a "Qualified IPO") or (B) the date specified by written consent or agreement of (x) the holders of 60% of the then outstanding shares of Series A Preferred Stock and (y) the holders of 60% of the then outstanding shares of Series B Preferred Stock.

(c) **Mechanics of Conversion.** Before any holder of Preferred Stock shall be entitled to convert such Preferred Stock into shares of Common Stock, the holder shall

surrender the certificate or certificates therefor, duly endorsed (or a reasonably acceptable affidavit and indemnity undertaking in the case of a lost, stolen or destroyed certificate), at the office of the Corporation or of any transfer agent for such series of Preferred Stock, and shall give written notice to the Corporation at its principal corporate office, of the election to convert the same and shall state therein the name or names in which the certificate or certificates for shares of Common Stock, are to be issued. The Corporation shall, as soon as practicable thereafter, issue and deliver at such office to such holder of Preferred Stock, or to the nominees or nominees of such holder, a certificate or certificates for the number of shares of Common Stock to which such holder shall be entitled as aforesaid and a certificate for the remaining number of shares of Preferred Stock if less than all of the Preferred Stock evidenced by the certificate were surrendered. Such conversion shall be deemed to have been made immediately prior to the close of business on (i) the date of such surrender of the shares of Preferred Stock to be converted or (ii) if applicable, the date of automatic conversion specified in Section 4(b) above, and the person or persons entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of public Common Stock as of such date. If the conversion is in connection with an underwritten public offering of securities registered pursuant to the Securities Act the conversion may, at the option of any holder tendering such Preferred Stock for conversion, be conditioned upon the closing with the underwriters of the sale of securities pursuant to such offering, in which event any persons entitled to receive Common Stock upon conversion of such Preferred Stock shall not be deemed to have converted such Preferred Stock until Immediately prior to the closing of such sale of securities.

(d) **Conversion Price Adjustments of Preferred Stock for Certain Dilutive Issuances, Splits and Combinations.** The Conversion Price of each share of Preferred Stock shall be subject to adjustment from time to time as follows:

(i) **Issuance of Additional Stock below Purchase Price.** If the Corporation should issue, at any tune after the date upon Which any shares of Preferred Stock were first issued (the "Purchase Date"), any Additional' Stock (as defined below) without consideration or for a consideration per share less than the applicable Conversion Price in effect immediately prior to the issuance of such Additional Stock, the applicable Conversion Price in effect immediately prior to each such issuances shall automatically be adjusted as set forth in this Section 4(d)(i), unless otherwise provided in this Section 4(d)(i).

(A) **Adjustment Formula.** Whenever the Conversion Price is adjusted pursuant to this Section (4)(d)(1), the new Conversion Price shall be determined by multiplying the applicable Conversion Price then in effect by a fraction, (x) the numerator of which shall be the number of shares of Common Stock outstanding immediately prior to such issuance (the "Outstanding Common") plus the number of shares of Common Stock that the aggregate consideration received by the Corporation for such issuance would purchase at such applicable Conversion Price; and (y) the denominator of which shall he the number of shares of Outstanding Common plus the number of shares of such Additional Stock. For purposes of the foregoing calculation, the term "Outstanding Common" shall include shares of Common Stock deemed issued pursuant to Section 4(d)(3)(E) below.

(B) **Definition of "Additional Stock".** For purposes of this Section 4(d)(i), "Additional Stock" shall mean any shares of Common Stock issued (or

deemed to have been issued pursuant to Section 4(d)(i)(E)) by the Corporation after the Purchase Date, other than the following securities, which shall hereinafter be referred to as "Exempt Securities":

(1) Common Stock issued pursuant to stock dividends, stock splits or similar transactions, as described in Section 4(d)(ii) hereof;

(2) Common Stock issued or issuable to employees, officers, consultants, advisors, or directors of the Corporation or other persons performing services for the Corporation, directly or pursuant to a stock option plan or arrangement, approved by the Board of Directors (including, as to the approval or amendment of any such plan or arrangement after August 30, 2012, one of the Preferred Directors);

(3) Capital stock, or options or warrants to purchase capital stock, issued to financial institutions or lessors in connection, with credit lines under arrangements, equipment leases, equipment financings, real property lease transactions, loans or similar transactions, the terms of which are approved by the Board of Directors (including one of the Preferred Directors);

(4) Capital stock, or warrants or options to purchase capital stock, issued in connection with bona fide acquisitions, mergers or similar transactions, the terms of which are approved by the Board of Directors (including one of the Preferred Directors);

(5) Shares of Common Stock issued or issuable upon conversion of the Preferred Stock, or as a dividend or distribution on the Preferred Stock;

(6) Common Stock issued or issuable in a public offering prior to or in connection with which all outstanding shares of Preferred Stock will be converted into Common Stock, as described in Section 4(b) above;

(7) Capital stock issued or issuable to an entity as a component of any business relationship with such entity for the purpose of (x) joint venture, technology licensing, sponsored research, collaboration, marketing or development activities; (y) distribution, supply or manufacture of the Corporation's products or services; or (z) any other arrangements involving corporate partners that are primarily for purposes other than raising capital, the terms of which business relationship with such entity are approved by the Board of Directors (including one of the Preferred Directors); and

(8) Capital stock issued or issuable upon the conversion, exercise or exchange of all debentures, warrants, options, or other convertible security outstanding on September 30,2014.

(C) **No Fractional Adjustments.** No adjustment of the applicable Conversion Price for the Preferred Stock shall be made in an amount less than one cent par share, provided that any adjustments which are not required to be made by reason of this sentence shall be carried forward and shall be either taken into account in any subsequent adjustment made prior to three years from the date of the event giving rise to the adjustment

being carried forward, or shall be made at the end of three years from the date of the event giving rise to the adjustment being carried forward.

(D) **Determination of Consideration.** In the case of the issuance of Common Stock for cash, the consideration shall be deemed to be the amount of cash paid therefor before deducting any reasonable discounts, commissions or other expenses allowed, paid or incurred by the Corporation for any underwriting or otherwise in connection with the issuance and sale thereof. In the case of the issuance of the Common Stock for a consideration in whole or in part other than cash, the consideration other than cash shall be deemed to he the fair value thereof as determined by the Board of Directors irrespective of any accounting treatment.

(E) **Deemed Issuances of Common Stock.** In the case of the issuance (whether before, on or after the applicable Purchase Date) of securities or rights convertible into, or entitling the holder thereof to receive directly or indirectly, additional shares of Common Stock (the "Common Stock Equivalents"), the following provisions shall apply for all purposes of this Section 4(d)(1):

(1) The aggregate maximum number of shares of Common Stock deliverable upon conversion, exchange or exercise (assuming the satisfaction of any conditions to convertibility, exchangeability or exercisability, including, without limitation, the passage of time, but without taking into account potential antidilution adjustments) of any Common Stock Equivalents and subsequent conversion, exchange ox exercise thereof shall be deemed to have been issued at the time such securities were issued or such Common Stock Equivalents were issued and for a consideration equal to the consideration, if any, received by the Corporation for any such securities and related Common Stock Equivalents (excluding any cash received on account of accrued interest or accrued dividends), plus the minimum additional consideration, if any, to be received by the Corporation (without taking into account potential antidilution adjustments) upon the conversion, exchange or exercise of any Common Stock Equivalents (the consideration in each case- to be determined in the manner provided in Section 4(d)(i)(D)).

(2) In the event of any change in the number of shares of Common Stock deliverable or in the consideration payable to the Corporation upon conversion, exchange or exercise of any Common Stock Equivalents, other than a change resulting from the antidilution provisions thereof, the applicable Conversion Price of the Preferred Stock, to the extent in any way affected by or computed using such Common Stock Equivalents, shall be recomputed to reflect such change, but no further adjustment shall be made for the actual issuance of Common Stock or any payment of such consideration upon the conversion, exchange or exercise of such Common Stock Equivalents.

(3) Upon the termination or expiration of the convertibility, exchangeability or exercisability of any Common Stock Equivalents, the applicable Conversion Price of the Preferred Stock, to the extent in any way affected by or computed using such Common Stock Equivalents, shall be recomputed to reflect the issuance of only the number of shares of Common Stock (and Common Stock Equivalents that remain convertible, exchangeable or exercisable) actually issued upon the conversion, exchange or exercise of such Common Stock Equivalents.

(4) The number of shares of Common Stock deemed issued and the consideration deemed paid therefor pursuant to Section 4(d)(i)(E)(1) shall be appropriately adjusted to reflect any change, termination of expiration of the type described in either Section 4(d)(i)(E)(2) or 4(d)(i)(E)(3).

(F) **No Increased Conversion Price.** Notwithstanding any other provisions of this Section (4)(d)(i), except to the limited extent provided for in Sections 4(d)(i)(E)(2) and 4(d)(i)(E)(3), no adjustment of the applicable Conversion Price pursuant to this Section 4(d)(1) shall

have the effect of increasing the applicable Conversion Price above the applicable Conversion Price in effect immediately prior to such adjustment.

(ii) **Stock Splits and Dividends.** In the event the Corporation should at any time after the Purchase Date fix a record date for the effectuation of a split or Subdivision of the outstanding shares of Common Stock or the determination of holders of Common Stock entitled to receive a dividend or other distribution payable in additional shares of Common Stock or Common Stock Equivalents without payment of any consideration by such holder for the additional shares of Common Stock or the Common Stock Equivalents (including the additional shares of Common Stock issuable upon conversion or exercise thereof) then, as of such record date (or the date of such dividend distribution, split or subdivision if no record date is fixed), the applicable Conversion Price of the Preferred Stock shall be appropriately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series Shall be increased in proportion to such increase of the aggregate of shares of Common Stock outstanding and those issuable with respect to such Common Stock Equivalents with the number of shares issuable with respect to Common Stock Equivalents determined from time to time in the manner provided for deemed issuances in Section 4(d)(i)(E).

(iii) **Reverse Stock Splits.** If the number of shares of Common Stock outstanding at any time after the Purchase Date is decreased by a combination of the outstanding shares of Common Stock, then, following the record date of such combination, the applicable Conversion Price for the Preferred Stock shall be appropriately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in outstanding shares.

(e) **Other Distributions.** In the event the Corporation shall declare a distribution (other than a subdivision, combination or merger or sale of assets transaction provided for elsewhere in this Section 4 or in Section 2 of this Article IV(B)) payable in securities of other persons, evidences of indebtedness issued by the Corporation or other persons, assets (excluding cash dividends) or options or rights not referred to in Section 4(d)(i) or 4(d)(ii), then, in each such case for the purpose of this Section 4(e), the holders of Preferred Stock shall be entitled to a proportionate share of any such distribution as though they were the holders of the number of shares of Common Stock of the Corporation into which their shares of Preferred Stock are convertible as of the record date fixed for the determination of the holders of Common Stock of the Corporation entitled to receive such distribution.

(f) **Recapitalizations.** If at any time or from time to time there shall be a recapitalization of the Common Stock (other than a subdivision, combination or merger or sale of assets transaction provided for elsewhere' in this Section 4 or in Section 2 of this Article IV(B)) provision shall be made so that the holders of Preferred Stock shall thereafter be

entitled to receive upon conversion of such Preferred Stock the number of shares of stock or other securities or property of the Corporation or otherwise, to which a holder of Common Stock deliverable upon conversion would have been entitled on such recapitalization. In any such case, appropriate adjustment shall be made in the application of the provisions of this Section 4 with respect to the rights of the holders of such Preferred Stock after the recapitalization to the end that the provisions of this Section. 4 (including adjustment of the applicable Conversion Price then in effect and the number of shares purchasable upon conversion of such Preferred Stock) shall be applicable after that event and be as nearly equivalent as practicable.

(g) **No Impairment.** The Corporation will not, through any reorganization, recapitalization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by the Corporation, but will at all times in good faith assist in the carrying out of all the provisions of this Section 4 and in the taking of all such action as may be necessary or appropriate in order to protect the Conversion Rights of the holders of Preferred Stock against impairment.

(h) **No Fractional Shares and Certificate as to Adjustments.**

(i) No fractional shares shall be issued upon the conversion of any share or shares of Preferred Stack, and the number of shares of Common Stock to be issued shall be rounded down to the nearest whole share. The number of shares issuable upon such conversion shall be determined on the basis of the total number of shares of Preferred Stock the holder is at the time converting into Common Stock and the number of shares of Common Stock issuable upon such aggregate conversion, If the conversion would result in any fractional share, the Corporation shall, in lieu of issuing any such fractional share pay the holder thereof an amount hi cash equal to the fair market value of such fractional share on the dale of conversion, as determined in good faith by the Board of Directors.

(ii) Upon the occurrence of each adjustment or readjustment of the applicable Conversion Price of the Preferred Stock pursuant to this Section 4, the Corporation, at its expense, shall promptly compute such adjustment or readjustment in accordance with the terms hereof and prepare and furnish to each holder of such Preferred Stock a certificate setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, upon the written request at any time of any holder of Preferred Stock, furnish or cause to be furnished to such holder a like certificate setting forth (A) such adjustment and readjustment, (B) the applicable Conversion Price for the Preferred Stock at the time in effect, and (C) the number of shares of Common Stock and the amount, if any., of other property which at the time would he received upon the conversion of a share of Preferred Stock.

(i) **Notices of Record Date.** In the event of any taking by the Corporation of a record of the holders of any class of securities for the purpose of determining the holders thereof who are entitled to receive any dividend (other than a cash dividend) or other distribution, any right to subscribe for, purchase or otherwise acquire any shares of Stock of any class or any other securities or property, or to receive any other right, the Corporation shall mail to each holder of Preferred stock, at least 10 days prior to the date specified therein, a notice

specifying the date on which any such record is to be taken for the purpose of such dividend, distribution or right, and the amount and character of such dividend, distribution or right,

(j) **Reservation of Stock Issuable Upon Conversion.** The Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of effecting the conversion of the shares of Preferred Stock, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion, of all outstanding shares of Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of Preferred Stock, in addition to such other remedies as shall be available to the holder of such Preferred Stock, the Corporation will take such corporate action as may, in the opinion of its

counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to this Restated Certificate.

(k) **Notices.** Any notice required by the provisions of this Section 4 to be given to the holders of shares of Preferred Stock shall he deemed given if deposited in the United States mail, postage prepaid, and addressed to each holder of record at his address appearing on the books of the Corporation.

5. **[Reserved]**

6. **Voting Rights.**

(a) Except as expressly provided by this Restated Certificate or as provided by law, the holder of Preferred Stock shall have the same voting rights as the holders of Common Stock and shall be entitled to notice of any stockholders' meeting la accordance with the Bylaws of the Corporation, and, unless otherwise indicated, the holders of Common Stock and Preferred Stock shall vote together as a single class on all matters. Each holder of Common Stock shall be entitled to one vote for each share of Common Stock held, and each holder of Preferred Stock shall be entitled to the number of votes equal to the number of shares of Common Stock into which such shares of Preferred Stock could be converted. Fractional votes shall not, however, be permitted and any fractional voting rights available on an as-converted basis (after aggregating all shares into which shares of Preferred Stack held by each holder could be converted) shall he rounded to the nearest whole number (with one-half being rounded upward).

(b) The authorized number of directors shall be set forth in the Corporation's Bylaws and:

(i) the holders of the majority of the Preferred Stock, voting separately as a class, shall be entitled to elect three directors (the "Preferred Directors"), and to fill any vacancies with respect thereto;

(ii) the holders of the majority of the Common Stock, voting separately as a class, shall be entitled to elect one director (the "Common Director"), and to fill any vacancies with respect thereto;

(iii) the Chief Executive Officer shall be elected as a director by the other directors, to serve for so long as he or she shall hold such position; and

(iv) any other members of the Board of Directors authorized by the Corporation's Bylaws shall be nominated and elected by the holders of a majority of the Common Stock and the Preferred Stock, voting together as a single class and on an as-converted basis.

(v) Any director who shall have been elected by a specified group of stockholders may be removed during the aforesaid term of office, either for or without cause, by and only by, the affirmative vote of the holders of a majority of the shares of such specified group, given at a special meeting of such stockholders duly called or by an action by written consent for that purpose,

7. **Protective Provisions.** (A) Series A. So long as at least 1,000,000 shares of Series A Preferred Stock are outstanding (as adjusted for stock splits, stock dividends, reclassification and the like), the Corporation shall not (by amendment, merger, consolidation or otherwise) without first obtaining the approval (by vote or written, consent, as provided by law) of the holders of at least 60% (or such higher percentage Specified in any provision of the Restated Certificate, in which case such higher percentage shall apply) of the then outstanding shares of Series A Preferred Stock, voting together as a class:

(a) effect a liquidation, dissolution or winding up, or Liquidation Transaction (unless stockholders elect not to treat a transaction as a Liquidation Transaction, as provided in Section 2(c)(i) of this Article IV(B));

(b) alter or change the rights, preferences or privileges of the shares of Series A Preferred Stock;

(c) Increase or decrease (other than by conversion) the total number of authorized shares of Common Stock or Series A Preferred Stock;

(d) authorize or issue, or obligate itself to issue, or otherwise create (by reclassification or otherwise) any equity or debt security, including any security (other than Series A Preferred Stock) convertible into or exercisable for any equity security, having rights, preference or privileges senior to, or being on a parity with, the Series A Preferred Stock;

(e) redeem, purchase or otherwise acquire (or pay into or set foods aside for a sinking fund for such purpose) any share or shares of Common Stock; provided, however, that this restriction shall not apply to the repurchase of shares of Common Stock from employees, officers, directors, consultants or other persona performing services for the Corporation or any subsidiary pursuant to agreements under which the Corporation has the option to repurchase such shares at no greater than cost upon the occurrence of certain events, such as the termination of employment, or through the exercise of any right of first refusal;

(f) amend or waive any provision in the Corporation's Restated Certificate or Bylaws;

(g) adopt or amend any equity incentive plan; provided that this restriction shall not apply to any equity Incentive plan adopted within twelve months after the closing of the purchase and sale of shares of the Series A Preferred Stock pursuant to the Purchase Agreement;

(h) change the authorized number of directors of the Corporation; or

(i) declare or pay any dividend on any shares of Common Stock or Preferred Stock.

(B) Series B. So long as at least 1,000,000 shares of Series B Preferred Stock are outstanding (as adjusted for stock splits, stock dividends, reclassification and the like), the Corporation shall not (by amendment, merger, consolidation or otherwise) without first obtaining the approval (by vote or written consent, as provided by law) of the holders of at least 60% (or such higher percentage specified in any provision of the Restated Certificate, in which case such higher percentage shall apply) of the then outstanding shares of Series B Preferred Stock, voting together as a class:

(a) effect a liquidation, dissolution or winding up, or Liquidation Transaction (unless stockholders elect not to treat a transaction as a Liquidation Transaction, as provided in Section 2(c)(i) of this Article IV(B));

(b) alter or change the rights, preferences or privileges of the shares of Series B Preferred Stock;

(c) increase or decrease (other than by conversion) the total number of authorized shares of Common Stock or Series B Preferred Stock or issue any shares of Series B Preferred Stock or any security convertible into or exercisable for shares of Series B Preferred Stock;

(d) authorize or issue, or obligate itself to issue, or otherwise create (by reclassification or otherwise) any equity or debt security, including any security (other than Series B Preferred Stock) convertible into or exercisable for any equity security, having rights, preferences or privileges senior to, or being on a parity with, the Series B Preferred Stock;

(e) redeem, purchase or otherwise acquire (or pay into or set funds aside for a sinking fund for such purpose) any share or shares of Common Stock; provided, however, that this restriction shall not apply to the repurchase of shares of Common Stock from employees, officers, directors, consultants or other persons performing services for the Corporation or any subsidiary pursuant to agreements under which the Corporation has the option to repurchase such shares at no greater than cost upon the occurrence of certain events, such as the termination of employment, or through the exercise of any right of first refusal;

(f) amend or waive any provision in the Corporation's Restated Certificate or Bylaws;

(g) adopt or amend any equity incentive plan;

(h) change the authorized number of directors of the Corporation; or

(i) declare or pay any dividend on any shares of Common Stock or Preferred Stock.

8. **Status of Converted Stock.** In the event any shares of Preferred Stock shall be converted pursuant to Section 4 hereof, the shares so converted shall be cancelled and shall not be issuable by the Corporation. This Restated Certificate shall be appropriately amended to effect the corresponding reduction in the Corporation's authorized capital stock.

(C) **Common Stock.**

1. **Dividend Rights.** Subject to the prior rights of holders of all classes of stock at the time outstanding having prior rights as to dividends, the holders of the Common Stock shall be entitled to receive, when and as declared by the Board of Directors, out of any assets of the Corporation legally available therefore, such dividends as may be declared from time to time by the Board of Directors.

2. **Liquidation Rights.** Upon the liquidation, dissolution or winding up of the Corporation, or the occurrence of a Liquidation Transaction, the assets of the Corporation shall be distributed as provided in Section 2 of Article IV(B).

3. **Redemption.** The Common Stock is not redeemable.

4. **Voting Rights.** Each holder of Common Stock shall have the right to one vote per share of Common Stock, and shall be entitled to notice of any stockholders' meeting in accordance with the Bylaws of the Corporation, and shall be entitled to vote upon such matters and in such manner as may be provided by law.

ARTICLE V

The Board of Directors of the Corporation is expressly authorized to make, alter or repeal the Bylaws of the Corporation.

ARTICLE VI

Elections of directors need not be by Written ballot unless otherwise provided in the Bylaws of the Corporation, subject to the right of the stockholders entitled to vote with respect thereto to alter and repeal Bylaws made by the Board of Directors.

ARTICLE VII

(A) To the fullest extent permitted by the General Corporation Law, as the same exists or as may hereafter be amended, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director.

(B) The Corporation shall indemnify to the fullest extent permitted by law any person made or threatened to be made a party to an action or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact that he, his testator or intestate is or was a director or officer of the Corporation or any predecessor of the Corporation, or serves or served

at any other enterprise as a director or officer at the request of the Corporation or any predecessor to the Corporation; provided, however, that the foregoing shall not require this Corporation to indemnify or advance expenses to any person in connection with any action suit, proceeding, claim or counterclaim initiated by or

on behalf of such person.

(C) Neither any amendment nor repeal of this Article VII, nor the adoption of any provision of the Corporation's Certificate of Incorporation inconsistent with this Article VII, shall eliminate or reduce the effect of this Article VII in respect of any matter occurring, or any action or proceeding accruing or arising or that, but for this Article VII, would accrue or arise, prior to such amendment, repeal or adoption of an inconsistent provision.

ARTICLE VIII

Any action by the stockholders of such class may be taken at an annual or special meeting of stockholders or by written consent in lieu of a meeting.

ARTICLE IX

This Corporation shall not be governed by Section 203 of the General Corporation Law.

* * *

[SIGNATURE PAGE FOLLOWS]

The foregoing Amended and Restated Certificate of Incorporation has been duly adopted by this corporation's Board of Directors and stockholders in accordance with the applicable provisions of Sections 228, 242 and 245 of the General Corporation Law.

Executed at Malvern, Pennsylvania, on September 30, 2014.

/s/ Neal Walker
Dr. Neal Walker
Chief Executive Officer

SIGNATURE PAGE TO SECOND AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF ACLARIS THERAPEUTICS, INC.

BYLAWS

OF

ACLARIS THERAPEUTICS, INC.

(a Delaware corporation)

Adopted on July 13, 2012

BYLAWS

OF

ACLARIS THERAPEUTICS, INC.

ARTICLE I

OFFICES

Section 1.1 Offices. The registered office of the Corporation shall be in the State of Delaware. The Corporation may have offices at such other places, both within and without the State of Delaware, as the Board of Directors may from time to time determine or as may be necessary or convenient to the business of the Corporation.

ARTICLE II

MEETINGS OF STOCKHOLDERS

Section 2.1 Annual Meeting. The annual meeting of stockholders shall be held on such date, at such time and at such place (if any), either within or without the State of Delaware, as shall be designated from time to time by the Board of Directors by resolution and stated in the notice of the meeting. At such annual meeting, the stockholders shall elect a Board of Directors and transact such other business as may properly be brought before the meeting. In lieu of holding an annual meeting of stockholders at a designated place, the Board of Directors may, in its sole discretion, determine that any annual meeting of stockholders may be held solely by means of remote communication.

Section 2.2 Special Meetings. Special meetings of stockholders shall be held on such date, at such time and at such place (if any), either within or without the State of Delaware, as shall be designated from time to time by the Board of Directors by resolution and stated in the notice of the meeting. Special meetings of stockholders, for any purpose or purposes, unless otherwise prescribed by statute or by the Certificate of Incorporation, may be called by the Chairman of the Board, if any, or the President and shall be called by the President or Secretary at the request in writing of a majority of the members of the Board of Directors, or at the request in writing of the stockholders entitled to cast at least a majority of the votes that all stockholders are entitled to cast at the particular meeting. Any such request shall state the purpose or purposes of the proposed meeting. In lieu of holding a special meeting of stockholders at a designated place, the Board of Directors may, in its sole discretion, determine that any special meeting of stockholders may be held solely by means of remote communication.

Section 2.3 Notice of Meetings and Record Date.

(a) The Corporation shall give notice of any annual or special meeting of stockholders. Notices of meetings of the stockholders shall state the place, if any, date and time thereof, and the means of remote communication, if any, by which each stockholder and proxyholder may be deemed to be present in person and vote at such meeting. In the case of a special meeting, the notice shall state the purpose or purposes for which the meeting is called. No business other than that specified in the notice thereof shall be transacted at any special meeting. Unless otherwise provided by applicable law or the Certificate of Incorporation, notice shall be given to each stockholder entitled to vote at such meeting not less than 10 days nor more than 60 days prior to the meeting.

(b) Notice to stockholders may be given by personal delivery, mail, or, with the consent of the stockholder entitled to receive notice, by facsimile or other means of electronic transmission. If mailed, such notice shall be delivered by postage prepaid envelope directed to each stockholder at such stockholder's address as it appears in the records of the Corporation and shall be deemed given when deposited in the United States mail. Notice given by electronic transmission pursuant to this subsection shall be deemed given: (1) if by facsimile telecommunication, when directed to a facsimile telecommunication number at which the stockholder has consented to receive notice; (2) if by electronic mail, when directed to an electronic mail address at which the stockholder has consented to receive notice; (3) if by posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of (A) such posting and (B) the giving of such separate notice; and (4) if by any other form of electronic transmission, when directed to the stockholder. An affidavit of the Secretary or an Assistant Secretary or of the transfer agent or other agent of the Corporation that the notice has been given by personal delivery, by mail, or by a form of electronic transmission shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

(c) Without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the Corporation shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Any such consent shall be revocable by the stockholder by written notice to the Corporation. Any stockholder who fails to object in writing to the Corporation, within 60 days of having been given written notice by the Corporation of its intention to send the single notice, shall be deemed to have consented to receiving such single written notice.

(d) Notice of any meeting of stockholders need not be given to any stockholder if waived by such stockholder either in a writing signed by such stockholder or by electronic transmission, whether such waiver is given before or after such meeting is held. If such a waiver is given by electronic transmission,

the electronic transmission must either set forth or be submitted with information from which it can be determined that the electronic transmission was authorized by the stockholder.

(e) In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall not be more than 60 or fewer than 10 days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held.

Section 2.4 Presiding Officer. Meetings of stockholders shall be presided over by the Chairman of the Board, if any, or, if the Chairman of the Board is not present (or, if there is none), by the President, or, if the President is not present, by a Vice President, or, if no Vice President is present (or, if there is none), by such person who may have been chosen by the Board of Directors, or, if none of such persons is present, by a chairman to be chosen by the

holders of a majority of the voting power of the shares of capital stock of the Corporation issued and outstanding and entitled to vote at the meeting and who are present in person or represented by proxy. The Secretary of the Corporation, or, if the Secretary is not present, an Assistant Secretary, or, if the Assistant Secretary is not present (or, if there is none), such person as may be chosen by the Board of Directors, shall act as secretary of meetings of stockholders, or, if none of such persons is present, the holders of a majority of the voting power of the shares of capital stock of the Corporation issued and outstanding and entitled to vote at the meeting and who are present in person or represented by proxy shall choose any person present to act as secretary of the meeting.

Section 2.5 Quorum; Adjournments. The holders of a majority of the aggregate voting power of the shares of capital stock of the Corporation issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall be necessary to, and shall constitute a quorum for, the transaction of business at all meetings of the stockholders, except as otherwise provided by law, by the Certificate of Incorporation or these Bylaws. If, however, a quorum shall not be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have the power to adjourn the meeting from time to time, without notice of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken, until a quorum shall be present or represented. Even if a quorum shall be present or represented at any meeting of the stockholders, the stockholders entitled to vote thereat, present in person or represented by proxy, shall have the power to adjourn the meeting from time to time for good cause, without notice of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken, until a date which is not more than 30 days after the date of the original meeting. At any such adjourned meeting, at which a quorum shall be present in person or represented by proxy, any business may be transacted which might have been transacted at the meeting as originally called. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of such meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting. If the adjournment is for more than 30 days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote thereat.

Section 2.6 Voting.

(a) At any meeting of stockholders, every stockholder having the right to vote shall be entitled to vote in person or by proxy. Except as otherwise provided by law or the Certificate of Incorporation, each stockholder of record shall be entitled to one vote for each share of capital stock having voting power and registered in such stockholder’s name on the books of the Corporation.

(b) Each person entitled to vote at a meeting of stockholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons to act for such stockholder by proxy, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. A proxy shall be irrevocable if it states that it is irrevocable and if, and only so long as, it is coupled with an interest sufficient in

law to support an irrevocable power. Proxies need not be filed with the Secretary of the Corporation until the meeting is called to order, but shall be filed before being voted.

(c) All elections shall be determined by a plurality vote, and, except as otherwise provided by law or the Certificate of Incorporation, all other matters shall be determined by the vote of the holders of a majority of the voting power of the shares present in person or represented by proxy and voting on such other matters.

Section 2.7 Remote Communication. For the purposes of these Bylaws, if authorized by the Board of Directors in its sole discretion, and subject to such guidelines and procedures as the Board of Directors may adopt, stockholders and proxyholders may, by means of remote communication:

(a) participate in a meeting of stockholders; and

(b) be deemed present in person and vote at a meeting of stockholders whether such meeting is to be held at a designated place or solely by means of remote communication, provided that (i) the Corporation shall implement reasonable measures to verify that each person deemed present and permitted to vote at the meeting by means of remote communication is a stockholder or proxyholder, (ii) the Corporation shall implement reasonable measures to provide such stockholders and proxyholders a reasonable opportunity to participate in the meeting and to vote on matters submitted to the stockholders, including an opportunity to read or hear the proceedings of the meeting substantially concurrently with such proceedings, and (iii) if any stockholder or proxyholder votes or takes other action at the meeting by means of remote communication, a record of such vote or other action shall be maintained by the Corporation.

Section 2.8 Action by Consent. Any action required or permitted by law or the Certificate of Incorporation to be taken at any meeting of stockholders may be taken without a meeting, without prior notice and without a vote, if a written consent, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present or represented by proxy and voted. A telegram, facsimile or other electronic transmission consenting to an action to be taken and transmitted by a stockholder or proxyholder, or by a person or persons authorized to act for a stockholder or proxyholder, shall be deemed to be written, signed and dated for the purposes of this section, provided that any such telegram, facsimile or other electronic transmission sets forth or is delivered with

information from which the Corporation can determine that the telegram, facsimile or other electronic transmission was transmitted by the stockholder or proxyholder or by a person or persons authorized to act for the stockholder or proxyholder and the date on which such stockholder or proxyholder or authorized person or persons transmitted such telegram, cablegram or electronic transmission. The date on which such telegram, facsimile or electronic transmission is transmitted shall be deemed to be the date on which such consent was signed. No consent given by telegram, facsimile or other electronic transmission shall be deemed to have been delivered until such consent is reproduced in paper form and until such paper shall be delivered to the Corporation by delivery to its principal place of business or an officer or agent of the Corporation having custody of the book in which the proceedings of meetings of stockholders are recorded, to the extent and in the manner provided by resolution of the Board of

Directors of the Corporation. Any copy, facsimile or other reliable reproduction of a consent in writing may be substituted or used in lieu of the original writing for any and all purposes for which the original writing could be used, provided that such copy, facsimile or other reproduction shall be a complete reproduction of the entire original writing. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing.

ARTICLE III

DIRECTORS

Section 3.1 General Powers; Number; Tenure. The business of the Corporation shall be managed by its Board of Directors, which may exercise all powers of the Corporation and perform all lawful acts and things that are not by law, the Certificate of Incorporation or these Bylaws directed or required to be exercised or performed by the stockholders or any class or classes or series thereof. The initial number of directors shall be Two (2). Thereafter, except as may otherwise be provided in the Certificate of Incorporation, the number of directors shall be determined by the Board of Directors. The directors shall be elected at the annual meeting of the stockholders, except as provided in Section 3.2 hereof, and each director elected shall hold office until such director's successor is elected and shall qualify. Directors need not be stockholders. Meetings of the Board of Directors shall be presided over by the Chairman of the Board, if one has been designated by the Board of Directors, or in his or her absence by the Chief Executive Officer, if any, or in his or her absence by a presiding person chosen at the meeting. The Secretary shall act as secretary of the meeting, but in his or her absence the presiding person at the meeting may appoint any person to act as secretary of the meeting. The Chairman of the Board shall serve for such term and shall exercise such powers and perform such duties as shall be determined from time to time by the Board of Directors.

Section 3.2 Vacancies. Unless otherwise provided in the Certificate of Incorporation or these Bylaws, if any vacancies occur in the Board of Directors, or if any new directorships are created, they may be filled by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director. Unless otherwise provided in the Certificate of Incorporation or these Bylaws, when one or more directors shall resign from the Board, effective at a future date, a majority of directors then in office, including those who have resigned, shall have the power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective. Each director so chosen shall hold office until the next annual meeting of stockholders and until his or her successor is duly elected and shall qualify. If there are no directors in office, any officer or stockholder may call a special meeting of stockholders in accordance with the provisions of the Certificate of Incorporation or these Bylaws, at which meeting such vacancies shall be filled.

Section 3.3 Removal; Resignation.

(a) Except as otherwise provided by law or the Certificate of Incorporation, any director, directors or the entire Board of Directors may be removed, with or without cause, by the holders of a majority of the voting power of the shares then entitled to vote at an election of directors.

(b) Any director may resign at any time by giving written notice to the Board of Directors, the Chairman of the Board, the President or the Secretary of the Corporation; provided, however, that if such notice is given by electronic transmission, such electronic transmission must either set forth or be submitted with information from which it can be determined that the electronic transmission was authorized by the director. Unless otherwise specified in such written notice, a resignation shall take effect upon delivery thereof to the Board of Directors or the designated officer. It shall not be necessary for a resignation to be accepted before it becomes effective.

Section 3.4 Annual Meeting. The annual meeting of each newly elected Board of Directors shall be held immediately following the annual meeting of stockholders, at the place where such meeting of stockholders has been held, or at such other place as shall be fixed by the person presiding over the meeting of the stockholders, for the purpose of election of officers and consideration of such other business as the Board of Directors considers relevant to the management of the Corporation, and no notice of such meeting shall be necessary to the newly elected directors in order legally to constitute the meeting, provided a quorum shall be present. In the event that in any year directors are elected by written consent in lieu of an annual meeting of stockholders, the Board of Directors shall meet in such year after receipt of such written consent by the Corporation, for the purpose of electing officers and considering such other business as the Board of Directors considers relevant to the management of the Corporation.

Section 3.5 Regular Meetings. Regular meetings of the Board of Directors shall be held on such dates and at such times and places, within or without the State of Delaware, as shall from time to time be determined by the Board of Directors, such determination to constitute the only notice of such regular meetings to which any director shall be entitled. In the absence of any such determination, such meetings shall be held, upon notice to each director in accordance with Section 3.7 of this Article III, at such times and places, within or without the State of Delaware, as shall be designated by the Chairman of the Board or the Chief Executive Officer.

Section 3.6 Special Meetings. Special meetings of the Board of Directors shall be held at the call of the Chairman of the Board or the Chief Executive Officer at such times and places, within or without the State of Delaware, as he or she shall designate, upon notice to each director in accordance with Section 3.7 of this Article III. Special meetings shall be called by the Secretary on like notice at the written request of a majority of the directors then in office.

Section 3.7 Notice; Waiver of Notice.

(a) Notice of any regular (if required) or special meeting of the Board of Directors may be given by personal delivery, mail, telegram, courier service (including, without limitation, Federal Express), facsimile transmission (directed to the facsimile transmission number at which the director has consented to receive notice), electronic mail (directed to the electronic mail address at which the director has consented to receive notice), or other form of electronic

transmission pursuant to which the director has consented to receive notice. If notice is given by personal delivery, by facsimile transmission, by telegram, by electronic mail, or by other form of electronic transmission pursuant to which the director has consented to receive notice, then such notice shall be given on not less than twenty-four hours' notice to each director. If written notice is delivered by mail or courier service, then it shall be given on not less than three (3) calendar

days' notice to each director. Notice of special meetings of the Board of Directors need not state the purpose thereof, except as otherwise expressly provided by law, the Certificate of Incorporation or these Bylaws. Any and all business may be transacted at a special meeting, unless otherwise indicated in the notice thereof or provided by law, the Certificate of Incorporation or these Bylaws.

(b) Notice of any meeting of the Board of Directors, or any committee thereof, need not be given to any member if waived by him or her in writing or by electronic transmission, whether before or after such meeting is held, or if he or she shall sign the minutes of such meeting or attend the meeting, except that if such director attends a meeting for the express purpose of objecting at the beginning of the meeting to the transaction of any business because the meeting is not lawfully called or convened, then such director shall not be deemed to have waived notice of such meeting. If waiver of notice is given by electronic transmission, such electronic transmission must either set forth or be submitted with information from which it can be determined that the electronic transmission was authorized by the director.

Section 3.8 Quorum; Adjournments. At all meetings of the Board of Directors and of each committee thereof, a majority of the total number of directors constituting the whole board or such committee shall be necessary and sufficient to constitute a quorum for the transaction of business. The act of a majority of the members present at any meeting of the Board of Directors or a committee thereof at which a quorum is present shall be the act of the Board of Directors or such committee, unless by express provision of applicable law, the Certificate of Incorporation, or these Bylaws, a different vote is required, in which case such express provision shall govern and control. In the absence of a quorum, a majority of the members present at any meeting may, without notice other than announcement at the meeting, adjourn such meeting from time to time until a quorum is present.

Section 3.9 Committees. The Board of Directors, by a vote of a majority of the whole Board of Directors, may from time to time designate one or more committees, each committee to consist of one or more directors, with such lawfully delegable powers and duties as it thereby confers (including the power and authority to designate other committees of the Board of Directors); provided, however, that no such committee shall have the power or authority in reference to the following matters: (i) approving or adopting, or recommending to the stockholders, any action or matter expressly required by the General Corporation Law of the State of Delaware to be submitted to stockholders for approval or (ii) adopting, amending, or repealing any Bylaw of the Corporation. The Board of Directors may designate one or more directors as alternate members of any committee to replace any absent or disqualified member of the committee. In the absence or disqualification of a member of a committee, the member or members present at any meeting of such committee and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in place of such absent or disqualified director.

Section 3.10 Committee Procedure.

(a) Except as otherwise determined by the Board of Directors or provided by these Bylaws, each committee shall adopt its own rules governing the time, place, and method of holding its meetings and the conduct of its proceedings and shall meet as provided by such rules

or by resolution of the Board of Directors. Unless otherwise provided by these Bylaws or any such rules or resolutions, notice of the time and place of each meeting of a committee shall be given to each member of such committee as provided in Section 3.7 of this Article III with respect to notices of meetings of the Board of Directors.

(b) Each committee shall keep regular minutes of its proceedings and report the same to the Board of Directors when required.

(c) Any member of any committee may be removed from such committee either with or without cause, at any time, by the Board of Directors at any meeting thereof. Any vacancy in any committee may be filled by the Board of Directors in the manner prescribed by the Certificate of Incorporation or these Bylaws for the original appointment of the members of such committee.

Section 3.11 Compensation. Directors may be paid such compensation for their services as a member of the Board of Directors and may be reimbursed for any reasonable expenses incurred with respect to duties as a member of the Board of Directors or any committee thereof as may be determined from time to time by the Board of Directors. Any director receiving such compensation shall not be barred from serving the Corporation in any other capacity and receiving compensation for, and reimbursement for reasonable expenses incurred with respect to, any such other services.

Section 3.12 Action by Consent. Any action required or permitted to be taken at any meeting of the Board of Directors or any committee thereof may be taken without a meeting if all members of the Board of Directors or such committee, as the case may be, consent thereto in writing or by electronic transmission, and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board of Directors or such committee; provided, however, that such electronic transmissions) must either set forth or be submitted with information from which it can be determined that the electronic transmission(s) were authorized by the director. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

Section 3.13 Meetings by Telephone or Similar Communications. Members of the Board of Directors, or any committee thereof, may participate in any meeting of the Board of Directors or such committee by means of conference telephone or other communications equipment by means of which all persons participating therein can hear each other, and participation in a meeting by such means shall constitute presence in person at such meeting.

ARTICLE IV

OFFICERS

Section 4.1 Designations. The officers of the Corporation shall be chosen by the Board of Directors. The Board of Directors may choose a Chief Executive Officer, a President, a Vice President or Vice Presidents, a Secretary, a Treasurer, one or more Assistant Secretaries and/or Assistant Treasurers and other officers and agents as it shall deem necessary or appropriate. All officers of the Corporation shall exercise such powers and perform such duties as shall from

time to time be determined by the Board of Directors. None of the officers of the Corporation needs to be a director of the Corporation. Any two or more offices may be held by

the same person to the extent permitted by the General Corporation Law of the State of Delaware and other applicable law, unless the Certificate of Incorporation or these Bylaws otherwise provide.

Section 4.2 Term of Office; Removal. The Board of Directors at its annual meeting after each annual meeting of stockholders shall elect a President, a Secretary and a Treasurer. The Board of Directors may also elect a Chief Executive Officer, a Chief Operating Officer, a Chief Financial Officer, a Vice President or Vice Presidents, one or more Assistant Secretaries and/or Assistant Treasurers, and such other officers and agents as it shall deem necessary or appropriate. Each officer of the Corporation shall hold office at the pleasure of the Board of Directors, except as may otherwise be expressly provided in a contract of employment duly authorized by the Board of Directors. Any officer elected by the Board of Directors may be removed, with or without cause, at any time by the affirmative vote of a majority of the directors then in office. Such removal shall not prejudice the contract rights, if any, of the person so removed. Any vacancy occurring in any office of the Corporation may be filled for the unexpired portion of the term by the Board of Directors.

Section 4.3 Compensation. The salaries of all officers of the Corporation shall be fixed from time to time by the Board of Directors and no officer shall be prevented from receiving such salary by reason of the fact that such officer is also a director of the Corporation.

Section 4.4 The Chief Executive Officer. The Chief Executive Officer shall have general management, direction and control of the business and affairs of the Corporation, subject to the direction of the Board of Directors. The Chief Executive Officer shall preside, if no Chairman of the Board shall be designated, at all meetings of the Board of Directors. Unless otherwise directed by the Board of Directors from time to time, the Chief Executive Officer shall have the power to vote and otherwise act on behalf of the Corporation, in person or by proxy, at any meeting of stockholders of or with respect to any action of stockholders of any other corporation in which the Corporation may hold securities and otherwise to exercise any and all rights and powers which the Corporation may possess by reason of its ownership of securities in such other corporation.

Section 4.5 The President. The President shall be the chief operating officer of the Corporation and shall have such powers and perform such duties as may from time to time be assigned to the President by the Chief Executive Officer or the Board of Directors. If no Chief Executive Officer shall be designated and then be serving, the President shall be the chief executive officer of the Corporation, and, as such, shall have the functions, authority and duties provided for the Chief Executive Officer.

Section 4.6 The Vice Presidents. The Vice President, if any (or in the event there be more than one, the Vice Presidents in the order designated, or in the absence of any designation, in the order of their election), shall, in the absence of the President or in the event of his or her disability, perform the duties and exercise the powers of the President and shall generally assist the Chief Executive Officer and the President and perform such other duties and have such other powers as may from time to time be assigned by the Chief Executive Officer or the Board of Directors.

Section 4.7 The Secretary. The Secretary shall attend meetings of the Board of Directors and of stockholders and record all votes and the proceedings of the meetings in a book to be kept for that purpose and shall perform like duties for the committees, if requested by the Board of Directors or any such committee. The Secretary shall give, or cause to be given, notice of all meetings of stockholders and special meetings of the Board of Directors, and shall perform such other duties as may from time to time be prescribed by the Board of Directors or the President, under whose supervision the Secretary shall act. The Secretary shall have custody of the seal of the Corporation, and the Secretary, or an Assistant Secretary, shall have authority to affix the same to any instrument requiring it, and, when so affixed, the seal may be attested by the signature of the Secretary or of an Assistant Secretary. The Board of Directors may give general authority to any other officer to affix the seal of the Corporation and to attest the affixing thereof by such officer’s signature.

Section 4.8 The Assistant Secretary. The Assistant Secretary, if any (or in the event there be more than one, the Assistant Secretaries in the order designated, or in the absence of any designation, in the order of their election), shall, in the absence of the Secretary or in the event of his or her disability, perform the duties and exercise the powers of the Secretary and shall perform such other duties and have such other powers as may from time to time be prescribed by the Board of Directors.

Section 4.9 The Treasurer. The Treasurer shall have the custody of the corporate funds and other valuable effects, including securities, and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation and shall deposit all moneys and other valuable effects in the name and to the credit of the Corporation in such depositories as may from time to time be designated by the Board of Directors. The Treasurer shall disburse the funds of the Corporation as may be ordered by the Board of Directors, taking proper vouchers for such disbursements, and shall render to the Chief Executive Officer and the Board of Directors, at regular meetings of the Board, or whenever they may require it, an account of all his or her transactions as Treasurer and of the financial condition of the Corporation.

Section 4.10 The Assistant Treasurer. The Assistant Treasurer, if any (or in the event there shall be more than one, the Assistant Treasurers in the order designated, or in the absence of any designation, in the order of their election), shall, in the absence of the Treasurer or in the event of his or her disability, perform the duties and exercise the powers of the Treasurer and shall perform such other duties and have such other powers as may from time to time be prescribed by the Board of Directors.

ARTICLE V

INDEMNIFICATION OF DIRECTORS, OFFICERS, EMPLOYEES AND AGENTS

Section 5.1 Indemnification.

(a) Subject to Section 5.3 of this Article V, the Corporation shall indemnify, to the full extent that it shall have power under applicable law to do so and in a manner permitted by such law, any person who is made or threatened to be made a party to or is otherwise involved (as a witness or otherwise) in any threatened, pending, or completed action, suit, or proceeding, whether civil, criminal, administrative, or investigative (hereinafter, a “Proceeding”), by reason

of the fact that such person is or was a director or officer of the Corporation, or, while serving as a director or officer of the Corporation, is or was serving at the request of Corporation as a director, officer, employee, or agent of another corporation, partnership, joint venture, trust, or other enterprise, including service with respect to an employee benefit plan (collectively, "Another Enterprise") (such person hereinafter, a "Mandatory Indemnitee").

(b) The Corporation may indemnify, to the Ml extent that it shall have power under applicable law to do so and in a manner permitted by such law, any person who is made or threatened to be made a party to or is otherwise involved (as a witness or otherwise) in any Proceeding, by reason of the fact that such person is or was an employee or agent of the Corporation, or, while serving as an employee or agent of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee, or agent of Another Enterprise (such person hereinafter, a "Permissive Indemnitee").

Section 5.2 Advancement of Expenses.

(a) Subject to Section 5.3 of this Article V, with respect to any Mandatory hrdemnitee, the Corporation shall pay the expenses (including attorneys' fees) incurred by such person in defending any such Proceeding in advance of its final disposition (hereinafter an "advancement of expenses"); provided, however, that any advancement of expenses shall be made only upon receipt of an undertaking (hereinafter an "undertaking") by such person to repay all amounts advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal that such person is not entitled to be indemnified for such expenses under this Article V or otherwise.

(b) With respect to any Permissive Indemnitee, the Corporation may, in its discretion and upon such terms and conditions, if any, as the Corporation deems appropriate, pay the expenses (including attorneys' fees) incurred by such person in defending any such Proceeding in advance of its final disposition.

Section 5.3 Actions Initiated Against the Corporation. Anything in Section 5.1 (a) or Section 5.2(a) of this Article V to the contrary notwithstanding, except as provided in Section 5.5(b) of this Article V, with respect to a Proceeding initiated against the Corporation by a director or officer of the Corporation (whether initiated by such person in such capacity or in any other capacity, including as a director, officer, employee or agent of Another Enterprise), the Corporation shall not be required to indemnify or to advance expenses (including attorneys' fees) to such person in connection with prosecuting such Proceeding (or part thereof) or in defending any counterclaim, cross-claim, affirmative defense, or like claim of the Corporation in such Proceeding (or part thereof) unless such Proceeding was authorized by the Board of Directors of the Corporation.

Section 5.4 Contract Rights. With respect to any Mandatory Indemnitee, the rights to indemnification and to the advancement of expenses conferred in Sections 5.1(a) and 5.2(a) of this Article V shall be contract rights. Any amendment, repeal, or modification of, or adoption of any provision inconsistent with, this Article V (or any provision hereof) shall not adversely affect any right to indemnification or advancement of expenses granted to any person pursuant hereto with respect to any act or omission of such person occurring prior to the time of such

amendment, repeal, modification, or adoption (regardless of whether the Proceeding relating to such acts or omissions is commenced before or after the time of such amendment, repeal, modification, or adoption).

Section 5.5 Claims.

(a) If (i) a claim under Section 5.1(a) of this Article V with respect to any right to indemnification is not paid in full by the Corporation (following the final disposition of the Proceeding) within 60 days after a written demand has been received by the Corporation or (ii) a claim under Section 5.2(a) of this Article V with respect to any right to the advancement of expenses is not paid in full by the Corporation within 20 days after a written demand has been received by the Corporation, then the person seeking to enforce a right to indemnification or to an advancement of expenses, as the case may be, may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim.

(b) If successful in whole or in part in any suit brought pursuant to Section 5.5(a) of this Article V, or in a suit brought by the Corporation to recover an advancement of expenses (whether pursuant to the terms of an undertaking or otherwise), the person seeking to enforce a right to indemnification or an advancement of expenses hereunder or the person from whom the Corporation sought to recover an advancement of expenses, as the case may be, shall be entitled to be paid by the Corporation the reasonable expenses (including attorneys' fees) of prosecuting or defending such suit.

(c) In any suit brought by a person seeking to enforce a right to indemnification hereunder (but not a suit brought by a person seeking to enforce a right to an advancement of expenses hereunder), it shall be a defense that the person seeking to enforce a right to indemnification has not met any applicable standard for indemnification under applicable law. With respect to any suit brought by a person seeking to enforce a right to indemnification or right to advancement of expenses hereunder or any suit brought by the Corporation to recover an advancement of expenses (whether pursuant to the terms of an undertaking or otherwise), neither (i) the failure of the Corporation to have made a determination prior to commencement of such suit that indemnification of such person is proper in the circumstances because such person has met the applicable standards of conduct under applicable law, nor (ii) an actual determination by the Corporation that such person has not met such applicable standards of conduct, shall create a presumption that such person has not met the applicable standards of conduct or, in a case brought by such person seeking to enforce a right to indemnification, be a defense to such suit.

(d) In any suit brought by a person seeking to enforce a right to indemnification or to an advancement of expenses hereunder, or by the Corporation to recover an advancement of expenses (whether pursuant to the terms of an undertaking or otherwise), the burden shall be on the Corporation to prove that the person seeking to enforce a right to indemnification or to an advancement of expenses or the person from whom the Corporation seeks to recover an advancement of'expenses is not entitled to be indemnified, or to such an advancement of expenses, under this Article V or otherwise.

Section 5.6 Determination of Entitlement to Indemnification. Any indemnification required or permitted under this Article V (unless ordered by a court) shall be made by the

Corporation only as authorized in the specific case upon a determination that indemnification of the present or former director, officer, employee or agent is proper in the circumstances because he or she has met all applicable standards of conduct set forth in this Article V and Section 145 of the General Corporation Law of the State of Delaware. Such determination shall be made, with respect to a person who is a director or officer of the Corporation at the time of such determination,

(i) by a majority vote of the directors who are not parties to such action, suit or proceeding, even though less than a quorum; (ii) by a committee of such directors designated by majority vote of such directors, even though less than a quorum; (iii) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion; or (iv) by the stockholders. Such determination shall be made, with respect to any person who is not a director or officer of the Corporation at the time of such determination, in the manner determined by the Board of Directors (including in such manner as may be set forth in any general or specific action of the Board of Directors applicable to indemnification claims by such person) or in the manner set forth in any agreement to which such person and the Corporation are parties.

Section 5.7 Non-Exclusive Rights. The indemnification and advancement of expenses provided in this Article V shall not be deemed exclusive of any other rights to which any person may be entitled under any Bylaw, agreement, vote of stockholders or disinterested directors, or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office, and shall continue as to a person who has ceased to be such director, officer, employee, or agent and shall inure to the benefit of the heirs, executors, and administrators of such person.

Section 5.8 Insurance. The Corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee, or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee, or agent of Another Enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power to indemnify such person against such liability under the provisions of this Article V or otherwise.

Section 5.9 Severability. If any provision or provisions of this Article V shall be held to be invalid, illegal, or unenforceable for any reason whatsoever: (a) the validity, legality, and enforceability of the remaining provisions of this Article V (including, without limitation, each portion of any paragraph or clause containing any such provision held to be invalid, illegal, or unenforceable, that is not itself held to be invalid, illegal, or unenforceable) shall not in any way be affected or impaired thereby; and (b) to the fullest extent possible, the provisions of this Article V (including, without limitation, each such portion of any paragraph or clause containing any such provision held to be invalid, illegal, or unenforceable) shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal, or unenforceable.

Section 5.10 Miscellaneous. For purposes of this Article Y: (a) references to serving at the request of the Corporation as a director or officer of Another Enterprise shall include any service as a director or officer of the Corporation that imposes duties on, or involves services by, such director or officer with respect to an employee benefit plan; (b) references to serving at the request of the Corporation as an employee or agent of Another Enterprise shall include any service as an employee or agent of the Corporation that imposes duties on, or involves services

by, such employee or agent with respect to an employee benefit plan; (c) a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner not opposed to the best interests of the Corporation; and (d) references to a director of Another Enterprise shall include, in the case of any entity that is not managed by a board of directors, such other position, such as manager or trustee or member of the governing body of such entity, that entails responsibility for the management and direction of such entity's affairs, including, without limitation, general partner of any partnership (general or limited) and manager or managing member of any limited liability company.

ARTICLE VI

AFFILIATED TRANSACTIONS AND INTERESTED DIRECTORS

Section 6.1 Affiliated Transactions. No contract or transaction between the Corporation and one or more of its directors or officers, or between the Corporation and any other corporation, partnership, association or other organization in which one or more of its directors or officers are directors or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board of Directors or committee thereof which authorizes the contract or transaction or solely because his, her or their votes are counted for such purpose, if:

(a) The material facts as to his or her relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the committee, and the Board of Directors or committee in good faith authorizes the contract or transaction by the affirmative vote of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; or

(b) The material facts as to his or her relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(c) The contract or transaction is fair as to the Corporation as of the time it is authorized, approved or ratified by the Board of Directors, a committee thereof, or the stockholders.

Section 6.2 Determining Quorum. Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee thereof which authorizes the contract or transaction.

ARTICLE VII

STOCK CERTIFICATES

Section 7.1 Form; Signatures.

(a) Shares of any or all of the Corporation's classes or series of capital stock may be evidenced by certificates for shares of stock, in such form as the Board of Directors may from time to time prescribe, or may be issued in uncertificated form. The issuance of shares in uncertificated form shall not affect shares already represented by a certificate until the certificate

is surrendered to the Corporation. Except as expressly provided by law, there shall be no differences in the rights and obligations of stockholders based on whether or not their shares are represented by certificates. The Corporation shall issue to any holder who so requests a share certificate representing shares registered in the holder's name, signed by the Chairman of the Board, the Chief Executive Officer or the President and the Treasurer or an Assistant Treasurer or the Secretary or an

Assistant Secretary of the Corporation, exhibiting the number and class (and series, if any) of shares owned by such stockholder, and bearing the seal of the Corporation. Such signatures and seal may be facsimiles. In case any officer who has signed, or whose facsimile signature was placed on, a certificate shall have ceased to be such officer before such certificate is issued, it may nevertheless be issued by the Corporation with the same effect as if he or she were such officer at the date of its issue.

(b) All stock certificates representing shares of capital stock that are subject to restrictions on transfer or to other restrictions may have imprinted thereon such notation to such effect as may be determined by the Board of Directors.

Section 7.2 Transfers. Transfers of stock of the Corporation shall be made on the books of the Corporation only upon surrender to the Corporation of a certificate (if any) for the shares duly endorsed or accompanied by proper evidence of succession, assignment, or authority to transfer; provided, however, that such succession, assignment, or transfer is not prohibited by the Certificate of Incorporation, these Bylaws, applicable law, or contract. Thereupon, the Corporation shall issue a new certificate (if requested) to the person entitled thereto, cancel the old certificate (if any), and record the transaction upon its books.

Section 7.3 Registered Stockholders.

(a) Except as otherwise provided by law, the Corporation shall be entitled to recognize the exclusive right of a person who is registered on its books as the owner of shares of its capital stock to receive dividends or other distributions, to vote as such owner, and to hold liable for calls and assessments any person who is registered on its books as the owner of shares of its capital stock. The Corporation shall not be bound to recognize any equitable or legal claim to or interest in such shares on the part of any other person.

(b) If a stockholder desires that notices and/or dividends shall be sent to a name or address other than the name or address appearing on the stock ledger maintained by the Corporation (or by the transfer agent or registrar, if any), such stockholder shall have the duty to notify the Corporation (or the transfer agent or registrar, if any) in writing, of such desire. Such written notice shall specify the alternate name or address to be used.

Section 7.4 Lost, Stolen or Destroyed Certificates. The Board of Directors may direct a new certificate to be issued in place of any certificate theretofore issued by the Corporation which is claimed to have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen or destroyed. When authorizing such issue of a new certificate, the Board of Directors may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed certificate, or his or her legal representative, to advertise the same in such manner as it shall require and/or to give the Corporation a bond in such sum, or other security in such form, as

it may direct as indemnity against any claim that may be made against the Corporation with respect to the certificate claimed to have been lost, stolen or destroyed.

ARTICLE VIII

GENERAL PROVISIONS

Section 8.1 Books and Records.

(a) Any books or records maintained by the Corporation in the regular course of its business, including its stock ledger, books of account, and minute books, may be kept on, or by means of, or be in the form of, any information storage device or method; provided, however, that the books and records so kept can be converted into clearly legible paper form within a reasonable time. The Corporation shall so convert any books or records so kept upon the request of any person entitled to inspect such records pursuant to the Certificate of Incorporation, these Bylaws, or the provisions of the General Corporation Law of the State of Delaware.

(b) It shall be the duty of the Secretary or other officer of the Corporation who shall have charge of the stock ledger to prepare and make, at least 10 days before every meeting of the stockholders, a complete list of the stockholders entitled to vote thereat, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the stockholder's name. Nothing contained in this subsection (b) shall require the Corporation to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting for a period of at least 10 days prior to the meeting: (i) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (ii) during ordinary business hours, at the principal place of business of the Corporation. In the event that the Corporation determines to make the list available on an electronic network, the Corporation may take reasonable steps to ensure that such information is available only to stockholders of the Corporation. If the meeting is to be held at a place, then the list shall be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible network, and the information required to access such list shall be provided with the notice of the meeting. The stock ledger shall be the only evidence of the identity of the stockholders entitled to examine such list.

(c) Except to the extent otherwise required by law, the Certificate of Incorporation or these Bylaws, the Board of Directors shall determine from time to time whether and, if allowed, when and under what conditions and regulations the stock ledger, books, records, and accounts of the Corporation, or any of them, shall be open to inspection by the stockholders and the stockholders' rights, if any, in respect thereof. The stock ledger shall be the only evidence of the identity of the stockholders entitled to examine the stock ledger, the books, records, or accounts of the Corporation.

Section 8.2 Voting Shares in Other Business Entities. The Chief Executive Officer or any other officer of the Corporation designated by the Board of Directors may vote any and all

shares of stock or other equity interest held by the Corporation in any other corporation or other business entity, and may exercise on behalf of the Corporation any and all rights and powers incident to the ownership of such stock or other equity interest.

Section 8.3 Record Date for Distributions and Other Actions. In order that the Corporation may determine the stockholders entitled to receive payment of any dividend or other distribution, or allotment of any rights, or the stockholders entitled to exercise any rights in respect of any change, conversion, or

exchange of capital stock, or for the purpose of any other lawful action, except as may otherwise be provided in these Bylaws, the Board of Directors may fix a record date. Such record date shall not precede the date upon which the resolution fixing such record date is adopted, and shall not be more than 60 days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

Section 8.4 **Fiscal Year.** The fiscal year of the Corporation shall be such fiscal year as the Board of Directors from time to time by resolution shall determine.

Section 8.5 **Gender/Number.** As used in these Bylaws, the masculine, feminine, or neuter gender, and the singular and plural number, shall each include the other whenever the context so indicates.

Section 8.6 **Section Titles.** The titles of the sections and subsections have been inserted as a matter of reference only and shall not control or affect the meaning or construction of any of the terms and provisions hereof.

Section 8.7 **Electronic Transmission.** For purposes of these Bylaws, “electronic transmission” means any form of communication, not directly involving the physical transmission of paper, that creates a record that may be retained, retrieved, and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient through an automated process.

Section 8.8 **Amendment.** These Bylaws may be altered, amended, or repealed at any annual or regular meeting of the Board of Directors or at any special meeting of the Board of Directors if notice of the proposed alteration, amendment, or repeal be contained in written notice of such special meeting, or at any meeting of the stockholders of the Corporation.

Section 8.9 **Certificate of Incorporation.** Notwithstanding anything to the contrary contained herein, if any provision contained in these Bylaws is inconsistent with or conflicts with a provision of the Certificate of Incorporation, such provision of these Bylaws shall be superseded by the inconsistent provision in the Certificate of Incorporation to the extent necessary to give effect to such provision in the Certificate of Incorporation.

Exhibit 10.1

*****Text Omitted and Filed Separately**
Confidential Treatment Requested
Under 17 C.F.R. §§ 200.80(b)(4) and 240.24b-2

CLINICAL AND COMMERCIAL SUPPLY AGREEMENT

THIS CLINICAL AND COMMERCIAL SUPPLY AGREEMENT (this "Agreement"), effective as of August 6, 2014 ("Effective Date"), by and between PeroxyChem, a Delaware corporation, with a principal place of business at 1735 Market Street, Philadelphia, Pennsylvania 19103 ("PeroxyChem") and Aclaris Therapeutics, Inc., a Delaware corporation, with a principal place of business at 101 Lindenwood Drive, Suite 400, Malvern, Pennsylvania 19355 ("Aclaris").

W I T N E S S E T H

WHEREAS, PeroxyChem is engaged in the business of manufacturing and supplying hydrogen peroxide;

WHEREAS, Aclaris is a pharmaceutical company engaged in the business of developing and commercializing pharmaceutical products;

WHEREAS, Aclaris desires to purchase quantities of the active pharmaceutical ingredient, hydrogen peroxide ("**API**") for use in connection with the clinical development and upon FDA approval, commercial sale of Aclaris' proprietary hydrogen peroxide drug, A-101 (**"Product**") in the Territory as defined below; and

WHEREAS, subject to the terms hereof, PeroxyChem agrees to manufacture, supply, sell and deliver to Aclaris, and Aclaris agrees to purchase and accept from PeroxyChem, the API.

NOW, THEREFORE, the parties agree as follows:

1.1 DEFINITIONS. For purposes hereof, the following terms shall have the meanings set forth below:

"**Aclaris Improvements**" has the meaning set forth in Section 6.5 (c) hereof.

"**Aclaris Technology**" means (a) the Product and any intermediates or derivatives thereof; (b) information provided by Aclaris included in the Specifications; and (c) the Technology of Aclaris owned, licensed, developed or obtained by or on behalf of Aclaris prior to the Effective Date of this Agreement, or developed or obtained by or on behalf of Aclaris independent of this Agreement and without reliance upon the Confidential Information, Improvements or Technology of PeroxyChem For the avoidance of doubt, Aclaris Technology shall not include PeroxyChem Technology.

"**Act**" means the United States Federal Food, Drug and Cosmetic Act of 1938, the Public Health Service Act of 1944, as may be amended from time to time and the rules and regulations promulgated thereunder.

CONFIDENTIAL TREATMENT HAS BEEN REQUESTED FOR PORTIONS OF THIS EXHIBIT. THE COPY FILED HEREWITH OMITS THE INFORMATION SUBJECT TO A CONFIDENTIALITY REQUEST. OMISSIONS ARE DESIGNATED [***]. A COMPLETE VERSION OF THIS EXHIBIT HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

*****Text Omitted and Filed Separately**
Confidential Treatment Requested
Under 17 C.F.R. §§ 200.80(b)(4) and 240.24b-2

"**Affiliate**" means (a) any corporation or business entity, fifty percent (50%) or more of the voting stock or voting equity interests of which are owned directly or indirectly by a Party; or (b) any corporation or business entity which directly or indirectly owns fifty percent (50%) or more of the voting stock or voting equity interests of a Party; or (c) any corporation or business entity directly or indirectly controlling, controlled by, or under common control with a corporation or business entity as described in (a) or (b). For the purposes of this definition only, "control" and, with correlative meanings, the terms "controlled by" and "under common control with," means (a) the possession, directly or indirectly, of the power to direct the management or policies of such entity, whether through the ownership of voting securities, by contract or otherwise, and/or (b) the ownership, directly or indirectly, of at least fifty percent (50%) of the voting securities or other ownership interest of such entity. For the avoidance of doubt, for purposes of this Agreement, NeXeption, Inc., NeXeption, LLC, NeXeption II, LLC and NST, LLC shall not be considered to be Affiliates of Aclaris.

"**API**" has the meaning set forth in the preamble hereof.

"**Applicable Law**" means all applicable ordinances, rules, regulations, laws, statutes and court orders of any kind whatsoever, as amended from time to time, including the bodies of law and regulations (including without limitation, cGMPs or their equivalent), of any Regulatory Authority.

"**Batch**" means a specific quantity of API comprising a number of units mutually agreed upon between Aclaris and PeroxyChem, and that (a) is intended to have uniform character and quality within specified limits, and (b) is manufactured according to a single production order during the same cycle of manufacture. Each Batch shall have a manufacturing Batch Number.

"**Batch Number**" means a unique, traceable identification number for each Batch of API manufactured and supplied by PeroxyChem for Aclaris.

"**Business Day**" means any day that is not a Saturday, Sunday or other day on which commercial banks in Philadelphia, Pennsylvania are authorized or required by law to remain closed.

"**Certificate of Analysis**" means a summary of the test results, including the test methods, Specification parameters, and the pass/fail criteria, used in the determination of the quality and suitability of a specific Batch of API, including review and approval by the appropriate quality assurance

department at PeroxyChem.

"**cGMPs**" means the current Good Manufacturing Practices in the Territory, as may be amended or supplemented from time to time; if in the United States, then cGMP shall include without limitation, the current good manufacturing practices set forth in 21 C.F. R. 210, 21 C.F.R. 211, and if in the European Union, then cGMP shall include, without limitation, the European Community Directive 2003/94/EC and all relevant implementations of such directives,

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as may be amended or supplemented from time to time. In the event of any conflict among Applicable Laws pertaining to the manufacture and supply of API, current Good Manufacturing Practices as specified in the United States Code of Federal Regulations will be applied unless the Parties agree otherwise in writing.

"**Confidential Information**" means (i) any information that (x) in any way shall relate to a Party hereto or Affiliate thereof, including, without limitation, its products, business, know-how, methods, trade secrets, customers and technology and (y) shall be furnished or disclosed to the other Party in connection with this Agreement and (ii) any other information that could reasonably be expected to be recognized as confidential or proprietary information; provided, however, that Confidential Information shall not include any information that:

(a) at the time of disclosure, is generally available to the public;

(b) after disclosure in connection herewith, becomes generally available to the public, except as a result of a breach of this Agreement by the recipient of such information;

(c) becomes available to the recipient of such information from a Third Party that is not legally prohibited from disclosing such Confidential Information, provided that such Confidential Information was not acquired directly or indirectly from the disclosing party or any of its Affiliates; or

(d) the recipient of which can demonstrate was developed by or for such recipient independent of, and without the use of, the Confidential Information disclosed by the disclosing party or any of its Affiliates hereunder.

"**Dispute**" has the meaning set forth in Section 11.4 hereof.

"**DMF**" means the Drug Master File for the API filed by PeroxyChem for acceptance by the FDA, as the same may be supplemented and/or amended from time to time.

"**Effective Date**" means the date set forth in the preamble.

"**EMEA**" means the European Medicines Agency.

"**Facility**" or "**Facilities**" means PeroxyChem's facility located at 12000 Bay Area Blvd., Pasadena, Texas 77507 and all other PeroxyChem facilities used in the manufacture, supply and storage of API.

"**FDA**" means the United States Food and Drug Administration or successor governmental agency.

"**First Commercial Sale**" means the date, with respect to a country in the Territory, the first commercial sale to a Third Party for monetary value of the Product in such country for use or consumption by the end user of such product in such country after all

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approvals of Regulatory Authorities that are required for the commercialization of such product in such country have been obtained in such country. For the avoidance of doubt, sales prior to receipt of all approvals of Regulatory Authorities necessary to commence commercial sales of the Product in a particular country, such as so-called "treatment IND sales", "named patient sales", "compassionate use sales", clinical trial supplies, and samples, in each case, where Aclaris and/or its Affiliate receives no cash compensation for such sales, shall not be construed as a First Commercial Sale.

"**FCPA**" has the meaning set forth in Section 11.15 hereof.

"**Force Majeure Event**" has the meaning set forth in Section 10.1 hereof.

"**Improvements**" means all Technology and discoveries, inventions, developments, modifications, innovations, updates, enhancements, improvements, writings or rights (whether or not protectable under patent, trademark, copyright or similar laws) that are conceived, discovered, invented, developed, created, made or reduced to practice in the manufacture of API or Product or performance of other services related to API or Product under this Agreement.

"**Indemnitee**" has the meaning set forth in Section 7.7 hereof.

"**Indemnitor**" has the meaning set forth in Section 7.7 hereof.

"**Ineligible Person**" has the meaning set forth in Section 7.4(a) hereof.

"**Initial Term**" has the meaning set forth in Section 8.1 hereof.

"**Losses**" means any and all losses, liabilities, claims, obligations, penalties, judgments, demands, actions, disbursements of any kind and nature, suits, losses, damages, costs and expenses (including, without limitation, reasonable attorneys' fees).

"**Notice of Observations**" has the meaning set forth in Section 6.2 hereof.

"**PeroxyChem Improvements**" has the meaning set forth in Section 6.5 (d) hereof.

"**PeroxyChem Technology**" (a) the API and any intermediates or derivatives thereof; (b) information provided by PeroxyChem included in the Specifications; and (c) the Technology of PeroxyChem owned, licensed, developed or obtained by or on behalf of PeroxyChem prior to the Effective Date of this Agreement, or developed or obtained by or on behalf of PeroxyChem independent of this Agreement and without reliance upon the Confidential Information, Improvements or Technology of Aclaris. For the avoidance of doubt, PeroxyChem Technology shall not include Aclaris Technology.

"**Person**" means an individual, corporation, partnership or other entity.

"**Product**" has the meaning set forth in the preamble hereof.

"**Purchase Price**" has the meaning set forth in Section 5.1 hereof.

"**Quality Agreement**" means a separate Quality Agreement to be executed at the same time as this Agreement by the Parties and attached hereto as Attachment A. The Quality Agreement constitutes an integrated part of this Agreement and defines the quality assurance and regulatory responsibilities of the Parties as they relate to this Agreement and such Agreement is incorporated by reference herein and made a part hereof as though fully set forth herein

"**Raw Materials**" means the raw materials, chemicals and excipients required to manufacture and supply the API in accordance with the Specifications.

"**Regulatory Authority**" means (a) the regulatory entities for each respective country, state and/or territory as set forth in Attachment B; if Territory includes the United States, the Food and Drug Administration; if Territory includes any member state of the European Union, the EMA; (b) any successor organization of any such entity; and (c) any other government regulatory authority with regulatory oversight of the manufacture, supply, use or sale of API or Product in or for the Territory, as such other authorities are mutually agreed upon by the Parties in writing.

"**Regulatory Communications**" has the meaning set forth in Section 6.1(b) hereof.

"**Renewal Term**" has the meaning set forth in Section 8.1 hereof.

"**Specifications**" means the quality standards, including tests, analytical procedures, and acceptance criteria that are established to confirm the quality of API and Raw Materials, which are contained or referenced in the product specification section of the DMF (or similar submission to a governmental agency in jurisdictions outside of the United States), as set forth on the attached Attachment C hereto, and as the same may be amended or supplemented from time to time, and any other requirements of Aclaris and/or as may be required or necessitated by the FDA.

"**Technology**" means all methods, techniques, trade secrets, copyrights, know-how, data, documentation, regulatory submissions, Specifications, and other intellectual property of any kind, including without limitation formulations and manufacturing information (whether or not protectable under patent, trademark, copyright or similar laws).

"**Term**" has the meaning set forth in Section 8.1 hereof.

"**Territory**" means [***].

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*****Text Omitted and Filed Separately**
Confidential Treatment Requested
Under 17 C.F.R. §§ 200.80(b)(4) and 240.24b-2

"**Third Party**" means any Person or entity other than a Party to this Agreement or such Party's Affiliate.

"**United States**" means its commonwealths, possessions and territories

2. PURCHASE AND SALE

2.1 Purchase and Sale of API.

(a) **Exclusive Manufacture and Supply of API**. Subject to the terms and provisions hereof, during the Term of this Agreement, PeroxyChem shall exclusively manufacture, supply, and sell API to Aclaris for clinical and commercial use in connection with the development and commercialization of the Product for the treatment and/or prevention of verrucoid-type lesions, seborrheic keratosis, warts, molluscum contagiosum, acrochordons, actinic keratoses, squamous cell carcinomas (invasive and in situ), basal cell carcinoma, lentigines, solar lentigines, fine lines, and rhytides ("Aclaris Indications") in the Territory. For the avoidance of doubt, during the Term of this Agreement, PeroxyChem and/or its Affiliates, at Peroxychem's sole discretion, may manufacture and supply API to a Third Party (ies), in any country in the Territory or outside of the Territory, for any indication other than an Aclaris Indication. . Further, for the avoidance of doubt, during the Term of this Agreement, PeroxyChem and/or its Affiliates shall not, directly or indirectly, manufacture, supply or sell API to or on behalf of a Third Party (ies) or for use by such Third Party (ies) for Aclaris Indications in the Territory. [***].

(b) The API shall be manufactured to conform to, and comply with, the Specifications and cGMPs.

2.2 Quantities. PeroxyChem shall supply Aclaris with and Aclaris shall purchase from PeroxyChem quantities of the API in accordance with Aclaris' forecasts and orders submitted in accordance with Section 3 hereof; provided, however, that during any calendar quarter, PeroxyChem shall not, subject to Section 6.4 hereof, be required to supply Aclaris with quantities of the API that exceed [***] of the forecasts submitted by Aclaris in respect of such quarter in accordance with Section 3.1 hereof. In the event that Aclaris submits orders to PeroxyChem that exceed [***] of such forecasts, then, unless such excess orders are the result of PeroxyChem's decision to terminate or significantly reduce its manufacture of the API (in which event Section 6.4 hereof shall govern), PeroxyChem shall use commercially reasonable efforts to supply Aclaris with such excess quantities of the API as soon as possible. PeroxyChem agrees that it can timely supply the amount of the API set forth in, or otherwise contemplated by, this Agreement and that Aclaris can rely on PeroxyChem's ability to supply such amount.

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3. FORECASTS AND ORDERS

3.1 Forecasts. During the Term of this Agreement, Aclaris shall provide PeroxyChem with written (calendar) quarterly forecasts of the quantities of the API that it expects to order for each rolling twelve (12) month period. Notwithstanding anything to the contrary contained herein, all forecasts are estimates only, and Aclaris shall be bound to purchase only the amounts of the API set forth in purchase orders submitted by Aclaris to PeroxyChem in accordance with Section 3.2 hereof, Aclaris shall have delivered the first of its quarterly forecasts no later than sixty (60) calendar days after the Effective Date, and shall deliver updated and extended forecasts thereafter at least thirty (30) calendar days prior to each subsequent quarter.

3.2 Purchase Orders. During the Term, and subject to the other terms hereof, Aclaris shall submit orders to purchase the API to PeroxyChem and identify the requested delivery date(s) for each such order. The delivery date(s) specified in any such order shall not be less than forty-five (45) calendar days from the date of such order. Each order submitted pursuant to this Section 3.2 shall constitute a firm obligation to purchase the ordered quantities of the API; provided, however, that such order may be modified or cancelled by Aclaris upon written notice to Peroxychem prior to commencement of manufacture by PeroxyChem of such order. The terms and provisions of this Agreement shall be controlling over any conflicting terms and provisions used in any purchase order or other documentation used by Aclaris in ordering the API or by PeroxyChem in confirming orders.

4. DELIVERY.

4.1 Delivery. PeroxyChem shall ensure that the API ordered by Aclaris in accordance with this Agreement is shipped in accordance with the delivery dates specified in Aclaris' purchase orders, and PeroxyChem shall notify Aclaris promptly of any anticipated delay. All of the API purchased hereunder shall be delivered EXW Pasadena, Texas (Incoterms 2010) to the location designated by Aclaris.

4.2 Quality Control and Assurances and Release Documentation. PeroxyChem shall perform all in-process quality control tests and quality assurance reviews on the API in accordance with the Specifications and cGMPs and any other tests that may be required by the FDA, and shall certify in writing that each shipment of the API delivered to Aclaris was manufactured in strict conformity with the Specifications and cGMPs and that the API contained in each such shipment complies with all of the provisions of Section 7.2 hereof. All deliveries of the API by PeroxyChem shall be accompanied by all documentation and information required under all Applicable Laws and regulations to import, if applicable, the API into, and for Aclaris to use in clinical trials and in the commercial Product for sale in the Territory, including, without limitation, the name of the API, a Certificate of Analysis certifying that each Batch of the API conforms to the Specifications, and the Batch Number and any quality assurance or quality control audit results conducted to ensure that any shipment of the API supplied hereunder was manufactured in conformity with cGMPs, Applicable Laws, and other applicable provisions of the Act and FDA regulations.

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4.3 **Acceptance and Rejection**. Aclaris shall give written notice to PeroxyChem of any claims that any portion of a shipment of the API manufactured by PeroxyChem does not comply with the requirements of Section 7.2 hereof. In the event that Aclaris shall fail to notify PeroxyChem of any such claim within (30) Business Days after Aclaris' receipt of such shipment at the location designated by Aclaris, such shipment shall be deemed accepted by Aclaris; provided, however, that notwithstanding the foregoing, other than with respect to defects or other non-compliance plainly observable from a visual inspection, any acceptance or deemed acceptance shall not adversely affect or otherwise diminish Aclaris' rights under the terms of this Section 4.3 to receive shipments of the API in compliance with the requirements of Section 7.2 hereof. Any notice by Aclaris pursuant to this Section 4.3 that any portion of a shipment of the API does not comply with the terms and provisions hereof shall be accompanied by a true and correct copy of the results of any tests conducted by Aclaris thereon. The Parties shall cooperate in good faith to resolve any disputes arising therefrom and, in the event that the Parties shall be unable to resolve such dispute within forty-five (45) calendar days from the date of Aclaris' notice pursuant to this Section 4.3, the Parties shall submit such dispute to a mutually agreed-to independent laboratory. The determination by such laboratory shall be final and binding and the costs therefor shall be borne by the non-prevailing Party. Aclaris shall not dispose of any API claimed by it not to comply with the terms and provisions hereof until resolution of any dispute with respect thereto. Aclaris shall return or dispose of any non-conforming API pursuant to the written instructions of PeroxyChem. PeroxyChem shall promptly (at Aclaris' sole discretion): (i) replace any of the API that does not comply with the terms and provisions thereof, at its sole cost and expense, by delivery thereof to Aclaris, (ii) refund Aclaris for the Purchase Price paid in respect thereof or (iii) reimburse Aclaris for an amount equal to the factor obtained by multiplying (A) the amount of replacement API procured by Aclaris from a Third Party(ies) as a result of receiving non-conforming API and (B) the difference, if any, between the per unit amount paid by Aclaris to such Third Party(ies) to procure such replacement API during such period and the Purchase Price. For the avoidance of doubt, the Parties agree that the per unit amount paid by Aclaris to such Third Party (ies) shall be an arm's length, fair market value price.

5. PRICE AND PAYMENT TERMS.

5.1 **Price for API Manufactured by PeroxyChem**. The purchase price payable by Aclaris for the API manufactured and supplied to it by PeroxyChem shall be as set forth on Attachment D ("Purchase Price").

5.2 **Payment for API Manufactured by PeroxyChem**. Payment for API manufactured and supplied hereunder shall be made to PeroxyChem. Aclaris shall pay for shipments of the API within thirty (30) days after its receipt of invoice hereof; provided, however, that Aclaris shall not be obligated to pay for any shipment of the API during the pendency of any dispute pursuant to Section 4.3 hereof.

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6. CERTAIN UNDERTAKINGS.

6.1 **DMF Maintenance**.

(a) Within five (5) calendar days from the completion of PeroxyChem's update of its hydrogen peroxide DMF, and annually thereafter on April 1 until the expiration of the Term of this Agreement, Aclaris will pay PeroxyChem an annual fee equal to [***] for the cost of maintaining the hydrogen peroxide DMF and for Facility and related fees incurred by PeroxyChem in connection with the maintenance of cGMPs for the API. On an annual basis, the Parties agree to meet to discuss whether or not an adjustment to such fee is necessary as a result of an increase in Regulatory Authority or Third Party costs related to the maintenance of the hydrogen peroxide DMF, Facility and/or related fees.

(b) PeroxyChem shall (a) respond promptly and diligently in writing to all FDA information requests, inspection observations, and any regulatory communications, correspondence or actions with respect to the API and similar communications, actions and requirements of similar Regulatory Authorities in jurisdictions outside the United States, including, without limitation, all submissions and annual updates necessary to keep the DMF current and in good standing with the FDA or such similar Regulatory Authorities ("Regulatory Communications"); (b) notify Aclaris ninety (90) calendar days before implementation of any process change or Raw Material source change that may materially affect the chemical or physical characteristics of the API, regardless of whether such change requires notification to Aclaris according to cGMPs, FDA regulations and/or industry norms and agrees not to implement such change without the prior written consent of Aclaris (not to be unreasonably withheld) and such consent shall be communicated to PeroxyChem within thirty (30) calendar days of receipt of notification of such change by PeroxyChem; (c) promptly provide copies to Aclaris of all written communications and written summaries of all oral communications from, with or to the FDA (and/or similar Regulatory Authorities in jurisdictions outside the United States) with respect to the API and/or the DMF, but in no event later than forty-eight (48) hours (excluding weekends and holidays) after its receipt or delivery of such communications or summaries; (d) seek input from Aclaris and/or its designated representatives prior to any response to the FDA and shall include Aclaris and/or its designated representatives in all discussions and meetings with the FDA concerning the API and/or DMF; (e) advise Aclaris in writing and promptly (but in any event within one (1) Business Day thereafter) of any material problems or delays encountered by, or additional requirements imposed upon, PeroxyChem in respect of the DMF; and (f) advise Aclaris of any inspection of PeroxyChem's Facilities by the FDA promptly in writing, but in no event earlier than five (5) calendar days prior to the date of such inspection. In connection with clause (a) above, PeroxyChem shall additionally provide written notice to Aclaris of when it intends to respond to all such Regulatory Communications and, in the event that PeroxyChem does not intend to respond within fifteen (15) calendar days of its receipt of the applicable Regulatory Communications, PeroxyChem shall provide the reasons therefor in such notice.

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6.2 Facility Maintenance; Audits; FDA Inspection; Reports. PeroxyChem shall maintain and operate its Facility designated in the DMF and implement quality control procedures required to meet the requirements of FDA regulations and to be able to timely perform its obligations hereunder. PeroxyChem shall permit Aclaris (or a Third Party quality assurance representative of Aclaris) to inspect Facilities utilized by PeroxyChem with respect to the API once per calendar year upon reasonable notice thereof, during normal business hours and on a confidential basis; provided, however, that if Aclaris (or such Third Party) discovers any non-compliance during any such inspection or if PeroxyChem receives a FDA Form 483 ("Notice of Observations") evidencing any non-compliance with respect to the API, PeroxyChem shall (a) promptly and diligently rectify such non-compliance and implement appropriate procedures with a view to avoiding any repetition of such non-compliance and (b) permit such additional inspection(s) by Aclaris (or such Third Party) as Aclaris shall deem necessary to verify that such non-compliance has been rectified. PeroxyChem shall promptly provide Aclaris with a copy of any Notice of Observations received at the conclusion of an inspection relating to the API or its Facility and all follow-up correspondence from the FDA, if any.

6.3 Insurance. Both Parties shall (and shall cause their respective Affiliates, as required, to), for a period of not less than thirty-six (36) months following the expiration or termination of this Agreement, carry or be subject to coverage under (as a named insured) product liability insurance (including blanket contractual liability) in an amount of not less than $5,000,000 per occurrence and $5,000,000 in the aggregate, which insurance shall be written on an "occurrence made" policy form.

6.4 Termination of Supply. In the event PeroxyChem decides to terminate its manufacture of the API and/or shut down its Facility that manufactures the API for Aclaris hereunder, PeroxyChem shall promptly provide Aclaris with written notice thereof, but in no event later than five (5) Business Days after having knowledge of making such decision. In the event that PeroxyChem shall make such decision to terminate its manufacture of API PeroxyChem shall take all actions as are necessary to ensure that it can provide Aclaris' requirements for the API during the period in which Aclaris seeks approval from the FDA to use the API supplied by a Third Party. In the event that PeroxyChem is unable to provide Aclaris' requirements in accordance with Section 2.2 hereof during the Term or such period, PeroxyChem shall reimburse Aclaris for (i) an amount equal to the factor obtained by multiplying the amount of replacement units of API procured by Aclaris from a Third Party(ies) as a result of PeroxyChem's inability to supply such requirements during the Term or such period, by the difference, if any, between the per unit amount paid by Aclaris to such Third Party(ies) to procure such replacement API and the Purchase Price. For the avoidance of doubt, the Parties agree that the per unit amount paid by Aclaris to such Third Party (ies) shall be an arms-length, fair market value price.

6.5 Intellectual Property

(a) **Aclaris Technology**. All rights to and interests in Aclaris Technology shall remain solely in Aclaris and no right or interest therein is transferred or granted to

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PeroxyChem. PeroxyChem acknowledges and agrees that it does not acquire a license or any other right to Aclaris Technology except for the limited purpose of carrying out its duties and obligations under this Agreement and that such limited, non-exclusive, license shall expire upon the completion of such duties and obligations or the termination or expiration of this Agreement, whichever is the first to occur.

(b) **PeroxyChem Technology**. All rights to and interests in PeroxyChem Technology shall remain solely in PeroxyChem and no right or interest therein is transferred or granted to Aclaris. Aclaris acknowledges and agrees that it shall not acquire a license or any other right to PeroxyChem Technology except as otherwise set forth in this

(c) **Aclaris Improvements**. The Parties agree that all Improvements that relate exclusively to the Confidential Information of Aclaris or are Product-specific, shall be the sole and exclusive property of Aclaris ("Aclaris Improvements") and are hereby assigned to Aclaris (or its designee) without additional compensation to PeroxyChem. PeroxyChem shall take such steps as Aclaris may reasonably request (at Aclaris' expense) to vest in Aclaris (or its designee) ownership of the Aclaris Improvements.

(d) **PeroxyChem Improvements**. The Parties agree that all Improvements that are not Aclaris Improvements shall be the sole and exclusive property of PeroxyChem ("PeroxyChem Improvements") and Aclaris hereby assigns the same to PeroxyChem(or its designee) without additional compensation to Aclaris. Aclaris shall take such steps as PeroxyChem may reasonably request (at PeroxyChem's expense) to vest in PeroxyChem (or its designee) ownership of the PeroxyChem Improvements. To the extent that PeroxyChem incorporates a PeroxyChem Improvement into the manufacturing process of API for use in the Aclaris' Product, PeroxyChem agrees to grant to Aclaris a non-exclusive, sub-licensable, royalty-free license to use such Aclaris-approved, PeroxyChem Improvement to manufacture, have manufactured, use, sell, have sold,import and/or export Product in the Territory. This grant shall be perpetual, but subject to termination in the event that PeroxyChem is notified that such PeroxyChem Improvement infringes a Third Party's intellectual property rights, in which case the grant set forth in this Section 6.5 (d) is terminable within ten (10) Business Days written notice to Aclaris. The foregoing license shall only be transferable as provided in Section 11.3.

(e) **Disclaimer**. Except as otherwise expressly provided herein, nothing contained in this Agreement shall be construed or interpreted, either expressly or by implication, estoppel or otherwise, as: (i) a grant, transfer or other conveyance by either Party to the other of any right, title, license or other interest of any kind in any of its Inventions or other intellectual property, (ii) creating an obligation on the part of either Party to make any such grant, transfer or other conveyance or (iii) requiring either Party to participate with the other Party in any cooperative development program or project of any kind or to continue with any such program or project.

(f) **Rights in Inventions**. The Party owning any invention shall have the world-wide right to control the drafting, filing, prosecution and maintenance of patents covering

the inventions, including decisions about the countries in which to file patent applications. Patent costs associated with the patent activities described in this Section 6.5 shall be borne by the sole owner. Each Party will cooperate with the other Party in the filing and prosecution of patent applications. Such cooperation will include, but not be limited to, furnishing supporting data and affidavits for the prosecution of patent applications and completing and signing forms needed for the prosecution, assignment and maintenance of patent applications.

(g) **Confidentiality of Intellectual Property**. Intellectual property shall be deemed to be the Confidential Information of the Party owning such intellectual property. The protection of each Party's Confidential Information is described in Section 9. Any disclosure of information by one Party to the other under the provisions of this Section 6.5 shall be treated as the disclosing Party's Confidential Information under this Agreement. It shall be the responsibility of the Party preparing a patent application to use reasonable efforts to limit the disclosure of the other Party's Confidential Information in any patent application. Should a Party need to disclose the other Party's Confidential Information to comply with a patent office's disclosure requirements the Party must obtain the written permission of the other Party to use or disclose the other Party's Confidential Information in the patent application before the application is filed and for other disclosures made during the prosecution of the patent application.

6.6 Product Recalls. In the event Aclaris shall be required to recall any Product because the API manufactured and supplied by PeroxyChem in the Product may violate Applicable Law or has not been manufactured in accordance with Specifications, or in the event that Aclaris elects to institute a voluntary recall, Aclaris shall be responsible for coordinating such recall. Aclaris promptly shall notify PeroxyChem if any Product is the subject of a recall and provide PeroxyChem with a copy of all documents relating to such recall. PeroxyChem shall cooperate with Aclaris in connection with any recall. PeroxyChem will only be financially responsible for the costs of any recall for which: (a) its negligence, willful misconduct, negligent omission or breach of this Agreement is the sole cause of such recall, and (b) the recall occurs within three (3) years from the date of manufacture of the recalled Batch of API. PeroxyChem's liability for costs associated with all recalls shall not exceed the total fees actually paid by Aclaris for the services provided pursuant to this Agreement.

6.7 Audits

(a) **Quality Audits**. Aclaris, upon prior written notice and on dates and times agreed upon by the Parties, shall have the right to quality audit PeroxyChem pursuant to the Quality Agreement executed by the Parties. If Aclaris requests additional audits other than the number of audits agreed to by the Parties in the Quality Agreement, Aclaris agrees to reimburse PeroxyChem for PeroxyChem's reasonable expenses, incurred in hosting the audit. All audited data will be treated as Confidential Information of PeroxyChem and Aclaris shall not be permitted to remove or copy data without PeroxyChem's prior written consent.

(b) **Other Audits**. Aclaris, upon prior written notice and on dates and times agreed upon by the Parties, shall have the right to additional audits of PeroxyChem in addition to those audits agreed to between the Parties pursuant to the Quality Agreement executed by the Parties with the prior written consent of PeroxyChem. Aclaris agrees to reimburse PeroxyChem for PeroxyChem's reasonable expenses incurred in hosting any such audit.

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7. REPRESENTATIONS, WARRANTIES, COVENANTS, AND INDEMNIFICATION.

7.1 Mutual Representations. Each Party hereby represents and warrants to the other Party that (a) the person executing this Agreement is authorized to execute this Agreement; (b) this Agreement is legal and valid and the obligations binding upon such Party are enforceable by their terms; and (c) the execution, delivery and performance of this Agreement does not conflict with any agreement, instrument or understanding, oral or written, to which such Party may be bound, nor violate any Applicable Law of any court, governmental body or administrative or other agency having jurisdiction over it

7.2 Representations, Warranties and Covenants of PeroxyChem.

(a) To the best of its knowledge, PeroxyChem represents and warrants that the DMF and any other submissions made to the FDA in connection with the API were accurate, complete and truthful when filed and made in good faith upon the best information available to PeroxyChem or its Affiliates at such time and that the DMF and all other such regulatory submissions have been, and covenants that such submissions will be, amended, supplemented, or otherwise updated in a timely manner whenever the information contained in any of them is no longer accurate, complete and truthful, and covenants that Aclaris will be promptly notified in writing of any such "pertinent" changes in accordance with 21 C.F.R. § 314.420(c).

(b) PeroxyChem covenants that all the API supplied by it to Aclaris shall meet the Specifications and be manufactured, packaged, tested, stored and handled in accordance with the then-current version of the DMF, Applicable Laws, the applicable standards established by The United States Pharmacopoeia Convention, Inc., the applicable provisions of the Act and all relevant FDA regulations, guidelines, and guidances, including, without limitation, cGMP regulations codified and located at 21 C.F.R. pts. 210 and 211 in effect at the time of manufacture and testing of the API.

THE FOREGOING WARRANTIES IN THIS SECTION 7.2 ARE MADE BY PEROXYCHEM EXPRESSLY IN LIEU OF ANY OTHER EXPRESS OR IMPLIED WARRANTIES. PEROXYCHEM DOES NOT PROVIDE ANY WARRANTY EXCEPT AS SPECIFICALLY PROVIDED IN THIS SECTION 7.2, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

7.3 Representations and Warranties of Aclaris.

EXCEPT AS SET FORTH IN SECTION 7.4, ACLARIS MAKES NO WARRANTIES HEREUNDER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

7.4 Representations and Warranties with Regard to Status.

(a) Aclaris represents and warrants to PeroxyChem that neither it nor any of its Affiliates is prohibited by any law, rule or regulation or by any order, directive or policy from selling the Product or other pharmaceutical products within the Territory and that neither Aclaris nor any of its Affiliates is a Person who is listed by a United States regulatory agency or authority as debarred, suspended or otherwise ineligible for federal programs in the United States or its territories and protectorates under the Generic Drug Enforcement Act of 1992 or analogous or similar regulation (an "Ineligible Person") or listed by any United States Regulatory Authority as proposed for debarment.

(b) PeroxyChem represents and warrants to Aclaris that neither it nor any of its Affiliates that has manufactured the API are currently prohibited by any law, rule or regulation or by any order, directive or policy from selling the API and that neither PeroxyChem nor any such Affiliate is an Ineligible Person or listed by any United States Regulatory Authority as proposed for debarment.

7.5 PeroxyChem's Indemnification Obligations. PeroxyChem shall indemnify and hold Aclaris and its Affiliates and its and their respective officers, directors, employees and agents harmless from and against, and pay and reimburse them for, any Losses arising directly or indirectly as a result of PeroxyChem's (i) negligent acts or omissions or willful wrongful acts or (ii) breach of any of its representations, warranties, covenants or other obligations hereunder; provided, however, that PeroxyChem shall not be required to indemnify Aclaris with respect to any Losses to the extent arising from or related to Aclaris' negligent acts, negligent omissions, or willful wrongful acts or Aclaris' breach of its representations, warranties, covenants or other obligations hereunder.

7.6 Aclaris' Indemnification Obligations. Aclaris shall indemnify and hold PeroxyChem and its Affiliates and its and their respective officers, directors, employees and agents harmless from and against, and pay and reimburse them for, any Losses arising directly or indirectly as a result of Aclaris' (i) negligent acts or negligent omissions or willful wrongful acts or (ii) breach of any of its representations, warranties, covenants or other obligations hereunder; provided, however, that Aclaris shall not be required to indemnify PeroxyChem with respect to any Losses to the extent arising from or related to PeroxyChem's negligent acts, negligent omissions, or willful wrongful acts or PeroxyChem's breach of any of its representations, warranties, covenants or other obligations hereunder.

7.7 Indemnification Procedures. A Party (the "Indemnitee") that intends to claim indemnification under this Section 7 shall promptly notify the other Party (the "Indemnitor") in writing of any action, claim or liability with respect to which the Indemnitee or any of its officers, directors, employees or agents intends to claim such indemnification. The Indemnitee shall permit, and shall cause its employees and agents to permit, the Indemnitor, at its discretion, to settle any such action, claim or liability and agrees to the complete control of such

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defense or settlement by the Indemnitor; provided, however, that such settlement (i) includes an unconditional release of the Indemnitee from all liability to any Third Party and (ii) does not adversely affect the Indemnitee's rights hereunder or impose any obligations on the Indemnitee in addition to those set forth herein in order for it to exercise such rights or damage its reputation or legal status. No such action, claim or liability shall be settled by the Indemnitee without the prior written consent (not to be unreasonably withheld or delayed) of the Indemnitor, and the Indemnitor shall not be responsible for any fees or other costs incurred other than as provided herein. The Indemnitee, its employees, agents and Affiliates shall cooperate fully with the Indemnitor and its legal representatives in the investigation and defense of any action, claim or liability covered by this indemnification. The Indemnitee shall have the right, but not the obligation to be represented by counsel of its own selection and at its own expense.

8. TERM AND TERMINATION.

8.1 Term. This Agreement shall commence on the Effective Date and will expire on the tenth anniversary of the First Commercial Sale of Product in the Territory (the "Initial Term"). Thereafter, this Agreement shall be automatically renewed for successive two (2) year periods (each, a "Renewal Term" and, together with the Initial Term, the "Term"), unless a Party shall otherwise notify the others in writing at least ninety (90) calendar days prior to the otherwise scheduled expiration of the Initial Term or any Renewal Term.

8.2 Termination for Financial Matters. This Agreement may be terminated Immediately by either Party by giving the other Party written notice thereof in the event such other Party makes a general assignment for the benefit of its creditors, or proceedings of a case are commenced in any court of competent jurisdiction by or against such Party seeking (a) such Party's reorganization, liquidation, dissolution, arrangement or winding up, or the composition or readjustment of its debts, (b) the appointment of a receiver or trustee for or over such Party's property, or (c) similar relief in respect of such Party under any law relating to bankruptcy, insolvency, reorganization, winding up or composition or adjustment of debt, and such proceedings shall continue undismissed, or an order with respect to the foregoing shall be entered and continue unstayed, for a period of more than sixty (60) calendar days.

8.3 Termination for Supply Interruption. This Agreement may be terminated by Aclaris, on thirty (30) calendar days' prior written notice, if PeroxyChem shall fail or be unable to supply Aclaris' requirements for the API for a period exceeding ninety (90) cumulative days in any 365-day period during the Term of this Agreement.

8.4 **Termination for Force Majeure Event**. If, as a result of a Force Majeure Event, a Party does not perform its obligations hereunder for any consecutive period of ninety (90) days, the other Party shall have the right to terminate this Agreement in its entirety upon providing written notice to the non-performing Party, such termination to be effective within thirty (30) calendar days of such notice.

8.5 **Termination for Breach**. Either Party may terminate this Agreement upon the breach of any provision of this Agreement by the other Party if such breach is not cured by the breaching Party within ten (10) Business Days for material monetary breaches, and sixty (60) calendar days for material non-monetary breaches (or such additional time as is reasonably necessary to cure such non-monetary breaches provided the breaching Party has commenced a cure within the sixty (60) calendar day period and is diligently pursuing completion of such cure) after receipt by the breaching Party of written notice of such breach. At the option of the non-breaching Party, such termination may be with respect to the entire Agreement, or only with respect to the Product that is subject to the breach

8.6 **Effects of Termination**. In the event of expiration of the applicable Term or termination of this Agreement, all rights and obligations of the Parties hereunder shall cease, except that termination or expiration shall not: (i) release either Party from any liability or obligation that at such time shall already have accrued or be owed, that is caused by an improper termination or that thereafter accrues from a breach or default prior to the effective date of such expiration or termination; and (ii) affect in any way the survival of any other right, duty or obligation of either Party hereto that is expressly stated elsewhere in this Agreement to survive such expiration or termination including without limitation the obligations set forth in section 6.5 (d).

9. CONFIDENTIALITY.

9.1 **Treatment of Confidential Information**. Except as required by Applicable Laws and regulations or as otherwise provided in this Section 9, during the Term and thereafter, each Party receiving Confidential Information shall hold in confidence, and may not use for purposes other than those contemplated by this Agreement or disclose to a Third Party (except as specifically set forth herein or with the express prior written consent of the other Party), any Confidential Information. In the event that such receiving Party is required by legal or judicial process to disclose any Confidential Information, the Party so disclosing information shall (i) timely inform the other Party, (ii) use its commercially best efforts to limit the disclosure required by such legal or judicial process and to maintain confidentiality and (iii) permit the other Party to attempt, by appropriate legal means, to limit such disclosure.

9.2 **Limits on Disclosure**.

(a) Without limiting the generality of the foregoing, each Party may disclose Confidential Information to those employees, attorneys or agents who need to receive the Confidential Information and use such Information in order to further the activities contemplated by this Agreement. Each Party shall take sufficient precautions to safeguard the Confidential Information, including, without limitation, obtaining appropriate commitments and enforceable confidentiality agreements. Each Party understands and agrees that the unauthorized disclosure of Confidential Information may result in serious and irreparable damage to the other Party, that the remedy at law for any breach of this covenant may be inadequate and that the

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Party seeking redress hereunder shall be entitled to injunctive relief, without prejudice to any other rights and remedies to which such Party may be entitled.

(b) It is acknowledged that Confidential Information may be obtained by a Party from the other Party not only in writing or other tangible form (including electronic), but also through discussions between each Party's respective representatives, demonstrations, observations and other intangible methods.

(c) The foregoing notwithstanding, each Party shall have the right with the exercise of reasonable discretion, and insofar as practical under written confidentiality agreements having provisions no less stringent than those contained herein, to make disclosures of such portions of Confidential Information to Third Party consultants, attorneys, contractors, advisors, Affiliates and governmental agencies if, in the recipient's judgment, such disclosure is beneficial to the manufacture and supply of the API pursuant to this Agreement.

(d) Except as otherwise set forth in this Agreement, upon the termination or expiration of this Agreement and at the written request of the disclosing Party, the receiving Party, at the option of the disclosing Party, shall either return all Confidential Information of the disclosing Party (including, without limitation, all copies, excerpts and summaries thereof contained on any media) or destroy such Confidential Information, provided that the receiving Party's legal department may retain one (1) copy of such Confidential Information.

10. FORCE MAJEURE.

10.1 **Effects of Force Majeure**. No Party hereto shall be held liable or responsible for failure or delay in fulfilling or performing any of its obligations under this Agreement (other than the payment of money) if such failure or delay is caused by acts of God, acts of the public enemy, fire, explosion, flood, drought, war, terrorists, riot, sabotage, embargo, intervention of a governmental agency, including a Regulatory Authority, or by any other event or circumstance of like character to the foregoing beyond the reasonable control and without the fault or negligence of the affected Party (a "Force Majeure Event").

For the avoidance of doubt, if the FDA does not approve the Product for sale in the United States, such lack of approval may be treated, at Aclaris' discretion, as a Force Majeure Event. Such excuse shall continue only as long as the Force Majeure Event continues. Upon cessation of such Force Majeure Event, such Party shall promptly resume performance hereunder.

10.2 Notice of Force Majeure. Each Party shall give the other Party prompt written notice of the occurrence of any Force Majeure Event, the nature thereof and the extent to which the affected Party will be unable to perform its obligations hereunder. Each Party shall use reasonable efforts to correct the Force Majeure Event as quickly as possible and to give the other Party prompt written notice when it is again fully able to perform such obligations.

11. MISCELLANEOUS.

11.1 Dispute Resolution. The Parties recognize that a bona fide dispute as to certain matters may, from time to time, arise during or after the Term that relates to a Party's

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rights and/or obligations hereunder. In the event of the occurrence of such a dispute, any Party may, by written notice to the other Party, have such dispute referred to their respective officers, designated below, or their duly appointed successors, for attempted resolution by good faith negotiation within thirty (30) Business Days after such written notice is received. Such designated officers are as follows:

For PeroxyChem: Bruce Lerner, President and CEO

For Aclaris: Neal Walker, President and CEO

In the event the designated officers are not able to resolve the dispute within such thirty (30) day period, or such other period of time as the Parties may mutually agree to in writing, each Party shall have the right to pursue any and all remedies available at law or in equity, subject to Section 4.3 hereof.

11.2 Independent Contractors. The relationship between PeroxyChem and Aclaris is that of independent contractors and nothing contained herein shall be deemed to constitute the relationship of partners, joint venturers or of principal and agent between PeroxyChem and Aclaris. No Party shall have any express or implied right or authority to assume or create any obligations on behalf of or in the name of the other Party or to bind the other Party to any contract, agreement or undertaking with any Third Party.

11.3 Assignment. This Agreement shall be binding upon and inure to the benefit of the successors or permitted assigns of each of the Parties and may not be assigned or transferred by either Party without the prior written consent of the other, which consent will not be unreasonably withheld or delayed, except that no consent shall be required in the case of a transfer to a wholly-owned subsidiary or in connection with a transaction involving the merger, consolidation or sale of substantially all of the assets of the Party seeking such assignment or transfer and such transaction relates to the Product covered by this Agreement and the resulting entity assumes all of the obligations under this Agreement or in the event of a sale, transfer or license of the Product covered by this Agreement. Both Parties may, without such consent, assign this Agreement to their respective Affiliates, provided that the assignee assumes all obligations of such Party under this Agreement. No assignment shall relieve any Party of responsibility for the performance of its obligations hereunder.

11.4 Governing Law. In the event of any action, dispute, controversy or claim regarding the validity, construction or enforcement of this Agreement (a "**Dispute**"), this Agreement shall be governed by, and construed in accordance with, the laws of the United States and the State of Delaware and (ii) the Parties shall consent to the exclusive jurisdiction of federal and state courts located in the State of Delaware and shall waive any objection to venue or forum laid therein. The Parties hereby agree that service of process by certified mail, return receipt requested, shall constitute personal service for all purposes hereof.

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11.5 No Implied Waiver. No failure or delay on the part of the Parties hereto to exercise any right, power or privilege hereunder or under any instrument executed pursuant hereto shall operate as a waiver; nor shall any single or partial exercise of any right, power or privilege preclude any other or further exercise thereof or the exercise of any other right, power or privilege.

11.6 Notices. All notices required to be given hereunder shall be in writing and shall be given by personal delivery, via facsimile or electronic transmission, by a nationally recognized overnight carrier or by registered or certified mail, postage pre-paid with return receipt requested. Notices shall be addressed to the Parties as follows:

If to PeroxyChem:	PeroxyChem 1735 Market Street, 16th Floor Philadelphia, Pennsylvania 19103 Attn: Stephanie Montag Email: Stephanie.Montag@peroxychem.com
If to Aclaris:	Aclaris Therapeutics, Inc. 101 Lindenwood Drive, Suite 400

Malvern, Pennsylvania 19355
Attn: Chief Legal Officer
Email: kalijackson@aclaristx.com

Notices delivered personally shall be deemed delivered as of actual receipt; notices sent via facsimile or electronic transmission shall be deemed delivered as of receipt by the sender of written confirmation of transmission thereat notices sent via overnight courier shall be deemed delivered as of five (5) Business Days following sending; and notices mailed shall be deemed delivered as of ten (10) Business Days after proper mailing. A Party may change his or its address by written notice in accordance with this Section 11.6.

11.7 Amendments. Any amendment or modification of this Agreement shall be valid only if made in writing and signed by an authorized representative of the Parties hereto.

11.8 Counterparts. This Agreement may be executed in counterparts and by facsimile or electronic transmission, each of which shall be deemed an original and all of which shall constitute a single agreement. Electronic and facsimile transmissions shall be treated the same as original signatures.

11.9 Entire Agreement. This Agreement constitutes the entire understanding between the Parties with respect to the subject matter hereof and supersedes all prior contracts, agreements and understandings related to the same subject matter between the Parties, excluding the Confidentiality Agreement between the Parties dated July 8, 2013. The Parties intend this Agreement to be a complete statement of the terms of their understanding. No change or modification of any of the provisions hereof shall be effective unless in writing and signed by an authorized officer of each of the Parties.

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11.10 Benefit; Binding Effect. This Agreement shall be binding upon and shall inure to the benefit of the Parties hereto and their respective successors and permitted assigns.

11.11 Survival. Notwithstanding anything to the contrary contained in this Agreement, the provisions of Sections 6.3, 6.6, 7.5, 7.6 and 7.7, 8.6, 9 and this Section 11 shall survive any termination or expiration of this Agreement.

11.12 Further Assurances. The Parties hereto agree that they shall take all appropriate actions, including, without limitation, the execution or filing of any documents or instruments, which may be reasonably necessary or advisable to carry out the intent and accomplish the purposes of any of the provisions hereof.

11.13 Severability. In the event that any provision of this Agreement shall be held invalid or unenforceable for any reason by a court of competent jurisdiction, such provision or part thereof shall be considered separate from the remaining provisions of this Agreement, which shall remain in full force and effect. Such invalid or unenforceable provision shall be deemed revised to effect, to the fullest extent permitted by law, the intent of the Parties as set forth therein.

11.14 Limitation of Liability. ACLARIS' SOLE AND EXCLUSIVE REMEDIES FOR BREACH OF THIS AGREEMENT ARE LIMITED TO THOSE REMEDIES SET FORTH IN ARTICLES 4.3, 6.4, 6.6, 7.5, 7.6, 8.3, and 8.5. EXCEPT AS PROVIDED IN SECTIONS 7.5 AND 7.6, IN NO EVENT SHALL EITHER PARTY BE LIABLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES ARISING OUT OF THIS AGREEMENT, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY. THIS LIMITATION SHALL APPLY EVEN IF THE OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE; PROVIDED, HOWEVER, THAT THIS LIMITATION SHALL NOT APPLY TO DIRECT DAMAGES RESULTING FROM BREACHES BY A PARTY OF A DUTY IMPOSED UNDER SECTION 9 (CONFIDENTIALITY) OR TO ANY THIRD PARTY LOSS, INJURY OR DAMAGE FOR WHICH EITHER PARTY SHALL BECOME LIABLE UNDER SECTIONS 7.5 AND 7.6. UNDER NO CIRCUMSTANCES SHALL EITHER PARTY BE LIABLE TO THE OTHER PARTY FOR LOST PROFITS, LOST MARKET SHARE OR ANY DAMAGES STEMMING FROM AN INTERRUPTION OF SUPPLY. THESE LIMITATIONS SHALL APPLY NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY. EXCEPT AS EXPLICITLY SET FORTH TO THE CONTRARY HEREIN, IN NO EVENT SHALL EITHER PARTY'S MAXIMUM TOTAL AGGREGATE LIABILITY HEREUNDER EXCEED THE TOTAL FEES PAID BY ACLARIS FOR THE SERVICES PROVIDED PURSUANT TO THIS AGREEMENT. SUCH LIMITED WARRANTIES, LIMITATION OF LIABILITY AND SPECIAL PROVISIONS ARE INTEGRAL PARTS OF THIS AGREEMENT. ALL CLAIMS BY ACLARIS FOR BREACH OR DEFAULT UNDER

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THIS AGREEMENT SHALL BE BROUGHT WITHIN TWO (2) YEARS AFTER THE CAUSE OF ACTION ACCRUED OR SHALL BE DEEMED WAIVED.

11.15 Foreign Corrupt Practices Act. Each Party shall comply with all Applicable Laws, rules, and regulations applicable to it in its role as a provider or recipient of services under this Agreement, and shall ensure that all of its Affiliates comply with all Applicable Laws, rules, and regulations applicable to their roles, if any, as providers or recipients of services under this Agreement. In performing any of its obligations or activities under this Agreement, PeroxyChem shall not engage in any activities (such as offering a bribe to any government official), directly or indirectly (e.g., through use of an agent), that

would subject Aclaris to liability under the U.S. Foreign Corrupt Practices Act of 1977 ("*FCPA*"). PeroxyChem and each of its Affiliates shall conduct its activities hereunder in accordance with the provisions of the FCPA, the U.S. Travel Act, and the UK Bribery Act 2010.

11.16 Headings, Interpretation. The headings used in this Agreement are for convenience only and are not part of the Agreement.

11.17 Attorneys' Fees. The successful Party in any litigation or other dispute resolution proceeding to enforce the terms and conditions of this Agreement shall be entitled to recover from the other Party reasonable attorney's fees and related costs involved in connection with such litigation or dispute resolution proceeding.

[SIGNATURE PAGE FOLLOWS]

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IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed as of the date first above written by their duly authorized representatives.

PEROXYCHEM, LLC

By: /s/ Stephanie Montag
Name: Stephanie Montag
Title: Global Business Director, H_2O_2

ACLARIS THERAPEUTICS, INC.

By: /s/ Christopher Powala
Name: Christopher Powala
Title: COO

By: /s/ Neal Walker
Name: Neal Walker
Title: President & CEO

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Attachment A

Quality Agreement

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PEROXYCHEM, L.L.C.

QUALITY AGREEMENT

BETWEEN

PeroxyChem, L.L.C. (Supplier)

AND

Aclaris Therapeutics, Inc. (Company)

SIGNATURES OF APPROVAL

Company QA Representative:	**/s/** **Signature**
	COO **Title**
	8/6/14 **Date**
Supplier QA Representative	**/s/** **Signature**
	Global Electronics Quality Manager **Title**
	8/6/14 **Date**

Revision No. 1

INTRODUCTION, SCOPE, AND DEFINITIONS

This Quality Agreement defines the duties and responsibilities of Aclaris Therapeutics, Inc. (Company) and PeroxyChem, L.L.C. (Supplier) for the manufacture and supply of 50% hydrogen peroxide, also referred to as the "API". This Quality Agreement clearly states who (Supplier or Company) is responsible for compliance with current Good Manufacturing Practices (cGMPs) aspects of production, analysis, release, storage, stability, and shipment of the API.

A detailed checklist of the activities associated with pharmaceutical production, analysis, release, storage, stability and shipment of the API is attached. The responsibility for each activity is assigned to either the Supplier or the Company in the appropriate box of the checklist.

This Quality Agreement is incorporated by reference in the Clinical and Commercial Supply Agreement between the Parties ("Supply Agreement"). In the event of any inconsistency between the Quality Agreement and the Supply Agreement, the terms of the Quality Agreement shall prevail with respect to quality-related matters in connection with the manufacture and supply of API; in all other respects, the terms of the Supply Agreement shall prevail.

Capitalized terms not defined in this Quality Agreement will have the meanings set forth in the Supply Agreement.

For purposes of this Quality Agreement, the following definitions shall apply:

- "API" shall mean the active pharmaceutical ingredient, 50% hydrogen peroxide as identified in the Specifications.
- "cGMPs" means the current Good Manufacturing Practices for finished pharmaceuticals promulgated by the FDA, 21 C.F.R, sections 210 and 211, as amended and presented in the International Conference of Harmonisation, Good Manufacturing Practice Guide for Active Pharmaceutical Ingredients Q7.
- "Facilities" means 12000 Bay Area Blvd., Pasadena, Texas 77507
- "FDA" shall mean the United States Food and Drug Administration.
- "Process" or "Processing" means the compounding, filling, producing, labeling and/or packaging of the API in accordance with the Specifications and the terms and conditions set forth in the Supply Agreement and this Quality Agreement.
- "Specifications" means the procedures, requirements, standards, quality control testing, other data and scope of services set forth in the Supply Agreement.
- "Standard Operating Procedures" shall mean the standard operating procedures in effect at the Company and the Supplier.

RESPONSIBILITY CHECKLIST

RESPONSIBILITIES	Company	Supplier
Regulatory Authorizations & GMP Compliance		
1. Will maintain all licenses, registrations and other authorizations as required to operate a cGMP pharmaceutical manufacturing facility.		X
2. Will maintain and operate the Facility in compliance, as applicable, with cGMPs and all other Applicable Laws and Regulations.		X
3. Will process the API in compliance, as applicable, with cGMPs and all other Applicable Laws and Regulations.		X
4. Will not employ or use the services of any individual who is debarred by FDA or who has engaged in activities that could lead to being debarred.	X	X
5. Will provide Company with copies of the completed batch records and analytical results to support the Chemistry, Manufacturing and Controls ("CMC") information required in the Investigational New Drug Application ("IND")/ New Drug Application ("NDA") to be filed by Company.		X
6. Upon reasonable notice of at least 45 calendar days, will permit Company to conduct audits of all documents, processes, procedures and facilities applicable to the API.		X
Regulatory Actions & Inspections		
7. Will notify Company of any FDA or other Regulatory Authority notice of inspection or inspection of the Facilities directly relating to the API within two (2) Business Days of receipt of such notice.		X
8. Will notify the other party of any FDA or other Regulatory Authority investigation relating to the API within two (2) Business Days of such investigation.	X	X
9. Will provide copies of any FDA Form 483s, Warning Letters or the like from applicable Regulatory Authorities relating to items 7 and 8.	X	X
10. Will promptly notify the other party of any Regulatory Authority request for product samples or product batch records.	X	X
11. Will provide copies of complaints so that Supplier can evaluate the possible relationship to API manufacturing.	X	
12. Will prepare and maintain annual product reviews and annual reports in accordance with 21CFR 314.81(b)(2).		X
Deviations & Change Control		
13. If requested by Company to conduct testing, will notify Company of any Out of Specification (00S) or Out of Trend (00T) results within three (3) Business Days of the investigation of such results.		X

RESPONSIBILITIES	Company	Supplier
14. Will fully document and notify Company of any significant deviations relating to the manufacture or testing of the API.		X
15. Will obtain written approval from Company prior to making any significant changes to documentation, procedures and equipment used in the manufacture, testing, validation, packaging and storage of the API that will impact our regulatory submissions or potentially change the impurity profile of the drug product. Adequate time will be provided for all notifications of the intent to change in accordance with the Supply Agreement, to allow for submission (and any regulatory approvals) prior to implementation.		X
Materials		
16. Will be responsible for maintenance of the Specifications and release of the API.		X
17. Will be responsible for storage, sampling and testing of the API.		X
18. Will provide API meeting Specifications and cGMPs for manufacture, as well as a certificate of analysis.		X
19. Will be responsible for setting Specifications for raw materials and packaging components and for storage of API unless directed otherwise by Company.		X
20. Will be responsible for maintenance of Specifications, procurement, storage, sampling, testing and release of raw materials and packaging components.		X
21. Will be responsible for auditing and qualifying all vendors supplying raw materials or other components of the API.		X
22. Will store API, components and raw materials in accordance with approved Specifications while at the Facilities.		X
23. Will dispose of API waste and any special waste related to the processing of API in accordance with Applicable Laws and Regulations.		X
24. If requested, will retain reserve samples of each lot of API for at least three (3) years after the expiration date of the batch		X
25. If requested, will retain all production, control, or distribution records specifically associated with a batch of API for at least two (2) years after the expiration date of the batch.		X
Maintenance and Qualification of Equipment and Facilities		
26. Will be responsible for maintenance, qualification, calibration and validation (where appropriate and required) of the Facility, equipment, and analytical instruments associated with manufacture and control of the API that are located at the Supplier's facility.		X

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RESPONSIBILITIES	Company	Supplier
Production		
27. Will manufacture API in accordance with the master batch record, Standard Operating Procedures and Specifications.		X
28. Will review and approve master batch records, analytical methods, and Specifications, before use in the production and control of the API.		X
Testing, Release and Stability		
29. Will be responsible for testing the API in accordance with approved methods, and for evaluating the results for compliance with the approved Specifications.		X
30. Will supply to the Company a Certificate of Analysis (COA) and Certificate of Compliance (COC) for all testing of API performed by the Supplier.		X
31. Will be responsible for the final release of the API.		X
32. Will be responsible for selecting and placing on stability at least one batch of API per year, in accordance with a pre-approved protocol.		X
33. Will be responsible for qualification/disqualification, certification and management of external third party contract testing laboratories, with the exception of Company-specified laboratories.		X
Storage and Shipment		
34. Will be responsible for storage of the API at the specified storage conditions until shipment unless directed otherwise by Company.		X
35. Will be responsible for authorizing shipment of API.	X	
36. Will be responsible for handling returned API.	X	
Complaints and Recalls		
37. Will notify Supplier of any product failures or complaints within two (2) Business Days that may be a result of the manufacture or control of the API.	X	
38. When reasonably requested by Company, Supplier will promptly perform investigations regarding API failures or complaints.		X
39. Will notify Supplier within two (2) Business Days of any market withdrawal or recall of the Drug Product.	X	
40. Will handle complaints or recalls in accordance with Company Standard Operating Procedures.	X	

Communication Channels

PeroxyChem Contacts

Aclaris Contacts

***Text Omitted and Filed Separately
Confidential Treatment Requested
Under 17 C.F.R. §§ 200.80(b)(4) and 240.24b-2

Name:	Paul Merta	Name:	_____
Title:	QA/Lab Coordinator	Title:	_____
Phone	281-474-8761	Phone:	_____

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Attachment B

Regulatory Authority

FDA
EMEA
HC

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Attachment C

Specifications

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Attachment D

API & Purchase Price Details

[***]

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Exhibit 10.2

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SERVICES AGREEMENT

THIS SERVICES AGREEMENT (the "Agreement"), effective as of February 5, 2014 (the "Effective Date"), between NST, LLC ("NST"), a Delaware limited liability company with its principal offices located at 101 Lindenwood Drive, Suite 400, Malvern, Pennsylvania 19355 and Aclaris Therapeutics, Inc. ("ACLARIS"), a Delaware corporation having a place of business at 101 Lindenwood Drive, Suite 400, Malvern, PA 19355 (each a "party", collectively, the "parties").

WHEREAS, NST desires to provide certain pharmaceutical development and management services to ACLARIS;

WHEREAS, ACLARIS wishes to retain NST to provide such services;

WHEREAS, NST wishes to provide such services, all subject to the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the foregoing premises and the mutual promises and covenants contained herein, and intending to be legally bound hereby, the parties hereto do hereby agree as follows:

1. Scope of Professional Services.

1.1 The purpose of this Agreement is to establish the general terms and conditions applicable to NST's provision of services to ACLARIS. NST will provide pharmaceutical development and management services ("Services") and any other services, as may be mutually agreed to by the parties, from time to time. Specifically, NST will provide the services and personnel as set forth in Exhibit A attached hereto and made a part hereof.

1.2 NST shall provide the Services for the Term of this Agreement including any extensions thereof

1.3 NST shall use commercially reasonable efforts to perform the Services for the compensation set forth in Section 3.1 of this Agreement.

2. Term.

The term of this Agreement shall begin on the Effective Date and shall continue for one (1) year unless terminated prior thereto pursuant to Section 7 of this Agreement (the "Term"). Upon expiration of the initial Term, this Agreement shall automatically extend for additional one (1) year periods unless a party provides the other party with

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prior written notice of its decision not to renew this Agreement sixty (60) calendar days prior to expiration of the initial Term or any subsequent term of this Agreement.

3. Compensation.

3.1 In consideration of NST providing the Services, ACLARIS shall pay to NST $33,500.00 on a monthly basis ("Service Fee"). During the Term of this Agreement, NST and ACLARIS agree to meet at the end of each calendar quarter to review the Service Fee and to make adjustments, if necessary, as mutually agreed to by the parties in writing. Notwithstanding the foregoing, during the term of this Agreement, Aclaris may offset any payments owed by Aclaris to NST against payments, which are owed by NST to Aclaris for the provision of NST personnel, including consultants, to Aclaris, as more fully described in Exhibit A attached hereto and made a part hereof.

3.2 NST shall submit monthly invoices to ACLARIS. Any sum due NST pursuant to this Agreement shall be due and payable fifteen (15) calendar days after ACLARIS' receipt of the invoice. All invoices submitted by NST must set forth the following information: (a) a description of and billing amount of work performed; and (b) a record of expenses and receipts therefore by individual (if any). ACLARIS shall be entitled to return incomplete invoices and to return or correct invoices containing errors (identifying all problems or errors in any such invoices) to NST within five (5) business days following ACLARIS' receipt thereof Should any part of the invoice be in dispute, ACLARIS shall pay the balance of the undisputed amount according to the terms and conditions described herein while said dispute is being resolved. Without prejudice to any other rights it has under this Agreement, NST shall have the right to suspend the provision of the Services to ACLARIS, modify the payment terms to require full payment before providing additional Services or terminate this Agreement in its entirety for breach without the opportunity for cure, if NST has not received payment of an invoice within sixty (60) calendar days after ACLARIS' receipt of invoice.

3.3 Unless otherwise agreed, ACLARIS shall reimburse NST for all travel expenses, living, hotel and transportation allowances and other normally reimbursable expenses and allowances for any employee or agent of or consultant to NST travelling in connection with the Services, all as reasonably incurred and in accordance with NST generally applicable personnel practices and procedures. ACLARIS will not reimburse NST or any independent contractor or employee of NST for travel time. Notwithstanding

the foregoing, ACLARIS may directly reimburse the NST employee for such expenses so long as the NST employee provides the requested documentation for such expenses to ACLARIS in accordance with this Section 3.3.

4. Independent Contractor; Performance.

4.1 Independent Contractor Status. For purposes of this Agreement and all Services to be provided hereunder, NST shall not be considered a partner, co-venturer, agent, employee or representative of ACLARIS, but shall remain in all respects an independent contractor. No officer, director, employee, agent or consultant retained by NST to perform work on ACLARIS' behalf under this Agreement shall be deemed to be an employee of ACLARIS. Neither party hereto shall have any right or authority to make or undertake any promise, warranty or representation, to execute any contract, or otherwise assume any obligation or responsibility in the name of or on behalf of the other

party. NST assumes full responsibility and liability for the payment of any taxes due on money received by NST hereunder. in making payments to NST under this Agreement, ACLARIS will not make any deductions for taxes.

4.2 Manner of Performance by NST. NST shall work with ACLARIS' personnel to the extent required and, if necessitated by the nature of the Services, ACLARIS will provide reasonable working space and access to ACLARIS' facilities and equipment as may be reasonably required to carry out the performance of the Services. NST shall make available to ACLARIS, periodically upon request, work products related to the Services and other information as may be reasonably necessary to enable ACLARIS to verify that NST is proceeding in accordance with this Agreement. While at the facilities of ACLARIS, NST shall observe and follow the reasonable work rules, policies and standards of ACLARIS including but not limited to ACLARIS' rules, policies and standards relating to security of and access to ACLARIS' facilities, telephone systems, electronic mail systems, computer systems, confidential information and intellectual property.

4.3 Representatives. During the Term, each party shall maintain an individual who shall serve as the respective party's primary representative under this Agreement. Such party's representative shall (a) have overall responsibility for managing and coordinating the performance of such party's obligations under this Agreement and (b) be authorized to act for and on behalf of such party with respect to all matters relating to this Agreement.

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5. Confidentiality.

5.1 The term "Confidential information" means any and all business and technical information, samples and written and verbal descriptions relating to the business and operations of the parties or the designated products of ACLARIS which are disclosed after the Effective Date of this Agreement.

5.2 The Confidential information is being disclosed by one party to the other party in order for NST to provide the Services hereunder.

5.3 The parties shall not use the Confidential information for any other purpose other than for the purpose of NST providing the Services pursuant to this Agreement.

5.4 All Confidential information disclosed by one party to the other party shall remain the property of the disclosing party and shall not be disclosed by the receiving party to anyone, without the prior written permission of the disclosing party. Such Confidential information shall be promptly returned to the disclosing party within thirty (30) days after a written request by the disclosing party except that the receiving party shall have the right to retain one (1) copy of the disclosing party's Confidential information so that any continuing obligations to the disclosing party may be determined.

5.5 Confidential information does not include any information which: (a) at the time of disclosure was in the public domain, (b) after disclosure becomes part of the public domain, except through breach of this Agreement by a party, (c) a party can demonstrate by its written records was in its possession prior to the time of disclosure by or on behalf of the disclosing party hereunder, and was not acquired directly or indirectly from the disclosing party, (d) becomes available to a party from a third party which, to the knowledge of the receiving party is not legally prohibited from disclosing such Confidential information, or (e) a party can demonstrate by its written records was developed by or for the receiving party independently of the disclosure of Confidential information by the disclosing party.

6. Proprietary Rights.

6.1 ACLARIS' Proprietary Rights. NST agrees that all inventions, data, literary works and other works of authorship, including reports, drawings, charts, graphics and other documentation, works, discoveries, designs, technology and improvements, (whether or not protectable by a patent or a copyright) directly related to the business of ACLARIS, which are conceived of, made, reduced to practice, created, written, designed or developed, authored or made by NST specifically related to the Services provided by NST under this Agreement ("ACLARIS Technology"), shall be the sole and exclusive

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property of ACLARIS. No rights are hereby given to ACLARIS in any inventions conceived and evidenced in an invention record or disclosure, or under any patents or patent applications that NST may own prior to the Effective Date of this Agreement or may subsequently acquire which do not arise out of and are not derived from the performance of the Services under this Agreement. NST hereby irrevocably assigns to ACLARIS any and all rights or interests in the ACLARIS Technology.

6.2 NST's Proprietary Rights. All of NST's (a) applications, software programs, software tools, system files, encryption algorithms, file structures, internal program structures, operating system software, computer software languages, utilities and other computer programs, (b) processes, methodologies, procedures and trade secrets, (c) literary works and other works of authorship, including reports, drawings, charts, graphics and other documentation related to the technology described in subsections (a) and (b) above, (d) all materials, options, data, documentation, specifications, technical manuals, user manuals, flow diagrams, file descriptions and other written information that describes the function and use of the technology described in subsections (a) and (b) above, as applicable, in whatever form or media and (e) the tangible media upon which the foregoing are recorded or printed (including any modifications, enhancements or changes thereto and derivative works thereof) (the "NST Technology") shall be and shall remain the exclusive property of NST or its licensor and ACLARIS shall have no rights or interests in the NST Technology. ACLARIS hereby irrevocably assigns to NST any and all rights or interests in the NST Technology.

7. Termination.

7.1 If NST materially fails to perform any of its material obligations under this Agreement, ACLARIS shall give NST written notice of such failure. NST shall within thirty (30) business days of receipt of such notice remedy the failure specified therein. in the event NST fails to remedy the failure within such thirty (30) business day period, ACLARIS may give a termination notice to NST and may terminate this Agreement in its entirety; provided, however, that the time to cure a breach shall extend for up to a total of sixty (60) business days from the date on which the notice of breach is received by NST if NST has promptly commenced to cure the breach and continues to use reasonable efforts to cure such breach during the sixty (60) business day period.

7.2 NST shall have the right to terminate this Agreement in its entirety if: (a) ACLARIS fails to pay any amounts payable under this Agreement within sixty (60)calendar days after written notice from NST that such amounts are overdue, (b) ACLARIS fails to perform any of its material non-monetary obligations under this Agreement, and does not cure such default within thirty (30) business days of receipt of

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written notice of default from NST or (c) ACLARIS becomes or is declared insolvent or bankrupt, is the subject of any proceedings relating to its liquidation, insolvency or for the appointment of a receiver or similar officer for it, makes an assignment of all or substantially all of its assets for the benefit of its creditors.

7.3 Either NST or ACLARIS may terminate this Agreement for no reason upon no less than thirty (30) business days' written notice to the other party. ACLARIS shall pay for all services performed by NST through the effective date of termination (including works-in-progress), plus any noncancellable or nonrefundable expenses, as documented in accordance with Section 3.2 above incurred through the effective date of termination.

8. Representations and Warranties.

8.1 Mutual. Each party hereby represents and warrants to the other party that:

(i) it has all requisite corporate power and authority to enter into this Agreement and to carry out the transactions contemplated hereby and thereby;

(ii) the execution, delivery and performance of this Agreement and the consummation of the transactions contemplated hereby and thereby have been duly authorized by all requisite corporate actions on the part of such party;

(iii) this Agreement has been or will be duly executed and delivered by such party and (assuming the due authorization, execution and delivery hereof by the other party) is a valid and binding obligation of such party, enforceable against it in accordance with its terms; and

(iv) its entry into this Agreement does not and will not violate or constitute a breach of any of its contractual obligations with third parties.

9. Indemnification.

9.1 NST indemnification. NST shall indemnify, defend and hold harmless ACLARIS and its affiliates, and its and their directors, officers, employees and agents (each, an "ACLARIS indemnified Party"), from and against any and all losses, damages, liabilities, reasonable attorney fees, court costs, and expenses

(collectively "ACLARIS Losses"), resulting or arising from any third-party claims, actions, proceedings, investigations or litigation relating to or arising from or in connection with this Agreement or the Services contemplated herein (including, without limitation, any ACLARIS Losses arising from or in connection with any study, test, product or potential

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product to which this Agreement relates), to the extent such ACLARIS Losses are determined to have resulted from the gross negligence or intentional misconduct of NST or its affiliates.

9.2 ACLARIS indemnification. ACLARIS shall indemnify, defend and hold harmless NST and its affiliates, and its and their directors, officers, employees and agents (each, a "NST indemnified Party"), from and against any and all losses, damages, liabilities, reasonable attorney fees, court costs, and expenses (collectively "NST Losses"), resulting or arising from any actions, proceedings, investigations or litigation relating to or arising from any third party claims, actions, proceedings, investigations or litigation relating to or arising from or in connection with this Agreement or the Services contemplated herein (including, without limitation, any NST Losses arising from or in connection with any study, test, product or potential product, if applicable, to which this Agreement relates), to the extent such NST Losses are determined to have resulted from the gross negligence or intentional misconduct of ACLARIS or its affiliates.

9.3 Indemnification Procedure. The indemnified party shall give the indemnifying party prompt notice of any such claim or lawsuit (including a copy thereof) served upon it and shall fully cooperate with the indemnifying party and its legal representatives in the investigation of any matter the subject of indemnification. The indemnifying party may enter into a settlement agreement with a claimant but shall not admit liability to a claimant without the prior written permission of the indemnified party, which permission shall not be unreasonably withheld.

10. Debarment and Disqualification. NST represents that neither it, nor any person employed by NST has ever been debarred, disqualified, or banned under any applicable laws and regulations, including, but not limited to, the Generic Drug Enforcement Act of 1992, 21 C.F.R. section 312.70, and 42 C.F.R. part 1001 et seq. or is under investigation by any regulatory authority, including but not limited to the United States Food and Drug Administration, for debarment, disqualification or any similar regulatory action. NST will immediately notify ACLARIS of any disqualification, debarment or other ban or investigation that comes to its attention.

11. Liability.

11.1 EXCEPT AS EXPRESSLY SET FORTH HEREIN, NST DOES NOT MAKE ANY WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE SERVICES AND EXPRESSLY DISCLAIMS ALL OTHER REPRESENTATIONS AND WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A SPECIFIC PURPOSE.

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11.2 THE ENTIRE LIABILITY OF BOTH PARTIES TO EACH OTHER ARISING FROM OR IN CONNECTION WITH THIS AGREEMENT, HOWEVER CAUSED, REGARDLESS OF THE FORM OF ACTION AND ON ANY THEORY OF LIABILITY, INCLUDING CONTRACT, STRICT LIABILITY, NEGLIGENCE OR OTHER TORT, SHALL BE LIMITED TO DIRECT DAMAGES NOT TO EXCEED IN THE AGGREGATE THE AMOUNT ACTUALLY PAID OR PAYABLE BY ACLARIS TO NST UNDER THIS AGREEMENT.

11.3 In no event shall a party have any liability, regardless of the form of action and on any theory of liability, including contract, strict liability, negligence or other tort, for any loss of interest, profit or revenue, replacement goods, loss of technology, rights or services, loss of data or interruption or loss of use of service or equipment by another party or for any consequential, indirect, incidental, special, punitive or exemplary damages suffered by another party, arising from or related to this Agreement, even if such party has been advised of the possibility of such losses or damages; provided, however, that this Section shall not prevent NST from recovering amounts payable under this Agreement for the provision of the Services.

11.4 ACLARIS shall promptly identify and notify NST of any changes in any law, rule or regulation affecting ACLARIS' regulatory requirements that may relate to ACLARIS' use of the Services. The parties shall work together to identify the impact of such changes on how ACLARIS uses and NST delivers, the Services. ACLARIS shall be responsible for any fines and penalties arising from any non-compliance by ACLARIS with any law, rule or regulation relating to ACLARIS' use of the Services.

12. Audits.

12.1 NST agrees to maintain records of all Services performed under this Agreement in accordance with the United States Food and Drug Administration's ("FDA") or other mutually agreed upon regulatory authority's archival guidelines. During regular business hours and mutually agreed upon

times, ACLARIS may review the records of NST directly relating to the Services performed and expenses incurred to assure compliance with all provisions of this Agreement. Such review must be completed in not more than two (2) business days and shall be offered to ACLARIS by NST one (1) time each calendar year. Subsequent reviews during the same calendar year or such reviews that cannot be completed in two (2) business days will be at ACLARIS' sole cost and expense, at NST's then current rates. ACLARIS shall also be provided an invoice for any incidental expenses NST incurs resulting from such review.

12.2 In the event of an inspection by any governmental or regulatory authority concerning the Services performed hereunder, NST shall notify ACLARIS promptly upon learning of such an inspection, shall supply ACLARIS with copies of any correspondence or portions of correspondence directly relating to ACLARIS' materials and shall inform ACLARIS of the general findings and outcomes of such inspections as they directly pertain to ACLARIS' materials. ACLARIS shall reimburse NST for actual time and reasonable expenses incurred by NST in connection with such an audit. NST shall provide ACLARIS with an invoice detailing such time and expenses. Payment of such invoice shall be in accordance with Section 3 herein.

13. Governing Law and Exclusive Jurisdiction. This Agreement shall be governed by and construed and interpreted in accordance with the laws of the Commonwealth of Pennsylvania, without regard to its provisions governing conflicts of law. Subject to Section 26 of this Agreement, the Parties agree to submit all disputes arising out of or related to this Agreement to the exclusive jurisdiction of the federal courts and state courts of the Commonwealth of Pennsylvania.

14. Notices. All notices, requests, demands, waivers and other communications required or permitted to be given under this Agreement shall be in writing and may be given by any of the following methods: (a) personal delivery, (b) facsimile transmission, (c) registered or certified mail, postage prepaid, return receipt requested, or (d) air courier service. Notices shall be sent to the appropriate party at its address or facsimile number given below (or at such other address or facsimile number for such party as shall be specified by notice given hereunder):

If to ACLARIS:

Kamil Ali-Jackson
Aclaris Therapeutics, Inc.
101 Lindenwood Drive
Suite 400
Malvern, PA. 19355
Email: kalijackson@aclaristx.com

If to NST:

Attn: Douglas Gessl
NST, LLC
101 Lindenwood Drive
Suite 400
Malvern, PA 19355

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Email: dgessl@nexeption.com

15. Non-Solicitation. INTENTIONALLY OMITTED.

16. Force Majeure. Neither of the parties hereto shall be liable in damages for any delay or default which is caused by conditions beyond its control, including but not limited to Acts of God, governmental actions or restrictions, including any actions by the United States Food and Drug Administration, continuing domestic or international problems such as war, terrorism or insurrections, strikes, fires, floods, work stoppages, embargoes, unauthorized actions of third parties, equipment, telecommunications, power, or electrical failures, and/or lack of materials; provided, however that any party hereto shall have the right to terminate this Agreement if the other party is unable to fulfill its obligations hereunder within ninety (90) calendar days due to any of the above-mentioned causes.

17. Severability and Waiver. if any of the terms, provisions, or conditions of this Agreement or the application thereof to any circumstances shall be ruled invalid or unenforceable, the validity or enforceability of the remainder of this Agreement shall not be affected thereby, and each of the other terms, provisions, and conditions of this Agreement shall be valid and enforceable to the fullest extent permitted by law. A waiver or consent regarding any term, provision, or condition of this Agreement given by ACLARIS or NST on any one occasion shall be effective only in that instance and shall not be construed as a bar or waiver of any right on any other occasion.

18. Successors and Assigns. Neither Party may assign or transfer any of its rights or duties under this Agreement to any third person or entity without the prior written consent of the other Party provided that, the assigning Party may assign, without prior written consent, its rights and obligations under this Agreement to a third party or entity in connection with the sale of all or substantially all of the assets or stock or the merger of either party to or into such third party or entity. All terms and provisions of this Agreement shall be binding upon and inure to the benefit of the parties, and their successors and permitted assigns.

19. Export. Neither party shall export, directly or indirectly, any information acquired under this Agreement or any product utilizing such information to any country for which the government of the United States of America or any agency thereof or any other governmental authority at the time of export requires an export license or other governmental approval without first obtaining such license or approval.

20. Survival. The terms, provisions, representations, warranties and covenants contained in this Agreement that by their sense and context are intended to survive the performance

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thereof by either party or both parties hereunder shall so survive the completion of performance, expiration or termination of this Agreement.

21. Entire Agreement and Amendment. This Agreement and attached exhibits constitute the entire agreement between NST and ACLARIS with respect to the Services to be performed hereunder and supercede all prior and/or contemporaneous agreements, representations, negotiations, statements, proposals, and understandings with respect hereto, whether oral, written, or in any other medium, that might exist between the parties with relation to the Services and subject matter hereof. No modification or amendment to any provision of this Agreement shall be binding unless in writing and signed by both NST and ACLARIS.

22. Paragraph Heading. Paragraph headings are provided for convenience of reference and do not constitute a part of this Agreement.

23. Counterparts. This Agreement may be executed simultaneously in several counterparts and by facsimile, each of which shall be an original and all of which shall constitute but one and the same instrument. Facsimile signatures shall be treated as original signatures.

24. Insurance. NST, shall carry, at its expense, insurance coverage in types and amounts commensurate in its industry for the performance of services substantially similar to the Services by similarly sized service providers and as otherwise prudent or required by law, including, but not limited to worker's compensation, if applicable, and comprehensive general liability. At ACLARIS' request, NST shall provide to ACLARIS a certificate of insurance evidencing that the required insurance is in force and effect. NST shall give not less than thirty (30) business days' advance notice, in writing, to ACLARIS of any cancellation, termination or material alteration of such insurance coverages.

25. Dispute Resolution. in the event of a dispute regarding payment or the performance of Services pursuant to this Agreement (each, a "Dispute"), the parties shall endeavor to negotiate in good faith an agreeable solution. if after ten (10) business days following receipt of a party's written notification of a Dispute such Dispute has not been resolved, the Dispute shall be brought to the attention of the CEO of each party and such CEO or his/her designee will negotiate in good faith to define and implement a final resolution. The intent of this Section 25 is to encourage the parties to work together to resolve any Dispute without having to rely on arbitration pursuant to Section 26.

26. Arbitration. The parties shall attempt to amicably resolve any dispute arising out of or relating to this Agreement pursuant to Section 25. in the event that said negotiations

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are not successful, the dispute shall be resolved through binding, confidential arbitration before three (3) arbitrators. Such arbitration shall take place in the Commonwealth of Pennsylvania and shall proceed in accordance with the rules of the American Arbitration Association ("AAA") and the laws of the Commonwealth of Pennsylvania without regard to the provisions thereof concerning conflict of laws. Within fourteen (14) calendar days of either party making a demand for arbitration, ACLARIS and NST shall each select one (1) arbitrator. A third arbitrator shall be selected by the arbitrators selected by the parties within thirty (30) days of the demand for arbitration. in the event that either party shall fail to appoint its arbitrator, or the two (2) arbitrators selected by the parties fail to appoint the third arbitrator, in either case within the prescribed time period, then either party may apply to the AAA for the appointment of such arbitrator. The determination of a majority of the panel of arbitrators shall be the decision of the arbitrators and shall be binding regardless of whether one of the parties fails or refuses to participate in the arbitration. Each party shall pay for the arbitrator it selects with the cost of the third arbitrator being split equally between the parties. All other costs shall also be split equally between the parties. Either party may enter any arbitration award in any court having jurisdiction or may make application to any such court for a judicial acceptance of the award and order of enforcement, as the case may be. Each party understands and agrees that any use or disclosure of information in violation of this Agreement will cause the disclosing party irreparable harm without an adequate legal remedy and shall therefore entitle the disclosing party to injunctive relief from any court having jurisdiction.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties hereto have caused this Services Agreement to be executed as of the Effective Date.

Signed for and on behalf of Aclaris Therapeutics, Inc.:

By: /s/Neal Walker

Name: Neal Walker
Title: President and CEO

Signed for and on behalf of NST, LLC:

By: /s/Douglas L. Gessl

Name: Douglas L. Gessl
Title: COO and CFO

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EXHIBIT A

FEES AND DESCRIPTION OF PERSONNEL AND SERVICES PROVIDED BY NST TO ACLARIS

- **Executive Personnel Compensation paid by Aclaris to NST:**

  (1) NST will provide the services of Kelly Copeland (20% time allocation) to Aclaris for [***]/year plus -25% benefits charge for a total monthly cost of [***].

  (2) NST will provide the services of Steve Tullman to Aclaris for $100,000/year plus ~25% benefits charge for a total monthly cost of $10,400.

  (3) The total monthly cost payable by Aclaris to NST for the services of Copeland and Tullman

  [***]

- **Administrative Support Staff:**

  [***]**/month (excludes bonuses and Gina)**

- **Total Overhead Charge:**

  [***]/month which covers utilities, general insurance, office supplies, computer servers, furniture, etc. , but not mobile phone or laptop/desktop computers.

- **Monthly Amounts Due from Aclaris to NST (thru 6/30/14):**

Executive Personnel:	[***] (includes 25% benefits charge)
Administrative Support Staff:	[***]
Overhead Charge:	[***]

Total Due from Aclaris to NST for Services Provided: $33,500.00

- **Executive Personnel Compensation paid by NST to Aclaris:**

(1) Reimbursement for Christopher Powala (30% time allocation) for a total monthly cost of $9,400

(2) Reimbursement for Stuart Shanler (25% time allocation) for a total monthly cost of $7,400

(3) Reimbursement for Frank Ruffo (30% time allocation) for a total monthly cost of $7,400

(4) The total monthly cost plus ~25% benefits charge to be reimbursed by NST to Aclaris for the services of Powala, Shanler and Ruffo =$24,200.

- **Monthly Amounts Due from NST to Aclaris (thru 6/30/14):**

Executive Personnel:	$24,200.00 (includes 25% benefits charge)
Admin Support:	$3,800.00 (includes 25% benefits charge)

Total Due from NST to Aclaris for Certain Personnel Reimbursement Expenses: $28,000.00

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- **Net Monthly Amounts Due from Aclaris to NST (thru 6/30/2014):**

Monthly Due from Aclaris to NST: $5,500.00

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Under 17 C.F.R. §§ 200.80(b)(4) and 240.24b-2

FIRST AMENDMENT TO SERVICES AGREEMENT
BETWEEN
NST, LLC
AND
ACLARIS THERAPEUTICS, INC.

This First Amendment to the Services Agreement ("First Amendment") made and entered into this 19th day of December 2014 ("Effective Date"), by and between NST, LLC ("NST") and ACLARIS THERAPEUTICS, INC. ("Aclaris").

WHEREAS, NST provides certain management services to Aclaris pursuant to that certain Services Agreement dated February 5, 2014 ("Services Agreement"),the services being more specifically described therein; and

WHEREAS, NST and Aclaris wish to amend the Services Agreement as follows;

NOW, THEREFORE, in consideration of and the agreement of each other, NST and Aclaris agree that the Services Agreement shall be and the same is hereby amended as follows:

1. Incorporation of Recitals. The recitals set forth above, the Services Agreement referred to therein and the exhibits attached hereto are hereby incorporated herein by reference as if set forth in full in the body of this First Amendment. Capitalized terms not otherwise defined herein shall have the meanings given to them in the Services Agreement.

2. Assignment of Services Agreement from NST, LLC to NST Consulting, LLC. Pursuant to paragraph 18 of the Services Agreement, NST, LLC, with the prior written consent of Aclaris, hereby assigns all interests, rights, duties, and obligations under the Services Agreement to NST Consulting, LLC. Accordingly, all references to NST, LLC in the Services Agreement shall be deleted and replaced by the words "NST Consulting, LLC". The parties further agree that NST Consulting, LLC, as of the Effective Date of this Amendment, shall be the party solely responsible for providing all Services as set forth in the Services Agreement to Aclaris.

3. Exhibit A. Exhibit A is deleted in its entirety and replaced with the new Exhibit A attached hereto.

4. Binding Effect. Except as expressly amended hereby, the Services Agreement remains in full force and effect in accordance with its terms.

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IN WITNESS WHEREOF, NST and Aclaris have duly executed this First Amendment on the date first above written.

NST, LLC		**ACLARIS THERAPEUTICS, INC.**	
By:	/s/ Douglas Gessl	By:	/s/ Neal Walker
Name:	Douglas Gessl	Name:	Neal Walker
Title:	COO & CFO	Title:	President and CEO

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Confidential Treatment Requested
Under 17 C.F.R. §§ 200.80(b)(4) and 240.24b-2

EXHIBIT A - AMENDED

FEES AND DESCRIPTION OF PERSONNEL AND SERVICES PROVIDED BY NST TO ACLARIS

- **Executive Personnel Compensation paid by Aclaris to NST:**

  NST will provide the services of Kelly Copeland (20% time allocation) and Steve Tullman (25% time allocation) for a total monthly cost of [***] (includes benefits charge, excludes bonuses).

- **Administrative Support Staff:**

  [***]/month (includes benefits charge, excludes bonuses and Gina Reed)

- **Total Overhead Charge:**

  [***]/month which covers utilities, general insurance, office supplies, computer servers, furniture, etc., but not mobile phone or laptop/desktop computers.

- **Monthly Amounts Due from Aclaris to NST:**

Executive Personnel:	[***]
Administrative Support Staff:	[***]
Overhead Charge:	[***]

Total Due from Aclaris to NST for Services Provided: $34,880.00

- **Executive Personnel Compensation paid by NST to Aclaris:**

  (1) Reimbursement for Christopher Powala (30% time allocation), Stuart Shanler (25% time allocation) and Frank Ruffo (30% time allocation) including a ~25% benefits = $24,540.

  (2) Bonuses are a pass-through via Alexar Therapeutics, Inc.

- **Monthly Amounts Due from NST to Aclaris:**

Executive Personnel:	$24,540.00
Admin Support:	$ 3,020.00 (incl. ~25% benefits charge, excludes pass through bonus)

Total Due from NST to Aclaris for Certain Personnel Reimbursement Expenses: $27,560.00

- **Net Monthly Amounts Due from Aclaris to NST (excluding rent):**

Monthly Due from Aclaris to NST: $7,320.00

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SECOND AMENDMENT TO SERVICES AGREEMENT
BETWEEN
NST CONSULTING, LLC
AND
ACLARIS THERAPEUTICS, INC.

This Second Amendment to the Services Agreement (" First Amendment") made and entered into this 11th day of August 2015 and effective as of April 1, 2015 (" Effective Date"), by and between NST CONSULTING, LLC ("NST") and ACLARIS THERAPEUTICS, INC. ("Aclaris").

WHEREAS, NST provides certain management services to Aclaris pursuant to that certain Services Agreement dated February 5, 2014 (" Services Agreement"), as amended by the First Amendment dated December 19, 2014 and effective January 1, 2015, the services being more specifically described therein; and

WHEREAS, NST and Aclaris wish to further amend the Services Agreement as follows;

NOW, THEREFORE, in consideration of and the agreement of each other, NST and Aclaris agree that the Services Agreement shall be and the same is hereby amended as follows:

5. Incorporation of Recitals. The recitals set forth above, the Services Agreement referred to therein and the exhibits attached hereto are hereby incorporated herein by reference as if set forth in full in the body of this First Amendment. Capitalized terms not otherwise defined herein shall have the meanings given to them in the Services Agreement.

6. Paragraph 1.2 of the Services Agreement is deleted in its entirety and replaced with the following new paragraph:

"1.2 NST shall provide the Services for the Term of this Agreement including any extensions thereof. Notwithstanding the foregoing, NST, with prior written notice to Aclaris, may use its affiliates, including without limitation, NST, LLC, to provide Services to Aclaris, as NST may deem necessary. In such event, NST shall remain responsible for the quality of its affiliates' performance of such Services."

7. Exhibit A. Exhibit A is deleted in its entirety and replaced with the new Exhibit A attached hereto.

8. Binding Effect. Except as expressly amended hereby, the Services Agreement remains in full force and effect in accordance with its terms.

CONFIDENTIAL TREATMENT HAS BEEN REQUESTED FOR PORTIONS OF THIS EXHIBIT. THE COPY FILED HEREWITH OMITS THE INFORMATION SUBJECT TO A CONFIDENTIALITY REQUEST. OMISSIONS ARE DESIGNATED [***]. A COMPLETE VERSION OF THIS EXHIBIT HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

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IN WITNESS WHEREOF, NST and Aclaris have duly executed this Second Amendment on the date first above written.

NST CONSULTING, LLC		**ACLARIS THERAPEUTICS, INC.**	
By:	/s/ Steve Tullman	By:	/s/ Neal Walker
Name:	Steve Tullman	Name:	Neal Walker
Title:	Managing Member	Title:	President and CEO

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EXHIBIT A to Second Amendment to NST Services Agreement
(effective April 1, 2015)

FEES AND DESCRIPTION OF PERSONNEL AND SERVICES PROVIDED BY NST TO ACLARIS

- **Executive Personnel Compensation paid by Aclaris to NST:**

  NST will provide the services of Kelly Copeland (33.33% time allocation) and Steve Tullman (25% time allocation) for a total monthly cost of [***] (includes benefits charge, excludes bonuses).

· **Administrative Support Staff:**

[***]/month (includes benefits charge, excludes bonuses and Gina Reed)

· **Total Overhead Charge:**

[***]/month which covers utilities, general insurance, office supplies, computer servers, furniture, etc., but not mobile phone or laptop/desktop computers.

· **Monthly Amounts Due from Aclaris to NST:**

Executive Personnel:	[***]
Administrative Support Staff:	[***]
Overhead Charge:	[***]

Total Due from Aclaris to NST for Services Provided: $37,990.00

· **Executive Personnel Compensation paid by NST to Aclaris:**

(1) Reimbursement for Christopher Powala (30% time allocation), Stuart Shanler (25% time allocation), Frank Ruffo (30% time allocation) and Kamil Ali-Jackson (35% time allocation) including a ~25% benefits = $34,780.

(2) Bonuses are a pass-through via Alexar Therapeutics, Inc.

· **Monthly Amounts Due from NST to Aclaris:**

Executive Personnel:	$34,780.00
Admin Support:	$3,020.00 (incl. ~25% benefits charge, excludes pass through bonus)

Total Due from NST to Aclaris for Certain Personnel Reimbursement Expenses: $37,800.00

· **Net Monthly Amounts Due from Aclaris to NST (excluding rent):**

Monthly Due from Aclaris to NST: $190.00

Exhibit 10.3

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ASSIGNMENT AGREEMENT

THIS **ASSIGNMENT AGREEMENT** (the "**Agreement**") is made effective as of August 20, 2012 (the "**Effective Date**"), by and between **ACLARIS THERAPEUTICS, INC.,** a Delaware corporation, having an address of 101 Lindenwood Drive, Suite 400, Malvern, Pennsylvania 19355 ("**Assignee**"), and **MICKEY J MILLER, II**, of 5757 Preston View Blvd, Appt. #130, Dallas, Texas 75240, as Personal Representative of the estate of Mickey J. Miller ("**Miller Estate**").

BACKGROUND

1. Mickey Joe Miller (Mickey J. Miller I) was an inventor of certain inventions relating to high-concentration hydrogen peroxide and its use for certain dermatological conditions, and developed certain related data and know-how and obtained certain patents relating to the inventions;

2. Mickey J. Miller I is deceased and, as personal representative for his estate, Mickey J. Miller II represents that the. Miller Estate holds all of Mickey J. Miller Ps rights to such patent rights, data, and know-how;

3. Assignee is interested in acquiring rights to such patent rights, data, and know-how; and

4. Miller Estate is willing to assign to Assignee, and Assignee is willing to purchase from Miller Estate, such patent rights, data and know-how, all on the terms and conditions more particularly set forth below.

5. Prior to the Effective Date, the probate court having jurisdiction has determined that Mickey J. Miller II and Mickey Lyon are the sole heirs of Mickey J. Miller I and his estate. Each such heir is signing, in his personal capacity, the Consent of Heir that is set forth in **Exhibit C** to this Agreement, in which each acknowledges Mickey J. Miller IV s right to sign for the estate, and consents to and agrees not to challenge the transaction contemplated by this Agreement, as more particularly provided for in the Consent of Heir. Miller Estate shall deliver such Consents of Heir to Assignee within five (5) days after the Effective Date of this Agreement.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing premises and the covenants and obligations set forth in this Agreement, the Parties (defined below) hereby agree as follows:

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ARTICLE 1

DEFINITIONS

As used herein, the following terms have the following meanings (with derivative forms being interpreted accordingly) and the words "**include,**" "**including**" and derivative forms of them shall be deemed followed by the phrase "**without limitation**":

1.1 **"$"** and "**Dollars**" means United States dollars.

1.2 "**Affiliate**" means, with respect to a given legal entity, any other entity that, directly or indirectly, through one or more intermediaries, controls, is controlled by or is under common control with such first legal entity. For this purpose, "control" shall mean the ownership of fifty percent (50%) or more of the voting securities entitled to elect the directors or management of the entity, or the actual power to elect or direct the management or policies of the entity by law, contract, or otherwise.

1.3 "**Business Day**" means any Monday, Tuesday, Wednesday, Thursday or Friday that is not a national, statutory holiday in the United States.

1.4 "**Claims**" means, with respect to a particular item or product and a particular issued patent, that such issued patent claims the composition of such item or product or any of its ingredients or formulations; a method of making or using it or them; or an item used or present in the manufacture of such item or product (including chemical intermediates); such that, in each case, in the absence of ownership of a patent or a license granted thereunder, such item or product or its manufacture or use as and where actually practiced would infringe a Valid Claim of such issued patent.

1.5 "**Confidential Information**" means, subject to the limitations set forth in Section 8.1: (i) all information received by Miller Estate, counsel to Miller Estate, or any of the Miller Estate Group pursuant to the Prior CDA or pursuant to this Agreement from Assignee, any person or entity who negotiated for the rights under this Agreement prior or on behalf of Assignee (including without limitation, Sciaderm, Inc., a Pennsylvania corporation and KPT Consulting, LLC), or any of the owners, investors and/or prospective investors of any of them; (ii) the Transferred Know-How; and (iii) the existence and terms of this Agreement and nature of the Products and the intellectual property assigned under this Agreement.

1.6 "**Control**" means, with respect to a particular item of Know-How or Patent, that the applicable Party has ownership of or a license to and has the ability to grant to the other Party access to and a license or sublicense under such Know-How or Patent.

1.7 "**FDA**" means the United States Food and Drug Administration, and any successor thereto.

1.8 "**IND**" means an Investigational New Drug Application as defined in the United States Food, Drug and Cosmetic Act and applicable regulations promulgated thereunder by the FDA or the equivalent application to the equivalent agency in any other country or group of

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countries, the filing of which is necessary to commence clinical testing of Product in humans in a particular jurisdiction.

1.9 "**Indication**" means treatment, prophylaxis or diagnosis of any and all dermatological indications, including any and all diseases and conditions of the skin, whether or not mentioned, claimed or covered in the Transferred Patents as of the Effective Date, and whether or not a sub-indication of, or condition or symptom related to, those dermatological indications that are mentioned, claimed or covered in the Transferred Patents as of the Effective Date.

1.10 "**Know-How**" means any and all data, instructions, processes, methods, formulae, materials, expert opinions, inventions (whether or not patentable), biological materials (including cell lines, vectors and their progeny and derivatives), know-how, and information (including biological, chemical, pharmacological, toxicological, pharmaceutical, physical, analytical, clinical, safety, manufacturing and quality control data).

1.11 "**Licensee**" means any entity to which Assignee or an Affiliate of Assignee grants a license under the Transferred Patents and/or Transferred Know-How to make, have made, use, sell, offer for sale, import and/or export Product. The term "Licensee" also includes the sublicensees of those whom Assignee or its Affiliate has directly licensed under the Transferred Patents and/or Transferred Know-How. The term "Licensee" also includes assignees of the Transferred Patents (or any subset thereof) and their licensees and sublicensees of the Transferred Patents (or any subset thereof).

1.12 "**Miller Estate Group**" means Mickey J. Miller II and Mickey Lyon and their respective spouses (if any), and any corporate entities controlled by any of the foregoing people (and/or any combination of them) that Control Technology and/or intellectual property rights in Technology.

1.13 "**Miller I**" means Mickey J. Miller who is a named inventor on the Transferred Listed Patents.

1.14 "**Net Sales**" means the gross revenues actually received by Assignee, or its Affiliates or Licensees, from the sale of Products to Third Parties, less deductions for: (i) transportation and insurance charges; (ii) sales and excise taxes, tax, tariff, duty or any other governmental charges or duties paid; (ii) normal and customary trade, quantity and cash discounts and rebates allowed or granted in whatever form (including those in the form of fees (or reverse fees) provided for in the distribution or selling contract); (iii) allowances on account of rejection or return by customers; (iv) credits, rebates, charge-backs, reimbursements, retroactive price adjustments, or similar payments actually granted or given to wholesalers and other distributors, buying groups, health care insurance carriers, governmental agencies and other institutions; (v) payments or rebates actually paid in connection with state or federal Medicare, Medicaid or similar programs.

To avoid any doubt, sales of Products among Assignee, its Affiliates and Licensees under the Transferred Patents are not taken into account in the calculation of Net Sales, but resales by

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any of them to Third Parties (but specifically excluding transfers for use in clinical trials and/or provision free of charge as samples or for compassionate use) are taken into account in the calculation of Net Sales. In the case of Third-Party distributors, Net Sales occur on sale to the distributor, not the distributor's resale.

Notwithstanding the foregoing definition of Net Sales, if Assignee in its agreement with a Licensee will also be receiving sales royalties, and agrees on a different definition of Net Sales with the Licensee that will govern such sales royalties, then Net Sales under this Agreement for purposes of the sales by such Licensee shall have the meaning given in such agreement between Assignee and the Licensee, rather than the definition given above.

1.15 "**Party**" means Assignee or Miller Estate.

1.16 "**Patent**" means any patent application or patent, including all of the following kinds and their equivalents outside the United States (as applicable): provisional, converted provisional (or regular), divisional, continuation, continuation-in-part, and substitution applications; and regular utility, re-issue, re-examination, renewal and extended patents (including Supplementary Protection Certificates).

1.17 "**Prior CDA**" means that those confidentiality-related agreements set forth in **Exhibit D**.

1.18 "**Products**" means all product candidates and products (a) that includes Technology, (b) the manufacture of which includes Technology, and/or (c) the clinically investigated or Regulatorily Approved use of which includes Technology.

1.19 "**Regulatory Agency**" means a supranational, regional, federal, state, provincial or other local regulatory agency, department, bureau or other governmental authority with jurisdiction over Regulatory Approvals, including the FDA.

1.20 "**Regulatory Approval**" means, collectively with respect to a particular jurisdiction, all governmental approvals, product and/or establishment licenses, registrations or authorizations necessary for the manufacture, use, storage, import, export, transport, marketing and sale of a composition as a pharmaceutical product in such jurisdiction.

1.21 "**Settlement Agreement**" has the meaning given in Section 2.10.

1.22 "**Technology**" means (a) any composition containing hydrogen peroxide and having utility to treat any Indication (including any and all of the foregoing compositions and mentioned or covered in any Transferred Listed Patent); (b) all pharmaceutical and/or cosmeceutical formulations of such compositions (including reformulations created after the Effective Date by or for Assignee); (c) any method of use and/or delivery of any composition of clause (a) and/or (b) to treat any Indication (including dosing schedules and methods of application); (c) any device used in such a method; and (d) all methods of making any of the foregoing. To avoid doubt, the Technology includes any formulations described in the Transferred Listed Patents as they exist as of the Effective Date of the Agreement, which

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formulations have previously been tested by or for Miller Estate, whether or not such formulations are claimed in such Transferred Listed Patents.

1.23 "**Third Party**" means any entity or person other than Assignee, Miller Estate, an Affiliate of either of them or of any other member of the Miller Estate Group.

1.24 "**Trademarks**" means all Technology-related trademarks and tradenames owned, used or conceived of by Miller Estate or any member of Miller Estate Group on our before the Effective Date, including the trademark identified in **Exhibit B**.

1.25 "**Transferred Know-How**" means all Know-How related to or constituting Technology and developed in whole or in part or owned or Controlled by Miller I or Miller Estate on or before the Effective Date, including: (a) all preclinical and clinical data generated relating to Technology before the Effective Date by or on behalf of Miller I; (b) all manufacturing information regarding the processes for Technology that Miller Estate or any member of Miller Estate Group has made or tested on or before the Effective Date (including the formula and master batch records for each Technology formulation that may have been tested); (c) such formulations; and (d) all information as to clinical investigators Miller Estate knows to be currently (as of the Effective Date) exploring Technology or to have done so in the three (3) years prior to the Effective Date.

1.26 "**Transferred Listed Patents**" means (a) U.S. Patent Serial Number 7,381,427 and U.S. Patent Serial Number 7,138,146, and those ex-U S filings and U.S. provisional patent applications identified in the next paragraph; (b) all patent applications claiming common priority with or based on the foregoing, including all converted provisional or regular utility filings, divisionals, continuations, continuations-in-part and substitutions of any of the foregoing; (c) all patents issuing on any of the foregoing, and all reissues, reexaminations, renewals and extensions of any of the foregoing; (d) all counterparts to the foregoing in other countries; and (e) all Supplementary Protection Certificates and other similar rights of Miller Estate based on any of the foregoing.

The ex-U.S. filings are set forth in **Exhibit E-1**. The Parties acknowledge that Exhibit E includes ex-U.S. active patents as well as patents and applications that have lapsed. The U.S. provisional patent applications are set forth in **Exhibit E-2**. The Parties acknowledge that these provisional patent applications have expired.

1.27 "**Transferred Patents**" means (a) the Transferred Listed Patents; (b) all Patents (currently pending or issued and/or that may be filed in the future) claiming Transferred Know-How, to the extent of any ownership interest therein based on the inventorship interest of any named inventor whose interest Miller Estate conveys to Assignee under this Agreement; and (c) all other Patents owned by Miller Estate or any member of the Miller Estate Group during the term of this Agreement naming or that should properly name Miller I as an inventor, and are directed to Technology.

1.28 "**Valid Claim**" means with respect to any country, a claim of any issued, unexpired patent in that country that has not been held revoked, unenforceable or invalid by a

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decision of a court or governmental authority of competent jurisdiction, and has not lapsed or been abandoned, disclaimed, denied or admitted to be invalid or unenforceable through reissue or disclaimer or otherwise.

ARTICLE 2

GRANTS OF RIGHTS

2.1 Assignment. Miller Estate hereby irrevocably, perpetually and forever assigns and conveys to Assignee the entire right, title and interest in and to the Transferred Patents and Transferred Know-How, together with all powers, privileges, benefits, causes of action, remedies, and other rights relating, appertaining to and/or associated with the Transferred Patents and Transferred Know-How; provided, however, that such assignment is expressly conditioned upon and will only be effective upon payment of the Upfront Fee described in Section 4.1. Assignee hereby accepts such assignment.

2.2 Specific Rights and Privileges. Without limiting the generality of the assignment in Section 2.1, as owner of the Transferred Patents, Assignee shall have, and the assignment and conveyance pursuant to Section 2.1 includes, the following specific rights and privileges:

(a) Assignee shall have the sole and exclusive right, but not the duty, to file and prosecute pending and future applications within the Transferred Patents worldwide;

(b) Assignee shall have the sole and exclusive right, but not the duty, to maintain and enforce the Transferred Patents worldwide, except as and to the extent explicitly provided in Article 5, as regards the obligation to maintain Transferred Listed Patents that are issued in the U.S. as of the Effective Date;

(c) Assignee shall have the sole and exclusive right, but not the duty, to grant licenses (which licenses may include the right to grant sublicenses) under the Transferred Patents and to collect and retain royalty and/or other payments for such licenses;

(d) Assignee shall have the sole and exclusive right, but not the duty, to sue on the Transferred Patents, and to collect all damages and profits for any past, present and/or future infringements thereof; and

(e) Assignee shall have the sole and exclusive right to sell, assign or otherwise transfer to any other entity or entities any or all of the rights assigned and transferred to Assignee under this Agreement (Assignee must either make such payments as are required under this Agreement or require the assignee to do so).

Except as expressly provided in Article 4, Assignee shall not currently or in the future owe any further consideration to Miller Estate for or in respect of Assignee's exercise of the rights assigned to Assignee hereunder, including any amounts Assignee may collect on licenses it grants under the Transferred Patents; recover by enforcing the Transferred Patents against infringement; and/or receive for the sale or transfer of any of the rights assigned Assignee hereunder.

2.3 Further Documentation to Perfect and Record. Miller Estate shall sign and have notarized the short-form patent assignment document attached hereto as **Exhibit A** upon execution of this Agreement and/or within 30 days after requested in writing by Assignee. Miller Estate shall further execute and deliver to Assignee and/or its representatives all other documents and instruments, to be prepared by Assignee, as Assignee reasonably requests, in order for Assignee to prosecute, perfect, record and/or enforce any of the rights that are granted to it under this Agreement, promptly after requested by Assignee. If Assignee is unable, after making reasonable inquiry, to obtain Miller Estate's signature on any such documents, then if and only if such documents are reasonably necessary due to Miller Estate having previously been the assignee of record on the Transferred Patents, Miller Estate hereby appoints Assignee as Miller Estate's attorney-in-fact for the sole purpose of executing and delivering such documents, which appointment is coupled with an interest.

2.4 Further Assurances. Miller Estate and such inventors shall take reasonable further actions to execute and deliver all further documents that Assignee may reasonably require to further the purpose and intent of this Agreement.

2.5 Transferred Know-How Confidentiality Protection. Miller Estate acknowledges that the Transferred Know-How is, as a result of the assignment of this Agreement, the commercially valuable confidential information of Assignee. Accordingly, Miller Estate and the other members of the Miller Estate Group shall treat such Know-How as the Confidential Information of Assignee. Miller Estate acknowledges that, as between Miller Estate and Assignee, Assignee shall have the sole right to file, prosecute, maintain and enforce Patents. Claiming Transferred Know-How (but Assignee shall have no obligation to do so).

2.6 Disclosure of Know-How. Commencing within fifteen (15) days after the Effective Date and to be completed over a period of thirty (30) days, Miller Estate shall provide to Assignee true, complete and correct copies and/or originals of all tangibly documented Transferred Know-How in existence as of the Effective Date (including reports of all relevant preclinical and clinical data, to the extent not already provided to Assignee prior to the Effective Date) and to the extent not prohibited by the Settlement Agreement, or court order, and all laboratory notebooks or journals kept by Miller I (if any) relating to Technology and/or its invention and/or development.

If at any time after such disclosure is believed complete, Miller Estate discovers additional documentation of Transferred Know-How, it shall promptly transfer such documentation to Assignee.

2.7 Assignment of Trademarks. Miller Estate hereby irrevocably, perpetually and forever assigns and conveys to Assignee all of Miller Estate's right, title and interest throughout the world in and to: (a) the Trademarks; (b) all renewals and extensions for registrations included in the Trademarks; and (c) all benefits, privileges, causes of action and remedies relating to or conferred by any of the foregoing, whether accrued before or after the Effective Date. Such benefits, privileges, causes of action and remedies include the exclusive rights to apply for and maintain all such registrations, renewals and/or extensions; to sue for all past, present or future infringements or other violations of any rights in the Trademark; and to settle and retain proceeds

from any such actions. Neither Miller Estate nor any other member of the Miller Estate Group retains any rights to use or to display the Trademarks. Miller Estate and the other members of the Miller Estate Group shall not challenge the validity of Assignee's ownership in the Trademarks. Miller Estate and all members of the Miller Estate Group each hereby further agrees to execute and deliver all documents and instruments required to evidence or record such assignment or to enforce the assigned rights (and hereby appoints Assignee as Miller Estate's attorney-in-fact to execute and deliver such documents if unable after making reasonable inquiry to obtain. Miller Estate's signatures on any of them).

2.8 Rights of Reference. To the extent relevant, necessary or useful to support Assignee's (and its Affiliates' and the Licensees') Product activities, Assignee (and its Affiliates and Licensees) shall have the right to reference and the right to access all INDs of Miller Estate relating to Technology and in existence as of the Effective Date, if any.

2.9 Technology-Related Agreements. Based on counsel's review of client files for Mickey J. Miller (I) and Miller Estate, Miller Estate indicates that as of the Effective Date it is not aware of any Third-Party agreements in effect between Mickey J. Miller (I), Miller Estate, or any corporation controlled by either of them that relate to Technology and/or the disclosure thereof, other than the Settlement Agreement referred to in Section 2.10 and confidentiality agreements listed in **Exhibit D**. If any such agreement comes to the attention of Mickey J. Miller II (through counsel or otherwise), Miller Estate shall promptly disclose the applicable agreement to Assignee and as and to the extent requested by Assignee in writing either assign such agreement to Assignee or if it is not assignable then reasonably cooperate to afford Assignee the benefits of such agreement at Assignee's cost (meaning that Assignee would cover any related out-of-pocket costs of such cooperation on a pass-through basis; Miller Estate will obtain approval of expenditures in advance so that Assignee can elect not to pursue the matter if the costs outweighed the benefits in its opinion).

2.10 Counsel Authorization and Instructions. One or more of the Assigned Listed Patents in existence as of the Effective Date has previously been the subject of a litigation relating to ownership. **[***]** ("**Settlement Agreement**"). As the new owner of the Assigned Listed Patents, Assignee's interests are aligned with Miller Estate's interest in such litigation, and under the Settlement Agreement. As the new owner of the Assigned Listed Patents, Assignee may need to confer with counsel who represented Miller I in the settled litigation, engage with such counsel, and obtain files and documentation in such counsel's possession. Miller Estate hereby authorizes all of the foregoing and agrees to provide any other written authorization that such counsel may require (including conflict waivers, if applicable) for the foregoing. The same shall apply with respect to transactional counsel to Miller I for the Settlement Agreement, if different than such litigation counsel. Furthermore, it is understood and agreed that all papers and documentation relating to such litigation and/or any legal advice received in connection with it, that Miller Estate has in its possession or has the ability to access other than through public records, shall be included in the transfer of documentation by Miller Estate to Assignee under Section 2.6 to the extent not prohibited by the Settlement Agreement or court order. Without imposing any Settlement Agreement obligations on Assignee, Miller Estate shall upon request assign the benefits of the Settlement Agreement to Assignee, and reasonably assist Assignee in any necessary enforcement of such Settlement Agreement.

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ARTICLE 3

DEVELOPMENT/COMMERCIALIZATION

3.1 Allocation of Rights for Development and Commercialization. As between the Parties, Assignee shall have the sole right to conduct all additional preclinical and clinical studies of Products, in order to be able to seek Regulatory Approval of and commercialize Products. As between the Parties, Assignee will be solely responsible for the costs of these activities. Assignee shall also have the exclusive right to commercialize Products and be exclusively responsible for the costs of such commercialization. Assignee shall be fully and freely entitled to engage Licensees, contractors and distributors in Product development and commercialization. Assignee shall have full and sole discretion over licensing, intellectual property transactions and use of contractors and distributors. As between the Parties, Assignee shall have the sole right and sole discretion to select (and use and own) the trademarks and tradenames for Products.

3.2 Assignee Responsibilities in Further Development and Commercialization; Diligence. Assignee shall devote Commercially Reasonable Efforts (defined below in this Section) to develop and commercialize at least one (1) Product for at least one (1) Indication for the United States market. Such obligation shall expire on expiration of the last Assigned Patent. To avoid doubt, the first sentence of this Section shall not be read to require Commercially Reasonable Efforts towards development and commercialization of more than one (1) Product, nor towards development and commercialization of that Product for more than one (1) Indication, nor development and commercialization for any market other than the U.S. market.

All development and commercialization activities performed by any Assignee Affiliate(s) and any Licensee(s), contractors and distributors shall inure to the benefit of Assignee for purposes of determining Assignee's compliance with its obligation under this Section.

In the first four (4) and ten (10) years of the term of this Agreement (respectively), Assignee shall be deemed to have fulfilled its obligations under this Section 3.2 through the fourth (4^{th}) anniversary of the Effective Date, if it files an IND for a Product to treat an Indication within four (4) years after the Effective Date, and Assignee shall be deemed to have fulfilled its obligations under this Section 3.2 through the tenth (10^{th}) anniversary of the Effective Date, if it files an application in the U.S. for Regulatory Approval for a Product to treat an Indication within ten (10) years after the Effective Date.

If Assignee does not achieve either of the foregoing by its corresponding target date, but Assignee can demonstrate through documentary evidence or other competent proof that (i) it has diligently sought to be in a position to do so, (ii) the failure to do so by the corresponding timeline after the Effective Date was not caused by Assignee's intentional delays but rather was caused by technical, scientific or regulatory events beyond Assignee's control, and (iii) Assignee has a written plan setting forth specific objectives and goals to advance the research and development of the Product in order to achieve such objectives as soon as otherwise commercially reasonable, then Assignee shall be deemed to be in compliance with its obligations under this Section 3.2 as long as it devotes reasonable efforts to carry out such plan.

No diligence obligations other than the ones set forth in this Section 3.2 and Section 5.1 (see second paragraph) shall be implied under or in connection with this Agreement, at law or in equity, and Assignee's diligence obligations in relation to its rights under this Agreement shall be solely as set forth in this Section 3.2 and Section 5.1 (see second paragraph).

"**Commercially Reasonable Efforts**" means a reasonable level of efforts, commensurate with the efforts that a venture-backed start-up company similarly situated to Assignee would devote to a product of similar potential and having similar commercial advantages and disadvantages as the Product, taking into account all relevant commercial factors, such as, but not limited to: (1) the intellectual property landscape and level of intellectual property exclusivity available for the product, (2) technical, scientific and clinical results and developments, (3) the competitive landscape and maturity of the marketplace, (4) the regulatory framework and hurdles, (5) pricing, (6) cost of goods, and (7) all other similarly relevant commercial factors.

If Assignee is acquired (whether through merger, reverse merger, sale of assets or other fond of transaction) ("**M&A Transaction**"), or any successor entity under this Agreement undergoes such an event, this Section 3.2 shall survive such acquisition. However, under no circumstances shall the surviving entity or Assignee's successor under this Agreement be required, in order to be in compliance with this Agreement, to put forth a greater level of effort or conduct more activities or conduct activities on any faster timeline than set forth in Assignee's development plan for the lead Product as such plan is in effect and approved by Assignee's Board of Directors immediately prior to the closing of the M&A Transaction.

3.3 Authorization of and Non-Interference with Consulting and/or Advisory Relationships. It is understood and agreed that Assignee may wish to engage one (1) or more of the clinical investigators and/or other collaborators of the inventor on the Transferred Patents in a consulting, advisory, or other contract relationship. Both Parties recognize this may be beneficial for Product progress. Miller Estate — to the extent its permission, waiver or other act would be required — hereby agrees that Assignee and any of the inventors may enter into such a relationship, and hereby provides all permissions and waivers and agrees to perform such other acts as may be required to permit this. Assignee will contact Miller Estate or its counsel prior to contacting the inventors; but Miller Estate and its counsel shall have no veto right, and shall have no intermediary role except as may be mutually agreed by the Parties in the future.

3.4 Non-Competition for Protection of Transferred Trade Secrets and Confidential Information. Recognizing that such activities would necessarily entail use of the Transferred Know-How and/or Confidential Information of Assignee reported to Miller Estate in connection with this Agreement, Miller Estate hereby covenants that it shall not during the term of this Agreement research, develop, make, have made, offer to sell, sell, import or export any Products. Miller Estate hereby acknowledges on behalf of itself that the foregoing covenant is legally enforceable and is reasonable, necessary and appropriate to protect Assignee's Confidential Information.

3.5 Assistance with Patent Activities. In accordance with Article 2, Assignee has the sole right to file, prosecute, conduct interferences of and enforce the Transferred Patents

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(including any Patents that may be filed on the Transferred Know-How). Miller Estate shall assist, and to the extent within its power shall cause any living inventors named in the Transferred Patents to reasonably assist, Assignee in all of the foregoing activities, promptly upon each reasonable request by Assignee, and at Assignee's expense (on a pass-through basis with no markup).

3.6 Improvements. It is understood and agreed that the Transferred Patents themselves, including those that may be filed and/or prosecuted to issuance after the Effective Date, are royalty-bearing under this Agreement, and the royalties under this Agreement extend to all Valid Claims of the Transferred Patents, not just those Valid Claims of the Transferred Listed Patents that are issued as of the Effective Date (all of the foregoing at the applicable rates and under the conditions more particularly provided in Section 4.2). Accordingly, if Assignee files on improvements previously made but not filed on by Mickey J. Miller (I), or that he filed on but for which the provisional patent applications have lapsed, but Mickey J. Miller is properly named as an inventor on the patent filing, then the pending claims therein and any resulting Valid Claims shall support a royalty to the extent and at the applicable rate provided in Section 4.2. Furthermore, the presence of any Assignee Technology (defined in the next Section) in (or covering or used by) a Product, including a reformulated Product, shall not negate or lessen the royalty obligations of Section 4.2 for Products covered by the Transferred Patents during their applicable Royalty Terms.

3.7 Assignee Technology. Assignee shall as between the Parties have the right to own all enhancements, improvements, modifications, derivatives and amendments (including Know-How and published patentable or patented inventions) to that Technology that is in existence as of the Effective Date, which enhancements, improvements, modifications, derivatives and amendments are made, conceived, developed, reduced to practice or acquired by or for Assignee (including under any consulting or employment agreement between Assignee or its Affiliate and any inventor on any Transferred Listed Patent) ("**Assignee Technology**") and all Patents on the Assignee Technology (the "**Assignee Technology Patents**"). To avoid doubt, the Assignee Technology Patents are not considered Transferred Patents, and are not royalty-bearing to Miller Estate under this Agreement. However, it is understood and agreed that any applicability of the Assignee Technology Patents to Products (including reformulations) that are otherwise royalty-bearing under this Agreement shall not negate or lessen the royalty obligations at the applicable rates and on the conditions set forth in Section 4.2.

ARTICLE 4

FINANCIAL TERMS

4.1 Flat Fees.

(a) Upfront Fee. Assignee shall pay Miller Estate a fee equal to Four Hundred Five Thousand Dollars ($405,000). Such amount shall be payable in two (2) installments.

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(i) The first installment, in the amount of Five Thousand Dollars ($5,000) shall be due within three (3) days after the Effective Date. (This amount shall help defray patent filing, prosecution and maintenance expenses incurred since the death of Mickey Miller I.) Within seven (7) days after the Effective Date, the Miller Estate shall make the Transferred Know-How (including any and all clinical data in Miller Estate's possession, but excluding patient names and addresses) available for inspection by Assignee at Miller Estate's or its counsel's premises as described in Section 6.2(1). If within ten (10) days after the Transferred Know-How is made available, Assignee's inspection shows that the Transferred Know-How (including such data) is to Assignee's satisfaction, then the second installment shall be due on the timing set forth in the next subsection and this Agreement shall continue in full force and effect. If Assignee's inspection shows that the Licensed Know-How (including such data) are not to Assignee's satisfaction, then Assignee shall provide notice within such ten (10) days. In that case, this Agreement shall terminate, Miller Estate shall be entitled to retain the five thousand dollar ($5,000) payment already (at that time) made under this Agreement, no further payments shall be due hereunder, Miller Estate will retain ownership of the Transferred Patents and Transferred Know-How, and Assignee's rights in the Transferred Patents and Transferred Know-How shall be fully cancelled.

(ii) The second installment (assuming no termination under Section 4.1(a)(i)), in the amount of Four Hundred Thousand Dollars ($400,000) shall be due on or before August 30, 2012. Time is of the essence regarding the payment installments of the Upfront Fee, and the notice and cure provision of Section 9.2(a) will not apply to such payment; provided, however, that if, for any reason, Assignee has not received its Series A funding by the deadline for paying the second installment of the Upfront Fee, Assignee will have the right, upon giving notice to the Miller Estate before such deadline, to extend the deadline for up to two weeks.

(iii) Between the Effective Date and the date that the second installment is due, Miller Estate shall not in any way alienate title to the Transferred Patents nor the Transferred Know-How, nor grant any license, lien or other right therein to any other party. Miller Estate shall assure that its representations and warranties in Section 6.2 remain true as of the date the second installment is paid or due, otherwise, at Assignee's option exercisable by written notice, the last sentence of Section 4.1(a)(i) shall fully apply.

(b) Milestone Fee. Assignee shall pay Miller Estate a fee equal to two hundred thousand Dollars ($200,000) as a milestone payment within thirty (30) days after the end of the calendar month in which the first human subject is first dosed with a Product in the first human clinical trial sponsored by or on behalf of Assignee, its Affiliate or a Licensee. Such milestone payment shall be payable a maximum of one (1) time only under this Agreement, even if multiple clinical trials of Product are conducted under this Agreement.

(c) Patent Expense Reimbursement. To the extent that expenses incurred by Miller Estate or Mickey Miller II since the death of Mickey Miller I for the foreign filing, prosecution, maintenance and revival of Transferred Listed Patents have exceeded five thousand dollars ($5,000), then within thirty (30) days after receiving an invoice from Miller Estate itemizing the costs and the date they were incurred, Assignee shall reimburse to Miller Estate such costs up to a maximum of five thousand dollars ($5,000) (such that the total recovered costs

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are the five thousand dollars ($5,000) of the first payment under Section 4.1(a), plus the up to five thousand dollars ($5,000) under this Section 4.1(c)). Miller Estate shall provide its invoice under this Section no later than sixty (60) days after the Effective Date. To avoid doubt, the reimburseable expenses under this Section are patent filing, prosecution, maintenance and revival expenses, not probate-related or transactional expenses.

4.2 Royalty Rates. Assignee shall pay Miller Estate royalties on Net Sales of Products as follows:

(a) For Net Sales of Products sold to Third Parties in countries where the Product sold is Claimed by an issued Valid Claim of the Transferred Patents, at the rate of **[***]** of Net Sales. This royalty is due on Net Sales sold during the "**Royalty Term**" applicable to the particular Product in the particular country, defined as the time from such Product's receiving Regulatory Approval in such country for the first Indication for which it is approved, until the date that there is no longer any Valid Claim of the Transferred Patents in such country Claiming such Product.

(b) For Net Sales on which no royalty is due per Section 4.2(a) (i.e. Net Sales of Product not Claimed by an issued Valid Claim of the Transferred Patents), but that are sold on or before the fifth (5^{th}) anniversary of Regulatory Approval of the first Product in a given country, Assignee shall pay to Miller Estate royalties on Net Sales of Product in such country at the rate of **[***]** of such Net Sales for so long as (and only for so long as) all of the following apply: (a) there is at least one (1) pending claim of a Transferred Patent that Claims the Product (determined country-by-country), (b) the pending patent claim of the Transferred Patents is no older than five (5) years old (looking to first priority date), and (c) the pending patent claim has not been abandoned, has not lapsed,

and has not been finally rejected. This provision shall not be read to imply that Assignee has any further patent filing, prosecution, or maintenance obligation than as set forth in Section 5.1, second paragraph.

(c) If the Net Sale of any Product covered by Sections 4.2(a) or 4.2(b) requires Assignee (or its Affiliate or a Licensee) to make payments to a Third Party(ies) under intellectual property license(s), the aggregate royalties under which exceed **[***]** of Net Sales of Product, then the excess over **[***]** in aggregate across all such Third Parties shall be the "**Excess Third-Party Royalties,**" and with respect to the Net Sales on which Excess Third-Party Royalties are due, Assignee will be entitled to deduct up to **[***]** of the Excess Third-Party Royalties from the royalty owed by Assignee to Miller Estate, but will not be allowed to reduce the royalty owed to Miller Estate to below **[***]** of the royalties that would otherwise have been due to Miller Estate in any calendar quarter. Any amounts of Excess Third-Party Royalties that Assignee is unable to credit due to the foregoing **[***]** limitation on the reduction in Miller Estate's royalties as applied in any calendar quarter shall carry forward to future calendar quarters, subject always to such **[***]** limitation on the reduction in Miller Estate's royalties as applied in such future calendar quarters.

As examples of how the foregoing clause operates:

(X) **FIRST EXAMPLE**: Assume a country in which a Valid Claim of the Transferred Patents that Claims the Product sold is in force, so that the royalty rate under this Agreement is **[***]**, and Third-Party intellectual property licenses in the country total to **[***]** of Net Sales. In this example, because the Third-Party royalty obligation is less than **[***]**, Assignee has no right offset any portion of it against the royalty of this Agreement. The royalty paid under this Agreement in this example will be **[***]**, and the Third-Party royalties borne solely by Assignee will also be **[***]**.

(Y) **SECOND EXAMPLE**: Assume a country in which a Valid Claim of the Transferred Patents that Claims the Product sold is in force, so that the royalty rate under this Agreement is **[***]**, and Third-Party intellectual property licenses in the country total to **[***]** of Net Sales. In this example, **[***]** of the Third-Party royalty burden is considered Excess Third-Party Royalties, and so one and **[***]** is eligible to be offset against the royalty of this Agreement. However, because offsetting the entire **[***]** against the **[***]** royalty of this Agreement would reduce the royalty of this Agreement by more than half, only **[***]** of the Excess Third-Party Royalties can be offset. Accordingly, the royalty paid to Miller Estate in this example will be **[***]**, and the Third-Party royalties borne exclusively by licensee will be **[***]**).

4.3 Recoveries on Infringement of Transferred Patents. In accordance with Sections 2.1 and 2.2, Assignee has the sole right to enforce the Transferred Patents against infringement. Any recoveries on such infringement suits in excess of Assignee's (or its Affiliate's or Licensee's) costs in connection with such infringement suits (including all outside counsel costs and a reasonable allocation of the costs of internal counsel) shall be deemed Net Sales under this Agreement, and shall be deemed sold in a country in which the Product is Claimed by an issued Valid Claim of the Transferred Patents, in the calendar quarter in which the recovery over costs is actually received, and shall bear a royalty under Section 4.2.

4.4 Quarterly Payment Timings. All royalties due under Section 4.2 shall be paid quarterly, on a country-by-country basis, within the following timelines:

(a) If Assignee or its Affiliate is the marketing party for the underlying Product Net Sales, then payment shall be made thirty (30) days after the end of the relevant calendar quarter for which royalties are due, in the case of U.S. Net Sales; the time period shall be sixty (60) days after the end of the relevant calendar quarter for ex-U.S. Net Sales; and

(b) If a Licensee unaffiliated with Assignee is such marketing party, then Assignee shall make the royalty payments due hereunder within ten (10) Business Days after receiving royalties on the same Net Sales from the Licensee.

Payments due under Section 4.3 shall be paid within thirty (30) days after receipt of the underlying funds by Assignee.

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4.5 Royalty Payment Reports. With respect to each calendar quarter, within thirty (30) days after the end of the calendar quarter, Assignee shall provide to Miller Estate a written report stating the number and description of all Products sold by or on behalf of Assignee during the relevant calendar quarter; the gross sales associated with such sales; and the calculation of Net Sales on such sales, including the amount of any deduction provided for in the definition of Net Sales in Article 1. The report shall provide all such information on a country-by-country and Product-by-Product basis. The quarterly report will be certified as accurate by a duly authorized officer of Assignee. Beginning with the calendar quarter in which Regulatory Approval is achieved for the first Product, such quarterly reports will be furnished to the Miller Estate regardless of whether any Products were shipped during the relevant month or whether any actual payment is owed. The receipt or acceptance by the Miller Estate of any report or payment will not prevent the Miller Estate from subsequently challenging the validity or accuracy of such report or payment.

4.6 Payment Method. All payments due under this Agreement to Miller Estate shall be made by bank wire transfer in immediately available funds to an account designated by Miller Estate in writing. Once Miller Estate has designated a bank account, it may only be changed on ten (10) Business Days advance

written notice, unless Assignee consents to a shorter time frame in writing. All payments hereunder shall be made in the legal currency of the United States of America. For the purposes of payment of the Upfront Fee of Section 4.1(a) and the reimbursement expense of Section 4.1(c), Miller Estate designates the trust account of Tiffany & Bosco, P.A. as the designated bank account.

4.7 Taxes. Assignee shall be responsible to withhold from payments otherwise to be made to Miller Estate under this Agreement any taxes required to be withheld by Assignee under applicable law. If any such taxes are levied on such payments due hereunder ("**Withholding Taxes**"), Assignee shall (i) deduct the Withholding Taxes from the payment amount, (ii) pay all applicable Withholding Taxes to the proper taxing authority, and (iii) send evidence of the obligation together with proof of tax payment to Miller Estate with the next royalty report under Section 4.5.

4.8 Foreign Exchange. If any currency conversion shall be required in connection with the calculation of amounts payable hereunder, such conversion shall be made using the average of the exchange rates for the purchase and sale of U.S. dollars, as reported by Bank of America in San Francisco, California (or its successor entity) on the last business day of the calendar quarter to which such payment pertains. With any payment in relation to which a currency conversion is performed to calculate the amount of payment due, Assignee shall provide to Miller Estate a true, accurate and complete copy of the exchange rates used in the calculation.

4.9 Late Payments. Any payment due under this Article 4 that is not paid on or before the date such payment is due shall bear interest at a rate equal to the lesser of: ten percent (10%) per year; or the maximum rate permitted by law, calculated based on the number of days that payment is delinquent until full payment has been made, less a 15 calendar-day grace period in the case of payments under Sections 4.2 and 4.3.

4.10 Records and Audit. Assignee shall keep (or cause to be kept) complete and accurate records pertaining to Net Sales of Products and the payments due under this Agreement, in sufficient detail to permit Miller Estate to confirm the accuracy of all payments due under this Agreement. Miller Estate shall have the right, at its expense, to cause an independent, certified public accountant to audit such records as necessary to confirm Assignee's payments for the preceding year. Such independent, certified public accountant shall be legally bound by written confidentiality and non-use obligations running directly to Assignee. It shall be nationally recognized in the United States. Such audit rights may be exercised no more often than once a year, once only with respect to records regarding any given accounting period, within three (3) years after the year to which such records relate, upon reasonable advance notice to Assignee and during normal business hours. The terms of this Section shall survive any termination or expiration or termination of this Agreement for a period of one (1) year.

In the event that such audit reveals an underpayment by Assignee of the actual amount owed the Miller Estate, Assignee will pay the difference, plus interest calculated at the rate of ten percent (10%) per year. If such underpayment is more than ten percent (10%) for any calendar month, Licensee will also reimburse the Miller Estate for the cost of such audit. If the audit reveals that Assignee overpaid, then Assignee may credit the overpaid amounts against future payments due hereunder, or require reimbursement of the overpaid amounts within thirty (30) days after the audit.

All books and records relative to Licensee's obligations hereunder will be maintained by Licensee at Licensee's address set forth in this Agreement (which will be in the United States) for at least three (3) years after the end of the calendar year to which they relate, including after termination of this Agreement as applicable.

In the case of records held by Assignee's Licensees, it shall suffice if Assignee obtains an audit right for itself similar to Assignee's audit right above, and the right to share the results of its own audits with Miller Estate; Assignee shall not be required to obtain a direct right for Miller Estate to audit a Licensee.

ARTICLE 5

PATENT PROSECUTION, MAINTENANCE AND ENFORCEMENT

5.1 Patent Prosecution, Maintenance and Reports. Assignee shall have the right to prosecute (including by conducting interferences, oppositions, reissues, reexaminations and other similar proceedings), maintain (including the timely payment of all maintenance fees, renewal fees and other applicable fees), and extend the Transferred Patents. All of the foregoing shall be at Assignee's sole expense. At least once each calendar year, Assignee will provide to the Miller Estate an update on the status and plans relating to the prosecution and maintenance of Patents relating to the Technology. In addition, upon at least 15 days' notice to Assignee, the Miller Estate may request a second update during any calendar year, provided, however, that such request may not be made within three months of the previous update.

Assignee shall have the obligation at its own expense to pay any maintenance fees that come due after the Effective Date on the Transferred Listed Patents that have issued as of the Effective Date in the United States. If Assignee fails to pay the maintenance fees timely and this leads to a loss of a Transferred Listed Patents Valid Claim that had previously issued and would have supported a royalty obligation at the **[***]** rate under Section 4.2, then as liquidated damages for such failure to maintain, Assignee shall be required to pay such royalty on Net Sales as if the maintenance fee had been paid and the Valid Claim had remained in place. This calculation of liquidated damages shall thereafter occur quarterly, taking account of whether and to what extent any other Valid Claim or pending claim of a Transferred Patent already independently causes royalties to be due (i.e., if another Valid Claim already causes a **[***]** royalty on the applicable

Net Sales, then no liquidated damages shall be due on those Net Sales; if a pending claim causes a **[***]** royalty on the applicable Net Sales, then an additional **[***]** royalty shall be due on Net Sales that are subject to the pending claim **[***]** royalty but would instead have been royalty-bearing at the **[***]** rate if the lapsed Valid Claim had continued in force).

Other than the foregoing obligation at its own expense to maintain the Transferred Listed Patents that have issued as of the Effective Date in the United States, Assignee shall have no obligation to file, prosecute, maintain or extend any other Transferred Patent, express or implied, at law or in equity.

5.2 Enforcement. Without limiting Assignee's rights in Article 2, it is understood and agreed that if in connection with any enforcement of Transferred Patents Assignee requests documentation that Miller Estate may have in its possession or testimony from Miller Estate or any member of Miller Estate Group, Miller Estate shall reasonably cooperate and assist Assignee in all reasonable ways at Assignee's expense (meaning that Assignee would cover any related out-of-pocket expenses of such cooperation, including without limitation hotel and travel expenses, on a pass-through basis; provided that the Miller Estate will obtain approval of expenditures in advance).

Licensee will fully comply with the patent marking provisions of the patent laws of the United States and any applicable foreign countries, to the extent in accordance with then-customary practices in the pharmaceutical industry for dermatology products, and to the extent in accordance with regulatory requirements relating to labeling of pharmaceutical products.

ARTICLE 6

REPRESENTATIONS AND WARRANTIES

6.1 Reciprocal Representations and Warranties. Each Party hereby represents and warrants to the other Party that as of the Effective Date the representing and warranting Party has the full legal right, power and authority to enter into and perform this Agreement; that this Agreement has been authorized by all requisite action within such representing and warranting Party (in the case of a corporate entity, and all applicable or required legal process to bind the estate of Miller I, in the case of Miller Estate); and that this Agreement is legally binding upon such representing and warranting Party.

6.2 Miller Estate Representations and Warranties. Miller Estate represents and warrants to Assignee as follows:

(a) Sole Owner. Immediately prior to the assignment hereunder becoming effective, Miller Estate was the sole and lawful owner of the entire right, title, and interest in and to the Transferred Listed Patents and Transferred Know-How.

(b) No Liens. There are as of the Effective Date no outstanding liens, security interests, pledges, charges, mortgages, restrictions, interests and/or encumbrances burdening any of the Transferred Patents nor the Transferred Know-How.

(c) No Licenses or Encumbrances. Miller I and Miller Estate each has not granted, expressly or otherwise, any assignment, license or other extension of rights, covenant not to sue or other similar interest or benefit, exclusive or otherwise, to, under or in the Transferred Patents or the Transferred Know-How.

(d) No Inconsistent Agreements. Miller I, Miller Estate and the Miller Estate Group have not executed, and Miller Estate further covenants that Miller Estate and the Miller Estate Group shall not execute, any agreements inconsistent with this Agreement or to the detriment of the Transferred Patents or the Transferred Know-How.

(e) Non-infringement of Third Party Rights. As of the Effective Date to Miller Estate's actual knowledge, after making a review of those files of Mickey J. Miller I in Mickey J. Miller II's possession (and/or in the possession of counsel), no published Patents or trade secret rights owned or controlled by a Third Party, would be infringed or misappropriated by the manufacture, use, sale, offer for sale or importation of any Products in topical applications for Indications. Miller Estate and the other members of the Miller Estate Group have received no written claims relating to any claims of such infringement or misappropriation.

(f) Claims. There are no claims, actions, suits or proceedings commenced or pending, or to Miller Estate's knowledge threatened, against it, Miller I, or any other member of the Miller Estate Group, as of the Effective Date, that could affect the rights and benefits granted to Assignee under this Agreement. As of the Effective Date, Miller Estate has not received verbal or written notice that any third party is challenging or intends to challenge the patentability, validity or ownership of the Transferred Listed Patents, other than those allegations that culminated in Physicians Choice of Arizona Inc. v. Mickey Miller, et al., CV2003-020242, in the Superior Court of Maricopa County. All of the claims and allegations giving rise to such case were finally settled in the Settlement Agreement. As of the Effective Date, Miller Estate and the other members of the Miller Estate Group have no knowledge of prior art relevant to the Transferred Patents not cited in the file wrappers of the Transferred Listed Patents.

(g) Settlement Agreement. The copy of the Settlement Agreement that Miller Estate has disclosed to Assignee and its representatives prior to the Effective Date is a true, accurate and complete copy, and nothing has been redacted or omitted therefrom except exactly as indicated by the blackened areas shown in that copy; none of the redacted information in those blackened areas changes the meaning of the remainder of the Settlement Agreement; and

there is nothing in such blackened areas that is necessary to disclose in order to make the disclosure of the remainder of the Settlement Agreement not misleading. The Settlement Agreement is in full force and effect as of the Effective Date. Miller Estate knows of no breach thereof by any party to such agreement and has received no written notice of such a breach. Miller Estate does not know of any loss or diminution of rights that would occur under the Settlement Agreement as a result of the transaction contemplated under this Agreement. There are no payments currently due or due in the future under the Settlement Agreement. Miller Estate has the right to assign the benefits of the Settlement Agreement to Licensee in accordance with this Agreement.

(h) Estate Bound and Agreement Approved Through Probate Process. Exhibit F to this Agreement is a true and correct copy of the Letters of Administration issued by the Superior Court of the State of Arizona and appointing Mickey Joe Miller II as the personal representative of the Miller Estate. The Miller Estate, and all heirs claiming through such estate, is and are legally bound by this Agreement; A.R.S. § 14-3711 gives Mickey J. Mickey J. Miller II, as personal representative of the Miller Estate, the same power over the title to property of the Miller Estate that an absolute owner would have, which power may be exercised without notice, hearing or order of the court. **Exhibit G** to this Agreement is a true and correct copy of the Order of Intestacy and Determination of Heirs issued by the Superior Court of the State of Arizona naming Mickey J. Miller II and Mickey Lyon as the sole heirs of the Mickey J, Miller I. Mickey J. Miller II knows of no people other than himself and Mickey Lyon who are claiming to be heirs under the Miller Estate, and knows of no one who has challenged or is planning to challenge the probate court finding that he and Mickey Lyon are the sole heirs of the estate or that has challenged or is planning to challenge the Miller Estate's ownership as of the Effective Date (and before the effects of this Agreement are carried out) of the assets transferred to Assignee under this Agreement. Fully and properly signed Consents of Heir from each of the two (2) heirs shall be delivered to Assignee within five (5) days after the Effective Date.

(i) Third-Party Activities; Grounds. As of the Effective Date and to Miller Estate's actual knowledge without any special enquiry, there are no (i) activities by Third Parties that would constitute infringement or misappropriation of the Transferred Listed Patents (in the case of pending claims, evaluating them as if issued), nor (ii) grounds currently existing on which any claims, actions, suits or proceedings might be commenced against Miller Estate or Assignee with respect to the manufacture, use or sale of Products for Indications and/or practice of the Transferred Listed Patents.

(j) Patents. The Transferred Listed Patents are the only Patents that Miller Estate or any other member of the Miller Estate Group owns or Controls, as of the Effective Date, that claim or are directed to Technology.

(k) Trademarks. Exhibit B contains a complete list of all trademarks that Miller Estate or any other member of the Miller Estate Group owns or Controls, as of the Effective Date, that are associated with Technology or have been registered for use with Technology. (It is acknowledged by Assignee that **Exhibit B** lists no trademarks.)

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(l) Data. Within seven (7) days after the Effective Date, Miller Estate will disclose to Assignee (which disclosure may occur by making available for inspection at Miller Estate's premises or the premises of Miller Estate's counsel) all data and information (including preclinical and clinical data and information) generated by, disclosed to and/or known to Miller Estate or any other member of the Miller Estate Group regarding Technology and any information required to fairly and accurately interpret such data and information and make Miller Estate's disclosures thereof to Assignee complete, accurate and not misleading; provided that such disclosure does not violate the terms of the Settlement Agreement, any other agreement set forth in **Exhibit D** or any court order. It is understood that Miller Estate is entitled to redact patient names and addresses so as to ensure that such disclosure does not violate the terms of the Settlement Agreement. Miller Estate represents and warrants that the disclosures under this Section shall be true and accurate in all material respects, and shall not omit to disclose any information known to Miller Estate (other than patient names and addresses) necessary to make the information that is disclosed to Assignee under this Section complete, accurate and not misleading.

(m) No Debarment. In the course of developing Technology and any products based on it, to Miller Estate's actual knowledge without any special enquiry, Miller Estate and Miller Estate's predecessors-in-interest has and have not engaged any person who has been debarred by the FDA or to Miller Estate's knowledge is the subject of debarment proceedings by the FDA.

(n) Affiliates of Miller Estate. As of the Effective Date, Miller Estate has no Affiliates and the Miller Estate Group does not have any Affiliates holding rights to any Technology.

6.3 Miller Estate Covenants. Miller Estate hereby covenants that, without limiting Assignee's right set forth elsewhere in this Agreement (including in Section 6.2(d)), Miller Estate and the other members of the Miller Estate Group shall not purport to convey to any Third Party any Transferred Patent and/or Transferred Know-How.

6.4 Disclaimer of Warranties. EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES EXPLICITLY SET FORTH IN SECTIONS 6.1 AND 6.2 EACH OF ASSIGNEE AND MILLER ESTATE HEREBY EXPRESSLY DISCLAIMS ALL REPRESENTATIONS AND WARRANTIES, EXPRESS, STATUTORY OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE.

ARTICLE 7

INDEMNIFICATION

7.1 Indemnification by Assignee. Assignee shall indemnify, hold harmless and defend Miller Estate, the other members of the Miller Estate Group, and their respective officers, directors, members, employees and agents (the "**Miller Estate Indemnitees**") from and against any and all losses, damages, liabilities, judgments, fines, amounts paid in settlement, expenses

and costs of defense (including reasonable attorneys' fees and witness fees) (collectively "**Losses**") resulting from any demand, claim, action or proceeding brought or initiated by a Third Party (each a "**Third-Party Claim**") against any Miller Estate Indemnitees(s) to the extent that such Third-Party Claim arises out of (i) the breach or alleged breach of any representation, warranty or covenant by Assignee in this Agreement; (ii) the negligence or willful misconduct of any Assignee Indemnitee (defined in Section 7.2); or (iii) the development, manufacture, storage, handling, use, sale, offer for sale, import, export or distribution of Products by or for Assignee and its Affiliates and Licensees on or after the Effective Date; *provided* that (a) the Miller Estate Indemnitees comply with the procedure set forth in Section 7.3; and (b) such indemnity shall not apply to the extent Miller Estate has an indemnification obligation pursuant to Section 7.2 for such Loss. To avoid doubt, Third-Party Claims shall exclude and claims brought by heirs of the estate of Mickey J. Miller I amongst themselves and/or against the estate.

7.2 Indemnification by Miller Estate. Miller Estate shall indemnify, hold harmless and defend Assignee, its Affiliates, the Licensees, the investors in Assignee, Sciaderm, Inc. and the investors in Sciaderm, Inc., and the respective officers, directors, employees and agents of each of the foregoing (the "**Assignee Indemnitees**") from and against any and all Losses resulting from any Third-Party Claim(s) against any Assignee Indemnitee(s) to the extent that such Third-Party Claim(s) arises out of (i) the breach or alleged breach of any representation, warranty or covenant by Miller Estate in this Agreement; (ii) the negligence or willful misconduct of any Miller Estate Indemnitee; or (iii) disputes amongst the heirs of Mickey J. Miller I; *provided* that (a) the Assignee Indemnitees comply with the procedure set forth in Section 7.3; and (b) such indemnity shall not apply to the extent Assignee has an indemnification obligation pursuant to Section 7.1 for such Loss.

7.3 Mechanics. A Party whose Assignee Indemnitee or Miller Estate Indemnitee is entitled to be indemnified pursuant to this Article 7 (the "**Indemnified Party**") shall give prompt notice of the Third Party Claim to the other Party (the "**Indemnifying Party**") and the Indemnifying Party shall defend against such Third Party Claim with the reasonable cooperation of the Indemnified Party; *provided* that the Indemnifying Party shall not settle any such Third-Party Claim for anything other than money damages without the prior written consent of the Indemnified Party, which consent shall not be unreasonably withheld, conditioned or delayed. The Indemnified Party's Indemnitees must tender defense of the applicable Third-Party Claim and provide all reasonable cooperation and assistance in such defense, in order to remain eligible to be indemnified and held harmless; *provided*, *however*, that where Assignee is the Indemnified Party, unless Miller Estate has adequate insurance to cover the alleged potential Losses and is tendering defense to such insurer who has indicated in writing that they will fully assume the defense and cover any resulting Losses, the Assignee Indemnitees shall not be required to tender defense in order to remain eligible to be indemnified and held - harmless and instead notwithstanding anything express or implied in this Section 7.3 Assignee and/or the Assignee Indemnitees may do so and be indemnified under this Agreement. The Indemnified Party shall have the right to be present in person or through counsel at substantive legal proceedings relating to the Third-Party Claim giving rise to the Indemnified Party's right to indemnification hereunder. If the Parties cannot agree as to the application of Sections 7.1 and 7.2 to any Loss or Third-Party Claim, the Parties may conduct separate defenses of such Third-Party Claim. In such

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case, each Party further reserves the right to claim indemnity from the other upon resolution of such underlying Third-Party Claim.

7.4 Limitation of Liability. IN NO EVENT SHALL EITHER PARTY OR ITS RESPECTIVE AFFILIATES (OR IN THE CASE OF MILLER ESTATE, ANY RESPONSIBLE MILLER ESTATE GROUP MEMBERS) BE LIABLE FOR SPECIAL, EXEMPLARY, CONSEQUENTIAL OR PUNITIVE DAMAGES, WHETHER IN CONTRACT, WARRANTY, TORT, STRICT LIABILITY OR OTHERWISE, EXCEPT TO THE EXTENT SUCH PARTY MAY BE REQUIRED TO INDEMNIFY THE OTHER PARTY FROM SUCH DAMAGES CLAIMED BY THIRD PARTIES UNDER THIS ARTICLE 7.

ARTICLE 8

CONFIDENTIALITY

8.1 Confidential Information; Exceptions. At all times before the effectiveness of the assignment under this Agreement of the Transferred Patents and Transferred Know-How: (i) each Party that has received Confidential Information from the other (the "**Receiving Party**") shall maintain all such Confidential Information in trust and confidence and shall not disclose any such Confidential Information to any Third Party (except as expressly provided below) or use any such Confidential Information for any purposes other than for performance under or determining compliance with and administering this Agreement; and (ii) the Receiving Party shall not disclose such Confidential Information to any employee, agent, attorney, consultant, or Affiliate who does not have a reasonable need for such information for the foregoing purposes. Disclosures to such persons with a reasonable need for the information are only permitted to the extent the person is subject to binding obligations of confidentiality and limited use at least as restrictive in scope and as long in duration as those of this Article 8. The Receiving Party shall use at least the same standard of care as it uses to protect its own confidential information of a similar nature to prevent unauthorized disclosures or uses of the Confidential Information, but no less than reasonable care. The Receiving Party shall promptly notify the other Party upon discovery of any unauthorized use or disclosure of the Confidential Information.

After the assignment hereunder of the Transferred Patents and Transferred Know-How becomes effective and the Miller Confidential Information becomes Assignee's Confidential Information protected under this Article, the confidentiality obligations of this Article shall apply to the Miller Estate to protect Assignee's Confidential Information, but shall no longer restrict the Assignee.

Confidential Information shall not include any information which, as shown by Miller Estate through competent proof:

(a) is now, or hereafter becomes, through no act or failure to act on the part of the receiving Party in breach hereof, generally known or available;

(b) is known by the receiving Party at the time of receiving such information, as shown by contemporaneous written records — but other than the Transferred Know-How and

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any documentation thereof; the Transferred Know-How and any documentation thereof is deemed Confidential Information under this Agreement;

(c) is independently developed by the Receiving Party without the aid, application or use of Confidential Information, as shown by written records; or

(d) is hereafter furnished to the receiving Party by a Third Party, as a matter of right, without breach of any confidentiality agreement, and without restriction on disclosure.

8.2 Authorized Disclosure. Notwithstanding any other provision of this Agreement, the Receiving Party may disclose Confidential Information to the extent and to the persons and entities required by an applicable governmental law, rule, regulation or order; *provided*, *however*, that the Receiving Party shall first have given prompt notice to the other Party to enable such other Party to seek any available exemptions from or limitations on such disclosure requirement and shall reasonably cooperate in any such efforts by such other Party.

8.3 Return of Confidential Information. If this Agreement is terminated for breach according to the provisions of Section 9.2, the Receiving Party shall use diligent efforts to return all of the other Party's Confidential Information. The Receiving Party will be allowed to keep one archival copy of any Confidential Information for record-keeping purposes only.

8.4 Use of Names. A Party shall not use any of the other Party's names, trademarks, logos, employee names, investor names or symbols in any publicity, promotion or similar public disclosure, without the advance written withholdable consent of such other Party, except as may be required by law or stock exchange requirement.

ARTICLE 9

TERM AND TERMINATION

9.1 Term. The term of this Agreement shall commence upon the Effective Date and, unless sooner terminated as provided in this Article 9, shall expire upon the expiration of the last-to-expire Valid Claim of the Transferred Patents, but in any event no sooner than fifteen (15) years after the Effective Date and/or if later the expiration of the last pending patent claim of a Transferred Patent with the potential to become a Valid Claim.

9.2 Termination for Breach.

(a) Right to Terminate for Material Breaches. Either Party may terminate this Agreement for the other's material breach of this Agreement, unless the material breach is cured within ninety (90) days of the allegedly breaching Party receiving written notice from the other Party specifying in detail what the material breach of this Agreement is and stating explicitly that the notice is a breach and potential termination notice under this Section 9.2(a). The notice and cure period shall be thirty (30) days in the case of a payment failure breach. In the case of a material breach of this Agreement that is incapable of cure within ninety (90) days, and is not a failure to make payment, but is capable of cure in a longer reasonable period, then the allegedly breaching Party shall within such ninety (90) day notice period provide a reasonable written plan

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to cure the breach, and shall have a reasonable time to cure the breach without losing rights under this Agreement (it shall cure as soon as practicable).

(b) Mechanics. If a Party gives notice of termination under Section 9.2(a) and the other Party disputes whether such notice was proper, then the issue of whether this Agreement has been terminated shall be resolved in accordance with Section 10.1. If as a result of such dispute resolution process it is finally determined that the notice of termination was proper, then such termination shall become effective as of the date of such final determination; *provided*, *however*, that the breaching Party fails thereafter to cure the underlying breach in accordance with the determination made in the resolution process under Section 10.1 within the time period set forth in this Section 9.2 for the applicable breach following such determination (meaning it must either cure within ninety (90) days after such final determination or provide within such time period a reasonable written plan for cure; in the case where the cure would be payment of monies, the time period for cure shall be thirty (30) days after such final determination). If, however, as a result of such dispute resolution process it is determined that the notice of termination was improper, then no termination shall have occurred and this Agreement shall remain in effect.

9.3 Effects of Termination.

(a) Survival of Licensee's Rights and Obligations. If Miller Estate terminates this Agreement pursuant to Section 9.2(a), then notwithstanding anything in this Agreement, at law, or in equity, if at the time of termination there are any Licensees, such Licensees' rights to the Transferred Patents, Transferred Know-How and Trademarks shall not be affected by the termination, and each such Licensee shall pay directly to Miller Estate (or, if the Miller Estate is closed, to the entity designated to receive payment as set forth in Section 10.5) any payments coming due under Section 4.2 or 4.3 of this Agreement after the effective date of termination as a result of its own practice of its surviving rights to the Transferred Patents, Transferred Know-How and Trademarks.

(b) After Assignee Terminates for Miller Estate's Breach. If Assignee terminates this Agreement pursuant to Section 9.2(a), then, in addition to those provisions that survive any expiration or termination of this Agreement as set forth in Section 9.3(c), the following shall survive and apply: Sections 3.4, 3.5, 3.6, and 3.7; and Article 4. Article 5 shall not survive such a termination. Section 3.2 shall not survive such a termination (nor shall Assignee have any diligence obligation under this Agreement, express or implied, at law or in equity, after such a termination). To avoid doubt, in this scenario, as between the Parties, Assignee retains title to the Transferred Know-How and Transferred Patents.

(c) General Survival. Expiration or termination of this Agreement for any reason shall not affect any accrued rights or obligations of the Parties, and the following Articles shall survive any expiration or termination of this Agreement: Articles 1, 2 and 7-10.

9.4 Elective Termination after Certain Obligations. Assignee shall have the right to terminate its obligations under Sections 3.2 and Article 5 without cause at any time after the payments of Section 4.1(a) and 4.1(c) (in the latter case, if any) have been fully paid. In this case,

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only Assignee's obligations Sections 3.2 and Article 5 shall be terminated, and the remainder of the Parties' rights and obligations under this Agreement shall remain in full force and effect.

ARTICLE 10

MISCELLANEOUS

10.1 Dispute Resolution.

(a) Initial Dispute Resolution. The Parties recognize that disputes may from time to time arise between the Parties during the term of this Agreement. It is the objective of the Parties to establish procedures to facilitate the resolution of disputes arising under this Agreement in an expedient manner by mutual cooperation and without resort to litigation. To accomplish this objective, the Parties agree to follow the procedures set forth in this Section 10.1 to resolve any dispute arising under this Agreement. If such a dispute between the Parties arises, then either Party, by written notice to the other Party, may have such dispute referred to the Parties' respective executive officers designated below or their successors, for attempted resolution by good faith negotiations within thirty (30) days after such notice is received. Said designated officers are as follows:

Assignee:	President and CEO
Miller Estate:	Mickey Miller II

(b) Preliminary Relief. A Party is entitled to seek interlocutory relief and/or a preliminary injunction without first following the procedure of this Section 10.1; *provided* that it also invokes the procedure of this Section 10.1 in parallel. Each Party hereby irrevocably waives its right to jury trial of any and all disputes arising under this Agreement, and consents to have such disputes decided instead by a judge or justice.

(c) Arbitration. Except as otherwise set out in this Section 10.1, any dispute that cannot be settled amicably by agreement of the Parties pursuant to Section 10.1(a) shall be finally settled by an arbitration administered by JAMS applying its most applicable procedural rules (and the substantive laws of the State of California) *provided* that the appointed arbitrator(s) shall have appropriate experience in the pharmaceutical industry (or if no such person is available then in the biopharmaceutical industry or the closest industry possible). The place of arbitration shall be San Francisco, California. The language to be used in the arbitration proceedings shall be English. The award rendered in any arbitration shall be final and binding upon both Parties. The judgment rendered by the arbitrator(s) may include costs of arbitration, reasonable legal fees and reasonable costs for any expert and other witnesses. Nothing in this Agreement shall be deemed as preventing either Party from seeking injunctive relief (or any other provisional remedy) from any court having jurisdiction over the Parties and the subject matter of the dispute as necessary to protect either Party's name, Confidential Information (in the case of Assignee) or intellectual property. Judgment upon the award may be entered in any court having jurisdiction, or application may be made to such court for judicial acceptance of the award and/or an order of enforcement as the case may be. Notwithstanding the foregoing, either Party shall be free to submit any dispute relating to the scope, validity, enforceability or other

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like matter regarding intellectual property to any court having jurisdiction over the Parties and the subject matter of the dispute and to seek such relief and remedies as are available in that court.

10.2 Jurisdiction. Both Parties consent to the exclusive personal jurisdiction of all courts sitting within San Francisco, California for resolving all disputes arising out of or in connection with this Agreement. Each Party hereby waives any and all defenses it may have to the jurisdiction and venue of such courts, including a defense that such a court may not assert personal jurisdiction over such Party, or of *forum non conveniens*.

10.3 Governing Law. This Agreement is made in accordance with and shall be governed and construed under the laws of the State of California excluding its choice of law principles.

10.4 No Agency, Joint Venture or Partnership. Neither Party is, nor will be deemed to be, an employee, agent or legal representative of the other Party for any purpose. Neither Party will be entitled to enter into any contracts in the name of, or on behalf of the other Party, nor will a Party be entitled to pledge the credit of the other Party in any way or hold itself out as having authority to do so. The parties are independent contractors, this Agreement is for an arm's-length transaction, and the relationship that it governs shall not be construed to be or create any agency, joint venture or partnership.

10.5 Assignment. Except as explicitly provided for in this Agreement, neither Party shall have the right or power to assign any rights or obligations under this Agreement without the consent of the other Party, except that Assignee may assign one or more times to an Affiliate or to a successor to substantially all of the business or assets of Assignee to which this Agreement relates (whether through merger, sale of stock, sale of assets or other transaction). This Agreement shall be binding upon and inure to the benefit of the successors and explicitly permitted assigns of the Parties. Any assignment of this Agreement not made in accordance with this Agreement is prohibited hereunder and shall be null and void. Any assignee must certify in writing to the non-assigning Party, within ninety (90) days after the requested in writing by the non-assigning Party, that such assignee agrees to the terms and conditions of this Agreement going forward from the date of assignment.

It is understood and agreed that Miller Estate may divide the proceeds due to it under this Agreement amongst the heirs to the estate, and commit to the heirs to do so as regards future payments. It may distribute to the heirs or enter into written agreements with the heirs for the distribution of such proceeds, and the heirs may further transfer or assign their rights to such proceeds. Any such written agreement or activity shall not be considered in breach of and is hereby explicitly allowed under this Section 10.5. It is understood and agreed, however, that whatever the distribution between the Miller Estate and the heirs, Assignee's sole responsibility with respect to each payment due is to make that payment to Miller Estate in accordance with this Agreement, or if the estate has been closed, then to Mickey J. Miller II or the single legal entity designated by him in writing under the next paragraph. Assignee shall not be required to split payments among different heirs nor to deal with more than one representative of Miller Estate and/or designee for receipt of payment if the estate has been closed.

It is understood and agreed that during the Willi of this Agreement the estate of Mickey J. Miller I is likely to be closed because probate will not remain open over the life of this Agreement. If the Miller Estate is closed prior to any payment coming due under this Agreement, then notwithstanding anything express or implied in this Agreement, after the date that the Miller Estate is closed Assignee shall make all subsequent payments that would have been due to Miller Estate, instead, to Mickey J. Miller II in his personal capacity, or to such other single legal entity as may be specified by Mickey J. Miller II in writing no later than ten (10) Business Days prior to the payment due date. As among the Parties and the heirs of the Miller Estate, it shall be Mickey J. Miller II's responsibility to distribute those payments to any and all heirs of the estate and/or their successors, or, in the case that Mickey J. Miller II has designated a different single legal entity to receive payment, it shall be that entity's responsibility to do so. Assignee shall have no responsibility whatsoever to the heirs, nor to their successors, and Assignee's sole responsibility is to make payment to Miller Estate, Mickey J. Miller II, or the single legal entity designated in writing by him to receive payment as provided for above, as applicable.

10.6 Amendment. No amendment or modification hereof shall be valid or binding upon the Parties unless made in writing and signed by authorized officers of both Parties.

10.7 Notices. Any notice or other communication required or permitted to be given to either Party hereto shall be in writing unless otherwise specified and shall be deemed to have been properly given and to be effective (a) on the date of delivery if delivered in person; (b) the date of electronically confirmed facsimile transmission if during the recipient's normal business hours, or otherwise on the next Business Day; (c) two (2) Business Days after sending for next Business Day delivery by internationally recognized expedited courier service for no later than next-possible-business-day delivery; and (d) upon actual receipt by the recipient of an email, in the case of an emailed notice:

In the case of Assignee:

Aclaris Therapeutics, Inc.
101 Lindenwood Drive
Suite 400
Malvern Pa 19355
Attn: Dr. Neal Walker
Fax — [To be provided by written notice by Aclaris within 60 days after the Effective Date.]
Email — nwalker@OCTAGONRESEARCH.com

With required copies to:

Spiegelman Life Sciences PC
1459 Eighteenth St PMB 309
San Francisco, CA 94107
Attn: Laura O. Spiegelman

Fax — 415 520 2220
Email — lspiegelman@spiegelmanlifesciences.com

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In the case of Miller Estate:

Mickey J. Miller, II
5757 Preston View Blvd, Apt. #130
Dallas, Texas 75240
Fax: None
Email - micbows@msn.com

With a required copy to:

Tiffany & Bosco, P.A.
Third Floor Camelback Esplanade II
2525 East Camelback Road
Phoenix, AZ 85016-9240
Attn: Richard E. Oney
Fax 602-255-0103
Email - reo@tblaw.com

In the case of (c) (expedited courier service), the Party providing the notice shall as a courtesy additionally provide the notice by a facsimile in accordance with (b). Either Party may change its address for communications by a notice to the other Party in accordance with this Section 10.7.

10.8 No Implied Licenses. Except as otherwise expressly set forth in this Agreement, nothing in this Agreement shall give either Party any right, title or interest in or to any Patents or other intellectual property owned by or licensed to the other Party.

10.9 Force Majeure. Any delay in or failure of performance by any Party under this Agreement shall not be considered a breach of this Agreement if and to the extent caused by occurrences beyond the reasonable control of the Party affected, including acts of God, embargoes, governmental restrictions, strikes or other acts of workers, fire, flood, earthquake, explosion, riots, wars, acts of terrorism, civil disorder, rebellion or sabotage and technical events beyond the Party's reasonable control; provided, however, the payment of any value due and owing hereunder shall not be delayed by the payor because of a force majeure affecting the payer, unless such force majeure specifically precludes the payment process. The Party suffering such occurrence shall notify the other Party and any time for performance hereunder shall be extended by the actual time of delay caused by the occurrence.

10.10 Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original but all of which together shall constitute a single instrument.

10.11 Captions. All section titles or captions contained in this Agreement, in any Exhibit referred to herein and the table of contents, if any, to this Agreement are for convenience only, shall not be deemed a part of this Agreement and shall not affect the meaning or interpretation of this Agreement.

10.12 Draftsmanship. Each Party acknowledges that it has participated in, and has been represented by counsel in, the drafting of this Agreement. Any applicable rule of construction to

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the effect that ambiguities are to be resolved against the drafting party will not be applied in connection with the construction or interpretation of this Agreement.

10.13 No Third Party Rights or Obligations. Except for the rights of the Miller Estate Indemnitees and the Assignee Indemnitees as expressly provided in Article 7 of this Agreement, no provision of this Agreement shall be deemed or construed in any way to result in the creation of any rights or obligation in any Third Party.

10.14 Severability. If any term, condition or provision of this Agreement is held to be invalid or unenforceable for any reason by any court of competent jurisdiction form which no appeal can be or is taken, or in arbitration proceedings between the Parties as set forth in Article 10 of this Agreement, it shall, if possible, be narrowed, shortened, or interpreted to achieve the intent of the Parties to this Agreement to the extent legally possible rather than voided or if not to any extent legally possible be deemed severed from this Agreement. In any event, all other terms, conditions and provision of this Agreement shall be deemed valid and enforceable to the full extent.

10.15 Compliance with Laws. Each Party shall carry out its activities pursuant to this Agreement in compliance with all applicable supranational, national, state, provincial and other local laws, rules, regulations and guidelines.

10.16 Cumulative Rights. The rights, powers and remedies hereunder shall be in addition to, and not in limitation of, all rights, powers and remedies provided at law or in equity, or under any other agreement between the Parties. All of such rights, powers and remedies shall be cumulative, and may be exercised successively or cumulatively.

10.17 Waiver. No failure or delay on the part of either Party to exercise any power, right, privilege or remedy under this Agreement will operate as a waiver thereof. No single or partial exercise of any such power, right, privilege or remedy will preclude any other or further exercise thereof or of any other power, right, privilege or remedy. Waivers of powers, rights, privileges and remedies under this Agreement may only be waived in a writing executed by a duly authorized officer of the waiving Party.

10.18 Net Liability. Notwithstanding any provision of this Agreement, every liability of Assignee to Miller Estate is subject to and conditioned upon the recoupment of any and all liabilities owing from Miller Estate to Assignee, so as to establish a net liability. However, Assignee shall not reduce the amounts of its payments under Article 4 based on its net liability unless (i) this Agreement is properly terminated pursuant to Section 9.2 for Miller Estate's uncured material breach of the Agreement, or (ii) a dispute resolution is pending with regard to whether Assignee has the right to terminate pursuant to Section 9.2 for Miller Estate's uncured material breach of the Agreement,. In the case that such a dispute resolution is pending, Assignee will deposit and maintain in a separate account the amount of its damages and deduct the deposited amounts from payments to Miller Estate; the separate account shall belong to Assignee and be used to pay any back amounts due if Assignee does not prevail in dispute resolution.

10.19 Costs. Each Party shall bear its own legal costs of and incidental to the preparation, negotiation and execution of this Agreement.

10.20 Entire Agreement. This Agreement embodies the entire understanding of the Parties with respect to the subject matter hereof and shall supersede all previous communications, representations or understandings, either oral or written, between the Parties relating to the subject matter of this Agreement. To be clear, this Agreement supersedes the Prior CDA with respect to Confidential Information and the Parties' rights and obligations with respect thereto.

10.21 Attorney's Fees. The prevailing party in any arbitration proceeding or litigation between the Parties arising as a result of any breach or dispute under this Agreement will have a right to reasonable attorneys' fees incurred in connection with such arbitration or litigation from the other party.

IN WITNESS WHEREOF, both Assignee and Miller Estate have executed this Agreement by their respective officers hereunto duly authorized.

ACLARIS THERAPEUTICS, INC.		**MILLER ESTATE**	
By	/s/ Neal Walker	By:	/s/ Mickey J. Miller, II
Name:	Neal Walker	Name:	Mickey J. Miller, II
Title:	President and CEO	Title:	Personal Representative
Date:	8/21/12	Date:	8/20/12

EXHIBITS LIST

Exhibit A - Form of Recordation Document

Exhibit B - Trademarks

Exhibit C - Consent of Heirs

Exhibit D - Prior Confidentiality Agreements

Exhibit E-1 - Ex-U.S. filings of the Transferred Listed Patents

Exhibit E-2 - U.S. Provisional filings of the Transferred Listed Patents

Exhibit F - Estate of Mickey Joe Miller Letters of Administration

Exhibit G - Estate of Mickey Joe Miller Order of Intestacy and Determination of Heirs

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EXHIBIT A

FORM OF RECORDATION DOCUMENT

SHORT-FORM PATENT ASSIGNMENT

Mickey J. Miller I was heretofore the owner of the entire right, title and interest in the patent applications referred to in Exhibit A to this Short-Form Patent Assignment ("Assigned Families"). Mickey J. Miller I is deceased, and his estate therefore became the owner of his interest in the Assigned Families, which was the sole ownership interest therein (by prior assignment of the co-inventor), as evidence by the ruling of the probate court reproduced in Exhibit B to this Short-Form Patent Assignment. Mickey J. Miller II is Personal Representative of the estate of Mickey J. Miller I (in such capacity of Personal Representative of the estate, "ASSIGNOR"), as evidenced by the appointment attached to this Short-Form Patent Assignment as Exhibit B to Short-Form Patent Assignment.

By prior assignment pursuant to that certain Assignment Agreement executed between ASSIGNOR and Inc., a Delaware corporation, effective , 2012, ASSIGNOR transferred, assigned and conveyed to Assignee, the entire right, title, and interest in and to the Assigned Families and Letters Patent that may be issued on any of the Assigned Families in the United States, Australia, Canada, Japan, the countries in the European Patent Organisation, and everywhere else in the world.

NOW, THEREFORE, ASSIGNOR hereby acknowledges that, in consideration of the foregoing and the good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, set forth in such Assignment Agreement, ASSIGNOR has heretofore transferred, assigned and conveyed to Assignee all right, title and interest in and to the Assigned Families and Letters Patent that may be issued on any of the Assigned

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Families in the United States, Australia, Canada, Japan, the countries in the European Patent Organisation, the PCT, its participating countries, and everywhere else in the world.

[CONTINUES ON NEXT PAGE]

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ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks of the United States and of Australia, Canada, Japan, the countries in the European Patent Organisation, the PCT, its participating countries, and anywhere else in the world to issue any Letters Patent granted on the Assigned

Families, whether on any subsequently filed division, continuation, continuation-in-part, reexamination, or reissue application, to Assignee, its successors and assigns, as the assignee of the entire interest in the Assigned Families.

IN TESTIMONY WHEREOF, the undersigned has executed this instrument on the day of 2012.

ASSIGNOR

By: _____

Name: _____

Title: _____

State of

County of

On before me, ,
personally appeared
o personally known to me — **OR -** o proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

_____
Signature of Notary

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EXHIBIT A TO SHORT-FORM PATENT ASSIGNMENT

[To be completed prior to recordation.]

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EXHIBIT B TO SHORT-FORM PATENT ASSIGNMENT

Estate of Mickey Joe Miller - Letters of Administration

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EXHIBIT B

TRADEMARKS

None.

*****Text Omitted and Filed Separately**
Confidential Treatment Requested
Under 17 C.F.R. §§ 200.80(b)(4) and 240.24b-2

EXHIBIT C

FORM OF CONSENT OF HEIR

I, , and individual residing as of at , have reviewed the assignment agreement attached as Schedule 1 to this Consent of Heir ("**Assignment Agreement**").

I am an heir of the Miller Estate referred to in the Assignment Agreement.

I hereby acknowledge that Mickey J. Miller II has been appointed as the personal representative of the Miller Estate and as such is authorized to enter into such Assignment Agreement on behalf of the estate.

I hereby acknowledge that upon his signature to the Assignment Agreement the Miller Estate and my interests as an heir thereto shall be legally bound.

Without implying that my consent is an any way required, I hereby consent to the Assignment Agreement and waive any and all rights to challenge it.

I hereby covenant that, having consented to such Assignment Agreement, I shall not in any way challenge the legal effectiveness of the Assignment Agreement, assert ownership to any assets transferred thereby, assert a right to direct payment in my personal capacity under the Assignment Agreement, or otherwise challenge the transaction contemplated in the Assignment Agreement, nor the rights of Assignee thereunder. I further covenant that I have not executed any agreements that are inconsistent with the Assignment Agreement or to that are to the detriment of the Transferred Patents or the Transferred Know-How.

I waive any right that I may have to challenge such Assignment Agreement or the Assignee thereunder, known or unknown, present or future.

[Mickey Lyon: I agree to look only to the estate or Mickey J. Miller II for payment; I recognize that the counterparty to the Assignment Agreement will make payment to Mickey J. Miller II and will have no direct obligation to me as an heir to the estate.]

[Mickey J Miller II: While I am currently personal representative for the Estate of Mickey J. Miller (I), I am signing this Consent of Heir in my personal capacity, and agreeing to be responsible to distribute payments received by me in my capacity as personal representative of the estate currently, and in my personal capacity once the estate is closed, between myself and the other heir in the manner determined in probate or otherwise agreed in writing amongst the heirs.]

I have had the opportunity, whether or not I have chosen to use it, to consult with counsel with respect to the effect of this Consent of Heir and my waivers, agreements, acknowledgements and covenants set forth in this Consent of Heir.

[Pagination to be checked and state "remainder of page intentionally blank" if applicable]

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Confidential Treatment Requested
Under 17 C.F.R. §§ 200.80(b)(4) and 240.24b-2

Signed: _____

[Mickey Lyon]/[Mickey J. Miller, II]

Date: _____

State of

County of

On before me,
personally appeared
o personally known to me — **OR -** o proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

_____
Signature of Notary

Schedule 1 to Consent of Heir

[PDF of final version of Assignment Agreement to be attached.]

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EXHIBIT D

PRIOR CONFIDENTIALITY AGREEMENTS

[***]

[***]

[***]

[***]

Note to Exhibit: The foregoing list omits one CDA that was signed with a party to cover licensing discussions that did not come to fruition. Miller Estate does not have the right to disclose the name of the counterparty and has not done so, and Assignee acknowledges that it is not requiring the Miller Estate to do so.

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EXHIBIT E-1

EX-U.S. FILINGS OF THE TRANSFERRED LISTED PATENT

Active Patents

Matter	Matter Name	Matter No.
India	IN Pat Acrochordon Alleviation	[***]
Mexico	MX Pat Acrochordon Alleviation	[***]
New Zealand	NZ Pat Acrochordon Alleviation	[***]
Singapore	SG Pat Acrochordon Alleviation	[***]
Australia	AU Div Pat Acrochordon Alleviation	[***]

Lapsed Patents

Matter	Matter Name	Matter No.
China	CN Pat Acrochordon Alleviation	[***]
Europe - DE	DE, FR and GB Patents (formerly EPO App) Acrochordon Alleviation	[***]
Israel	IL Pat Acrochordon Alleviation	[***]
Singapore	Composition for the Treatment of Skin Conditions (Div)	[***]

Expired/Lapsed Patents/Applications

Matter	Matter Name	Matter No.
Brazil	BR Pat App Acrochordon Alleviation	[***]
Canada	CA Pat App Acrochordon Alleviation	[***]
Hong Kong	Hong Kong Pat App Acrochordon Alleviation	[***]
Japan	JP Pat App Acrochordon Alleviation	[***]
Singapore	Composition for the Treatment of Skin Conditions (Div)	[***]
Mexico	MX Pat App Treatment of Skin Conditions	[***]
Australia	AU Pat App Acrochordon Alleviation (lapsed when divisional 12018-020 was filed)	[***]

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EXHIBIT E-2

U.S. PROVISIONAL PATENT APPLICATIONS OF THE TRANSFERRED LISTED PATENT

Date Filed	Title	Inventor
Not filed (but dated October 9, 2003)	Basal Cell Carcinoma Treatment	Mickey Miller
Filing status unknown (but dated January 8, 2004)	Age Spot Alleviation	Mickey Miller
Filing status unknown	Age Spot Cosmetic Regimen	Mickey Miller
July 24, 2007	Basal Cell Carcinoma Treatment	Mickey Miller
Filing status unknown	Video Microscope Assisted Seborrheic Keratosis Treatment	Mickey Miller
Filing status unknown	Age Spot Alleviation	Mickey Miller
Apparently filed on March 17, 2009	Peroxide Treatment of Skin. Afflictions	Mickey Miller
Apparently filed on September 23, 2009	Basal Cell Carcinoma Treatment	Mickey Miller
November 2, 2009	Single Application Age Spot Removal	Mickey Miller
Filing status unknown	Skin Lightening Cosmetic	Mickey Joe Miller
Filing status unknown	Age Spot Formulations and Methods	Mickey Miller

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EXHIBIT F

ESTATE OF MICKEY JOE MILLER LETTERS OF ADMINISTRATION

[*]**

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Under 17 C.F.R. §§ 200.80(b)(4) and 240.24b-2

EXHIBIT G

ESTATE OF MICKEY JOE MILLER ORDER OF INTESTACY AND DETERMINATION OF HEIRS

[SEE ATTACHED PDF]

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LINDA S. BATTS, PLLC
7537 E. McDonald Drive
Scottsdale, AZ 85250
(480) 659-5192
edocket@lsbatts.com

Linda S. Batts - 009609
Attorneys for Personal Representative

COPY

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA

IN AND FOR THE COUNTY OF MARICOPA

In the matter of the Estate of MICKEY JOE MILLER, Deceased.	No. PB2011-000215 ORDER OF INTESTACY AND DETERMINATION OF HEIRS

The Petition for Adjudication of Intestacy and Determination of Heirs having been considered by the Court, the Court finds as follows:

1. Notice has been given as required by law.

2. Decedent died on or about the 18th day of November, 2010. This proceeding was commenced within two (2) years of the date of death.

3. Venue in this County is proper.

4. The domicile of decedent at death was in the County of Maricopa, State of Arizona.

5. Decedent died intestate leaving the following heirs:

. . .

. . .

Name	Age	Relationship	Address
MICKEY JOE II	Adult	Child/ Heir	5757 Preston View Blvd. #130 Dallas, TX 75240
MICKEY LYON	Adult	Child/ Heir	3502 Robinson Ave. Austin, TX 78722

IT IS, THEREFORE, ORDERED that:

Decedent died intestate leaving the heirs named above.

DATED this 30th day of July, 2012.

Judge/Commissioner

COMMISSIONER LORI HORN BUSTAMANTE

-2-

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FORM OF CONSENT OF HEIR

I, Mickey Lyon, an individual residing as of August 20, 2012, at , have reviewed the assignment agreement attached as Schedule 1 to this Consent of Heir ("**Assignment Agreement**").

I am an heir of the Miller Estate referred to in the Assignment Agreement.

I hereby acknowledge that Mickey J. Miller II has been appointed as the personal representative of the Miller Estate and as such is authorized to enter into such Assignment Agreement on behalf of the estate.

I hereby acknowledge that upon his signature to the Assignment Agreement the Miller Estate and my interests as an heir thereto shall be legally bound.

Without implying that my consent is in any way required, I hereby consent to the Assignment Agreement and waive any and all rights to challenge it.

I hereby covenant that, having consented to such Assignment Agreement, I shall not in any way challenge the legal effectiveness of the Assignment Agreement, assert ownership to any assets transferred thereby, assert a right to direct payment in my personal capacity under the Assignment Agreement, or otherwise challenge the transaction contemplated in the Assignment Agreement, nor the rights of Assignee thereunder. I further covenant that I have not executed any agreements that are inconsistent with the Assignment Agreement or to that are to the detriment of the Transferred Patents or the Transferred Know-How.

I waive any right that I may have to challenge such Assignment Agreement or the Assignee thereunder, known or unknown, present or future.

I agree to look only to the estate of Mickey J. Miller I for payment; I recognize that the counterparty to the Assignment Agreement will make payment to the Miller Estate, Mickey J. Miller II, or the single legal entity designated in writing by him to receive payment as provided for in the Assignment Agreement and will have no direct obligation to me as an heir to the estate.

Remainder of page intentionally blank.

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I have had the opportunity, whether or not I have chosen to use it, to consult with counsel with respect to the effect of this Consent of Heir and my waivers, agreements, acknowledgements and covenants set forth in this Consent of Heir.

Signed: _____
Mickey Lyon

Date: _____

State of _____

County of _____

On August , 2012, before me, _____
personally appeared Mikey Lyon,
o personally known to me — **OR -** o proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

_____
Signature of Notary

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Exhibit 10.4

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EXECUTION COPY
CONFIDENTIAL

FINDER'S SERVICES AGREEMENT

THIS FINDER'S SERVICES AGREEMENT (the "**Agreement**") is made effective as of August 25, 2012 (the "**Effective Date**"), by and between **ACLARIS THERAPEUTICS, INC.**, a Delaware corporation, having an address of having an address of 101 Lindenwood Drive, Suite 400, Malvern, Pennsylvania 19355 ("**Aclaris**"), and **KPT CONSULTING LLC**, a Pennsylvania corporation, having an address of 1852 Glenwold Dr., Paoli, PA 19301 ("**KPT**").

BACKGROUND

1. KPT provided certain business development consulting services to Aclaris in sourcing and assisting in negotiating an intellectual property acquisition by Aclaris from the Estate of Mickey J. Miller I, under that certain Assignment Agreement between Aclaris and Mickey J. Miller II as personal representative of his father's estate, entered into contemporaneously with this Agreement ("**Miller Assignment**").

2. Aclaris and KPT wish to provide in this Agreement for the compensation to KPT for such services.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing premises and the covenants and obligations set forth in this Agreement, the Parties (defined below) hereby agree as follows:

ARTICLE 1

DEFINITIONS

As used herein, the following terms have the following meanings (with derivative forms being interpreted accordingly) and the words "include," "including" and derivative forms of them shall be deemed followed by the phrase "without limitation":

1.1 "**$**"and "**Dollars**" means United States dollars.

1.2 "**Affiliate**" means, with respect to a given legal entity, any other entity that, directly or indirectly, through one or more intermediaries, controls, is controlled by or is under common control with such first legal entity. For this purpose, "control" shall mean the ownership of fifty percent (50%) or more of the voting securities entitled to elect the directors or management of the entity, or the actual power to elect or direct the management or policies of the entity by law, contract, or otherwise.

1.3 "**Business Day**" means any Monday, Tuesday, Wednesday, Thursday or Friday that is not a national, statutory holiday in the United States.

1.4 "**Claims**" means, with respect to a particular item or product and a particular issued patent, that such issued patent claims the composition of such item or product or any of its ingredients or formulations; a method of making or using it or them; or an item used or present in the manufacture of such item or product (including chemical intermediates); such that, in each

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Under 17 C.F.R. §§ 200.80(b)(4) and 240.24b-2

case, in the absence of ownership of a patent or a license granted thereunder, such item or product or its manufacture or use as and where actually practiced would infringe a Valid Claim of such issued patent.

1.5 "**Confidential Information**" means, subject to the limitations set forth in Section 6.1, all information received by KPT, pursuant to the Prior CDA, pursuant to this Agreement, or pursuant to the Services, including all information learned by KPT relating to or in connection with the Miller Assignment and the intellectual property that it covers. The existence and terms of this Agreement and nature of the Products and the intellectual property assigned under the Miller Assignment are also considered Confidential Information.

1.6 "**Control**" means, with respect to a particular item of Know-How or Patent, that the applicable Party has ownership of or a license to and has the ability to grant to the other Party access to and a license or sublicense under such Know-How or Patent.

1.7 "**Assignment Date**" means the date that the assignment of the Transferred Know- How and Transferred Patents to Aclaris under the Miller Agreement becomes effective.

1.8 "**FDA**" means the United States Food and Drug Administration, and any successor thereto.

1.9 "**Indication**" means treatment, prophylaxis or diagnosis of any and all dermatological indications, including any and all diseases and conditions of the skin, whether or not mentioned, claimed or covered in the Transferred Patents as of the Assignment Date, and whether or not a sub-indication of, or condition or symptom related to, those dermatological indications that are mentioned, claimed or covered in the Transferred Patents as of the Assignment Date.

1.10 "**Know-How**" means any and all data, instructions, processes, methods, formulae, materials, expert opinions, inventions (whether or not patentable), biological materials (including cell lines, vectors and their progeny and derivatives), know-how, and information (including biological, chemical, pharmacological, toxicological, pharmaceutical, physical, analytical, clinical, safety, manufacturing and quality control data).

1.11 "**KPT Group**" means all shareholders in KPT and any corporate entities controlled by any of the foregoing people (and/or any combination of them). Without limitation, Sciaderm, Inc. a Pennsylvania corporation, and Klaus Theobald, are members of KPT Group.

1.12 "**Licensee**" means any entity to which Aclaris or its Affiliate grants a license or assignment under the Transferred Patents and/or Transferred Know-How.

1.13 "**Miller Assignment**" has the meaning given in the background section above.

1.14 "**Miller Estate**" means the estate of Mickey J. Miller I, an inventor on the Transferred Listed Patents.

1.15 "**Net Sales**" means the gross revenues actually received by Aclaris, or its Affiliates or Licensees, from the sale of Products to Third Parties, less deductions for: (i) transportation and insurance charges; (ii) sales and excise taxes, tax, tariff, duty or any other

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governmental charges or duties paid; (ii) normal and customary trade, quantity and cash discounts and rebates allowed or granted in whatever form (including those in the form of fees (or reverse fees) provided for in the distribution or selling contract); (iii) allowances on account of rejection or return by customers; (iv) credits, rebates, charge-backs, reimbursements, retroactive price adjustments, or similar payments actually granted or given to wholesalers and other distributors, buying groups, health care insurance carriers, governmental agencies and other institutions; (v) payments or rebates actually paid in connection with state or federal Medicare, Medicaid or similar programs.

To avoid any doubt, sales of Products among Aclaris, its Affiliates and Licensees under the Transferred Patents are not taken into account in the calculation of Net Sales, but resales by any of them to Third Parties (but specifically excluding transfers for use in clinical trials and/or provision free of charge as samples or for compassionate use) are taken into account in the calculation of Net Sales. In the case of Third-Party distributors, Net Sales occur on sale to the distributor, not the distributor's resale.

Notwithstanding the foregoing definition of Net Sales, if Aclaris in its agreement with a Licensee will also be receiving sales royalties, and agrees on a different definition of Net Sales with the Licensee that will govern such sales royalties, then Net Sales under this Agreement for purposes of the sales by such Licensee shall have the meaning given in such agreement between Assignee and the Licensee, rather than the definition given above.

1.16 "**Party**" means Aclaris or KPT.

1.17 "**Patent**" means any patent application or patent, including all of the following kinds and their equivalents outside the United States (as applicable): provisional, converted provisional (or regular), divisional, continuation, continuation-in-part, and substitution applications; and regular utility, re-issue, re-examination, renewal and extended patents (including Supplementary Protection Certificates).

1.18 "**Prior CDA**" means all obligations of confidentiality arising pursuant to agreement(s) (if any) between them or their Affiliates prior to the Effective Date.

1.19 "**Products**" means all product candidates and products (a) that constitute Technology, (b) the manufacture of which constitutes Technology, and/or (c) the clinically investigated or Regulatorily Approved use of which constitutes Technology; in each case where and while Claimed by a Valid Claim of a Transferred Patent, and only where and for so long as that continues to be the case. To avoid doubt, the term Products shall be determined regardless of where made or sold (subject to the country-by-country and Product-by-Product definition of Royalty Term) and regardless of which among Aclaris or any Affiliate of Aclaris or any assignee of Aclaris or an assignee of an affiliate of Aclaris sells the item.

1.20 "**Services**" means any and all services and activities to source, negotiate, advise with respect to, and complete the Miller Assignment, and all other services rendered by KPT and/or any member of KPT Group to Aclaris prior to the Effective Date.

1.21 "**Technology**" means (a) any composition containing hydrogen peroxide and having utility to treat any Indication (including any and all of the foregoing compositions

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mentioned or covered in any Transferred Listed Patent); (b) all pharmaceutical and/or cosmeceutical formulations of such compositions (including reformulations created after the Assignment Date by or for Aclaris); (c) any method of use and/or delivery of any composition of clause (a) and/or (b) to treat any Indication (including dosing schedules and methods of application); (c) any device used in such a method; and (d) all methods of making any of the foregoing.

1.22 "**Third Party**" means any entity or person other than Aclaris, KPT, an Affiliate of either of them or of any other member of the KPT Group.

1.23 "**Transferred Know-How**" means all Know-How assigned to Aclaris in the Miller Assignment.

1.24 "**Transferred Listed Patents**" means (a) U.S. Patent Serial Number 7,381,427 and U.S. Patent Serial Number 7,138,146; (b) all patent applications claiming common priority with or based on the foregoing, including all converted provisional or regular utility filings, divisionals, continuations, continuations-in-part and substitutions of any of the foregoing; (c) all patents issuing on any of the foregoing, and all reissues, reexaminations, renewals and extensions of any of the foregoing; (d) all counterparts to the foregoing in other countries; and (e) all Supplementary Protection Certificates and other similar rights of Miller Estate based on any of the foregoing.

1.25 "**Transferred Patents**" means all Patents assigned to Aclaris under the Miller Assignment.

1.26 "**Valid Claim**" means with respect to any country, a claim of any issued, unexpired patent in that country that has not been held revoked, unenforceable or invalid by a decision of a court or governmental authority of competent jurisdiction, and has not lapsed or been abandoned, disclaimed, denied or admitted to be invalid or unenforceable through reissue or disclaimer or otherwise.

ARTICLE 2

SERVICES; IP; RELEASE

2.1 **Services**. Aclaris acknowledges receipt of the Services prior to the Effective Date. The compensation for the Services shall be the compensation that is set forth in this Agreement. KPT and each member of the KPT Group shall not be entitled to compensation in relation to the Services and/or the Miller Agreement, other than the compensation set forth in this Agreement.

2.2 **Release**. KPT hereby on behalf of itself and its Affiliates and all members of the KPT Group as of the Effective Date irrevocably releases, waives, and forever discharges Aclaris, its Affiliates and its and their successors in interest and past, present and future assigns, founders, promoters, investors (including all partners in and officers, directors, employees and consultants of any investor), officers, directors, employees, consultants, insurers and underwriters, of and from any and all claims, counterclaims, demands, obligations, actions, causes of actions, liabilities, damages, judgments and suits of every nature, kind, description and character, whether asserted or unasserted, whether known or unknown, suspected or unsuspected, foreseen

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or unforeseen, real or imaginary, actual or potential, in law or in equity, for or by reason of any matter, cause or thing whatsoever, arising out of any and all agreements, courses of conduct, promises and/or activities between the Parties on or before the Assignment Date and/or in connection with the Services, the Miller Assignment, or the subject matter thereof, including any and all claims to compensation for the Services different than the compensation set forth in this Agreement and/or any rights in the Know-How and Patents assigned to Aclaris in the Miller Assignment, including any and all claims under any and all agreements or understandings between Aclaris or any founder, promoter, or investor of Aclaris and any member of KPT Group in existence as of or before the Effective Date (if any). KPT and each member of KPT Group hereby waives any and all rights in relation to such waiver under California Civil Code Section 1542 (and any corresponding laws in other jurisdictions), which reads: "A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."

2.3 **Recognition of Rights**. KPT on behalf of itself and the KPT Group hereby recognizes and acknowledges Aclaris's rights under the Miller Assignment, and as owner of the Transferred Know-How and Transferred Patents as of the Assignment Date.

2.4 **Primary Relationship to Estate**. KPT hereby covenants that it and the members of the KPT Group shall recognize and treat Aclaris's relationship with the Miller Estate as the primary relationship with the Miller Estate and shall, going forward from the Effective Date, refrain from all business contact with the Miller Estate and its representatives (including refraining from any all discussion ofthe terms of any agreement(s)), other than any such contact that Aclaris may request in writing for KPT to undertake.

2.5 **Quitclaim**. KPT on behalf of itself and the KPT Group hereby quitclaims and assigns to Aclaris any and all rights or interest it may have or have had in the Transferred Patents and Transferred Know-How, and/or in any other Know-How or Patents relating to Technology.

2.6 **Exclusive License**. KPT hereby grants to Aclaris an exclusive, worldwide, fully paid, perpetual, irrevocable license under all Patents and Know-How Controlled by KPT, its Affiliates, or any member of the KPT Group, as of the Effective Date or during the term of this Agreement, that Claims, constitutes, covers or relates to Technology.

2.7 **Non-Competition for Protection of Transferred Trade Secrets and Confidential Information**. Recognizing that such activities would necessarily entail use of the Transferred Know-How and/or Confidential Information of Aclaris known or reported to KPT in connection with this Agreement or the Services, KPT hereby covenants that it and the KPT Group shall not during the term of this Agreement research, develop, make, have made, offer to sell, sell, import or export any Technology and/or Products. KPT hereby acknowledges on behalf of itself and the KPT Group that the foregoing covenant is legally enforceable and is reasonable, necessary and appropriate to protect Aclaris's Confidential Information.

2.8 **No Diligence Obligations**. Notwithstanding anything express or implied in this Agreement, at law, or in equity: Aclaris and its Affiliates shall have no obligation to KPT to research, develop, or commercialize Products, nor to file, prosecute, and maintain Transferred

Patents, nor to enforce them, and no other diligence obligations, in each case, whatsoever, express or implied, under this Agreement, at law or in equity, on any theory.

2.9 Documentation from Entity Controlled by Principal in KPT. KPT shall provide to Aclaris on or before five (5) days after the Effective Date an original of the document set forth in Exhibit A, fully executed by Sciaderm, Inc., a Pennsylvania corporation.

2.10 Further Assurances. KPT and such inventors shall take reasonable further actions to execute and deliver all further documents that Aclaris may reasonably require to further the purpose and intent of this Agreement.

ARTICLE 3

FINANCIAL TERMS

3.1 Upfront Fee. Aclaris shall pay KPT a fee equal to two hundred thousand Dollars ($200,000). Such amount shall be payable in two (2) installments. The first, in the amount of five thousand dollars ($5,000) shall be due within three (3) days after the Effective Date. The second, in the amount of one hundred ninety-five thousand dollars ($195,000) shall be due at the later of thirty (30) days after the Assignment Date or January 9, 2013.

3.2 Milestones. Aclaris shall pay KPT a fee equal to the applicable amount in the following table within thirty (30) days after the end of the calendar month in which the corresponding milestone event is first achieved by or on behalf of Aclaris with the first Product under the Miller Assignment. Each such milestone payment shall be payable a maximum of one (1) time only under this Agreement, even if achieved more than once by one (1) or multiple Products. Each such milestone payment shall be payable only if, at the time the corresponding milestone event is achieved, the Miller Assignment is in full force and effect and the Product with which the milestone event was achieved was, at the time of such achievement, Claimed by a Valid Claim of a Transferred Patent.

Milestone Payment	Amount Milestone Event
1. two hundred thousand Dollars ($200,000)	1. First patient dosed in the first human clinical trial of the first Product under the Miller Assignment, which trial is sponsored by or on behalf of Aclaris after the Assignment Date, and is a phase 2 trial in humans in accordance with 21 CFR Section 312.21(b).
2. [***]	[***]

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3. [***]	[***]
4. [***]	[***]
5. [***]	[***]

3.3 Royalty Payments.

(a) Rate. Aclaris shall pay KPT royalties on Net Sales of Products sold to Third Parties in countries where the Product sold is Claimed by an issued Valid Claim of the Transferred Patents, at the rate of [***] of Net Sales. This royalty is due on Net Sales sold during the "Royalty Term" applicable to the particular Product in the particular country, defined as the time from such Product's receiving Regulatory Approval in such country for the first Indication for which it is approved, until the date that there is no longer any issued Valid Claim of the Transferred Patents in such country Claiming such Product.

(b) Offset. If Aclaris or its Affiliate or a Licensee were to make payments to a Third Party under an intellectual property license encompassing a Product that is royaltybearing to KPT - but other than Miller Estate - then Aclaris shall be entitled to deduct [***] of the Third-Party payments from the royalty owed by Aclaris to KPT, but would not be allowed to reduce the royalty owed to KPT to below [***] of the royalties that would otherwise have been due to KPT in any calendar quarter. Any amounts that Aclaris is unable to credit due to the foregoing [***] limitation on the reduction in KPT's royalties as applied in any calendar quarter shall carry forward to future calendar quarters, subject always to such [***] limitation on the reduction in KPT's royalties as applied in such future calendar quarters.

3.4 Aclaris Technology. It is understood and agreed that Aclaris shall as between the Parties have the right to own all enhancements, improvements, modifications, derivatives and amendments (including Know-How and published patentable or patented inventions) to that Technology that is transferred to Aclaris pursuant to the Miller Assignment or this Agreement, which enhancements, improvements, modifications, derivatives and amendments are made, conceived, developed, reduced to practice or acquired by or for Aclaris (including under any

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consulting or employment agreement between Aclaris or its Affiliate and any inventor on any Transferred Listed Patent) ("**Aclaris Technology**") and all Patents on the Aclaris Technology. Such Patents, to avoid doubt, are not considered Transferred Patents, and are not royalty-bearing to KPT under this Agreement.

3.5 Quarterly Payment Timings. All royalties due under Section 3.3 shall be paid quarterly, on a country-by-country basis, within the following timelines:

(a) If Aclaris or its Affiliate is the marketing party for the underlying Product Net Sales, then payment shall be made thirty (30) days after the end of the relevant calendar quarter for which royalties are due, in the case of U.S. Net Sales; the time period shall be sixty (60) days after the end of the relevant calendar quarter for ex-U.S. Net Sales; and

(b) If a Licensee unaffiliated with Aclaris is such marketing party, then Aclaris shall make the royalty payments due hereunder within ten (10) Business Days after receiving royalties on the same Net Sales from the Licensee.

3.6 Royalty Payment Reports. With respect to each calendar quarter, within thirty (30) days after the end of the calendar quarter, Aclaris shall provide to KPT a written report stating the number and description of all Products sold by or on behalf of Aclaris during the relevant calendar quarter; the gross sales associated with such sales; and the calculation of Net Sales on such sales, including the amount of any deduction provided for in the definition of Net Sales in Article 1. The report shall provide all such information on a country-by-country and Product-by-Product basis.

3.7 Payment Method. All payments due under this Agreement to KPT shall be made by bank wire transfer in immediately available funds to an account designated by KPT in writing. Once KPT has designated a bank account, it may only be changed on ten (10) Business Days advance written notice, unless Aclaris consents to a shorter time frame in writing. All payments hereunder shall be made in the legal currency of the United States of America.

3.8 Taxes. Aclaris shall be responsible to withhold from payments otherwise to be made to KPT under this Agreement any taxes required to be withheld by Aclaris under applicable law. If any such taxes are levied on such payments due hereunder ("**Withholding Taxes**"), Aclaris shall (i) deduct the Withholding Taxes from the payment amount, (ii) pay all applicable Withholding Taxes to the proper taxing authority, and (iii) send evidence of the obligation together with proof of tax payment to KPT with the next royalty report under Section 3.5.

3.9 Foreign Exchange. If any currency conversion shall be required in connection with the calculation of amounts payable hereunder, such conversion shall be made using the average of the exchange rates for the purchase and sale of U.S. dollars, as reported by Bank of America in San Francisco, California (or its successor entity) on the last business day of the calendar quarter to which such payment pertains. With any payment in relation to which a currency conversion is performed to calculate the amount of payment due, Aclaris shall provide to KPT a true, accurate and complete copy of the exchange rates used in the calculation.

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3.10 Late Payments. Any payment due under this Article 3 that is not paid on or before the date such payment is due shall bear interest at a rate equal to the lesser of: two percent (2%) over the U.S. federal prime lending rate; or the maximum rate permitted by law, calculated based on the number of days that payment is delinquent until full payment has been made, less a 15 calendar-day grace period in the case of payments under Section 3.3.

ARTICLE 4

REPRESENTATIONS AND WARRANTIES

4.1 Reciprocal Representations and Warranties. Each Party hereby represents and warrants to the other Party that as of the Assignment Date the representing and warranting Party has the full legal right, power and authority to enter into and perform this Agreement; that this Agreement has been authorized by all requisite action within such representing and warranting Party (in the case of a corporate entity, and all applicable or required legal process to bind the KPT Group, in the case of KPT); and that this Agreement is legally binding upon such representing and warranting Party.

4.2 KPT Representations and Warranties. KPT represents and warrants to Aclaris that:

(a) Non-infringement of Third Party Rights. KPT and KPT Group have no knowledge of any Patents or trade secret rights owned or controlled by a Third Party, that dominate or would be infringed or misappropriated by the manufacture, use, sale, offer for sale or importation of any Products for Indications. KPT and the other members of the KPT Group have received no written claims relating to any claims of such domination, infringement or misappropriation.

(b) Claims. There are no claims, actions, suits or proceedings commenced or pending, or to KPT's knowledge threatened, against it, or any other member of the KPT Group, as of the Assignment Date, that could affect the rights and benefits granted to Aclaris under this Agreement.

(c) Patents; Technology. KPT and KPT Group do not own or Control, or have the right to own or Control, and are not in discussions to acquire, any Patents or Know How that claim, constitute or are directed to Technology. KPT and KPT Group are not aware of any Third-Party rights in Patents or

Know-How specifically relating to Technology that it would be necessary or useful for Aclaris to acquire, other than the rights acquired under the Miller Assignment.

(d) Data and Information. KPT has disclosed to Aclaris all data and information (including preclinical and clinical data and information) generated by, disclosed to and/or known to KPT or any other member of the KPT Group regarding Technology and any information required to fairly and accurately interpret such data and information and make KPT's disclosures thereof to Aclaris complete, accurate and not misleading.

(e) Affiliates of KPT. As of the Assignment Date, KPT has no Affiliates other than Sciaderm, and the KPT Group does not have any members or Affiliates holding rights to any Technology as defined in Section 1.21.

(f) Technology Controlled Through Spouse. No spouse of any shareholder in KPT owns or controls any Technology, Patents or Know-How relating to Technology, nor legal entity owning or controlling any of the foregoing.

4.3 Disclaimer of Warranties. EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES EXPLICITLY SET FORTH IN SECTIONS 4.1 AND 4.2 EACH OF Aclaris AND KPT HEREBY EXPRESSLY DISCLAIMS ALL REPRESENTATIONS AND WARRANTIES, EXPRESS, STATUTORY OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE.

ARTICLE 5

INDEMNIFICATION

5.1 Indemnification by Aclaris. Aclaris shall indemnify, hold harmless and defend KPT, the other members of the KPT Group, and their respective officers, directors, members, employees and agents (the "**KPT Indemnitees**") from and against any and all losses, damages, liabilities, judgments, fines, amounts paid in settlement, expenses and costs of defense (including reasonable attorneys' fees and witness fees) (collectively "**Losses**") resulting from any demand, claim, action or proceeding brought or initiated by a Third Party (each a "**Third-Party Claim**") against any KPT Indemnitees(s) to the extent that such Third-Party Claim arises out of (i) the breach or alleged breach of any representation, warranty or covenant by Aclaris in this Agreement; (ii) the negligence or willful misconduct of any Aclaris Indemnitee (defined in Section 5.2); or (iii) the development, manufacture, storage, handling, use, sale, offer for sale, import, export or distribution of Products by or for Aclaris and its Affiliates and Licensees on or after the Assignment Date; *provided* that (a) the KPT Indemnitees comply with the procedure set forth in Section 5.3; and (b) such indemnity shall not apply to the extent KPT has an indemnification obligation pursuant to Section 5.2 for such Loss.

5.2 Indemnification by KPT. KPT shall indemnify, hold harmless and defend Aclaris, its Affiliates, the Licensees, the investors in Aclaris, and the respective officers, directors, employees and agents of each of the foregoing (the "**Aclaris Indemnitees**") from and against any and all Losses resulting from any (x) claims of KPT Group members in relation to Technology or compensation for Technology or Services, and (y) Third-Party Claim(s) against any Aclaris Indemnitee(s) to the extent that such Third-Party Claim(s) arises out of (i) the breach or alleged breach of any representation, warranty or covenant by KPT in this Agreement; (ii) the negligence or willful misconduct of any KPT Indemnitee, and/or (iii) claims amongst the KPT Indemnitees relating to the subject matter of this Agreement; *provided* that (a) the Aclaris Indemnitees comply with the procedure set forth in Section 5.3; and (b) such indemnity shall not apply to the extent Aclaris has an indemnification obligation pursuant to Section 5.1 for such Loss.

5.3 Mechanics. A Party whose Aclaris Indemnitee or KPT Indemnitee is entitled tobe indemnified pursuant to this Article 5 (the "**Indemnified Party**") shall give prompt notice of the Third Party Claim to the other Party (the "**Indemnifying Party**") and the Indemnifying Party shall defend against such Third Party Claim with the reasonable cooperation of the Indemnified Party; *provided* that the Indemnifying Party shall not settle any such Third-Party Claim for anything other than money damages without the prior written consent of the Indemnified Party, which consent shall not be unreasonably withheld, conditioned or delayed. The Indemnified Party's Indemnitees must tender defense of the applicable Third-Party Claim and provide all reasonable cooperation and assistance in such defense, in order to remain eligible to be indemnified and held harmless; *provided*, *however*, that where Aclaris is the Indemnified Party, unless KPT has adequate insurance to cover the alleged potential Losses and is tendering defense to such insurer who has indicated in writing that they will fully assume the defense and cover any resulting Losses, the Aclaris Indemnitees shall not be required to tender defense in order to remain eligible to be indemnified and held harmless and instead notwithstanding anything express or implied in this Section 5.3 Aclaris and/or the Aclaris Indemnitees may do so and be indemnified under this Agreement, unless KPT Consulting at that time has on its balance sheet cash or cash equivalents equal to or greater than five million dollars ($5,000,000) (in which case Aclaris Indemnitees shall be required to tender the defense); and *provided*, *however*, that where KPT is the Indemnified Party, unless Aclaris has adequate insurance to cover the alleged potential Losses and is tendering defense to such insurer who has indicated in writing that they will fully assume the defense and cover any resulting Losses, the KPT Indemnitees shall not be required to tender defense in order to remain eligible to be indemnified and held harmless and instead notwithstanding anything express or implied in this Section 5.3 KPT and/or the KPT Indemnitees may do so and be indemnified under this Agreement unless Aclaris at that time has on its balance sheet cash or cash equivalents equal to or greater than five million dollars ($5,000,000) (in which case KPT Indemnitees shall be required to tender the defense). The Indemnified Party shall have the right to be present in person or through counsel at substantive legal proceedings relating to the Third-Party Claim giving rise to the Indemnified Party's right to indemnification hereunder. If the Parties cannot agree as to the

application of Sections 5.1 and 5.2 to any Loss or Third-Party Claim, the Parties may conduct separate defenses of such ThirdParty Claim. In such case, each Party further reserves the right to claim indemnity from the other upon resolution of such underlying Third-Party Claim.

5.4 Limitation of Liability. IN NO EVENT SHALL EITHER PARTY OR ITS RESPECTIVE AFFILIATES (OR IN THE CASE OF KPT, ANY RESPONSIBLE KPT GROUP MEMBERS) BE LIABLE FOR SPECIAL, EXEMPLARY, CONSEQUENTIAL OR PUNITIVE DAMAGES, WHETHER IN CONTRACT, WARRANTY, TORT, STRICT LIABILITY OR OTHERWISE, EXCEPT TO THE EXTENT SUCH PARTY MAY BE REQUIRED TO INDEMNIFY THE OTHER PARTY FROM SUCH DAMAGES CLAIMED BY THIRD PARTIES UNDER THIS ARTICLE 5 AND EXCEPT TO THE EXTENT THAT SUCH DAMAGES ARISE FROM BREACH OF THE OBLIGATIONS SET FORTH IN ARTICLE 8 (REGARDING CONFIDENTIALITY).

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ARTICLE 6

CONFIDENTIALITY

6.1 Confidential Information; Exceptions. KPT shall maintain all Confidential Information in trust and confidence and shall not disclose any Confidential Information to any Third Party (except as expressly provided below) or use any Confidential Information for any purposes other than for performance under or determining compliance with and administering this Agreement. KPT shall not disclose Confidential Information to any employee, agent, attorney, consultant, or Affiliate who does not have a reasonable need for such information for the foregoing purposes. Disclosures to such persons with a reasonable need for the information are only permitted to the extent the person is subject to binding obligations of confidentiality and limited use at least as restrictive in scope and as long in duration as those of this Article 6. KPT shall use at least the same standard of care as it uses to protect its own confidential information of a similar nature to prevent unauthorized disclosures or uses of the Confidential Information, but no less than reasonable care. KPT shall promptly notify the other Party upon discovery of any unauthorized use or disclosure of the Confidential Information.

Confidential Information shall not include any information which, as shown by KPT through competent proof:

(a) is now, or hereafter becomes, through no act or failure to act on the part of the receiving Party in breach hereof, generally known or available;

(b) is known by the receiving Party at the time of receiving such information, as shown by contemporaneous written records - but other than the Transferred Know-How and any documentation thereof; the Transferred Know-How and any documentation thereof is deemed Confidential Information under this Agreement; any information generated by KPT or any KPT Group member pursuant to the Services is considered Confidental Information regardless of this clause (b);

(c) is hereafter furnished to the receiving Party by a Third Party, as a matter of right, without breach of any confidentiality agreement, and without restriction on disclosure.

6.2 Authorized Disclosure. Notwithstanding any other provision of this Agreement, KPT may disclose Confidential Information to the extent and to the persons and entities required by an applicable governmental law, rule, regulation or order; *provided*, *however*, that KPT shall first have given prompt notice to Aclaris to enable Aclaris to seek any available exemptions from or limitations on such disclosure requirement and shall reasonably cooperate in any such efforts by Aclaris.

6.3 Return of Confidential Information. If this Agreement is terminated under Section 7.1, KPT shall use diligent efforts to return to Aclaris all Confidential Information. KPT will be allowed to keep one archival copy of any Confidential Information for record-keeping purposes only.

6.4 Use of Names. A Party shall not use any of the other Party's names, trademarks, logos, employee names, investor names or symbols in any publicity, promotion or similar public

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disclosure, without the advance written withholdable consent of such other Party, except as may be required by law or stock exchange requirement.

ARTICLE 7

MISCELLANEOUS

7.1 Term. The term of this Agreement shall commence upon the Assignment Date and, unless sooner terminated as provided in this Section 7.1, shall expire upon the expiration of the last-to-expire Valid Claim of the Transferred Patents, but in any event no sooner than fifteen (15) years after the Assignment Date and/or if later the expiration of the last pending patent claim of a Transferred Patent with the potential to become a Valid Claim. This Agreement shall

terminate automatically upon termination or expiration of the Miller Assignment, and no payments shall be due hereunder with respect to milestone events and/or Net Sales achieved or made after any such termination or expiration. This Agreement shall not be terminable otherwise than as provided in this Section 7.1.

7.2 Survival. Sections 3.5-3.10 (as applied to payment obligations arising during the term of this Agreement) and 4.3 and Articles 1 and 5-7 shall survive any and all terminations or expirations of this Agreement. In addition, payment obligations with respect to milestone events achieved and Net Sales made prior to termination or expiration shall survive.

7.3 Dispute Resolution.

(a) Initial Dispute Resolution. The Parties recognize that disputes may from time to time arise between the Parties during the term of this Agreement. It is the objective of the Parties to establish procedures to facilitate the resolution of disputes arising under this Agreement in an expedient manner by mutual cooperation and without resort to litigation. To accomplish this objective, the Parties agree to follow the procedures set forth in this Section 7.3 to resolve any dispute arising under this Agreement. If such a dispute between the Parties arises, then either Party, by written notice to the other Party, may have such dispute referred to the Parties' respective executive officers designated below or their successors, for attempted resolution by good faith negotiations within thirty (30) days after such notice is received. Said designated officers are as follows:

Aclaris:	President and CEO
KPT:	President and CEO

(b) Preliminary Relief. A Party is entitled to seek interlocutory relief and/or a preliminary injunction without first following the procedure of this Section 7.3; *provided* that it also invokes the procedure of this Section 7.3 in parallel. Each Party hereby irrevocably waives its right to jury trial of any and all disputes arising under this Agreement, and consents to have such disputes decided instead by a judge or justice.

(c) Arbitration. Except as otherwise set out in this Section 7.3, any dispute that cannot be settled amicably by agreement of the Parties pursuant to Section 7.3(a) shall be finally settled by an arbitration administered by JAMS applying its most applicable procedural rules (and the substantive laws of the State of California) *provided* that the appointed

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arbitrator(s) shall have appropriate experience in the pharmaceutical industry (or if no such person is available then in the biopharmaceutical industry or the closest industry possible). The place of arbitration shall be San Francisco, California. The language to be used in the arbitration proceedings shall be English. The award rendered in any arbitration shall be final and binding upon both Parties. The judgment rendered by the arbitrator(s) may include costs of arbitration, reasonable legal fees and reasonable costs for any expert and other witnesses. Nothing in this Agreement shall be deemed as preventing either Party from seeking injunctive relief (or any other provisional remedy) from any court having jurisdiction over the Parties and the subject matter of the dispute as necessary to protect either Party's name, Confidential Information (in the case of Aclaris) or intellectual property. Judgment upon the award may be entered in any court having jurisdiction, or application may be made to such court for judicial acceptance of the award and/or an order of enforcement as the case may be. Notwithstanding the foregoing, either Party shall be free to submit any dispute relating to the scope, validity, enforceability or other like matter regarding intellectual property to any court having jurisdiction over the Parties and the subject matter of the dispute and to seek such relief and remedies as are available in that court.

7.4 Jurisdiction. Both Parties consent to the exclusive personal jurisdiction of all courts sitting within San Francisco, California for resolving all disputes arising out of or in connection with this Agreement. Each Party hereby waives any and all defenses it may have to the jurisdiction and venue of such courts, including a defense that such a court may not assert personal jurisdiction over such Party, or of *forum non conveniens*.

7.5 Governing Law. This Agreement is made in accordance with and shall be governed and construed under the laws of the State of California excluding its choice of law principles.

7.6 No Agency, Joint Venture or Partnership. Neither Party is, nor will be deemed to be, an employee, agent or legal representative of the other Party for any purpose. Neither Party will be entitled to enter into any contracts in the name of, or on behalf of the other Party, nor will a Party be entitled to pledge the credit of the other Party in any way or hold itself out as having authority to do so. The parties are independent contractors, this Agreement is for an arm's-length transaction, and the relationship that it governs shall not be construed to be or create any agency, joint venture or partnership.

7.7 Assignment. Except as explicitly provided for in this Agreement, neither Party shall have the right or power to assign any rights or obligations under this Agreement without the consent of the other Party, except that Aclaris may assign one or more times to an Affiliate or to a successor to substantially all of the business or assets of Aclaris to which this Agreement relates (whether through merger, sale of stock, sale of assets or other transaction). This Agreement shall be binding upon and inure to the benefit of the successors and explicitly permitted assigns of the Parties. Any assignment of this Agreement not made in accordance with this Agreement is prohibited hereunder and shall be null and void. Any permitted assignee must certify in writing to the non-assigning Party, within ninety (90) days after the requested in writing by the non-assigning Party, that such permitted assignee agrees to the terms and conditions of this Agreement going forward from the date of assignment.

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7.8 Amendment. No amendment or modification hereof shall be valid or binding upon the Parties unless made in writing and signed by authorized officers of both Parties.

7.9 Notices. Any notice or other communication required or permitted to be given to either Party hereto shall be in writing unless otherwise specified and shall be deemed to have been properly given and to be effective (a) on the date of delivery if delivered in person; (b) the date of electronically confirmed facsimile transmission if during the recipient's normal business hours, or otherwise on the next Business Day; (c) two (2) Business Days after sending for next Business Day delivery by internationally recognized expedited courier service for no later than next-possible-business-day delivery; and (d) upon actual receipt by the recipient of an email, in the case of an emailed notice:

In the case of Aclaris:

Aclaris Therapeutics, Inc.
101 Lindenwood Drive
Suite 400
Malvern, PA 19355
Attn: Dr. Neal Walker
Fax-
Email -

With required copy to:

Spiegelman Life Sciences PC
1459 Eighteenth St PMB 309
San Francisco, CA 94107
Attn: Laura O. Spiegelman
Fax - 415 520 2220
Email - lspiegelman@spiegelmanlifesciences.com

In the case of KPT:

KPT CONSULTING LLC
1852 Glenwold Dr.
Paoli, PA 19301
Attn: Klaus Theobald
Fax: 888-664-2736
Email: Klaus.Theobald@verizon.net

In the case of (c) (expedited courier service), the Party providing the notice shall as a courtesy additionally provide the notice by a facsimile in accordance with (b). Either Party may change its address for communications by a notice to the other Party in accordance with this Section 7.9.

Each Party shall update its notice address by written notice within 30 days after the Effective Date, to add its email and fax notice information to the extent not already provided.

7.10 Bankruptcy; Intellectual Property. All rights and licenses granted under or pursuant to this Agreement by a bankrupt Party to the other Party are, and shall be deemed to be,

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for purposes of Section 365(n) of the Bankruptcy Code and any similar law or regulation in any other country, licenses of rights to "intellectual property" as defined under Section 101(35A) of the Bankruptcy Code. The Parties agree that all intellectual property rights licensed hereunder, are part of the "intellectual property" as defined under Section 101(35A) of the Bankruptcy Code subject to the protections afforded the non-terminating Party under Section 365(n) of the Bankruptcy Code, and any similar law or regulation in any other country. KPT and Aclaris shall be entitled to all similar protections as licensee under bankruptcy laws of other countries.

7.11 No Implied Licenses. Except as otherwise expressly set forth in this Agreement, nothing in this Agreement shall give either Party any right, title or interest in or to any Patents or other intellectual property owned by or licensed to the other Party.

7.12 Force Majeure. Any delay in or failure of performance by any Party under this Agreement shall not be considered a breach of this Agreement if and to the extent caused by occurrences beyond the reasonable control of the Party affected, including acts of God, embargoes, governmental restrictions, strikes or other acts of workers, fire, flood, earthquake, explosion, riots, wars, acts of terrorism, civil disorder, rebellion or sabotage and technical events beyond the Party's reasonable control; provided, however, the payment of any value due and owing hereunder shall not be delayed by the payor because of a force majeure affecting the payer, unless such force majeure specifically precludes the payment process. The Party suffering such occurrence shall notify the other Party and any time for performance hereunder shall be extended by the actual time of delay caused by the occurrence.

7.13 Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original but all of which together shall constitute a single instrument.

7.14 Captions. All section titles or captions contained in this Agreement, in any Exhibit referred to herein and the table of contents, if any, to this Agreement are for convenience only, shall not be deemed a part of this Agreement and shall not affect the meaning or interpretation of this Agreement.

7.15 No Third Party Rights or Obligations. Except for the rights of the indemnitees associated with each Party as expressly provided in this Agreement, no provision of this Agreement shall be deemed or construed in any way to result in the creation of any rights or obligation in any Third Party.

7.16 Draftsmanship. Each Party acknowledges that it has participated in, and has been represented by counsel in, the drafting of this Agreement. Any applicable rule of construction to the effect that ambiguities are to be resolved against the drafting party will not be applied in connection with the construction or interpretation of this Agreement.

7.17 Right of Offset; Recoupment. Notwithstanding any other provision of this Agreement, every liability of Aclaris to KPT is subject to and conditioned upon the recoupment of any and all liabilities owing from KPT to Aclaris, so as to establish a net liability. Aclaris is entitled to credit against or net out against amounts due under this Agreement, any and all liabilities of KPT to Aclaris, including any damages for breach of contract if applicable.

7.18 Severability. If any term, condition or provision of this Agreement is held to be invalid or unenforceable for any reason by any court of competent jurisdiction form which no appeal can be or is taken, or in arbitration proceedings between the Parties as set forth in Article 10 of this Agreement, it shall, if possible, be narrowed, shortened, or interpreted to achieve the intent of the Parties to this Agreement to the extent legally possible rather than voided or if not to any extent legally possible be deemed severed from this Agreement. In any event, all other terms, conditions and provision of this Agreement shall be deemed valid and enforceable to the full extent.

7.19 Compliance with Laws. Each Party shall carry out its activities pursuant to this Agreement in compliance with all applicable supranational, national, state, provincial and other local laws, rules, regulations and guidelines.

7.20 Cumulative Rights. The rights, powers and remedies hereunder shall be in addition to, and not in limitation of, all rights, powers and remedies provided at law or in equity, or under any other agreement between the Parties. All of such rights, powers and remedies shall be cumulative, and may be exercised successively or cumulatively.

7.21 Waiver. No failure or delay on the part of either Party to exercise any power, right, privilege or remedy under this Agreement will operate as a waiver thereof. No single or partial exercise of any such power, right, privilege or remedy will preclude any other or further exercise thereof or of any other power, right, privilege or remedy. Waivers of powers, rights, privileges and remedies under this Agreement may only be waived in a writing executed by a duly authorized officer of the waiving Party.

7.22 Costs. Each Party shall bear its own legal costs of and incidental to the preparation, negotiation and execution of this Agreement.

7.23 Entire Agreement. This Agreement embodies the entire understanding of the Parties with respect to the subject matter hereof and shall supersede all previous communications, representations or understandings, either oral or written, between the Parties relating to the subject matter of this Agreement. To be clear, this Agreement supersedes the Prior CDA with respect to Confidential Information and the Parties' rights and obligations with respect thereto.

[remainder of page intentionally blank]

IN WITNESS WHEREOF, both Aclaris and KPT have executed this Agreement by their respective officers hereunto duly authorized.

KPT CONSULTING, LLC	**THERAPEUTICS, INC.**
By: /s/ Klaus Theobald, MD, Ph.D.	By: /s/ Neal Walker, MD
Name: Klaus Theobald, MD, Ph.D.	Name: Neal Walker, MD
Title: President	Title: CEO
Date: August 27, 2012	Date: August 29, 2012

*****Text Omitted and Filed Separately**
Confidential Treatment Requested
Under 17 C.F.R. §§ 200.80(b)(4) and 240.24b-2

EXHIBIT A

RELEASE AND COVENANTS

1. **Definitions**. Sciaderm, Inc., a Pennsylvania corporation ("**Sciaderm**") has had an opportunity to review that certain Finder's Services Agreement between Aclaris Therapeutics, Inc., a Delaware corporation ("**Aclaris**") and KPT Consulting, LLC, a Pennsylvania Limited Liability Company ("**KPT**") ("**Agreement**") relating to certain finder's services in connection with an agreement between Aclaris and the estate of Mickey J. Miller I ("**Miller Estate**") relating to certain technology and patents. Sciaderm is wholly owned by a shareholder in KPT Consulting, LLC. All initially capitalized terms used but not defined in this Release and Covenants shall have the meanings given in the Agreement.

2. **Background**. Sciaderm was or was going to be involved in the services under the Agreement and/or the transaction with Miller Estate, and wishes to clarify through this Release and Covenants (a) that no consideration is due to it in connection therewith, and (b) the other matters set forth below.

3. **Acknowledgement**. Sciaderm hereby acknowledges that it shall not be entitled to compensation in relation to the Services and/or the Miller Agreement, of any kind whatsoever.

4. **Release**. Sciaderm hereby on behalf of itself and its Affiliates as of the Effective Date irrevocably releases, waives, and forever discharges Aclaris, its Affiliates and its and their successors in interest and past, present and future assigns, founders, promoters, investors (including all partners in and officers, directors, employees and consultants of any investor), officers, directors, employees, consultants, insurers and underwriters, of and from any and all claims, counterclaims, demands, obligations, actions, causes of actions, liabilities, damages, judgments and suits of every nature, kind, description and character, whether asserted or unasserted, whether known or unknown, suspected or unsuspected, foreseen or unforeseen, real or imaginary, actual or potential, in law or in equity, for or by reason of any matter, cause or thing whatsoever, arising out of any and all agreements, courses of conduct, promises and/or activities between Sciaderm and Aclaris on or before the Assignment Date and/or in connection with the Services, the Miller Assignment, or the subject matter thereof, including any and all claims to compensation for the Services different than the compensation set forth in this Agreement and/or any rights in the Know-How and Patents assigned to Aclaris in the Miller Assignment, including any and all claims under any and all agreements or understandings between Aclaris or any founder, promoter, or investor of Aclaris and any member of KPT Group in existence as of or before the Effective Date (if any). Sciaderm hereby waives any and all rights in relation to such waiver under California Civil Code Section 1542 (and any corresponding laws in other jurisdictions), which reads: "A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor."

5. **Recognition of Rights**. Sciaderm hereby recognizes and acknowledges Aclaris's rights under the Miller Assignment, and as owner of the Transferred Know-How and Transferred Patents as of the Assignment Date.

*****Text Omitted and Filed Separately**
Confidential Treatment Requested
Under 17 C.F.R. §§ 200.80(b)(4) and 240.24b-2

6. **Primary Relationship to Estate**. Sciaderm shall recognize and treat Aclaris's relationship with the Miller Estate as the primary relationship with the Miller Estate and shall, going forward from the Effective Date, refrain from all business contact with the Miller Estate and its representatives (including refraining from any all discussion of the terms of any agreement(s)), other than any such contact that Aclaris may request in writing for Sciaderm to undertake.

7. **Quitclaim**. Sciaderm hereby quitclaims and assigns to Aclaris any and all rights or interest it may have or have had in the Transferred Patents and Transferred KnowHow, and/or in any other Know-How or Patents relating to Technology.

8. **Exclusive License**. Sciaderm hereby grants to Aclaris an exclusive, worldwide, fully paid, perpetual, irrevocable license under all Patents and Know-How Controlled by Sciaderm as of the Effective Date or during the term of this Agreement, that Claims, constitutes, covers or relates to Technology.

9. **Non-Competition for Protection of Transferred Trade Secrets and Confidential Information**. Recognizing that such activities would necessarily entail use of the Transferred Know-How and/or Confidential Information of Aclaris known or reported to a shareholder in Sciaderm, or Sciaderm, in connection with this Agreement or the Services, Sciaderm hereby covenants that it shall not during the term of this Agreement research, develop, make, have made, offer to sell, sell, import or export any Technology and/or Products. Sciaderm hereby acknowledges that the foregoing covenant is legally enforceable and is reasonable, necessary and appropriate to protect Aclaris's Confidential Information.

10. **No Diligence Obligations**. Notwithstanding anything express or implied in the Agreement, at law, or in equity: Aclaris and its Affiliates shall have no obligation to Sciaderm to research, develop, or commercialize Products, nor to file, prosecute, and maintain Transferred Patents, nor to enforce them, and no other diligence obligations, in each case, whatsoever, express or implied, under this Agreement, at law or in equity, on any theory.

11. **Consideration**. Sciaderm hereby acknowledges that it has received good and valuable consideration for the release and covenants provided in this document, including without limitation the benefits to at least one shareholder in Sciaderm provided in the Agreement.

12. **Jurisdiction**. Sciaderm consents to the exclusive personal jurisdiction of all courts sitting within San Francisco, California for resolving all disputes arising out of or in connection with this Agreement. Each Party hereby waives any and all defenses it may have to the jurisdiction and venue of such courts, including a defense that such a court may not assert personal jurisdiction over such Party, or of *forum non conveniens*.

13. **Governing Law**. This Release and Covenants document is made in accordance with and shall be governed and construed under the laws of the State of California excluding its choice of law principles.

[remainder of page intentionally blank]

*****Text Omitted and Filed Separately**
Confidential Treatment Requested
Under 17 C.F.R. §§ 200.80(b)(4) and 240.24b-2

IN WITNESS WHEREOF, Sciaderm has executed this Agreement by its duly authorized officer.

SCIADERM, INC.

By: /s/ Klaus Theobald, MD, Ph.D.

Name: Klaus Theobald, MD, Ph.D.

Title: President & CEO

Date: August 27, 2012

CONFIDENTIAL TREATMENT HAS BEEN REQUESTED FOR PORTIONS OF THIS EXHIBIT. THE COPY FILED HEREWITH OMITS THE INFORMATION SUBJECT TO A CONFIDENTIALITY REQUEST. OMISSIONS ARE DESIGNATED [***]. A COMPLETE VERSION OF THIS EXHIBIT HAS BEEN FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE COMMISSION.

ACLARIS THERAPEUTICS, INC.

AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

September 30, 2014

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ACLARIS THERAPEUTICS, INC.

AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

This Amended and Restated Investors' Rights Agreement (this "Agreement") is made as of this 30th day of September, 2014 (the "Effective Date"), by and among Aclaris Therapeutics, Inc., a Delaware corporation (the "Company"), the holders of the Company's Series A Preferred Stock listed on Exhibit A attached hereto (the "Series A Holders") and the holders of the Company's Series B Preferred Stock listed on Exhibit B attached hereto (the "Series B Holders" and together with the Series A Holders, the "Investors").

RECITALS

A. The Company and certain of the Investors are parties to that certain Investors' Rights Agreement dated as of August 30, 2012 (the "Prior Agreement").

B. The Company and the Series A Holders entered into a Series A Preferred Stock Purchase Agreement dated August 30, 2012 pursuant to which the Company sold to the Series A Holders, and the Series A Holders purchased from the Company, shares of the Company's Series A Preferred Stock (the

"Series A Preferred Stock").

C. The Company and the Series B Holders have entered into a Series B Preferred Stock Purchase Agreement (the "Purchase Agreement") of even date herewith pursuant to which the Company desires to sell to the Series B Holders and the Series B Holders desire to purchase from the Company shares of the Company's Series B Preferred Stock (the "Series B Preferred Stock" and together with the Series A Preferred Stock, the "Preferred Stock"). A condition to the Series B Holders' obligations under the Purchase Agreement is that the Company and the Investors enter into this Agreement in order to provide the Investors with (i) certain rights to register shares of the Company's Common Stock issuable upon conversion of the Preferred Stock held by the Investors, (ii) certain rights to receive or inspect information pertaining to the Company and (iii) a right of first offer with respect to certain issuances by the Company of its securities. The Company and the Investors each desire to induce the Series B Holders to purchase shares of Series B Preferred Stock pursuant to the Purchase Agreement by agreeing to the terms and conditions set forth herein.

D. The approval of (i) the Company and (ii) the holders of at least 60% of the Registrable Securities (as defined in the Prior Agreement for purposes of this paragraph D) is required to amend and restate the Prior Agreement pursuant to Section 3.4 thereof; provided, however, the amendment and restatement of the rights granted to the Major Holders (as defined in the Prior Agreement for purposes of this paragraph D) in Section 2 of the Prior Agreement requires the consent of 60% in interest of the Registrable Securities held by the Major Holders and the amendment and restatement of the rights granted to Investors (as defined in the Prior Agreement for purposes of this paragraph D) in Section 2 of the Prior Agreement requires the consent of 60% in interest of the Registrable Securities held by the Investors.

E. The Investors, which include the requisite Investors described in the preceding paragraph, desire to amend and restate the Prior Agreement in accordance with the terms and provisions set forth herein.

AGREEMENT

The parties hereby agree as follows:

1. **Registration Rights.** The Company and the Investors covenant and agree as follows:

1.1 **Definitions.** For purposes of this Section 1:

(a) "Conversion Shares" means shares of the Company's stock (including the Company's Preferred Stock, Common Stock and Common Stock issuable upon conversion of Preferred Stock or any stock received in connection with any stock dividend, stock split or other reclassification of any such stock).

(b) "Exchange Act" means the Securities Exchange Act of 1934, as amended (and any successor thereto) and the rules and regulations promulgated thereunder;

(c) "Form S-3" means such form under the Securities Act as in effect on the date hereof or any successor form under the Securities Act that permits significant incorporation by reference of the Company's subsequent public filings under the Exchange Act;

(d) "Holder" means any person owning or having the right to acquire Registrable Securities or any assignee thereof in accordance with Section 1.12 of this Agreement;

(e) "Qualified IPO" means a firm commitment underwritten public offering by the Company of shares of its Common Stock in connection with which all the then-outstanding shares of Preferred Stock are converted into shares of Common Stock as defined in the Company's Second Amended and Restated Certificate of Incorporation as such Amended and Restated Certificate of Incorporation may be amended from time to time (the "Restated Certificate");

(f) "register," "registered," and "registration" refer to a registration effected by preparing and filing a registration statement or similar document in compliance with the Securities Act, and the declaration or ordering of effectiveness of such registration statement or document;

(g) "Registrable Securities" means (i) the shares of Common Stock issuable or issued upon conversion of the Preferred Stock, and (ii) any other shares of Common Stock of the Company issued as (or issuable upon the conversion or exercise of any warrant, right or other security which is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, the shares listed in (i); provided, however, that the foregoing definition shall exclude in all cases any Registrable Securities sold by a person in a transaction in

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which his or her rights under this Agreement are not assigned. Notwithstanding the foregoing, Common Stock or other securities shall only be treated as Registrable Securities if and so long as (A) they have not been sold to or through a broker or dealer or underwriter in a public distribution or a public securities transaction, and (B) they have not been sold in a transaction exempt from the registration and prospectus delivery requirements of the Securities Act under Section 4(1) thereof so that all transfer restrictions, and restrictive legends with respect thereto, if any, are removed upon the consummation of such sale;

(h) The number of shares of "Registrable Securities then outstanding" shall be determined by the number of shares of Common Stock outstanding which are, and the number of shares of Common Stock issuable pursuant to then exercisable or convertible securities which are, Registrable Securities;

(i) "SEC" means the Securities and Exchange Commission; and

(j) "Securities Act" means the Securities Act of 1933, as amended (and any successor thereto) and the rules and regulations promulgated thereunder.

1.2 **Request for Registration.**

(a) If the Company shall receive at any time after the earlier of (i) the third anniversary of the Effective Date of this Agreement, or (ii) six months after the effective date of the first registration statement for a public offering of securities of the Company (other than a registration statement relating either to the sale of securities to employees of the Company pursuant to a stock option, stock purchase or similar plan or an SEC Rule 145 transaction), a written request from the Holders of more than 5% of the Registrable Securities then outstanding (provided the anticipated aggregate offering price, net of underwriting discounts and commissions, would exceed $5,000,000) that the Company file a registration statement under the Securities Act, then the Company shall, within 20 days of the receipt thereof, give written notice of such request to all Holders and shall, subject to the limitations of subsection 1.2(b), use commercially reasonable efforts to file as soon as practicable, and in any event within 90 days of the receipt of such request, a registration statement under the Securities Act covering all Registrable Securities which the Holders request to be registered.

(b) If the Holders initiating the registration request hereunder ("Initiating Holders") intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to this Section 1.2 and the Company shall include such information in the written notice referred to in subsection 1.2(a). The underwriter will be selected by 60% in interest of the Initiating Holders and shall be reasonably acceptable to the Company. In such event, the right of any Holder to include his Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting (unless otherwise mutually agreed by 60% in interest of the Initiating Holders and such Holder) to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided in subsection 1.5(e)) enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting. Notwithstanding any other provision

of this Section 1.2, if the underwriter advises the Initiating Holders in writing that marketing factors require a limitation of the number of shares to be underwritten, then the Initiating Holders shall so advise all Holders of Registrable Securities which would otherwise be underwritten pursuant hereto, and the number of shares of Registrable Securities that may be included in the underwriting shall be allocated among all participating Holders thereof, including the Initiating Holders, in proportion (as nearly as practicable) to the amount of Registrable Securities of the Company owned by each participating Holder; provided, however, that the number of shares of Registrable Securities to be included in such underwriting shall not be reduced unless all other securities are first entirely excluded from the underwriting.

(c) Notwithstanding the foregoing, if the Company shall furnish to Holders requesting a registration statement pursuant to this Section 1.2, a certificate signed by the Chief Executive Officer or President of the Company stating that in the good faith judgment of the Board of Directors of the Company, it would be seriously detrimental to the Company and its stockholders for such registration statement to be filed and it is therefore essential to defer the filing of such registration statement, the Company shall have the right to defer such filing for a period of not more than 90 days after receipt of the request of the Initiating Holders; provided, however, that the Company may not utilize this right more than once in any twelve-month period.

(d) In addition, the Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to this Section 1.2:

(i) After the Company has effected two registrations pursuant to this Section 1.2 and such registrations have been declared or ordered effective (a registration will count for this purpose only if (i) all Registrable Securities requested to be registered are registered and (ii) it is closed, or withdrawn at the request of the Investors (other than as a result of a material adverse change to the Company));

(ii) During the period commencing on the effective date of the registration statement for the initial public offering of the Company's securities and ending on a date 180 days after the effective date of such registration; or

(iii) If the Company delivers notice to the Holders within 30 days of the Company's receipt of the Initiating Holders' registration request declaring the Company's intention to file within 60 days a registration statement for the Company's initial public offering.

1.3 **Company Registration.** If (but without any obligation to do so) the Company proposes to register (including for this purpose a registration effected by the Company for stockholders other than the Holders) any of its stock under the Securities Act in connection with the public offering of such securities solely for cash (other than a registration relating solely to the sale of securities to participants in a Company stock plan or a transaction covered by Rule 145 under the Securities Act, a registration in which the only stock being registered is Common Stock issuable upon conversion of debt securities which are also being registered, or any registration on any form which does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities), the Company shall, at such time, promptly give each Holder written notice of such

registration. Upon the written request of each Holder given within 20 days after mailing of such notice by the Company in accordance with Section 3.5, the Company shall, subject to the provisions of Section 1.8, cause to be registered under the Securities Act all of the Registrable Securities that each such Holder has requested to be registered.

1.4 **Form S-3 Registration**. In case the Company shall receive from any Holder or Holders of the Registrable Securities then outstanding a written request or requests that the Company effect a registration on Form S-3 and any related qualification or compliance with respect to all or a part of the Registrable Securities owned by such Holder or Holders, the Company will:

(a) promptly give written notice of the proposed registration, and any related qualification or compliance, to all other Holders; and

(b) as soon as practicable, effect such registration and all such qualifications and compliances as may be so requested and as would permit or facilitate the sale and distribution of all or such portion of such Holder's or Holders' Registrable Securities as are specified in such request, together with all or such portion of the Registrable Securities of any other Holder or Holders joining in such request as are specified in a written request given within 15 days after receipt of such written notice from the Company; provided, however, that the Company shall not be obligated to effect any such registration, qualification or compliance, pursuant to this Section 1.4: (i) if Form S-3 is not available for such offering by the Holders; (ii) if the Holders, together with the holders of any other securities of the Company entitled to inclusion in such registration, propose to sell Registrable Securities and such other securities (if any) at an aggregate price to the public (net of any underwriters' discounts or commissions) of less than $5,000,000; (iii) if the Company shall furnish to the Holders a certificate signed by the Chief Executive Officer or President of the Company stating that in the good faith judgment of the Board of Directors of the Company, it would be seriously detrimental to the Company and its stockholders for such Form S-3 Registration to be effected at such time, in which event the Company shall

have the right to defer the filing of the Form S-3 registration statement for a period of not more than 120 days after receipt of the request of the Holder or Holders under this Section 1.4; provided, however, that the Company shall not utilize this right more than once in any 12-month period; (iv) if the Company has, within the 12-month period preceding the date of such request, already effected two registrations on Form S-3 for the Holders pursuant to this Section 1.4; (v) in any particular jurisdiction in which the Company would be required to qualify to do business or to execute a general consent to service of process in effecting such registration, qualification or compliance; or (vi) during the period ending 180 days after the effective date of a registration statement subject to Section 1.3.

(c) Subject to the foregoing, the Company shall file a registration statement covering the Registrable Securities and other securities so requested to be registered as soon as practicable after receipt of the request or requests of the Holders. Registrations effected pursuant to this Section 1.4 shall not be counted as demands for registration or registrations effected pursuant to Sections 1.2 or 1.3, respectively.

1.5 **Obligations of the Company**. Whenever required under this Section 1 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) Prepare and file with the SEC a registration statement with respect to such Registrable Securities and use commercially reasonable efforts to cause such registration statement to become effective, and, upon the request of the Holders of 60% of the Registrable Securities registered thereunder, keep such registration statement effective for up to 120 days, or until the distribution described in such registration statement is completed, if earlier.

(b) Prepare and file with the SEC such amendments and supplements to such registration statement and the prospectus used in connection with such registration statement as may be necessary to comply with the provisions of the Securities Act with respect to the disposition of all securities covered by such registration statement for up to 120 days, or until the distribution described in such registration statement is completed, if earlier.

(c) Furnish to the Holders such numbers of copies of a prospectus, including a preliminary prospectus, in conformity with the requirements of the Securities Act, and such other documents as they may reasonably request in order to facilitate the disposition of Registrable Securities owned by them.

(d) Use commercially reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or Blue Sky laws of such jurisdictions as shall be reasonably requested by the Holders, provided that the Company shall not be required in connection therewith or as a condition thereto to qualify to do business or to file a general consent to service of process in any such states or jurisdictions.

(e) In the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the managing underwriter of such offering. Each Holder participating in such underwriting shall also enter into and perform its obligations under such an agreement.

(f) Notify each Holder of Registrable Securities covered by such registration statement at any time when a prospectus relating thereto is required to be delivered under the Securities Act of the happening of any event as a result of which the prospectus included in such registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing. As promptly as practicable thereafter, the Company will prepare and file with the SEC, and furnish without charge to the appropriate Holders and managing underwriter(s), if any, an amendment or supplement to such registration statement or prospectus in order to cause such registration statement or prospectus not to include any 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 in the light of the circumstances then existing and will furnish such copies thereof as the Holders or any underwriters may reasonably request.

(g) Use best efforts to cause all such Registrable Securities registered pursuant hereunder to be listed on each securities exchange on which similar securities issued by the Company are then listed.

(h) Provide a transfer agent and registrar for all Registrable Securities registered pursuant hereunder and a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration.

(i) Use commercially reasonable efforts to furnish, at the request of any Holder requesting registration of Registrable Securities pursuant to this Section 1, on the date that such Registrable Securities are delivered to the underwriters for sale in connection with a registration pursuant to this Section 1, if such securities are being sold through underwriters, (i) an opinion, dated such date, of the counsel representing the Company for the purposes of such registration, in form and substance as is customarily given to underwriters in an underwritten public offering, addressed to the underwriters and (ii) a letter dated such date, from the independent certified public accountants of the Company, in form and substance as is customarily given by independent certified public accountants to underwriters in an underwritten public offering, addressed to the underwriters.

1.6 **Furnish Information.** It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 1 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as shall be required to effect the registration of such Holder's Registrable Securities. The Company shall have no obligation with respect to any registration requested pursuant to Section 1.2 or Section 1.4 of this Agreement if, as a result of the application of the preceding sentence, the number of shares or the anticipated aggregate offering price of the Registrable Securities to be included in the registration does not equal or exceed the number of shares or the anticipated aggregate offering price required to originally trigger the Company's obligation to initiate such registration as specified in subsection 1.2(a) or subsection 1.4(b)(ii), whichever is applicable.

1.7 **Expenses of Registration.**

(a) **Demand Registration.** All expenses other than underwriting discounts and commissions incurred in connection with registrations, filings or qualifications pursuant to Section 1.2, including (without limitation) all registration, filing and qualification fees, printers' and accounting fees, fees and disbursements of counsel for the Company, and the reasonable fees and disbursements of one counsel (not to exceed $25,000) for the selling Holders selected by them with the approval of the Company, which approval shall not be unreasonably withheld, shall be borne by the Company; provided, however, that the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Section 1.2 if the registration request is subsequently

withdrawn at the request of the Holders of 60% of the Registrable Securities to be registered (in which case all participating Holders shall bear such expenses), unless the Holders of 60% of the Registrable Securities agree to forfeit their right to one demand registration pursuant to Section 1.2; provided further, however, that if at the time of such withdrawal, the Holders (i) have learned of a material adverse change in the condition,

business, or prospects of the Company that was not known at the time of their request or could have not been reasonably known given the prior communication or information provided by the Company to the Holders and (ii) have withdrawn the request with reasonable promptness following disclosure by the Company of such material adverse change, then the Holders shall not be required to pay any of such expenses and shall not forfeit their rights pursuant to Section 1.2.

(b) **Company Registration.** All expenses other than underwriting discounts and commissions incurred in connection with registrations, filings or qualifications of Registrable Securities pursuant to Section 1.3 for each Holder (which right may be assigned as provided in Section 1.12), including (without limitation) all registration, filing, and qualification fees, printers' and accounting fees, fees and disbursements of counsel for the Company and the reasonable fees and disbursements of one counsel (not to exceed $25,000) for the selling Holder or Holders selected by them with the approval of the Company, which approval shall not be unreasonably withheld, shall be borne by the Company.

(c) **Registration on Form S-3.** All expenses incurred in connection with a registration requested pursuant to Section 1.4, including (without limitation) all registration, filing, qualification, printers' and accounting fees and the reasonable fees and disbursements of one counsel (not to exceed $25,000) for the selling Holder or Holders selected by them with the approval of the Company, which approval shall not be unreasonably withheld, and counsel for the Company, and any underwriters' discounts or commissions associated with Registrable Securities, shall be borne by the Company.

1.8 **Underwriting Requirements.** In connection with any offering involving an underwriting of shares of the Company's capital stock, the Company shall not be required under Section 1.3 to include any of the Holders' securities in such underwriting unless they accept the terms of the underwriting as agreed upon between the Company and the underwriters selected by it (or by other persons entitled to select the underwriters), and then only in such quantity as the underwriters determine in their sole discretion will not jeopardize the success of the offering by the Company. If the total amount of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the amount of securities sold other than by the Company that the underwriters determine in their sole discretion is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters determine in their sole discretion will not jeopardize the success of the offering (the securities so included to be apportioned pro rata among the selling stockholders according to the total amount of securities entitled to be included therein owned by each selling stockholder or in such other proportions as shall mutually be agreed to by such selling stockholders) but in no event shall (i) the amount of securities of the selling Holders included in the offering be reduced below 30% of the total amount of securities included in such offering, unless such offering is the initial public offering of the Company's securities, in which case, the selling stockholders may be excluded if the underwriters make the determination described above and no other stockholder's securities are included or (ii) without the consent of the holders of 60% of the Registrable Securities, any securities held by any non-Holder be included if any securities held by any selling Holder are excluded. For purposes of the preceding parenthetical concerning apportionment, for any selling stockholder which is a holder of Registrable Securities and which is a partnership or corporation,

the partners, retired partners and stockholders of such holder, or the estates and family members of any such partners and retired partners and any trusts for the benefit of any of the foregoing persons shall be deemed to be a single "selling stockholder," and any pro-rata reduction with respect to such "selling stockholder" shall be based upon the aggregate amount of shares carrying registration rights owned by all entities and individuals included in such "selling stockholder," as defined in this sentence.

1.9 **Delay of Registration.** No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any such registration as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 1.

1.10 **Indemnification.** In the event any Registrable Securities are included in a registration statement under this Section 1:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each Holder (including each of its officers, directors, members and partners), any underwriter (as defined in the Securities Act) for such Holder and each person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any losses, claims, damages, or liabilities (joint or several) to which they may become subject under the Securities Act, the Exchange Act or other federal or state law, insofar as such losses, claims, damages, or liabilities (or actions in respect thereof) arise out of or are based upon any of the following statements, omissions or violations (collectively a "Violation"): (i) any untrue statement or alleged untrue statement of a material fact contained in such registration statement, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto, (ii) the omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading, or (iii) any violation or alleged violation by the Company of the Securities Act, the Exchange Act, any state securities law or any rule or regulation promulgated under the Securities Act, the Exchange Act or any state securities law; and the Company will pay to each such Holder, underwriter or controlling person, as incurred, any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability, or action; provided, however, that the indemnity agreement contained in this subsection 1.10(a) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability, or action if such settlement is effected without the consent of the Company (which consent shall not be unreasonably withheld), nor shall the Company be liable to any Holder, underwriter or controlling person for any such loss, claim, damage, liability, or action to the extent that it arises out of or is based upon a Violation which occurs in reliance upon and in conformity with written information furnished expressly for use in connection with such registration by any such Holder, underwriter or controlling person.

(b) To the extent permitted by law, each selling Holder will, severally and not jointly, indemnify and hold harmless the Company, each of its directors, each of its officers who has signed the registration statement, each person, if any, who controls the Company within the meaning of the Securities Act, any underwriter, any other Holder selling securities in such registration statement and any controlling person of any such underwriter or

other Holder, against any losses, claims, damages, or liabilities (joint or several) to which any of the foregoing persons may become subject, under the Securities Act, the Exchange Act or other federal or state law, insofar as such losses, claims, damages, or liabilities (or actions in respect thereto) arise out of or are based upon any Violation, in each case to the extent (and only to the extent) that such Violation occurs in reliance upon and in conformity with written information

furnished by such Holder expressly for use in connection with such registration; and each such Holder will pay, as incurred, any legal or other expenses reasonably incurred by any person intended to be indemnified pursuant to this subsection 1.10(b), in connection with investigating or defending any such loss, claim, damage, liability, or action; provided, however, that the indemnity agreement contained in this subsection 1.10(b) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; provided, that in no event shall any indemnity under this subsection 1.10(b) exceed the net proceeds from the offering received by such Holder, except in the case of willful fraud by such Holder.

(c) Promptly after receipt by an indemnified party under this Section 1.10 of notice of the commencement of any action (including any governmental action), such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 1.10, deliver to the indemnifying party a written notice of the commencement thereof and the indemnifying party shall have the right to participate in, and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however. that an indemnified party (together with all other indemnified parties which may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the reasonable fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such proceeding. The failure to deliver written notice to the indemnifying party within a reasonable time of the commencement of any such action, if prejudicial to its ability to defend such action, shall relieve such indemnifying party of any liability to the indemnified party under this Section 1.10, but the omission so to deliver written notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 1.10.

(d) If the indemnification provided for in this Section 1.10 is held by a court of competent jurisdiction to be unavailable to an indemnified party with respect to any loss, liability, claim, damage or expense referred to therein, then the indemnifying party, in lieu of indemnifying such indemnified party hereunder, shall contribute to the amount paid or payable by such indemnified party as a result of such loss, liability, claim, damage, or expense in such proportion as is appropriate to reflect the relative fault of the indemnifying party on the one hand and of the indemnified party on the other in connection with the statements or omissions that resulted in such loss, liability, claim, damage or expense as well as any other relevant equitable considerations; provided, that in no event shall any contribution by a Holder under this Subsection 1.10(d) exceed the net proceeds from the offering received by such Holder, except in the case of willful fraud by such Holder. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or

alleged untrue statement of a material fact or the omission to state a material fact relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) The obligations of the Company and Holders under this Section 1.10 shall survive the completion of any offering of Registrable Securities in a registration statement under this Section 1, and otherwise.

1.11 **Reports Under the Exchange Act.** With a view to making available to the Holders the benefits of Rule 144 promulgated under the Securities Act and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company agrees to:

(a) make and keep public information available, as those terms are understood and defined in SEC Rule 144, at all times after 90 days after the effective date of the first registration statement filed by the Company for the offering of its securities to the general public so long as the Company remains subject to the periodic reporting requirements under Sections 13 or 15(d) of the Exchange Act;

(b) take such action, including the voluntary registration of its Common Stock under Section 12 of the Exchange Act, as is necessary to enable the Holders to utilize Form S-3 for the sale of their Registrable Securities, such action to be taken as soon as practicable after the end of the fiscal year in which the first registration statement filed by the Company for the offering of its securities to the general public is declared effective;

(c) file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act; and

(d) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144 (at any time after 90 days after the effective date of the first registration statement filed by the Company), the Securities Act and the Exchange Act (at any time after it has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after it so qualifies), (ii) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company, and (iii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC which permits the selling of any such securities without registration or pursuant to such form.

1.12 **Assignment of Registration Rights.** The rights to cause the Company to register Registrable Securities pursuant to this Section 1 may be assigned (but only with all

related obligations) by a Holder to a transferee or assignee (a) who, with the addition of the transferred shares, holds at least 1,000,000 shares of such securities (subject to adjustment for stock splits, stock dividends, reclassification or the like) (or is assigned all of the shares held by the transferring Holder, if less than 1,000,000 shares); (b) that is a subsidiary, parent, partner, limited partner, retired partner, member, retired member or stockholder of a Holder; (c) that is an affiliated fund or entity of the Holder, which means with respect to a limited liability company or a limited liability partnership, a fund or entity managed by the same manager or managing member or general partner or management company or by an entity controlling, controlled by, or under common control with such manager or managing member or general partner or management company (such a fund or entity, an "Affiliated Fund"); (d) who is a Holder's child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law (such a

relation, a Holder's "Immediate Family Member", which term shall include adoptive relationships); (e) that is a trust, partnership, limited liability company or corporation, the use of which is for estate planning purposes for the benefit of an individual Holder or such Holder's Immediate Family Member; (f) who is a Major Holder (as hereinafter defined); or (g) who is an Affiliated Transferee (as defined in Section 3.3 of the Purchase Agreement), provided the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee or assignee and the securities with respect to which such registration rights are being assigned; and provided, further, that such assignment shall be effective only if the transferee agrees to be bound by this Agreement and immediately following such transfer the further disposition of such securities by the transferee or assignee is restricted under the Securities Act. For the purposes of determining the number of shares of Registrable Securities held by a transferee or assignee, the holdings of transferees and assignees of (x) a partnership who are partners or retired partners of such partnership or (y) a limited liability company who are members or retired members of such limited liability company (including Immediate Family Members of such partners or members who acquire Registrable Securities by gift, will or intestate succession) shall be aggregated together and with the partnership or limited liability company; provided that all assignees and transferees who would not qualify individually for assignment of registration rights shall have a single attorney-in-fact for the purpose of exercising any rights, receiving notices or taking any action under Section 1.

1.13 **Limitations on Subsequent Registration Rights.** From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of 60% of the outstanding Registrable Securities, enter into any agreement with any holder or prospective holder of any securities of the Company which would allow such holder or prospective holder (a) to include such securities in any registration filed under Section 1.2 hereof, unless under the terms of such agreement, such holder or prospective holder may include such securities in any such registration only to the extent that the inclusion of his securities will not reduce the amount of the Registrable Securities of the Holders which is included or (b) to make a demand registration which could result in such registration statement being declared effective prior to the earlier of either of the dates set forth in subsection 1.2(a) or within 120 days of the effective date of any registration effected pursuant to Section 1.2; provided that this limitation shall not apply to any additional Investor who becomes a party to this Agreement in accordance with Section 1.12.

1.14 **Lock-Up Agreement.**

(a) **Lock-Up Period; Agreement.** In connection with the initial public offering of the Company's securities and upon request of the Company or the underwriters managing such offering of the Company's securities, each Holder agrees not to sell, make any short sale of, loan, grant any option for the purchase of, or otherwise dispose of any securities of the Company, however or whenever acquired (other than those included in the registration) without the prior written consent of the Company or such underwriters, as the case may be, for such period of time (not to exceed 180 days but subject to such extension(s) as may be required by the underwriters in order to publish research reports while complying with Rule 2711 of the Financial Industry Regulatory Authority (FINRA)) from the effective date of such registration as may be requested by the Company or such managing underwriters and to execute an agreement reflecting the foregoing as may be requested by the underwriters at the time of the Company's initial public offering.

(b) **Limitations.** The obligations described in Section 1.14(a) shall apply only if all officers and directors of the Company and all one-percent stockholders enter into similar agreements, and shall not apply to a registration relating solely to employee benefit plans, or to a registration relating solely to a transaction pursuant to Rule 145 under the Securities Act. If the obligations described in Section 1.14(a) are waived or terminated by the Company or the representatives of the underwriters, such waiver or termination shall apply to the Investors pro rata, based on the number of shares held by the Investors.

(c) **Stop-Transfer Instructions.** In order to enforce the foregoing covenants, the Company may impose stop-transfer instructions with respect to the securities of each Holder (and the securities of every other person subject to the restrictions in Section 1.14(a)).

(d) **Transferees Bound.** Each Holder agrees that prior to the Company's initial public offering it will not transfer securities of the Company unless each transferee agrees in writing to be bound by all of the provisions of this Section 1.14, provided that this Section 1.14(d) shall not apply to transfers pursuant to a registration statement or transfers after the 12-month anniversary of the effective date of the Company's initial registration statement subject to this Section 1.14.

2. **Covenants of the Company.**

2.1 **Delivery of Financial Statements.** The Company shall deliver to each Holder who holds at least 1,000,000 shares of Registrable Securities (subject to adjustment for stock splits, stock dividends, reclassifications or the like) (the "Major Holders"):

(a) as soon as practicable, but in any event within 120 days after the end of each fiscal year of the Company, an unaudited income statement for such fiscal year, an unaudited balance sheet of the Company and statement of stockholder's equity as of the end of such year, and an unaudited statement of cash flows for such year. As soon as practicable, but in any event within 150 days after the end of each fiscal year of the Company, an income statement for such fiscal year, a balance sheet of the Company and statement of stockholder's equity as of

the end of such year, and a statement of cash flows for such year, such year-end financial reports to be in reasonable detail, prepared in accordance with generally accepted accounting principles ("GAAP"), and audited and certified by an independent public accounting firm selected with the approval of the Board of Directors, including the approval of at least one of the three directors elected by the Investors (each, an "Investor Director");

(b) as soon as practicable, but in any event within 30 days after the end of each quarter, an unaudited profit or loss statement, a statement of cash flows as compared to the budget and the comparable period for the prior year, an unaudited balance sheet as of the end of such quarter and a written summary of operations, each of which has been prepared in accordance with reporting practices and methodologies approved by the Board of Directors, which in all events shall be consistent with prior reporting practices for earlier periods and fairly present the financial condition of the Company and its results of operation for the period specified;

(c) as soon as practicable, but in any event 30 days prior to the end of each fiscal year, a budget for the next fiscal year forecasting the Company's revenues, expenses and cash position on a month-to-month basis for the upcoming fiscal year, and, as soon as prepared, any other budgets or revised budgets prepared by the Company; and

(d) as soon as practicable following the end of each fiscal quarter, an updated capitalization table, certified by the Company's Chief Financial Officer.

2.2 **Inspection.** The Company shall permit each Major Holder, at such Major Holder's expense, to visit and inspect the Company's properties, to examine its books of account and records and to discuss the Company's affairs, finances and accounts with its officers, all at such reasonable times and at reasonable intervals as may be requested by the Major Holder; provided, however, that the Company shall not be obligated pursuant to this Section 2.2 to provide access to any information which it reasonably considers to be a trade secret or similar confidential information or any information with respect to which the Company may be legally bound to maintain confidentiality.

2.3 **Confidentiality.** Each Investor agrees that such Investor will keep confidential and will not disclose, divulge, or use for any purpose (other than to monitor its investment in the Company or exercise its rights under this Agreement) any confidential information obtained from the Company (including notice of the Company's intention to file a registration statement), unless such confidential information (a) is known or becomes known to the public in general (other than as a result of a breach of this Section 2.3 by such Investor), (b) is or has been independently developed or conceived by the Investor without use of the Company's confidential information, or (c) is or has been made known or disclosed to the Investor by a third party without a breach of any obligation of confidentiality such third party may have to the Company; provided, however, that an Investor may disclose confidential information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with monitoring its investment in the Company, if such professionals agree to be bound by the provisions of this Section 2.3; (ii) to any prospective purchaser of any Registrable Securities from such Investor, if such prospective purchaser agrees to be bound by the provisions of this Section 2.3; (iii) to any existing or

prospective affiliated entity or person, including, any partner, member, stockholder, or wholly owned subsidiary of such Investor in the ordinary course of business, if such prospective purchaser agrees to be bound by the provisions of this Section 2.3; or (iv) as may otherwise be required by law, provided that the Investor promptly notifies the Company of such disclosure and takes reasonable steps to minimize the extent of any such required disclosure. For the avoidance of doubt, each Investor shall be responsible for any breach of this Section 2.3 by any other person or entity to which it is permitted to disclose any Confidential Information pursuant to this Section 2.3. Notwithstanding the foregoing, or any other provision in this Agreement or any other agreement between an Investor that is a venture capital fund and the Company, the Company understands and agrees that such Investors and their representatives are in the business of evaluating technologies and the potential development plans of a large number of companies. In the course of their respective businesses, such Investors are provided access to a variety of, and a steady stream of information regarding, many companies' business plans, ideas and projections. Accordingly, the Company acknowledges that any such Investor, its representatives and its affiliates may have in the past or may in the future hold discussions with, evaluate an investment in or develop an investment relationship with one or more companies who could be deemed to be competitive with the Company. Therefore, the use of confidential information, to the extent such use is confined to the employees or representatives of such Investor, in evaluating, making or managing such investments or investment relationships shall not be deemed to be a violation of this Agreement.

2.4 **Right of First Offer.** Subject to the terms and conditions specified in this Section 2.4, the Company hereby grants to each holder of Preferred Stock a right of first offer with respect to future sales by the Company of its Shares (as hereinafter defined). A holder of Preferred Stock who chooses to exercise the right of first offer may designate as purchasers under such right itself or its partners or affiliates, including Affiliated Funds and Affiliated Transferees, in such proportions as it deems appropriate.

Each time the Company proposes to offer any shares of, or securities convertible into or exercisable for any shares of, any class of its capital stock ("Shares"), the Company shall first make an offering of such Shares to each holder of Preferred Stock in accordance with the following provisions:

(a) The Company shall deliver a notice (the "RFO Notice") to the holders of Preferred Stock stating (i) its bona fide intention to offer such Shares, (ii) the number of such Shares to be offered, and (iii) the price and terms, if any, upon which it proposes to offer such Shares.

(b) Within 20 calendar days after delivery of the RFO Notice, the holder of Preferred Stock may elect to purchase or obtain, at the price and on the terms specified in the RFO Notice, up to that portion of such Shares which equals the proportion that the number of shares of Common Stock issued and held, or issuable upon conversion and exercise of all convertible or exercisable securities then held, by such holder of Preferred Stock bears to the sum of (i) the total number of shares of Common Stock then outstanding (assuming full conversion and exercise of all convertible or exercisable securities) and (ii) shares of Common Stock issued or issuable (unless otherwise provided for in the preceding clause (i)) to employees,

consultants or directors pursuant to a stock option plan, restricted stock plan, or other stock plan approved by the Board of Directors. Such purchase shall be completed at the same closing as that of any third party purchasers or at an additional closing thereunder. The Company shall promptly, in writing, inform each holder of Preferred Stock that purchases all the shares available to it (each, a "Fully Exercising Holder") of any other holder of Preferred Stock's failure to do likewise. During the 10-day period commencing after receipt of such information, each Fully Exercising Holder shall be entitled to obtain that portion of the Shares for which holders of Preferred Stock were entitled to subscribe but which were not subscribed for by the holders of Preferred Stock that is equal to the proportion that the number of shares of Common Stock that are Registrable Securities issued and held, or issuable upon conversion and exercise of all convertible or exercisable securities then held, by such Fully-Exercising Holder bears to the total number of shares of Common Stock then outstanding (assuming full conversion and exercise of all convertible or exercisable securities).

(c) The Company may, during the 45-day period following the expiration of the period provided in subsection 2.4(b) hereof, offer the remaining unsubscribed portion of the Shares to any person or persons at a price not less than, and upon terms no more favorable to the offeree than those specified in the RFO Notice. If the Company does not enter into an agreement for the sale of the Shares within such period, or if such agreement is not consummated within 60 days of the execution thereof, the right provided hereunder shall be deemed to be revived and such Shares shall not be offered unless first reoffered to the holders of Preferred Stock in accordance herewith.

(d) The right of first offer in this Section 2.4 shall not be applicable to Exempt Securities (as defined in the Restated Certificate) and any shares of Preferred Stock to be issued under the Purchase Agreement.

2.5 Qualified Small Business Stock Status. In the event that the Company proposes to take an action or engage in a transaction that would reasonably be expected to result in the Shares no longer being "qualified small business stock" within the meaning of Section 1202(c) of the Internal Revenue Code of 1986, as amended (the "Code"), the Company shall notify the Investors and consult in good faith to devise a mutually agreeable and reasonable alternative course of action or transaction structure that would preserve such status. In addition, the Company shall submit to the Investors and to the Internal Revenue Service any reports that may be required under Section 1202(d)(1)(C) of the Code and any related Treasury Regulations. In addition, within ten (10) days after any

Investor has delivered to the Company a written request therefor, the Company shall deliver to such Investor a written statement informing the Investor whether, in the Company's good-faith judgment after a reasonable investigation, such Investor's interest in the Company constitutes "qualified small business stock" as defined in Section 1202(c) of the Code, or would constitute "qualified small business stock," if determination of whether stock constitutes "qualified small business stock" were made by taking into account the modifications set forth in Section 1045(b)(4) of the Code. The Company's obligation to furnish a written statement pursuant to this Section 2.5 shall continue notwithstanding the fact that a class of the Company's stock may be traded on an established securities market.

2.6 **Matters Requiring Investor Director Approval.** The Company hereby covenants and agrees with each of the Investors that it shall not, without approval of the Board of Directors, which approval must include the affirmative vote of at least two of the Investor Directors:

(a) make any loan or advance to, or own any stock or other securities of, any subsidiary or other corporation, partnership, or other entity unless it is wholly owned by the Company;

(b) make any loan or advance to any person, including, any employee or director, except advances and similar expenditures in the ordinary course of business or under the terms of an employee stock or option plan approved by the Board of Directors;

(c) guarantee any indebtedness except for trade accounts of the Company or any subsidiary arising in the ordinary course of business;

(d) make any investment other than investments in prime commercial paper, money market funds, certificates of deposit in any United States bank having a net worth in excess of $100,000,000 or obligations issued or guaranteed by the United States of America, in each case having a maturity not in excess of one year;

(e) incur any aggregate indebtedness in excess of $50,000 that is not already included in a Board-approved budget, other than trade credit incurred in the ordinary course of business;

(f) enter into or be a party to any transaction with any director, officer or employee of the Company or any "associate" (as defined in Rule 12b-2 promulgated under the Exchange Act) of any such person;

(g) hire, fire, or change the compensation of the executive officers, including approving any option plans;

(h) change the principal business of the Company, enter new lines of business, or exit the current line of business;

(i) sell, transfer, license, pledge or encumber technology or intellectual property (other than immaterial licenses granted in the ordinary course of business);

(j) increase the size of the options pool; or

(k) enter into or be a party to any contract research organization (CRO) agreement that is not already included in a Board-approved budget; provided, however. that the Company further covenants and agrees that it shall not enter into any such agreement that involves obligations of the Company in excess of $500,000, whether or not included in a Board-approved budget, without first providing the Board of Directors with prior notice thereof.

2.7 **Board Matters.**

(a) Unless otherwise determined by the vote of a majority of the directors then in office, the Board of Directors shall meet at least quarterly in accordance with an agreed-upon schedule. The Company shall reimburse its directors or observers for all reasonable out-of-pocket travel expenses incurred (consistent with the Company's travel policy) in connection with attending meetings of the Board of Directors as directors or observers. Any committee established by the Board of Directors shall include at least one Investor Director.

(b) The Company will purchase directors and officers insurance with a carrier and in a reasonable amount satisfactory to the Board of Directors. In the event the Company merges with another entity and is not the surviving corporation, or transfers all of its assets, the Company shall use best efforts to require any successors of the Company to either (i) assume Company's obligations with respect to indemnification of Directors or (ii) provide indemnification protection that is equal to or better than the Company's existing indemnification obligations to its Directors.

3. **Miscellaneous.**

3.1 **Termination.** This Agreement shall terminate, and have no further force and effect, upon the earliest of: (a) five years after a Qualified IPO; (b) a Liquidation Transaction (as defined in the Restated Certificate); or (c) when all shares held by the Investors are eligible to be sold without restriction under Rule 144(k) within any 90-day period.

3.2 **Entire Agreement.** This Agreement constitutes the entire agreement between the parties hereto pertaining to the subject matter hereof, and any and all other written or oral agreements relating to the subject matter hereof existing between the parties hereto, including, without limitation, the Prior Agreement, are expressly canceled.

3.3 **Successors and Assigns.** Except as otherwise provided in this Agreement, the terms and conditions of this Agreement shall inure to the benefit of and be binding upon the respective permitted successors and assigns of the parties (including transferees of any of the Preferred Stock or any Common Stock issued upon conversion thereof). Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and assigns any rights, remedies, obligations, or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement; provided, however, that an Investor that is a venture capital fund may assign or transfer such rights to its affiliates (including, without limitation, its Affiliated Transferees).

3.4 **Amendments and Waivers.** Any term of this Agreement may be amended or waived only with the written consent of the Company and the holders of at least 60% of the Registrable Securities then outstanding; provided, however, any amendment or waiver of the rights granted to the Major Holders in Section 2 above shall require the consent of 60% in interest of the Registrable Securities held by the Major Holders and any amendment or waiver of the rights granted to Investors in Section 2 above shall require the consent of 60% in interest of the Registrable Securities held by Investors. Notwithstanding the foregoing, if any such amendment or waiver has the effect of adversely affecting a particular Major Holder's

shares of a series of Preferred Stock in a manner that is not proportionate to the shares of the same series held by other Major Holders, then such amendment or waiver shall require the consent of the adversely affected Major Holder. Notwithstanding anything to the contrary herein, this Agreement may be amended with only the written consent of the Company for the sole purpose of including additional purchasers of Preferred Stock as "Investors" and "Holders." Any amendment or waiver effected in accordance with this paragraph shall be binding upon each party to this Agreement, whether or not such party has signed such amendment or waiver, each future holder of all such Registrable Securities, and the Company.

3.5 **Notices.** Unless otherwise provided, any notice required or permitted by this Agreement shall be in writing and shall be deemed sufficient upon delivery, when delivered personally or by overnight courier or sent by facsimile, or 48 hours after being deposited in the U.S. mail, as certified or registered mail, with postage prepaid, and addressed to the party to be notified at such party's address or facsimile number as set forth on Exhibit A and/or Exhibit B hereto, as applicable, or as subsequently modified by written notice.

3.6 **Severability.** If one or more provisions of this Agreement are held to be unenforceable under applicable law, such provision shall be excluded from this Agreement, the balance of this Agreement shall be interpreted as if such provision were so excluded and shall be enforceable in accordance with its terms.

3.7 **Governing Law.** This Agreement and all acts and transactions pursuant hereto shall be governed, construed and interpreted in accordance with the laws of the State of Delaware, without giving effect to principles of conflicts of laws.

3.8 **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.

3.9 **Titles and Subtitles.** The titles and subtitles used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

3.10 **Aggregation of Stock.** All shares of the Preferred Stock held or acquired by affiliated entities or persons shall be aggregated together for the purpose of determining the availability of any rights under this Agreement.

[Signature Pages Follow Immediately]

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

COMPANY:

ACLARIS THERAPEUTICS, INC.

By: /s/ Neal Walker
Name: Neal Walker
Title: Chief Executive Officer

Address:

Suite 400
101 Lindenwood Drive
Malvern PA 19355
Attn: Neal Walker

COMPANY'S COUNTERPART SIGNATURE PAGE TO AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

VIVO VENTURES FUND VII, L.P.

By: Vivo Ventures VII, LLC
its General Partner

By: /s/ Albert Cha
Name: Albert Cha
Title: Managing Partner

VIVO VENTURES VII AFFILIATES FUND VI, L.P.

By: Vivo Ventures VII, LLC
its General Partner

By: /s/ Albert Cha
Name: Albert Cha
Title: Managing Partner

BEACON BIOVENTURES FUND III LIMITED PARTNERSHIP

By its sole general partner:
Beacon Bioventures Advisors Fund III Limited Partnership
By its sole general partner: Impresa Management LLC

By: /s/ Mary F. Pendergast
Name: Mary F. Pendergast
Title: Vice President

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

SOFINNOVA VENTURE PARTNERS VIII, L.P.

By: Sofinnova Management VIII, L.L.C.
its General Partner

By: /s/ Anand Mehra
Name: Anand Mehra
Title: Managing Member

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ Kamil Ali-Jackson
Signature

Kamil Ali-Jackson
Name

/s/ Michael S. Jackson
Signature (if more than one)*

Michael S. Jackson
Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By:
Signature

(print name and title of signatory)

Address and Facsimile:

902 Trail Run Lane

West Chester, PA 19382

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

Signature

Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Steven L. Basta Trust
Name of Investor (please print)

By: /s/ Steven L. Basta
Signature

Steven L. Basta TTEE
(print name and title of signatory)

Address and Facsimile:

590 Berkeley Avenue

Menlo Park, CA 94025

*If joint investors, both must sign.

INVESTOR COUNTERPART SIGNATURE PAGE TO AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ Mark H Bradshaw
Signature

Mark H Bradshaw
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By: _____
Signature

(print name and title of signatory)

Address and Facsimile:

18 W 48th Street

Apt 8D

New York, NY 10036

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ Christopher J. Burns
Signature

Christopher J. Burns
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By: _____
Signature

(print name and title of signatory)

Address and Facsimile:

1806 Hawkweed Way

Malvern, PA 19355

* If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ Francis Cano 9/23/14
Signature

Francis Cano

Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By:
Signature

(print name and title of signatory)

Address and Facsimile:

11 Acorn Lane

Los Altos, CA 94022

650-949-1750 Fax

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ Kelly Copeland
Signature

Kelly Copeland
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By:
Signature

(print name and title of signatory)

Address and Facsimile:

422 Sabine Avenue

Wynnewood, PA 19096

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ Evan Dick
Signature

Evan Dick
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By:
Signature

(print name and title of signatory)

Address and Facsimile:

104 Potters Pond Drive

Phoenixville, PA 19460

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ Daniel Dubin
Signature

Daniel Dubin
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By:
Signature

(print name and title of signatory)

Address and Facsimile:

Daniel Dubin

33 Lilly Pond Lane

Chester Springs, PA 19425

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ Douglas L. Gessl
Signature

Douglas L. Gessl
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By:
Signature

(print name and title of signatory)

Address and Facsimile:

33 Lilly Pond Lane

Chester Springs, PA 19425

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ James W. Glasheen
Signature

James W. Glasheen
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By: _____
Signature

(print name and title of signatory)

Address and Facsimile:

26 Fairview Avenue

Corte Madera, CA 94925

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ Tim Henkel
Signature

Tim Henkel
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By: _____
Signature

(print name and title of signatory)

Address and Facsimile:

1113 Cymry Drive

Berwyn, PA 19312

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ Jeffrey R Metz
Signature

Jeffrey R Metz

Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By: Signature

(print name and title of signatory)

Address and Facsimile:

341 Strawtown Road

New City, NY 10956

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ Yves Quintin
Signature

Yves Quintin
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Morgan Stanley Ira Fbo Yves Quintin
Name of Investor (please print)

By: /s/ Yves Quintin
Signature

Yves Quintin, owner
(print name and title of signatory)

Address and Facsimile:

c/o Duane Morris LLP

30 South 17th Street

Philadelphia, PA 19103

Fax: 215-689-3818

* If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ David Pfeiffer
Signature

David Pfeiffer
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By:
Signature

(print name and title of signatory)

Address and Facsimile:

405 Foothill Dr.

Blue Bell, PA 19422

*If joint investors, both must sign.

INVESTOR COUNTERPART SIGNATURE PAGE TO AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ Frank Ruffo
Signature

Frank Ruffo
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By:
Signature

(print name and title of signatory)

Address and Facsimile:

223 Prince William Way

Chalfont, PA 18914

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ John L. Sbarbaro III
Signature

John L. Sbarbaro III
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By:
Signature

(print name and title of signatory)

Address and Facsimile:

3473 Wells Road

Malvern, PA 19355

*If joint investors, both must sign.

INVESTOR COUNTERPART SIGNATURE PAGE TO AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

Signature

Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Scion Fund III LLC
Name of Investor (please print)

By: /s/ Joseph Siletto
Signature

Joseph Siletto, Manger
(print name and title of signatory)

Address and Facsimile:

70 Country Way

Needham, MA 02492

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written,

Individuals Sign Below:

/s/ Margaret Long Shaver
Signature

Margaret Long Shaver
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By:
Signature

(print name and title of signatory)

Address and Facsimile:

347 Aubrey Road

Wynnewood, PA 19096-1812

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ Neil Solomon
Signature

Neil Solomon
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By:
Signature

(print name and title of signatory)

Address and Facsimile:

304 E. 41st St

Apt 806A

New York, NY 10017

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ Raymond Solomon
Signature

Raymond Solomon
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By:
Signature

(print name and title of signatory)

Address and Facsimile:

1 Bridge Street

Suite 83

Irvington N.Y. 10533

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

Signature

Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

STNY Investors General Partnership
Name of Investor (please print)

By: /s/ Sandra Stoneman
Signature

Sandra Stoneman, General Partner
(print name and title of signatory)

Address and Facsimile:

707 Corinthian Ave

Phila PA 19130

215-689-4420

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ Frank Ruffo
Signature

Frank Ruffo
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By:
Signature

(print name and title of signatory)

Address and Facsimile:

223 Prince William Way

Chalfont, PA 18914

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

Signature

Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

2007 Irrevocable Trust of Stephen A. Tullman
Name of Investor (please print)

By: /s/ Lisa Tullman
Signature

Lisa Tullman
(print name and title of signatory)

Address and Facsimile:

11 Kyle Drive

Chester Springs, PA 19425

Attn: Stephen A. Tullman

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ James C. Walker
Signature

James C. Walker
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By: _____
Signature

(print name and title of signatory)

Address and Facsimile:

1215 Basset Lane

Chester Springs, PA 19425

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ H. Jeffrey Wilkins
Signature

H. Jeffrey Wilkins
Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By: _____
Signature

(print name and title of signatory)

Address and Facsimile:

106 Brinkley Drive

Sellersville, PA 18960

*If joint investors, both must sign.

The parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Individuals Sign Below:

/s/ Lisa L Wittmer
Signature

Lisa L Wittmer

Name

Signature (if more than one)*

Name (if more than one)*

Corporations, Trusts, Partnerships, Limited Liability Companies, Retirement Plans, Retirement Accounts or Other Entities Sign Below:

Name of Investor (please print)

By: Signature

(print name and title of signatory)

Address and Facsimile:

673 Thomas Jefferson

Wayne PA 19087

*If joint investors, both must sign.

INVESTOR COUNTERPART SIGNATURE PAGE TO AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

EXHIBIT A

SERIES A INVESTORS

Series A Preferred Stock

Name/Address	No. of Shares
Vivo Ventures Fund VII, L.P. 575 High Street, Suite 201 Palo Alto, CA 94301 Attn: Albert Cha Fax: (650) 688-0815	8,467,943
Vivo Ventures VII Affiliates Fund, L.P. 575 High Street, Suite 201 Palo Alto, CA 94301 Attn: Albert Cha Fax: (650) 688-0815	184,557
Beacon Bioventures Fund III Limited Partnership c/o Fidelity Biosciences One Main Street, 13th Floor Cambridge, MA 02142 Attn: Mary F. Pendergast Fax: (617) 231-2425	8,652,500
Sofinnova Venture Partners VIII, L.P. 3000 Sand Hill Road, Building 4 Suite 250 Menlo Park, CA 94025 Attn: Anand Mehra Fax: (650) 322-2037	2,000,000
Kamil Ali-Jackson and Michael S. Jackson 902 Trail Run Lane West Chester, PA 19382	10,000
Steven L. Basta Trust 590 Berkeley Avenue Menlo Park, CA 94025	100,000

Attn: Steven L. Basta

Name/Address	No. of Shares
Mark Bradshaw 18 W 48th Street Apt 8D New York, NY 10036	100,000
Christopher Burns 1806 Hawkweed Way Malvern, PA 19355	50,000
Frank Cano 11 Acorn Lane Los Altos, CA 94022	75,000
Kelly Copeland 422 Sabine Avenue Wynnewood, PA 19096	20,000
Evan Dick 104 Potters Pond Drive Phoenixville, PA 19460	50,000
Dan Dubin 73 Deer Path Lane Weston, MA 02473	40,000
Douglas L. Gessl 33 Lily Pond Lane Chester Springs, PA 19425	30,000
Jim Glasheen 26 Fairview Avenue Corte Madera, CA 94925	50,000
Tim Henkel 1113 Cymry Drive Berwyn, PA 19312	50,000
Lochridge Family Investment, LLC 1350 Lochridge Road Bloomfield Hills, MI 48302 Attn: Steven K. Grekin	75,000

Name/Address	No. of Shares
Jeffrey Metz 341 Strawtown Road New City, NY 10956	100,000
David Pfeiffer 405 Foothill Drive Bluebell, PA 19422	50,000
Yves Quintin Duane Morris LLP 30 South 17th Street Philadelphia, PA 19103	15,000
Morgan Stanley Smith Barney as custodian for Yves Quintin - IRA Attn: Yves Quintin Duane Morris LLP 30 South 17th Street Philadelphia, PA 19103	75,000
Frank Ruffo 223 Prince William Way Chalfront, PA 18966	20,000

John Sbarbaro 3473 Wells Road Malvern, PA 19355	10,000
Scion Fund III, LLC 70 Country Way Needham, MA 02492 Attn: Joseph Siletto	110,000
Margaret L. Shaver 347 Aubrey Road Wynnewood, PA 19096-1812	20,000
Neil Solomon 304 E 41st Street Apt 806A New York, NY 10017	50,000

Name/Address	No. of Shares
Ray Solomon 1 Bridge Street Suite 83 Irvington, NY 10533	175,000
STNY Investors General Partnership 707 Corinthian Avenue Philadelphia, PA 19130 Attn: Sandra G. Stoneman	20,000
2007 Irrevocable Trust of Stephen A. Tullman 11 Kyle Drive Chester Springs, PA 19425 Attn: Stephen A. Tullman	110,000
Jim Walker 1215 Basset Lane Chester Springs, PA 19425	100,000
Jeff Wilkins 106 Brinkley Drive Sellersville, PA 18960	40,000
Lisa Wittmer 673 Thomas Jefferson Road Wayne, PA 19087	40,000
TOTAL:	**20,890,000**

EXHIBIT B

SERIES B INVESTORS

Series B Preferred Stock

Name/Address	No. of Shares First Tranche	No. of Shares Second Tranche (if applicable)
Vivo Ventures Fund VII, L.P. 575 High Street, Suite 201 Palo Alto, CA 94301 Attn: Albert Cha Fax: (650) 688-0815	1,779,400	1,779,400
Vivo Ventures VII Affiliates Fund, L.P. 575 High Street, Suite 201 Palo Alto, CA 94301 Attn: Albert Cha Fax: (650) 688-0815	38,782	38,782
Beacon Bioventures Fund III	1,818,182	1,818,182

Limited Partnership c/o Fidelity Biosciences One Main Street, 13th Floor Cambridge, MA 02142 Attn: Mary F. Pendergast Fax: (617) 231-2425		
Sofinnova Venture Partners VIII, L.P. 3000 Sand Hill Road, Building 4 Suite 250 Menlo Park, CA 94025 Attn: Anand Mehra Fax: (650) 322-2037	2,424,242	2,424,242
Kamil Ali-Jackson and Michael S. Jackson 902 Trail Run Lane West Chester, PA 19382	2,901	2,901
Steven L. Basta Trust 590 Berkeley Avenue Menlo Park, CA 94025 Attn: Steven L, Basta	29,012	29,012

Name/Address	No. of Shares First Tranche	No. of Shares Second Tranche (if applicable)
Christopher Burns 1806 Hawkweed Way Malvern, PA 19355	14,506	14,506
Frank Cano 11 Acorn Lane Los Altos, CA 94022	21,759	21,759
Kelly Copeland 422 Sabine Avenue Wynnewood, PA 19096	5,802	5,802
Dan Dubin 73 Deer Path Lane Weston, MA 02473	11,605	11,605
Douglas L. Gessl 33 Lily Pond Lane Chester Springs, PA 19425	20,000	20,000
Jim Glasheen 26 Fairview Avenue Corte Madera, CA 94925	14,506	14,506
Tim Henkel 1113 Cymry Drive Berwyn, PA 19312	14,506	14,506
Jeffrey Metz 341 Strawtown Road New City, NY 10956	29,012	29,012
Morgan Stanley Smith Barney as custodian for Yves Quintin - IRA Attn: Yves Quintin Duane Morris LLP 30 South 17th Street Philadelphia, PA 19103	26,111	26,111

Name/Address	No. of Shares First Tranche	No. of Shares Second Tranche (if applicable)
Frank Ruffo 223 Prince William Way Chalfont, PA 18966	5,802	5,802

Scion Fund III, LLC 70 Country Way Needham, MA 02492 Attn: Joseph Siletto	31,913	31,913
Margaret L. Shaver 347 Aubrey Road Wynnewood, PA 19096-1812	7,802	7,802
Neil Solomon 304 E 41st Street Apt 806A New York, NY 10017	14,506	14,506
Ray Solomon 1 Bridge Street Suite 83 Irvington, NY 10533	50,771	50,771
STNY Investors General Partnership 707 Corinthian Avenue Philadelphia, PA 19130 Attn: Sandra G. Stoneman	5,802	5,802
2007 Irrevocable Trust of Stephen A. Tullman 11 Kyle Drive Chester Springs, PA 19425 Attn: Stephen A. Tullman	31,913	31,913
Jim Walker 1215 Basset Lane Chester Springs, PA 19425	29,012	29,012
Jeff Wilkins 106 Brinkley Drive Sellersville, PA 18960	11,605	11,605

Name/Address	**No. of Shares First Tranche**	**No. of Shares Second Tranche (if applicable)**
Lisa Wittmer 673 Thomas Jefferson Road Wayne, PA 19087	11,605	11,605
TOTAL:	**6,451,057**	

Exhibit 10.6

AMENDED AND RESTATED SUBLEASE
BETWEEN
NEXEPTION, INC.
AND
ACLARIS THERAPEUTICS, INC.

THIS Amended and Restated Sublease ("Sublease") is effective as of the 3rd day of March 2014 by NeXeption, Inc., a Delaware corporation ("Sublandlord"), whose address is 101 Lindenwood Drive, Suite 400, Malvern, Pennsylvania 19355 and Aclaris Therapeutics, Inc., a Delaware corporation ("Subtenant"), whose address is 101 Lindenwood Drive, Suite 400, Malvern, Pennsylvania 19355.

RECITALS

WHEREAS, Brandywine Operating Partnership, L.P., as landlord ("Landlord"), and NeXeption, Inc. (formerly known as NeXeption Therapeutics, Inc.), as tenant ("Tenant"), entered into a lease dated May 3, 2011 (the "Master Lease"), as amended August 22, 2011, November 10, 2011, December 7, 2011, and July 10, 2012, with regard to 12,082 square feet of office space ("Premises") located at Valleybrook III, 101 Lindenwood Drive, Suite 400, Malvern, Pennsylvania 19355 (the "Building");

WHEREAS, NeXeption, Inc., as Sublandlord ("Sublandlord") desires to lease 3,110 square feet of the Premises in the Building to Aclaris Therapeutics, Inc., Subtenant as set forth on Exhibit A attached hereto ("Sublease"); and

NOW THEREFORE, in consideration of and the agreement of each other, Sublandlord and Subtenant agree:

1. Incorporation of Recitals. The recitals set forth above, the Master Lease and the Sublease referred to therein and the exhibits attached hereto are hereby incorporated herein by reference as if set forth in full in the body of this Sublease. Capitalized terms not otherwise defined herein shall have the meanings given to them in the Sublease or Master Lease, as applicable.

2. Sublease Space and Term. The term of the Sublease for the Sublease Space shall commence on September 1, 2013 ("Sublease Commencement Date") and end on November 30, 2016 ("Sublease Term"), unless such term is extended by mutual written agreement of the Sublandlord and the Subtenant in accordance with Section 14 below. The portion of the Premises Subleased to Subtenant may be increased or decreased up to a maximum of twenty percent (20%) of the Sublease Space by mutual written agreement of the Sublandlord and Subtenant.

3. Rent. As set forth in the Master Lease, Fixed Rent, Additional Rent, and other charges hereunder are sometimes hereinafter collectively called "Rent". Subtenant shall pay to Sublandlord as Rent for the Sublease Space the following:

(a) Fixed Rent. Commencing on the Sublease Commencement Date, Subtenant shall pay to Sublandlord the following Fixed Rent for the Sublease Space per month, in advance, without notice, demand, offset, or counterclaim, on the first day of each month during the Sublease Term:

TIME PERIOD	PER RSF	MONTHLY INSTALLMENT	ANNUAL FIXED RENT
09/01/2013 to 11/30/2013	$ 20.50**	$ 5,312.92*	$ 63,755.00*
12/01/2013 to 11/30/2014	$ 21.00**	$ 5,442.50	$ 65,310.00
12/01/2014 to 11/30/2015	$ 21.50**	$ 5,572.08	$ 66,865.00
12/01/2015 to 11/30/2016	$ 22.00**	$ 5,701.67	$ 68,420.00

*pro-rated in accordance with Section 3(c) below.
**Plus any charges set forth in Articles 6 and 7 of the Master Lease

(b) Additional Rent. Commencing on the Sublease Commencement Date and in each calendar year thereafter during the Sublease Term (as same may be extended), Subtenant shall also pay Sublandlord as Additional Rent, its pro rata share of Sublandlord's Allocated Share of the following Recognized Expenses, without notice, demand, offset, or counterclaim, to the extent such Recognized Expenses exceed the Recognized Expenses in the Base Year:

(1) Operating Expenses. Subtenant shall pay its pro rata share (as hereinafter defined) of Sublandlord's Allocated Share of Operating Expenses. Subtenant's pro rata share shall be calculated by dividing the rentable square footage of the Sublease Space by the rentable square footage of the Building.

(2) Taxes. Subtenant shall pay its pro rata share of Taxes, calculated on the basis of the square footage of the Sublease Space.

(c) Payment. Subtenant shall pay to Sublandlord, without notice, demand, offset, or counterclaim, all Rent in advance on the first day of each calendar month during the Sublease Term by check sent to Sublandlord at 101 Lindenwood Drive, Suite 400, Malvern, Pennsylvania 19355. If the Sublease Term begins on other than the first day of a month or ends on other than the last day of a month, Rent will be prorated on a per diem basis. Subtenant's payments of the items discussed in Section 3 (b) above shall be paid to Sublandlord and otherwise made as and when due under the Master Lease

(d) Electricity Charges. Subtenant shall pay electric utility charges for the Sublease Space to Sublandlord in an amount to be agreed to by the parties. Sublandlord shall not be liable for any interruption or delay in electric or any other utility service for any reasons unless caused by the gross negligence or willful misconduct of Sublandlord or its agents, Sublandlord shall have the right to change the electric and other utility providers to the Sublease Space at any time.

(e) Subtenant's Allocated Share for the Sublease Space is 26% of Sublandlord's Allocated Share, as such share may be adjusted, from time to time, on the basis of corresponding changes in the square footage of the Sublease Space.

5. Services. Sublandlord shall not be obligated to provide any services related to the Sublease Space to Subtenant; provided, however, that Sublandlord shall promptly make written request for services from Landlord upon its receipt of a request for such services from Subtenant. Subtenant's sole source of such services is Landlord, pursuant to the Master Lease. Sublandlord makes no representation about the availability or adequacy of such services.

6. Security Deposit. Subtenant shall pay a Security Deposit for the Sublease Space in the amount of $10,000.00 to Sublandlord. The Security Deposit shall be retained by Sublandlord until the earlier of expiration or termination of the Sublease Term (as it may be extended) and shall be returned to Subtenant, subject to the terms of the Master Lease, within thirty (30) days of Subtenant's written request for same.

7. The Master Lease. This Sublease is subject to the Master Lease. Except as set forth in this Sublease, the provisions of the Master Lease are applicable to this Sublease as though Sublandlord were the Landlord under the Master Lease and Subtenant were the Tenant under the Master Lease. Subtenant shall not cause or allow to be caused any default under the Master Lease. Subtenant shall defend, indemnify and hold harmless Sublandlord against any loss, liability, and expenses (including attorneys' fees and costs) arising out of any default under the Master Lease caused by Subtenant, and Sublandlord shall defend, indemnify and hold harmless Subtenant against any loss, liability, and expenses (including reasonable attorneys' fees and costs) arising out of any default under the Master Lease caused by Sublandlord.

8. Use. The Sublease Space shall be used and occupied by Subtenant for general, executive and administrative office purposes, provided that same are not in violation of any law, statute, ordinance or regulation, and for no other purpose. Subtenant's use of the Sublease Space shall be in compliance with all applicable governmental laws, rules and regulations and ordinances, and other applicable codes, including, but not limited to, the requirements of the occupational Safety and Health Administration and of any board of fire underwriters or like organization having jurisdiction over the Sublease Space; provided, however, that if during the Sublease Term, there are any changes to such applicable laws, rules, regulations, ordinances, and codes, Subtentant shall not be required to make or bring the Sublease Space itself into compliance with such applicable laws, rules, and regulations. Subtenant represents that Subtenant's North American Industry Classification Number is 325412.

9. Brokerage. Sublandlord and Subtenant represent that neither party has had any dealing with or entered into any agreement with any broker in connection with this Sublease. Each party shall defend, indemnify and hold harmless the other from any and all claims, liabilities, causes of action, obligations, losses, costs and expenses of any nature, including but not limited to attorneys' fees, arising out of a misrepresentation pursuant to this Section 9 by such indemnifying party. Such indemnification shall survive the expiration or earlier termination of this Sublease.

10. Furnishings. Subtenant may use the furnishings on the Premises without charge, subject to the terms of the Master Lease.

11. Assignment and Subletting. Subtenant shall not assign, transfer or hypothecate this Sublease or any interest herein or sublet the Sublease Space or any part thereof. This Sublease shall not, nor shall any interest herein, be assignable by Subtenant as to the interest of Subtenant by operation of law or by merger, consolidation or asset sale of Subtenant's business with or to an affiliate or a third party. Sublandlord may, without the consent of Subtenant, assign, transfer or hypothecate this Sublease or any interest herein to any Affiliate of Sublandlord or to a third party who acquires all or substantially all of the assets or stock of Sublandlord or with which Sublandlord may be consolidated or merged.

12. Insurance.

(a) Subtenant shall obtain and keep in force at all times during the Sublease Term, at its own expense, commercial general liability insurance including contractual liability and personal injury liability and all similar coverage, with combined single limits of $1,000,000 on account of bodily injury to or death of one or more persons as the result of any one accident or disaster and on account of damage to property, or in such other amounts as Sublandlord may from time to time reasonably require. Subtenant shall also require its movers to procure and deliver to Sublandlord a certificate of insurance naming Sublandlord as an additional insured.

(b) All liability insurance required hereunder shall not be subject to cancellation without at least thirty (30) days prior notice to all insureds, and shall name Sublandlord as additional insured and Subtenant as insured, as their interests may appear, and, if requested by Sublandlord, shall also name as an additional insured any mortgagee or holder of any mortgage which may be or become a lien upon any part of the Sublease Space. Unless the Sublandlord and Subtenant agree otherwise, prior to the commencement of the Sublease Term, Subtenant shall provide Sublandlord with certificates which evidence that the coverages required have been obtained for the policy periods. Subtenant shall also furnish to Sublandlord throughout the Sublease Term replacement certificates at least thirty (30) days prior to the expiration dates of the then current policy or policies. All the insurance required under this Sublease shall be issued by insurance companies authorized to do business in the Commonwealth of Pennsylvania with a financial rating of at least an A-X as rated in the most recent edition of Best's Insurance Reports and in business for the past five (5) years. The limit of any such insurance shall not limit the liability of Subtenant hereunder. If Subtenant fails to procure and maintain such insurance, Sublandlord may, but shall not be required to, procure and maintain the same, at Subtenant's expense to be reimbursed by Subtenant as Additional Rent within ten (10) days of written demand. Any deductible under such insurance policy or self-insured retention under such insurance policy in excess of Fifty Thousand ($50,000) must be approved by Sublandlord in writing prior to issuance of such policy. Subtenant shall not self-insure without Sublandlord's prior written consent. The policy limits set forth herein shall be subject to periodic review, and Sublandlord reserves the right to require that Subtenant increase the liability coverage limits if, in the reasonable opinion of Sublandlord, the coverage becomes inadequate or is less than

commonly maintained by tenants of similar buildings in the area making similar uses.

13. Representations.

(a) Sublandlord Representations and Warranties. Sublandlord represents and warrants to Subtenant that:

(1) A true and complete copy of the Master Lease is attached hereto as Exhibit B, and no agreements in regard to the same exist (whether written, oral or through conduct) except as set forth in Exhibit B.

(2) The Master Lease is in full force and effect and there has occurred no default or event of default under the Master Lease by the Landlord or the Sublandlord and no fact exists or event has occurred that, with the passage of time, could result in such a default by Landlord or Sublandlord;

(3) The Sublease has been duly authorized, executed and delivered by the Sublandlord and represents the valid, binding and enforceable obligations of Sublandlord.

(b) Subtenant Representations and Warranties. Subtenant represents and warrants to Sublandlord that:

(1) Subtenant is a corporation duly organized, validly existing, and in good standing under the laws of its jurisdiction of organization, with full organizational power and authority to conduct its business as it is now being conducted, to own or use the properties and assets that it purports to own or use and perform all its obligations under the contracts to which it is a party.

(2) The execution, delivery and performance by Subtenant of this Sublease has been duly, and validly authorized by the board of directors of Subtenant and no other corporate act or proceeding on the part of Subtenant is necessary to authorize the execution, delivery or performance of this Sublease or the consummation of the transaction contemplated herein.

(3) It has the full right and authority to enter into this Sublease without the consent and approval of any third party.

14. Termination of Sublease; Automatic Renewal. This Sublease may not be terminated by either Sublandlord or Subtenant prior to November 30, 2016, except in accordance with the terms of the Master Lease. After the expiration of the initial Sublease Term and subject to extension of the Master Lease, this Sublease shall automatically renew for a minimum of two (2) consecutive six (6) month periods, unless Subtenant provides Sublandlord with prior written notice of nonrenewal at least six (6) months prior to expiration of the initial Sublease Term and any subsequent renewal term. Upon expiration of the initial Sublease Term or any subsequent renewal

term, Subtenant's rights to the possession and use of the Sublease Space shall end absolutely as of the expiration date. All provisions in the Master Lease regarding any rights of Landlord, Sublandlord or Sublandlord and any of Subtenant's liabilities arising prior to such expiration which are intended to continue after the expiration of the initial Sublease Term or any subsequent renewal term shall survive such expiration in accordance with such Master Lease. Notwithstanding the foregoing, within ninety (90) calendar days follwing a Change of Control, Subtenant may terminate this Sublease by providing Sublandlord with forty-five (45) calendar days prior written notice of such termination. For purposes of this Sublease, "Change of Control" means, in each case as approved by the board of directors of Sublandlord and the requisite stockholders of Sublandlord, (i) any consolidation or merger of Suhlandlord, with or into any other corporation or other entity or person, or any other corporate reorganization, in which the stockholders of Sublandlord immediately prior to such consolidation, merger or reorganization, own, in the aggregate, less than 50% of the surviving entity's voting power and/or outstanding capital stock immediately after such consolidation, merger or reorganization, or any transaction or series of related transactions (including any transaction which results from an option agreement or binding letter of intent with a third party) to which Sublandlord or any of its stockholders is a party in which in excess of 50% of Sublandlord's voting power and/or outstanding capital stock is transferred, or pursuant to which any person or group of affiliated persons obtains in excess of 50% of Sublandlord's voting power and/or outstanding capital stock, excluding any consolidation or merger effected exclusively to change the domicile of Sublandlord; or (ii) any sale, lease or other disposition (including through a board of directors and stockholder approved division or spin-off transaction) of all or substantially all of the assets of Sublandlord and/or any of its subsidiaries or any sale, lease, exclusive license (or substantially exclusive license or agreement) or other disposition of all or substantially all of Sublandlord intellectual property, as reasonably determined based upon the potential earning power of the assets or intellectual property; provided, however that none of the following shall constitute a Change of Control: (A) transfers of capital stock by an existing stockholder as a result of death or otherwise for estate planning purposes or to such stockholder's affiliates or to any of Sublandlord's other existing stockholders, (B) issuances of equity securities of Sublandlord in connection with financings for working capital and other general corporate purposes; or (C) any sale, lease or other disposition (including through a board of directors and stockholder approved division or spin-off transaction) of all or substantially all of the assets of a portfolio company under the common control or management of Sublandlord and/or any of its subsidiaries or affiliates.

15. Binding Effect. **Subtenant specifically acknowledges and agrees that Article 22 of the Master Lease concerning Confession of Judgment is and shall remain in full force and effect in accordance with its terms.**

IN WITNESS WHEREOF, Sublandlord and Subtenant have duly executed this Sublease on the date first above written.

SUBLANDLORD:
NEXEPTION, INC.
By:

WITNESS:

_____

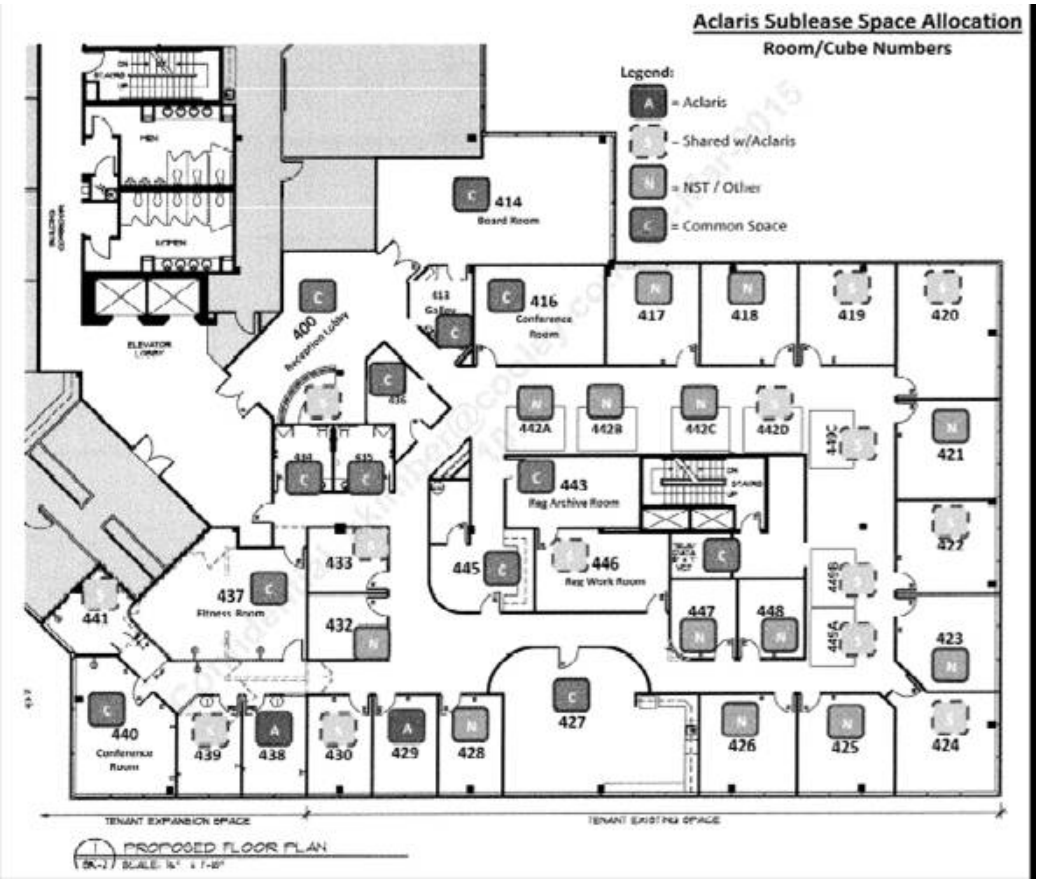
By: /s/ Douglas Gessl
Name: Douglas Gessl
Title: CFO & COO

SUBTENANT:
ACLARIS THERAPEUTICS, INC.

ATTEST:

_____

By: /s/ Neal Walker
Name: Neal Walker
Title: President & CEO



FIRST AMENDMENT TO AMENDED AND RESTATED SUBLEASE
BETWEEN
NEXEPTION, INC.
AND
ACLARIS THERAPEUTICS, INC.

This First Amendment to the Amended and Restated Sublease ("First Amendment") made and entered into this 2nd day of December 2014, by and between **NEXEPTION, INC.** hereinafter referred to as "Sublandlord" and **ACLARIS THERAPEUTICS, INC,** hereinafter referred to as "Subtenant".

WHEREAS, Sublandlord currently leases certain premises consisting of 12,082 rentable square feet of space commonly referred to as Suite 400 ("Premises") located at 101 Lindenwood Drive, Malvern, Pennsylvania 19355 ("Building") from Landlord and subleases 3,110 rentable square feet of such Premises to Subtenant pursuant to that certain Amended and Restated Sublease dated March 3, 2014, hereinafter referred to as "Sublease," the Premises being more particularly described therein; and

WHEREAS, Sublandlord and Subtenant wish to amend the Sublease as follows;

NOW, THEREFORE, in consideration of and the agreement of each other, Sublandlord and Subtenant agree that the Sublease shall be and the same is hereby amended as follows:

1. Incorporation of Recitals. The recitals set forth above, the Sublease referred to therein and the exhibits attached hereto are hereby incorporated herein by reference as if set forth in full in the body of this First Amendment. Capitalized terms not otherwise defined herein shall have the meanings given to them in the Sublease.

2. The following sections of the Sublease Term are amended as follows:

a. Section 2 Sublease Space and Term. The second sentence in Section 2 of the Sublease is deleted in its entirety and replaced with the following sentence:

"The parties agree to increase the portion of the Premises subleased to Subtenant from 3,110 to 4,833 square feet which such increase is greater than twenty percent (20%) of the Sublease Space.

b. Section 3(a) Fixed Rent, Commencing on January 1,2015, Subtenant shall pay Sublandlord the following Fixed Rent for the Sublease Space per month, in advance, without notice, demand, offset, or counterclaim, on the first day of each month during the Sublease Term:

Time Period	Rent/RSF	Monthly Installment	Annual Fixed Rent
01/01/15 to 11/30/15**	$ 21.50*	$ 8,659.12	$ 103,909.50
12/1/15 to 11/30/16**	$ 22.00*	$ 8,860.50	$ 106,326.00

* Plus any charges set forth in Articles 6 and Article 7 of the Master Lease

** Subtenant will pay electric costs pursuant to Article 6 of the Master Lease and janitorial costs in the amount of $1.26 per rentable square feet of the Premises.

c. Section 3(e) Additional Rent. Commencing on January 1, 2015, Subtenant's Allocated Share for the Sublease Space is 40% of Sublandlord's Allocated Share, as such share may be adjusted, from time to time, on the basis of corresponding changes in the square footage of the Sublease Space.

3. Binding Effect. Except as expressly amended hereby, the Sublease remains in full force and effect in accordance with its terms. **Subtenant specifically acknowledges and agrees that Article 22(f) of the Lease concerning Confession of Judgment is and shall remain in full force and effect in accordance with its terms.**

IN WITNESS WHEREOF, Sublandlord and Subtenant have duly executed this First Amendment on the date first above written.

SUBLANDLORD:
NEXEPTION, INC.
By:

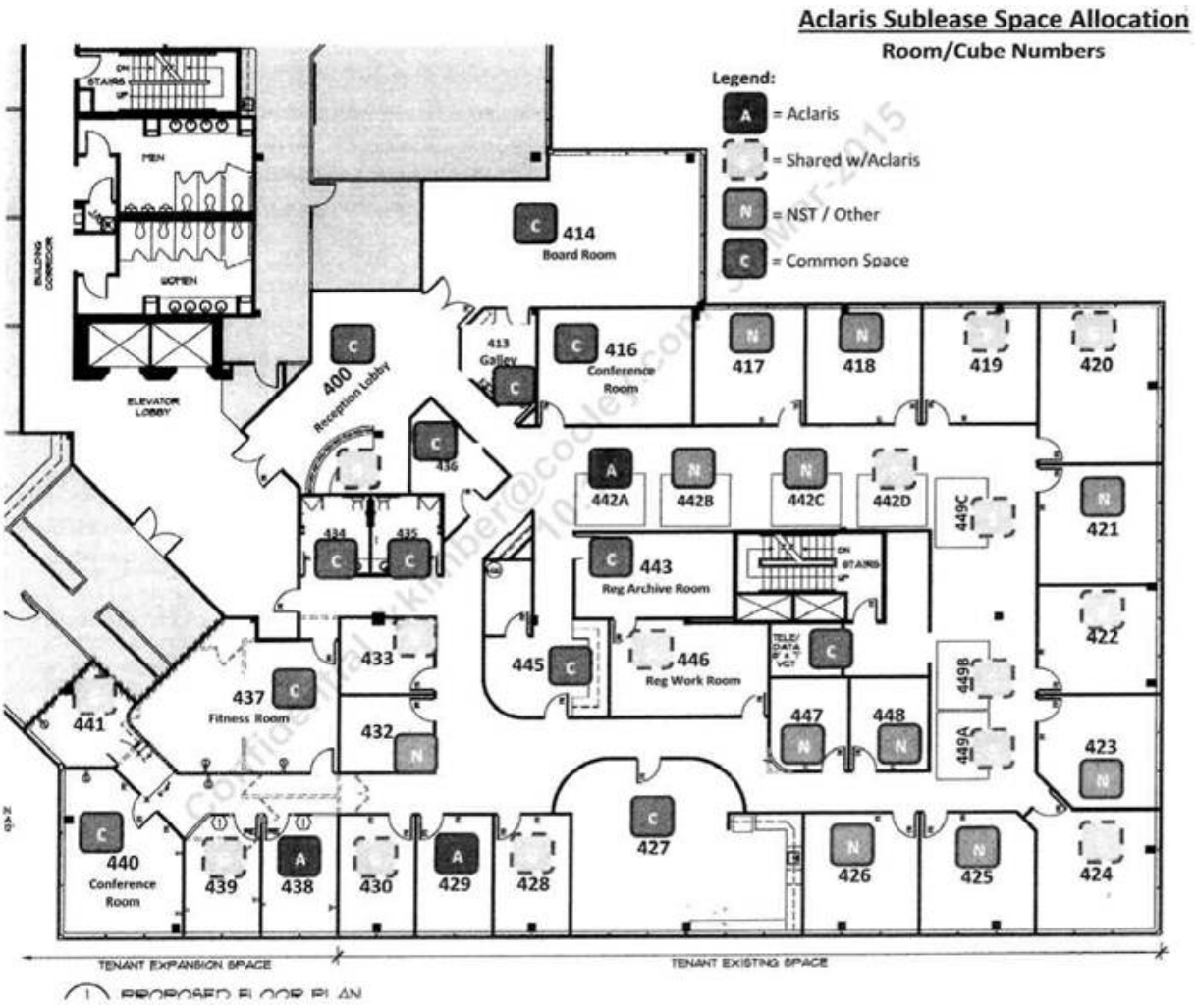
WITNESS:
/s/ Kamil Ali-Jackson

By: /s/ Stephen A. Tullman
Name: Stephen A. Tullman
Title: President and CEO

SUBTENANT:
ACLARIS THERAPEUTICS, INC.

ATTEST:
/s/ Germie Benoit-Rosa

By: /s/ Neal Walker
Name: Neal Walker
Title: President and CEO



SECOND AMENDMENT TO AMENDED AND RESTATED SUBLEASE
BETWEEN
NST CONSULTING, LLC
AND
ACLARIS THERAPEUTICS, INC.

This Second Amendment to the Amended and Restated Sublease ("Second Amendment") made and entered into this 14th day of August 2015 and effective as of April 1, 2015 ("Effective Date"), by and between **NST CONSULTING, LLC,** hereinafter referred to as "Sublandlord" and **ACLARIS THERAPEUTICS, INC,** hereinafter referred to as "Subtenant".

WHEREAS, Sublandlord currently leases certain premises consisting of 15,272 rentable square feet of space commonly referred to as Suite 400 ("Premises") located at 101 Lindenwood Drive, Malvern, Pennsylvania 19355 ("Building") from Landlord and subleases 4,833 rentable square feet of such Premises to Subtenant pursuant to that certain Amended and Restated Sublease dated March 3, 2014, as amended, hereinafter referred to as "Sublease," the Premises being more particularly described therein; and

WHEREAS, NEXEPTION, INC. assigned all rights and obligations under the Sublease to its Affiliate, NST Consulting, LLC pursuant to an Assignment and Assumption Agreement dated August 11, 2015; and

WHEREAS, Sublandlord and Subtenant wish to further amend the Sublease as follows;

NOW, THEREFORE, in consideration of and the agreement of each other, Sublandlord and Subtenant agree that the Sublease shall be and the same is hereby amended as follows:

1. Incorporation of Recitals. The recitals set forth above, the Sublease referred to therein and the exhibits attached hereto are hereby incorporated herein by reference as if set forth in full in the body of this Second Amendment. Capitalized terms not otherwise defined herein shall have the meanings given to them in the Sublease.

2. The following sections of the Sublease Term are amended as follows:

a. Exhibit A to the Sublease is deleted in its entirety and replaced with the new Exhibit A attached hereto and made a part hereof. All references to Exhibit A in the Sublease are references to this new Exhibit A.

b. Section 2 Sublease Space and Term. Section 2 of the Sublease is deleted in its entirety and replaced with the following new paragraph:

"Commencing on the date of Subtenant's possession of the Expansion Premises, the Sublease Space shall include both the Original Premises and the Expansion Premises. The term of the Sublease for the Original Premises portion of the Sublease Space shall commence on September 1, 2013 ("Sublease Commencement Date") and end on November 30, 2019 and the term for the Expansion Premises portion of the Sublease Space shall commence on the date of Subtenant's possession of the Expansion Premises and end on November 30, 2019 (collectively, the "Sublease Term"), unless such term is extended by mutual written agreement of the Sublandlord and the Subtenant in accordance with Section 14 below. Commencing on the date of Subtenant's possession of the Expansion Premises, the parties agree to increase the portion of the Premises subleased to Subtenant from 4,833 to 8,777 square feet which such increase is greater than twenty percent (20%) of the Sublease Space. Exhibit A is hereby deleted and replaced with the new Exhibit A attached hereto and made a part hereof."

c. Section 3(a) Fixed Rent. Commencing on the date of Subtenant's possession of the Expansion Premises, Subtenant shall pay Sublandlord the following Fixed Rent for the Sublease Space per month, in advance, without notice, demand, offset, or counterclaim, on the first day of each month during the Sublease Term:

Time Period	Rent/RSF	Monthly Installment
12/01/14 3/30/15**	$ 21.50*	$ 8,659.13
4/01/15 10/31/15**	$ 21.50*	$ 10,010.04
11/01/15 to 11/30/15**	$ 21.50*	$ 15,725.46
12/1/15 to 11/30/16**	$ 22.00*	$ 16,091.17
12/01/16 to 11/30/17**	$ 22.50*	$ 16,456.88
12/01/17 to 11/30/18**	$ 23.00*	$ 16,822.58
12/01/18 to 11/30/19**	$ 23.50*	$ 17,188.29

* Plus any charges set forth in Articles 6 and Article 7 of the Master Lease

** Subtenant will pay electric costs pursuant to Article 6 of the Master Lease and janitorial costs in the amount of $1.26 per rentable square feet of the Premises.

c. Section 3(e) Additional Rent. Commencing on the date of Subtenant's possession of the Expansion Premises, Subtenant's Allocated Share for the Sublease Space is 40% of Sublandlord's Allocated Share, as such share may be adjusted, from time to time, on the basis of corresponding changes in the square footage of the Sublease Space.

d. Section 6 Security Deposit. Commencing on the date of Subtenant's possession of the Expansion Premises, Subtenant's Security Deposit shall be increased from $10,000 to $20,000.

3. Binding Effect. Except as expressly amended hereby, the Sublease remains in full force and effect in accordance with its terms. **Subtenant specifically acknowledges and agrees that Article 22(f) of the Lease concerning Confession of Judgment is and shall remain in full force and effect in accordance with its terms.**

IN WITNESS WHEREOF, Sublandlord and Subtenant have duly executed this Second Amendment on the date first above written.

SUBLANDLORD:
NST CONSULTING, LLC
By:

WITNESS:

_____

By: /s/ Douglas Gessl
Name: Douglas Gessl
Title: CFO and Member

SUBTENANT:
ACLARIS THERAPEUTICS, INC.

ATTEST:

_____

By: /s/ Neal Walker
Name: Neal Walker
Title: President and CEO

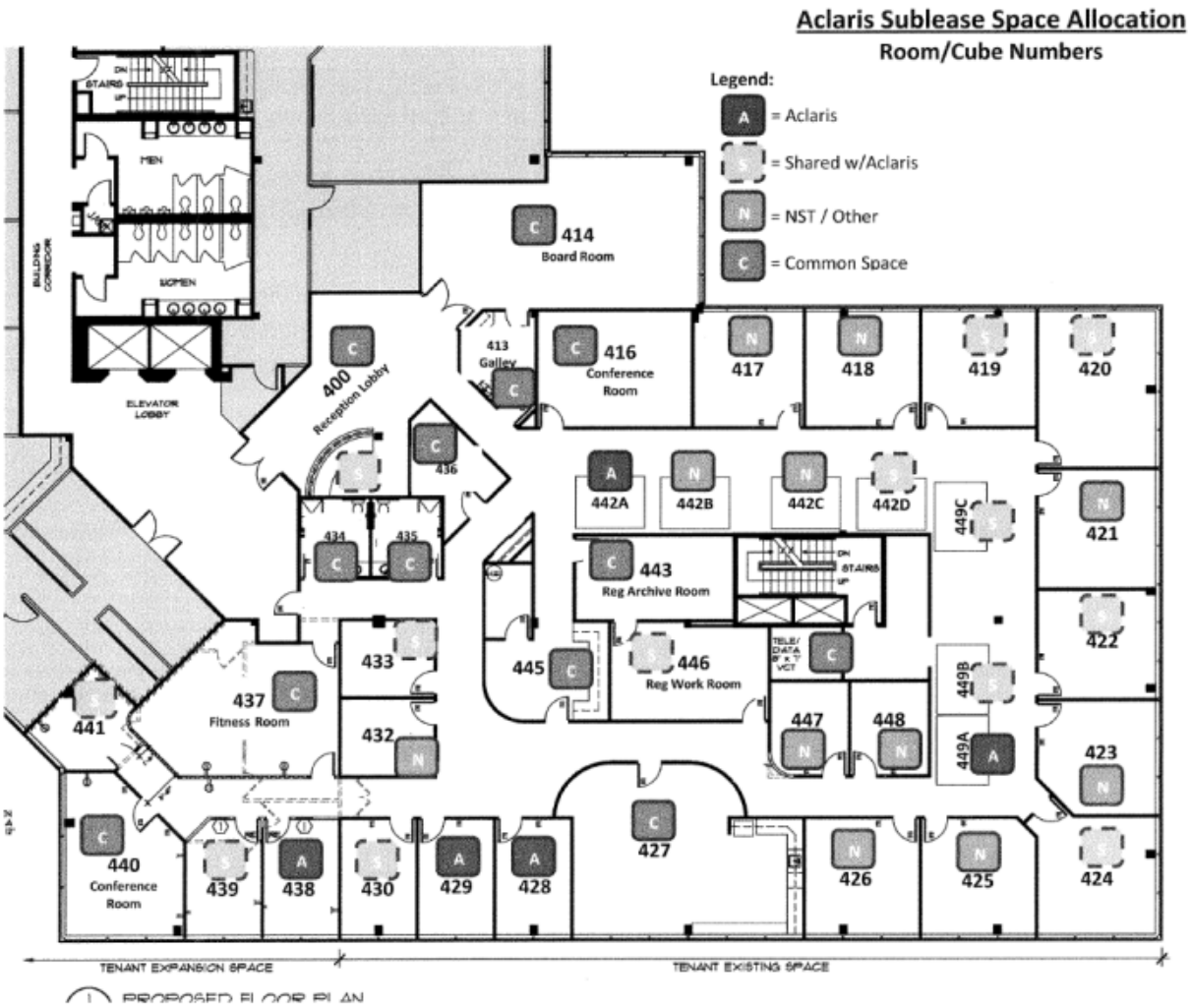


Exhibit 10.7

ACLARIS THERAPEUTICS, INC.

AMENDED AND RESTATED 2012 EQUITY COMPENSATION PLAN

The purpose of the Aclaris Therapeutics, Inc. Amended and Restated 2012 Equity Compensation Plan (the "Plan") is to provide (i) designated employees of Aclaris Therapeutics, Inc. (the "Company") and its subsidiaries, (ii) certain consultants and advisors who perform services for the Company or its subsidiaries and (iii) non-employee members of the Board of Directors of the Company (the "Board") with the opportunity to receive grants of incentive stock options, nonqualified stock options and stock awards. The Company believes that the Plan will encourage the participants to contribute materially to the growth of the Company, thereby benefiting the Company's stockholders, and will align the economic interests of the participants with those of the stockholders.

1. Administration

(a) Committee. The Plan shall be administered and interpreted by the Board or by a committee consisting of members of the Board, which shall be appointed by the Board. After an initial public offering of the Company's stock as described in Section 19(b) (a "Public Offering"), the Plan shall be administered by a committee of Board members, which may consist of "outside directors" as defined under section 162(m) of the Internal Revenue Code of 1986, as amended (the "Code"), and related Treasury regulations and "non-employee directors" as defined under Rule l6b-3 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). However, the Board may ratify or approve any grants as it deems appropriate, and the Board shall approve and administer all grants made to non-employee directors. The committee may delegate authority to one or more subcommittees as it deems appropriate. To the extent that a committee or subcommittee administers the Plan, references in the Plan to the "Board" shall be deemed to refer to the committee or subcommittee.

(b) Board Authority. The Board shall have the sole authority to (i) determine the individuals to whom grants shall be made under the Plan, (ii) determine the type, size and terms of the grants to be made to each such individual, (iii) determine the time when the grants will be made and the duration of any applicable exercise or restriction period, including the criteria for exercisability and the acceleration of exercisability, (iv) amend the terms of any previously issued grant, and (v) deal with any other matters arising under the Plan.

(c) Board Determinations. The Board shall have full power and authority to administer and interpret the Plan, to make factual determinations and to adopt or amend such rules, regulations, agreements and instruments for implementing the Plan and for the conduct of its business as it deems necessary or advisable, in its sole discretion. The Board's interpretations of the Plan and all determinations made by the Board pursuant to the powers vested in it hereunder shall be conclusive and binding on all persons having any interest in the Plan or in any awards granted hereunder. All powers of the Board shall be executed in its sole discretion, in the best interest of the Company, not as a fiduciary, and in keeping with the objectives of the Plan and need not be uniform as to similarly situated individuals.

2. Grants

Awards under the Plan may consist of grants of incentive stock options as described in Section 5 ("Incentive Stock Options"), nonqualified stock options as described in Section 5 ("Nonqualified Stock Options") (Incentive Stock Options and Nonqualified Stock Options are collectively referred to as "Options") and stock awards as described in Section 6 ("Stock Awards") (hereinafter collectively referred to as "Grants"). All Grants shall be subject to the terms and conditions set forth herein and to such other terms and conditions consistent with this Plan as the Board deems appropriate and as are specified in writing by the Board to the individual in a grant instrument or an amendment to the grant instrument (the "Grant Instrument"). All Grants shall be made conditional upon the Grantee's acknowledgement, in writing or by acceptance of the Grant, that all decisions and determination of the Board shall be final and binding on the Grantee, his or her beneficiaries and any other person having or claiming an interest under such Grant. The Board shall approve the form and provisions of each Grant Instrument. Grants under a particular Section of the Plan need not be uniform as among the grantees.

3. Shares Subject to the Plan

(a) Shares Authorized. Subject to adjustment as described below, the aggregate number of shares of common stock of the Company ("Company Stock") that may be issued or transferred under the Plan is 1,725,961 shares, each of which may be issued as an incentive stock option; provided, however, such number of shares shall automatically be increased to 1,980,708 shares, each of which may be issued as an incentive stock option, upon the consummation of the "Second Tranche Closing" under the Series B Preferred Stock Purchase Agreement dated as of September 30, 2014 among the Company and the other parties listed therein. The shares may be authorized but unissued shares of Company Stock or reacquired shares of Company Stock, including shares purchased by the Company on the open market for purposes of the Plan. If and to the extent Options granted under the Plan terminate, expire, or are canceled, forfeited, exchanged or surrendered without having been exercised or if any Stock Awards (including restricted Stock Awards received upon the exercise of Options) are forfeited, the shares subject to such Grants shall again be available for purposes of the Plan.

(b) Adjustments. If there is any change in the number or kind of shares of Company Stock outstanding (i) by reason of a stock dividend, spinoff, recapitalization, stock split, or combination or exchange of shares, (ii) by reason of a merger, reorganization or consolidation, (iii) by reason of a reclassification or change in par value, or (iv) by reason of any other extraordinary or unusual event affecting the outstanding Company Stock as a class without the Company's receipt of consideration, or if the value of outstanding shares of Company Stock is substantially reduced as a result of a spinoff or the Company's payment of an extraordinary dividend or distribution, the maximum number of shares of Company Stock available for Grants, the maximum number of shares of Company Stock that any individual participating in the Plan may be granted in any year, the number of shares covered by outstanding Grants, the kind of shares issued under the Plan, and the price per share of such Grants may be appropriately adjusted by the Board to reflect any increase or decrease in the number of, or change in the kind or value of, issued shares of Company Stock to preclude, to the extent practicable, the enlargement or dilution of rights and benefits under such Grants; provided, however, that any

fractional shares resulting from such adjustment shall be eliminated. Any adjustments determined by the Board shall be final, binding and conclusive.

4. Eligibility for Participation

(a) Eligible Persons. All employees of the Company and its subsidiaries ("Employees"), including Employees who are officers or members of the Board, and members of the Board who are not Employees ("Non-Employee Directors") shall be eligible to participate in the Plan. Consultants and advisors who perform services for the Company or any of its subsidiaries ("Key Advisors") shall be eligible to participate in the Plan if the Key Advisors render bona fide services to the Company or its subsidiaries, the services are not in connection with the offer and sale of securities in a capital-raising transaction, and the Key Advisors do not directly or indirectly promote or maintain a market for the Company's securities.

(b) Selection of Grantees. The Board shall select the Employees, Non-Employee Directors and Key Advisors to receive Grants and shall determine the number of shares of Company Stock subject to a particular Grant in such manner as the Board determines. Employees, Key Advisors and Non-Employee Directors who receive Grants under this Plan shall hereinafter be referred to as "Grantees".

5. Granting of Options

(a) Number of Shares. The Board shall determine the number of shares of Company Stock that will be subject to each Grant of Options to Employees, Non-Employee Directors and Key Advisors.

(b) Type of Option and Price.

(i) The Board may grant Incentive Stock Options that are intended to qualify as "incentive stock options" within the meaning of section 422 of the Code or Nonqualified Stock Options that are not intended so to qualify or any combination of Incentive Stock Options and Nonqualified Stock Options, all in accordance with the terms and conditions set forth herein. Incentive Stock Options may be granted only to Employees. Nonqualified Stock Options may be granted to Employees, Non-Employee Directors and Key Advisors.

(ii) The purchase price (the "Exercise Price") of Company Stock subject to an Option shall be determined by the Board and may be equal to or greater than the Fair Market Value (as defined below) of a share of Company Stock on the date the Option is granted; provided, however, that an Incentive Stock Option may not be granted to an Employee who, at the time of grant, owns stock possessing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or any parent or subsidiary of the Company, unless the Exercise Price per share is not less than 110% of the Fair Market Value of Company Stock on the date of grant.

(iii) "If the Company Stock is publicly traded, then the Fair Market Value per share shall be determined as follows: (x) if the principal trading market for the Company Stock is a national securities exchange or the Nasdaq National Market, the last reported sale price thereof on the relevant date or (if there were no trades on that date) the latest preceding date upon

which a sale was reported, or (y) if the Company Stock is not principally traded on such exchange or market, the mean between the last reported "bid" and "asked" prices of Company Stock on the relevant date, as reported on Nasdaq or, if not so reported, as reported by the National Daily Quotation Bureau, Inc. or as reported in a customary financial reporting service, as applicable and as the Board determines. If the Company Stock is not publicly traded or, if publicly traded, is not subject to reported transactions or "bid" or "asked" quotations as set forth above, the Fair Market Value per share shall be as determined by the Board based upon a good faith attempt to value the Common Stock accurately and computed in accordance with applicable regulations of the Internal Revenue Service, including, but not limited to, the requirements of Section 409A."

(c) Option Term. The Board shall determine the term of each Option. The term of any Option shall not exceed ten years from the date of grant. However, an Incentive Stock Option that is granted to an Employee who, at the time of grant, owns stock possessing more than ten percent of the total combined voting power of all classes of stock of the Company, or any parent or subsidiary of the Company, may not have a term that exceeds five years from the date of grant.

(d) Exercisability of Options.

(i) Options shall become exercisable in accordance with such terms and conditions, consistent with the Plan, as may be determined by the Board and specified in the Grant Instrument. The Board may accelerate the exercisability of any or all outstanding Options at any time for any reason.

(ii) The Board may provide in a Grant Instrument that the Grantee may elect to exercise part or all of an Option before it otherwise has become exercisable. Any shares so purchased shall be restricted shares ("Restricted Shares") and shall be subject to a repurchase right in favor of the Company during a specified restriction period, with the repurchase price equal to the Exercise Price, or such other restrictions as the Board deems appropriate.

(e) Termination of Employment, Disability or Death.

(i) Except as provided below, an Option may only be exercised while the Grantee is employed by, or providing service to, the Company as an Employee, Key Advisor or member of the Board. In the event that a Grantee ceases to be employed by, or provide service to, the Company for any reason other than Disability, death, or termination for Cause, any Option which is otherwise exercisable by the Grantee shall terminate unless exercised within 90 days after the date on which the Grantee ceases to be employed by, or provide service to, the Company (or within such other period of time as may be specified by the Board), but in any event no later than the date of expiration of the Option term. Except as otherwise provided by the Board, any of the Grantee's Options that are not otherwise exercisable as of the date on which the Grantee ceases to be employed by, or provide service to, the Company shall terminate as of such date.

(ii) In the event the Grantee ceases to be employed by, or provide service to, the Company on account of a termination for Cause by the Company, any Option held by the

Grantee shall terminate as of the date the Grantee ceases to be employed by, or provide service to, the Company. In addition, notwithstanding any other provisions of this Section 5, if the Board determines that the Grantee has engaged in conduct that constitutes Cause at any time while the Grantee is employed by, or providing service to, the Company or after the Grantee's termination of employment or service, any Option held by the Grantee shall immediately terminate, and the Grantee shall automatically forfeit all shares underlying any exercised portion of an Option for which the Company has not yet delivered the share certificates,

upon refund by the Company of the Exercise Price paid by the Grantee for such shares. Upon any exercise of an Option, the Company may withhold delivery of share certificates pending resolution of an inquiry that could lead to a finding resulting in a forfeiture.

(iii) In the event the Grantee ceases to be employed by, or provide service to, the Company because the Grantee is Disabled, any Option which is otherwise exercisable by the Grantee shall terminate unless exercised within one year after the date on which the Grantee ceases to be employed by, or provide service to, the Company (or within such other period of time as may be specified by the Board), but in any event no later than the date of expiration of the Option term. Except as otherwise provided by the Board, any of the Grantee's Options which are not otherwise exercisable as of the date on which the Grantee ceases to be employed by, or provide service to, the Company shall terminate as of such date.

(iv) If the Grantee dies while employed by, or providing service to, the Company or within 90 days after the date on which the Grantee ceases to be employed or provide service on account of a termination specified in Section 5(e)(i) above (or within such other period of time as may be specified by the Board), any Option that is otherwise exercisable by the Grantee shall terminate unless exercised within one year after the date on which the Grantee ceases to be employed by, or provide service to, the Company (or within such other period of time as may be specified by the Board), but in any event no later than the date of expiration of the Option term. Except as otherwise provided by the Board, any of the Grantee's Options that are not otherwise exercisable as of the date on which the Grantee ceases to be employed by, or provide service to, the Company shall terminate as of such date.

(v) For purposes of this Section 5(e) and Section 6:

(A) The term "Company" shall mean the Company and its parent and subsidiary corporations or other entities, as determined by the Board.

(B) "Employed by, or provide service to, the Company" shall mean employment or service as an Employee, Key Advisor or member of the Board (so that, for purposes of exercising Options and satisfying conditions with respect to Stock Awards, a Grantee shall not be considered to have terminated employment or service until the Grantee ceases to be an Employee, Key Advisor and member of the Board), unless the Board determines otherwise.

(C) "Disability" shall mean a Grantee's becoming disabled within the meaning of section 22(e)(3) of the Code, within the meaning of the Company's long-term disability plan applicable to the Grantee, or as otherwise determined by the Board.

(D) "Cause" shall mean, except to the extent specified otherwise by the Board, a finding by the Board that the Grantee (i) has breached his or her employment or service contract with the Company, (ii) has engaged in disloyalty to the Company, including, without limitation, fraud, embezzlement, theft, commission of a felony or proven dishonesty, (iii) has disclosed trade secrets or confidential information of the Company to persons not entitled to receive such information, (iv) has breached any written noncompetition or nonsolicitation agreement between the Grantee and the Company or (v) has engaged in such other behavior detrimental to the interests of the Company as the Board determines.

(f) Exercise of Options. A Grantee may exercise an Option that has become exercisable, in whole or in part, by delivering a notice of exercise to the Company with payment of the Exercise Price. The Grantee shall pay the Exercise Price for an Option as specified by the Board (w) in cash, (x) with the approval of the Board, by delivering shares of Company Stock owned by the Grantee (including Company Stock acquired in connection with the exercise of an Option, subject to such restrictions as the Board deems appropriate) and having a Fair Market Value on the date of exercise equal to the Exercise Price or by attestation (on a form prescribed by the Board) to ownership of shares of Company Stock having a Fair Market Value on the date of exercise equal to the Exercise Price, (y) after a Public Offering, payment through a broker in accordance with procedures permitted by Regulation T of the Federal Reserve Board, or (z) by such other method as the Board may approve. The Board may authorize loans by the Company to Grantees in connection with the exercise of an Option, upon such terms and conditions as the Board, in its sole discretion, deems appropriate. Shares of Company Stock used to exercise an Option shall have been held by the Grantee for the requisite period of time to avoid adverse accounting consequences to the Company with respect to the Option. The Grantee shall pay the Exercise Price and the amount of any withholding tax due (pursuant to Section 7) at the time of exercise.

(g) Limits on Incentive Stock Options. Each Incentive Stock Option shall provide that, if the aggregate Fair Market Value of the stock on the date of the grant with respect to which Incentive Stock Options are exercisable for the first time by a Grantee during any calendar year, under the Plan or any other stock option plan of the Company or a parent or subsidiary, exceeds $100,000, then the Option, as to the excess, shall be treated as a Nonqualified Stock Option. An Incentive Stock Option shall not be granted to any person who is not an Employee of the Company or a parent or subsidiary (within the meaning of section 424(f) of the Code).

6. Stock Awards

The Board may issue or transfer shares of Company Stock to an Employee, Non-Employee Director or Key Advisor under a Stock Award, upon such terms as the Board deems appropriate. The following provisions are applicable to Stock Awards:

(a) General Requirements. Shares of Company Stock issued or transferred pursuant to Stock Awards may be issued or transferred for consideration or for no consideration, and subject to restrictions or no restrictions, as determined by the Board. The Board may establish conditions under which restrictions on Stock Awards shall lapse over a period of time or according to such other criteria as the Board deems appropriate. The period of time during

which the Stock Award will remain subject to restrictions will be designated in the Grant Instrument as the "Restriction Period."

(b) Number of Shares. The Board shall determine the number of shares of Company Stock to be issued or transferred pursuant to a Stock Award and the restrictions applicable to such shares.

(c) Requirement of Employment or Service. If the Grantee ceases to be employed by, or provide service to, the Company (as defined in Section 5(e) during a period designated in the Grant Instrument as the Restriction Period, or if other specified conditions are not met, the Stock Award shall terminate as to all shares covered by the award as to which the restrictions have not lapsed, and those shares of Company Stock must be immediately returned to the Company. The Board may, however, provide for complete or partial exceptions to this requirement as it deems appropriate.

(d) Restrictions on Transfer and Legend on Stock Certificate. During the Restriction Period, a Grantee may not sell, assign, transfer, pledge or otherwise dispose of the shares of the Stock Award except to a successor under Section 8(a). Each certificate for Stock Awards shall contain a legend giving appropriate notice of the restrictions in the Grant. The Grantee shall be entitled to have the legend removed from the stock certificate covering the shares subject to restrictions when all restrictions on such shares have lapsed. The Board may determine that the Company will not issue certificates for Stock Awards until all restrictions on such shares have lapsed, or that the Company will retain possession of certificates for Stock Awards until all restrictions on such shares have lapsed.

(e) Right to Vote and to Receive Dividends. During the Restriction Period, the Grantee shall have the right to vote shares subject to Stock Awards and to receive any dividends or other distributions paid on such shares, subject to any restrictions deemed appropriate by the Board.

(f) Lapse of Restrictions. All restrictions imposed on Stock Awards shall lapse upon the expiration of the applicable Restriction Period and the satisfaction of all conditions imposed by the Board. The Board may determine, as to any or all Stock Awards, that the restrictions shall lapse without regard to any Restriction Period.

7. Withholding of Taxes

(a) Required Withholding. All Grants under the Plan shall be subject to applicable federal (including FICA), state and local tax withholding requirements. The Company may require that the Grantee or other person receiving or exercising Grants pay to the Company the amount of any federal, state or local taxes that the Company is required to withhold with respect to such Grants, or the Company may deduct from other wages paid by the Company the amount of any withholding taxes due with respect to such Grants.

(b) Election to Withhold Shares. If the Board so permits, a Grantee may elect to satisfy the Company's income tax withholding obligation with respect to a Grant by having shares withheld up to an amount that does not exceed the Grantee's minimum applicable withholding tax rate for federal (including FICA), state and local tax liabilities. The election

must be in a form and manner prescribed by the Board and may be subject to the prior approval of the Board.

8. Transferability of Grants

(a) Nontransferability of Grants. Except as provided below, only the Grantee may exercise rights under a Grant during the Grantee's lifetime. A Grantee may not transfer those rights except (i) by will or by the laws of descent and distribution or (ii) with respect to Grants other than Incentive Stock Options, if permitted in any specific case by the Board, pursuant to a domestic relations order or otherwise as permitted by the Board. When a Grantee dies, the personal representative or other person entitled to succeed to the rights of the Grantee may exercise such rights. Any such successor must furnish proof satisfactory to the Company of his or her right to receive the Grant under the Grantee's will or under the applicable laws of descent and distribution.

(b) Transfer of Nonqualified Stock Options. Notwithstanding the foregoing, the Board may provide, in a Grant Instrument, that a Grantee may transfer Nonqualified Stock Options to family members, or one or more trusts or other entities for the benefit of or owned by family members, consistent with applicable securities laws, according to such terms as the Board may determine; provided that the Grantee receives no consideration for the transfer of an Option and the transferred Option shall continue to be subject to the same terms and conditions as were applicable to the Option immediately before the transfer.

9. Right of First Refusal; Repurchase Right

(a) Offer. Prior to a Public Offering, if at any time an individual desires to sell, encumber, or otherwise dispose of shares of Company Stock that were distributed to him or her under this Plan and that are transferable, the individual may do so only pursuant to a bona fide written offer, and the individual shall first offer the shares to the Company by giving the Company written notice disclosing: (a) the name of the proposed transferee of the Company Stock; (b) the certificate number and number of shares of Company Stock proposed to be transferred or encumbered; (c) the proposed price; (d) all other terms of the proposed transfer; and (e) a written copy of the proposed offer. Within 60 days after receipt of such notice, the Company shall have the option to purchase all or part of such Company Stock at the price and on the terms described in the written notice; provided that the Company may pay such price in installments over a period not to exceed four years, at the discretion of the Board.

(b) Sale. In the event the Company (or a stockholder, as described below) does not exercise the option to purchase Company Stock, as provided above, the individual shall have the right to sell, encumber, or otherwise dispose of the shares of Company Stock described in subsection (a) at the price and on the terms of the transfer set forth in the written notice to the Company, provided such transfer is effected within 15 days after the expiration of the option period. If the transfer is not effected within such period, the Company must again be given an option to purchase, as provided above.

(c) Assignment of Rights. The Board, in its sole discretion, may waive the Company's right of first refusal and repurchase right under this Section 9. If the Company's

right of first refusal or repurchase right is so waived, the Board may, in its sole discretion, assign such right to the remaining stockholders of the Company in the same proportion that each stockholder's stock ownership bears to the stock ownership of all the stockholders of the Company, as determined by the Board. To the extent that a stockholder has been given such right and does not purchase his or her allotment, the other stockholders shall have the right to purchase such allotment on the same basis.

(d) Purchase by the Company. Prior to a Public Offering, if a Grantee ceases to be employed by, or provide service to, the Company, the Company shall have the right to purchase all or part of any Company Stock distributed to him or her under this Plan at its then current Fair Market Value (as defined in Section 5(b)) (or at such other price as may be established in the Grant Instrument); provided, however, that such repurchase shall be made in accordance with applicable accounting rules to avoid adverse accounting treatment.

(e) Public Offering. On and after a Public Offering, the Company shall have no further right to purchase shares of Company Stock under this Section 9.

(f) Stockholder's Agreement. Notwithstanding the provisions of this Section 9, if the Board requires that a Grantee execute a stockholder's agreement with respect to any Company Stock distributed pursuant to this Plan, which contains a right of first refusal or repurchase right, the provisions of this Section 9 shall not apply to such Company Stock, unless the Board determines otherwise.

10. Change of Control of the Company

As used herein, a "Change of Control", means, in each case as approved by the Board and the requisite stockholders of the Company:

(i) any consolidation or merger of the Company with or into any other corporation or other entity or person, or any other corporate reorganization, in which the stockholders of the Company immediately prior to such consolidation, merger or reorganization, own, in the aggregate, less than 50% of the surviving entity's voting power and/or outstanding capital stock immediately after such consolidation, merger or reorganization, or any transaction or series of related transactions (including any transaction which results from an option agreement or binding letter of intent with a third party) to which the Company or any of its stockholders is a party in which in excess of 50% of the Company's voting power and/or outstanding capital stock is transferred, or pursuant to which any person or group of affiliated persons obtains in excess of 50% of the Company's voting power and/or outstanding capital stock, excluding any consolidation or merger effected exclusively to change the domicile of the Company; or

(ii) any sale, lease or other disposition (including through a Board and stockholder approved division or spin-off transaction) of all or substantially all of the assets of the Company and/or any of its subsidiaries or any sale, lease, exclusive license (or substantially exclusive license or agreement) or other disposition of all or substantially all of the Company's intellectual properly, as reasonably determined based upon the potential

earning power of the assets or intellectual property; provided, however that none of the following shall constitute a Change of Control:

(A) transfers of capital stock by an existing stockholder as a result of death or otherwise for estate planning purposes or to such stockholder's affiliates or to any of the Company's other existing stockholders, and

(B) issuances of equity securities of the Company in connection with financings for working capital and other general corporate purposes.

11. Consequences of a Change of Control

(a) Assumption of Grants. Upon a Change of Control where the Company is not the surviving corporation (or survives only as a subsidiary of another corporation), unless the Board determines otherwise, all outstanding Options that are not exercised shall be assumed by, or replaced with comparable options by the surviving corporation (or a parent or subsidiary of the surviving corporation), and outstanding Stock Awards and Restricted Shares shall be converted to Stock Awards and Restricted Shares of the surviving corporation (or a parent or subsidiary of the surviving corporation).

(b) Other Alternatives. Notwithstanding the foregoing, in the event of a Change of Control, the Board may take any of the following actions with respect to any or all outstanding Grants: the Board may (i) determine that outstanding Options shall automatically accelerate and become fully exercisable and that the restrictions and conditions on outstanding Stock Awards and Restricted Shares shall immediately lapse, (ii) require that Grantees surrender their outstanding Options in exchange for a payment by the Company, in cash or Company Stock as determined by the Board, in an amount equal to the amount by which the then Fair Market Value of the shares of Company Stock subject to the Grantee's unexercised Options exceeds the Exercise Price of the Options or (iii) after giving Grantees an opportunity to exercise their outstanding Options, terminate any or all unexercised Options at such time as the Board deems appropriate. Such surrender or termination shall take place as of the date of the Change of Control or such other date as the Board may specify. The Board shall have no obligation to take any of the foregoing actions, and, in the absence of any such actions, outstanding Options and Stock Awards shall continue in effect according to their terms (subject to any assumption pursuant to subsection (a)).

12. Requirements for Issuance or Transfer of Shares

(a) Stockholder's Agreement. The Board may require that a Grantee execute a stockholder's agreement, with such terms as the Board deems appropriate, with respect to any Company Stock issued or distributed pursuant to this Plan.

(b) Limitations on Issuance or Transfer of Shares. No Company Stock shall be issued or transferred in connection with any Grant hereunder unless and until all legal requirements applicable to the issuance or transfer of such Company Stock have been complied with to the satisfaction of the Board. The Board shall have the right to condition any Grant made to any Grantee hereunder on such Grantee's undertaking in writing to comply with such

restrictions on his or her subsequent disposition of such shares of Company Stock as the Board shall deem necessary or advisable, and certificates representing such shares may be legended to reflect any such restrictions. Certificates representing shares of Company Stock issued or transferred under the Plan will be subject to such stop-transfer orders and other restrictions as may be required by applicable laws, regulations and interpretations, including any requirement that a legend be placed thereon.

(c)Lock-Up Period. If so requested by the Company or any representative of the underwriters (the "Managing Underwriter") in connection with any underwritten offering of securities of the Company under the Securities Act of 1933, as amended (the "Securities Act"), a Grantee (including any successor or assigns) shall not sell or otherwise transfer any shares or other securities of the Company during the 30-day period preceding and the 180-day period following the effective date of a registration statement of the Company filed under the Securities Act for such underwriting (or such shorter period as may be requested by the Managing Underwriter and agreed to by the Company) (the "Market Standoff Period"). The Company may impose stop-transfer instructions with respect to securities subject to the foregoing restrictions until the end of such Market Standoff Period.

13. Amendment and Termination of the Plan

(a) Amendment. The Board may amend or terminate the Plan at any time; provided, however, that the Board shall not amend the Plan without stockholder approval if such approval is required in order to comply with the Code or other applicable laws, or to comply with applicable stock exchange requirements.

(b) Termination of Plan. The Plan shall terminate on the day immediately preceding the tenth anniversary of its effective date, unless the Plan is terminated earlier by the Board or is extended by the Board with the approval of the stockholders.

(c) Termination and Amendment of Outstanding Grants. A termination or amendment of the Plan that occurs after a Grant is made shall not materially impair the rights of a Grantee unless the Grantee consents or unless the Board acts under Section 20(b). The termination of the Plan shall not impair the power and authority of the Board with respect to an outstanding Grant. Whether or not the Plan has terminated, an outstanding Grant may be terminated or amended under Section 20(b) or may be amended by agreement of the Company and the Grantee consistent with the Plan.

14. Governing Document

The Plan shall be the controlling document. No other statements, representations, explanatory materials or examples, oral or written, may amend the Plan in any manner. The Plan shall be binding upon and enforceable against the Company and its successors and assigns.

15. Funding of the Plan

This Plan shall be unfunded. The Company shall not be required to establish any special or separate fund or to make any other segregation of assets to assure the payment of any

Grants under this Plan. In no event shall interest be paid or accrued on any Grant, including unpaid installments of Grants.

16. Rights of Participants

Nothing in this Plan shall entitle any Employee, Key Advisor, Non-Employee Director or other person to any claim or right to be granted a Grant under this Plan. Neither this Plan nor any action taken hereunder shall be construed as giving any individual any rights to be retained by or in the employ of the Company or any other employment rights.

17. No Fractional Shares

No fractional shares of Company Stock shall be issued or delivered pursuant to the Plan or any Grant. The Board shall determine whether cash, other awards or other property shall be issued or paid in lieu of such fractional shares or whether such fractional shares or any rights thereto shall be forfeited or otherwise eliminated.

18. Headings

Section headings are for reference only. In the event of a conflict between a title and the content of a Section, the content of the Section shall control.

19. Effective Date of the Plan

(a) Effective Date. Subject to approval by the Company's stockholders, the Plan shall be effective on September 30, 2014.

(b) Public Offering. The provisions of the Plan that refer to a Public Offering, or that refer to, or are applicable to persons subject to, section 16 of the Exchange Act or section 162(m) of the Code, shall be effective, if at all, upon the initial registration of the Company Stock under section 12(g) of the Exchange Act, and shall remain effective thereafter for so long as such stock is so registered.

20. Miscellaneous

(a) Grants in Connection with Corporate Transactions and Otherwise. Nothing contained in this Plan shall be construed to (i) limit the right of the Board to make Grants under this Plan in connection with the acquisition, by purchase, lease, merger, consolidation or otherwise, of the business or assets of any corporation, firm or association, including Grants to employees thereof who become Employees of the Company, or for other proper corporate purposes, or (ii) limit the right of the Company to grant stock options or make other awards outside of this Plan. Without limiting the foregoing, the Board may make a Grant to an employee of another corporation who becomes an Employee by reason of a corporate merger, consolidation, acquisition of stock or property, reorganization or liquidation involving the Company or any of its subsidiaries in substitution for a stock option or Stock Awards grant made by such corporation. The terms and conditions of the substitute grants may vary from the terms and conditions required by the Plan and from those of the substituted stock incentives. The Board shall prescribe the provisions of the substitute grants.

(b) Compliance with Law. The Plan, the exercise of Options and the obligations of the Company to issue or transfer shares of Company Stock under Grants shall be subject to all applicable laws and to approvals by any governmental or regulatory agency as may be required. With respect to persons subject to section 16 of the Exchange Act, after a Public Offering it is the intent of the Company that the Plan and all transactions under the Plan comply with all applicable provisions of Rule 16b-3 or its successors under the Exchange Act. In addition, it is the intent of the Company that the Plan and applicable Grants under the Plan comply with the applicable provisions of section 162(m) of the Code, after a Public Offering, and section 422 of the Code. To the extent that any legal requirement of section 16 of the Exchange Act or section 162(m) or 422 of the Code as set forth in the Plan ceases to be required under section 16 of the Exchange Actor section 162(m) or 422 of the Code, that Plan provision shall cease to apply. The Board may revoke any Grant if it is contrary to law or modify a Grant to bring it into compliance with any valid and mandatory government regulation. The Board may also adopt rules regarding the withholding of taxes on payments to Grantees. The Board may, in its sole discretion, agree to limit its authority under this Section.

(c) Employees Subject to Taxation Outside the United States. With respect to Grantees who are subject to taxation in countries other than the United States, the Board may make Grants on such terms and conditions as the Board deems appropriate to comply with the laws of the applicable countries, and the Board may create such procedures, addenda and subplans and make such modifications as may be necessary or advisable to comply with such laws.

(d) Governing Law. The validity, construction, interpretation and effect of the Plan and Grant Instruments issued under the Plan shall be governed and construed by and determined in accordance with the laws of the State of Delaware, without giving effect to the conflict of laws provisions thereof.

ACLARIS THERAPEUTICS, INC.

STOCK OPTION GRANT

This Agreement (this "Agreement") dated as of [ ] and effective as of [ ] (the "Grant Date"), between Aclaris Therapeutics, Inc., a Delaware corporation (the "Company"), and [ ] ("Grantee"), an employee of the Company. Capitalized terms used but not defined herein shall have the meaning set forth in the Plan (as defined below).

1. Grant of Option. Pursuant to the Aclaris Therapeutics, Inc. 2012 Equity Compensation Plan (the "Plan"), the Company hereby grants to Grantee, as of the Grant Date, an option (the "Option") to purchase an aggregate of [ ] shares (the "Option Shares") of common stock, par value $0.0001 per share (the "Common Stock"), of the Company, at a per share exercise price of $.[ ] (the "Option Price"), being the Fair Market Value of the Common Stock on the Grant Date, subject to adjustment and the other terms and conditions set forth herein and in the Plan. It is intended that the entire Option be treated as a non-qualified stock option under the Internal Revenue Code of 1986, as amended (the "Code").

2. Grantee Bound by Plan. The Plan is incorporated herein by reference and made a part hereof. The Plan shall govern all aspects of this Agreement except as otherwise specifically stated herein. Grantee hereby acknowledges receipt of a copy of the Plan and agrees to be bound by all the terms and provisions thereof. Unless otherwise defined herein, capitalized terms used but not defined herein shall have the meanings ascribed to them in the Plan. The Plan should be carefully examined before any decision is made to exercise the Option.

3. Exercise of Option.

(a) *General.* Subject to the earlier termination of the Option as provided herein and in the Plan, the Option may be exercised in whole or in part, by written notice to the Company as set forth below at any time and from time to time after the Grant Date until the Expiration Date (as defined below).

(b) *Vesting.* Subject to the earlier termination of the Option as provided herein and in the Plan, the Option shall vest as described on the "Vesting Schedule" set forth on Schedule I attached hereto; provided, however, that Grantee must during the vesting period remain available to provide services to, and on each vesting date be available to provide services to, the Company (or any of its Subsidiaries). Alternatively, at the election of Grantee, the Option may be exercised in whole or part at any time as to Option Shares that have not yet vested; provided, however, that, as a condition to exercising the Option for unvested Option Shares, Grantee shall execute a Stock Restriction Agreement, substantially in the form of Exhibit A attached hereto (the "Stock Restriction Agreement"). For the avoidance of doubt, vested Option Shares shall not be subject to the Company's repurchase right under the Stock Restriction Agreement.

(c) *Early Expiration of Option.*

Upon the termination of Grantee's service with the Company (including any Subsidiary thereof) for any reason, including death, any portion of the Option which has not been exercised on the date of such termination shall expire in accordance with subsection (ii), (iii) or (iv) of this Section 3(c) as applicable;

In the event that Grantee's service with the Company (including any Subsidiary thereof) is terminated by the Company for Cause (as defined in the Plan), Grantee shall automatically forfeit his/her right to exercise any unvested portion of the Option, and Grantee shall automatically forfeit all shares underlying any exercised portion of an Option for which the Company has not yet delivered the share certificates, upon refund by the Company of the Exercise Price paid by the Grantee for such shares;

In the event that Grantee's service with the Company (including any Subsidiary thereof) is terminated (x) by the Company without Cause or (y) by Grantee, any vested portion of the Option (including any portion vested on the date of such termination) which has not been exercised as of the date of such termination shall automatically expire, if not exercised, within 90 days after the date of such termination, and any unvested portion of the Option shall expire as of the close of business on the date of such termination; and

In the event that Grantee's service with the Company (including any Subsidiary thereof) is terminated on account of Disability (as defined in the Plan), or death of Grantee, any vested portion of the Option (including any portion vested on the date of such termination) which has not been exercised as of the date of such termination shall automatically expire, if not exercised, within one year after the date of such termination, and any unvested portion of the Option shall expire as of the close of business on the date of such termination.

(d) *Normal Expiration of Option.* Unless otherwise terminated under Section 3(c) above, the Option shall not be exercisable after the tenth anniversary of the Grant Date (the "Expiration Date").

(e) *Expiration or Cancellation.* If any portion of the Option expires or is canceled in accordance with the terms hereof, the underlying Option Shares covered by the portion of the Option which expires or is canceled shall be returned to the Plan and shall again be available for future grants under the Plan.

(f) *Substitution/Cash Out.* If there occurs a Change of Control (as defined in the Plan) and if Grantee's service is terminated by the Company without Cause, then the Company shall either (x) cancel and pay Grantee for the unexercised portion of the Option granted hereunder (whether or not then vested) in an amount equal to the "spread" between the aggregate exercise price of the unexercised Option granted hereunder and the value of the underlying shares or (y) provide for the replacement of the unexercised portion of the Option granted hereunder (whether or not vested) with options to acquire the securities or other property which Grantee would have received in exchange for the underlying shares had the entire

unexercised Option been previously exercised. Any such replacement options will have terms no less favorable to Grantee than the Option granted hereunder.

4. Exercise of Option and Conditions to Exercise. The Option may not be exercised by Grantee unless the following conditions are met.

(a) *Notice.* The Option shall be exercised by delivering written notice to the Company's principal office to the attention of its Chief Financial Officer. Such notice shall specify the number of shares of Common Stock with respect to which the Option is being exercised, shall be signed by Grantee and shall be accompanied by this Agreement and full payment of the applicable purchase price. The Option may not be exercised for a fraction of a share of Common Stock. Any fractional shares being exercised will be paid in cash.

(b) *Securities Requirements.* Legal counsel for the Company must be satisfied at the time of exercise that the issuance of Option Shares upon exercise will be in compliance with the Securities Act of 1933, as amended (the "Securities Act"), and applicable United States federal, state, local and foreign laws; and

(c) *Payment of Exercise Price.* Grantee must pay at the time of exercise the full purchase price for the shares of Common Stock being acquired hereunder (i) in cash or by certified check, bank cashier's check or wire transfer, (ii) subject to the approval of the Committee, by delivery of shares of Common Stock previously acquired by Grantee (and held for at least six (6) months) valued at their Fair Market Value on the date of such exercise, or (iii) pursuant to such other method as the Committee may approve for time to time. Please refer to the Plan for a complete description of the methods for exercise, payment and delivery of Option Shares, including requirements for the payment of withholding taxes applicable thereto. All amounts that, under federal, state or local law, are required to be withheld from the amount payable with respect to any Option may be withheld by the Company.

(d) *Stockholders Agreement.* Grantee must execute a joinder to each of the Stockholders Agreements to the extent Grantee is not already a party to such agreements.

5. Transferability. The Option may not be sold, assigned, transferred, pledged, hypothecated or otherwise disposed of by Grantee, other than by will or the laws of descent and distribution (in which case, such transferee shall succeed to the rights and obligations of Grantee hereunder) and is exercisable during Grantee's lifetime only by Grantee, except that (i) Grantee may designate in writing a beneficiary to exercise the Option after Grantee's death (provided that the designation has been received by the Company prior to Grantee's death) and (ii) Grantee may transfer the Option to any Family Member (as defined in Rule 701 under the Securities Act) subject to the requirement that Grantee will cause any entity included in such definition to convey the Option held by it to another Family Member prior to the occurrence of any event which would cause such Family Member to cease to qualify as a Family Member. If Grantee or anyone claiming under or through Grantee attempts to violate this Section 5, such attempted violation shall be null and void and without effect, and the Company's obligation hereunder shall terminate. If at the time of Grantee's death the Option has not been fully exercised, Grantee's estate or any person who acquires the right to exercise the Option by bequest or inheritance or by reason of Grantee's death may exercise the Option in accordance with Section 3 above and with

respect to the number of shares set forth in Section 1 above. The applicable requirements of Section 4 above must be satisfied in full at the time of any exercise.

6. Administration. Any action taken or decision made by the Company, the Board or the Committee or its delegates arising out of or in connection with the construction, administration, interpretation or effect of the Plan or this Agreement shall lie within its sole and absolute discretion, as the case may be, and shall be final, conclusive and binding on Grantee and all persons claiming under or through Grantee. By accepting this grant or other benefit under the Plan, Grantee and each person claiming under or through Grantee shall be conclusively deemed to have indicated acceptance and ratification of, and consent to, any action taken under the Plan by the Company, the Board or the Committee or its delegates.

7. No Rights as Stockholder. Unless and until a certificate or certificates representing the shares of Common Stock that may be acquired upon the exercise of the Option shall have been issued to Grantee (or any person acting under Section 5 above) pursuant to an exercise hereunder, Grantee shall not be or have any of the rights or privileges of a stockholder of the Company with respect to shares of Common Stock purchasable upon exercise of the Option.

8. Investment Representation. Grantee hereby acknowledges that the shares of Common Stock which Grantee may acquire by exercising the Option shall be acquired for investment without a view to distribution, within the meaning of the Securities Act, and shall not be sold, transferred, assigned, pledged or hypothecated in the absence of an effective registration statement for the shares of Common Stock under the Securities Act and applicable state securities laws or an applicable exemption from the registration requirements of the Securities Act and any applicable state securities laws. Grantee agrees to provide such written investment representations in writing as may be requested by the Board or the Committee. Grantee also agrees that the shares of Common Stock which Grantee may acquire by exercising the Option will not be sold or otherwise disposed of in any manner which would constitute a violation of any applicable securities laws, whether federal or state, and that the certificate representing the shares of Common Stock shall contain a legend to such effect.

9. Listing and Registration of Common Stock. The Company, in its discretion, may postpone the issuance and/or delivery of shares of Common Stock upon any exercise of the Option until completion of such stock exchange listing, or registration, or other qualification of such shares under any state and/or federal law, rule or regulation as the Company may reasonably in good faith consider appropriate. If the Company at any time shall register shares of Common Stock or other securities under the Securities Act for sale to the public, Grantee agrees that, at the request of the Company or the underwriters managing any underwritten offering of the Company's securities, Grantee will not sell, make any short sale of, grant an option for the purchase of, loan, pledge or otherwise dispose of or encumber any shares of Common Stock purchased or purchasable upon the exercise of the Option without the prior written consent of the Company or the managing underwriter of the offering, as the case may be, for a period designated in writing to Grantee, which period shall not begin more than ten days prior to the effectiveness of the registration statement pursuant to which such public offer will be made and shall not last more than 180 days after the effective date of such registration statement. If so requested, Grantee will also enter into a separate written agreement to such effect in form

and substance requested by the Company or the managing underwriter of the offering, as the case maybe.

10. Adjustment. In the event of any change in the number of shares of Common Stock outstanding by reason of any stock dividend, stock split, reverse stock split, share combination, recapitalization, merger, consolidation, spin-off, split-off, reorganization, rights offering, liquidation or similar event of or by the Company, the Committee shall make equitable adjustment of the number of Option Shares covered by the Option and the Option Price.

11. No Employment or other Rights. The grant of the Option shall not give Grantee the right to remain in the service of the Company or any Subsidiary or to any benefits not specifically provided herein or modify the right of the Company or any Subsidiary to modify, amend or terminate the Plan or any other employee benefit plan or consulting, employment or other agreement.

12. Survival. Each provision of this Agreement that, by its terms, is intended to survive beyond the exercise of the Option shall continue in effect thereafter until such time as such term shall no longer apply.

13. Entire Agreement. This Agreement and the Plan set forth the entire understanding of the parties with respect to the subject matter hereof and supersede all prior agreements and understandings between the parties regarding the Option.

14. Notices. Any notice hereunder to the Company shall be addressed to the Company at Aclaris Therapeutics, Inc., 101 Lindenwood Drive, Suite 400, Malvern, Pennsylvania 19355 Attention: Kamil Ali-Jackson, Chief Legal Officer, and any notice hereunder to Grantee shall be addressed to Grantee at Grantee's last address on the records of the Company, subject to the right of either party to designate at any time hereafter in writing some other address. Any notice shall be deemed to have been duly given when delivered personally, one day following dispatch if sent by reputable overnight courier, fees prepaid, or three days following mailing if sent by registered mail, return receipt requested, postage prepaid and addressed as set forth above.

15. Binding Effect. This Agreement shall be binding upon and inure to the benefit of any successors to the Company and all persons lawfully claiming under Grantee.

16. Governing Law. The validity, construction, interpretation, administration and effect of the Plan, and of its rules and regulations, and rights relating to the Plan and to this Agreement, shall be governed by the substantive laws, but not the choice of law rules, of the State of Delaware.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Company and Grantee have executed this Agreement as of the date first above written.

ACLARIS THERAPEUTICS, INC.

By: _____
Name: Dr. Neal Walker
Title: President and Chief Executive Officer

GRANTEE ACKNOWLEDGES AND AGREES THAT THE VESTING OF SHARES PURSUANT TO THE OPTION IS EARNED ONLY THROUGH HIS/HER CONTINUED SERVICE WITH THE COMPANY OR ITS SUBSIDIARIES AND NOT THROUGH THE GRANT OF THE OPTION OR THE ACQUISITION OF SHARES HEREUNDER. GRANTEE ACKNOWLEDGES AND AGREES THAT NOTHING IN THIS AGREEMENT, NOR IN THE COMPANY'S 2012 EQUITY COMPENSATION PLAN, WHICH IS INCORPORATED HEREIN BY REFERENCE, SHALL CONFER UPON GRANTEE ANY RIGHT WITH RESPECT TO CONTINUATION OF SERVICE BY THE COMPANY, NOR SHALL IT INTERFERE IN ANY WAY WITH HIS/HER RIGHT OR THE COMPANY'S RIGHT TO TERMINATE HIS/HER SERVICE AT ANY TIME, WITH OR WITHOUT CAUSE.

Grantee acknowledges receipt of a copy of the Plan and represents that he/she is familiar with the terms and provisions thereof, and hereby accepts the Option subject to all of the terms and provisions thereof, except as otherwise specifically stated in this Agreement. Grantee has reviewed the Plan and this Agreement in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Agreement and fully understands all provisions of this Agreement. Grantee hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Board or Committee upon any questions arising under the Plan.

GRANTEE

_____
Name

Schedule I

Vesting Schedule

Date	Number of Options Vesting

Exhibit 10.12

INDEMNIFICATION AGREEMENT

This Indemnification Agreement (the "Agreement") is entered into as of by and among Aclaris Therapeutics, Inc., a Delaware corporation (the "Company") and the undersigned party (the "Indemnitee").

RECITALS

A. The Company and the Indemnitee recognize the substantial increase in corporate litigation in general, subjecting directors, officers, employees, controlling persons, agents and fiduciaries to expensive litigation risks at the same time as the availability and coverage of liability insurance has been severely limited.

B. The Indemnitee does not regard the current protection available as adequate under the present circumstances, and the Indemnitee and other directors, officers, employees, controlling persons, agents and fiduciaries of the Company may not be willing to serve in such capacities without additional protection.

C. The Company: (i) desires to attract and retain the involvement of highly qualified individuals and entities, such as the Indemnitee, to serve the Company and, in part, to induce the Indemnitee to be involved with the Company and (ii) wishes to provide for the indemnification and advancing of expenses to the Indemnitee to the maximum extent permitted by law.

D. Although the bylaws of the Company require indemnification of the officers and directors of the Company, and the Indemnitee may also be entitled to indemnification pursuant to the General Corporation Law of the State of Delaware (the "DGCL"), the bylaws and the DGCL expressly provide that the indemnification provisions set forth therein are not exclusive, and thereby contemplate that contracts may be entered into between the Company and members of the board of directors, officers and other persons with respect to indemnification.

E. ("Director") is the current and a director of the Company.

F. This Agreement is a supplement to and in furtherance of the bylaws of the Company and any resolutions adopted pursuant thereto, and shall not be deemed a substitute therefor, nor to diminish or abrogate any rights of the Indemnitee thereunder.

G. In view of the considerations set forth above, the Company desires that the Indemnitee be indemnified by the Company as set forth herein.

NOW, THEREFORE, the Company and the Indemnitee hereby agree as follows:

1. Indemnification.

a. Indemnification of Expenses. The Company shall indemnify and hold harmless the Indemnitee (including his spouse) to the fullest extent permitted by law if the Indemnitee was or is or becomes a party to or witness or other participant in, or is threatened to be made a party to or witness or other participant in, any threatened, pending or completed

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action, suit, proceeding or alternative dispute resolution mechanism, or any hearing, inquiry or investigation that the Indemnitee believes might lead to the institution of any such action, suit, proceeding or alternative dispute resolution mechanism, whether civil, criminal, administrative, investigative or other (hereinafter a "Claim") by reason of (or arising in part or in whole out of) any event or occurrence related to the fact that the Indemnitee is, was or may be deemed a director, officer, stockholder, employee, controlling person, agent or fiduciary of the Company, or any subsidiary of the Company, or is, was or may be deemed to be serving at the request of the Company as a director, officer, stockholder, employee, controlling person, agent or fiduciary of another corporation, partnership, limited liability company, joint venture, trust or other enterprise, or by reason of any action or inaction on the part of the Indemnitee while serving in such capacity including, without limitation, any and all losses, claims, damages, expenses and liabilities, joint or several (including any investigation, legal and other expenses incurred in connection with, and any amount paid in settlement of, any action, suit, proceeding or any claim asserted) under the Securities Act of 1933, as amended (the "Securities Act"), the Securities Exchange Act of 1934, as amended (the "Exchange Act") or other federal or state statutory law or regulation, at common law or otherwise, that relate directly or indirectly to the registration, purchase, sale or ownership of any securities of the Company or to any fiduciary obligation owed with respect thereto (hereinafter an "Indemnifiable Event") against any and all expenses (including attorneys' fees and all other costs, expenses and obligations incurred in connection with investigating, defending a witness in or participating in (including on appeal), or preparing to defend, be a witness in or participate in, any such action, suit, proceeding, alternative dispute resolution mechanism, hearing, inquiry or investigation), judgments, fines, penalties and amounts paid in settlement (if such settlement is approved in advance by the Company, which approval shall not be unreasonably withheld) of such Claim and any federal, state, local or foreign taxes imposed on the Indemnitee as a result of the actual or deemed receipt of any payments under this Agreement (collectively, hereinafter "Expenses"), including all interest, assessments and other charges paid or payable in connection with or in respect of such Expenses. Such payment of Expenses shall be made by the Company as soon as practicable but in any event no later than five (5) days after written demand by the Indemnitee therefor is presented to the Company.

b. Reviewing Party. Notwithstanding the foregoing, (i) the obligations of the Company under Section 1(a) shall be subject to the condition that the Reviewing Party (as described in Section 10(e) hereof) shall not have determined (in a written opinion, in any case in which the Independent Legal Counsel referred to in Section 10(d) hereof is involved) that the Indemnitee would not be permitted to be indemnified under applicable law, and (ii) the Indemnitee acknowledges and agrees that the obligation of the Company to make an advance payment of Expenses to the Indemnitee pursuant to Section 2(a) (an "Expense Advance") shall be subject to the condition that, if, when and to the extent that the Reviewing Party determines that the Indemnitee would not be permitted to be so indemnified under applicable law, the Company shall be entitled to be reimbursed by the Indemnitee (who hereby agrees to reimburse the Company) for all such amounts theretofore paid; provided, however, that if the Indemnitee has commenced or thereafter commences legal proceedings in a court of competent jurisdiction to secure a determination that the Indemnitee should be indemnified under applicable law, any determination made by the Reviewing Party that the Indemnitee would not be permitted to be indemnified under applicable law shall not be binding and the Indemnitee shall not be required to reimburse the Company for any Expense Advance until a final judicial

determination is made with respect thereto (as to which all rights of appeal therefrom have been exhausted or lapsed). The Indemnitee's obligation to reimburse the Company for any Expense Advance shall be unsecured and no interest shall be charged thereon. If there has not been a Change in Control (as defined in Section 10(c) hereof), the Reviewing Party shall be selected by the Board of Directors, and if there has been such a Change in Control (other than a Change in Control that has been approved by a majority of the Company's Board of Directors who were directors immediately prior to such Change in Control), the Reviewing Party shall be the Independent Legal Counsel referred to in Section 10(d) hereof. If there has been no determination by the Reviewing Party or if the Reviewing Party determines that the Indemnitee substantively would not be permitted to be indemnified in whole or in part under applicable law, the Indemnitee shall have the right to commence litigation seeking an initial determination by the court or challenging any such determination by the Reviewing Party or any aspect thereof, including the legal or factual bases therefor, and the Company hereby consents to service of process and to appear in any such proceeding. Any determination by the Reviewing Party otherwise shall be conclusive and binding on the Company and the Indemnitee.

c. Contribution. If the indemnification provided for in Section 1(a) above for any reason is held by a court of competent jurisdiction to be unavailable to the Indemnitee in respect of any losses, claims, damages, expenses or liabilities referred to therein, then the Company, in lieu of indemnifying the Indemnitee thereunder, shall contribute to the amount paid or payable by the Indemnitee as a result of such losses, claims, damages, expenses or liabilities (i) in such proportion as is appropriate to reflect the relative benefits received by the Company and the Indemnitee, or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company and the Indemnitee in connection with the action or inaction that resulted in such losses, claims, damages, expenses or liabilities, as well as any other relevant equitable considerations. In connection with the registration of the Company's securities, the relative benefits received by the Company and the Indemnitee shall be deemed to be in the same respective proportions that the net proceeds from the offering (before deducting expenses) received by the Company and the Indemnitee, in each case as set forth in the table on the cover page of the applicable prospectus, bear to the aggregate public offering price of the securities so offered. The relative fault of the Company and the Indemnitee shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or the Indemnitee and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

The Company and the Indemnitee agree that it would not be just and equitable if contribution pursuant to this Section 1(c) were determined by pro rata or per capita allocation or by any other method of allocation that does not take account of the equitable considerations referred to in the immediately preceding paragraph. In connection with the registration of the Company's securities, in no event shall the Indemnitee be required to contribute any amount under this Section 1(c) in excess of the lesser of: (i) that proportion of the total of such losses, claims, damages or liabilities that are indemnified against, equal to the proportion of the total securities sold under such registration statement that is being sold by the Indemnitee or (ii) the proceeds received by the Indemnitee from its sale of securities under such registration statement.

No person found guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not found guilty of such fraudulent misrepresentation.

d. Survival Regardless of Investigation. The indemnification and contribution provided for in this Section 1 will remain in full force and effect regardless of any investigation made by or on behalf of the Indemnitee.

e. Change in Control. The Company agrees that if there is a Change in Control of the Company (other than a Change in Control that has been approved by a majority of the Company's Board of Directors who were directors immediately prior to such Change in Control) then, with respect to all matters thereafter arising concerning the rights of the Indemnitee to payments of Expenses under this Agreement or any other agreement or under the Company's certificate of incorporation or bylaws as now or hereafter in effect, Independent Legal Counsel (as defined in Section 10(d) hereof) shall be selected by the Indemnitee and approved by the Company (which approval shall not be unreasonably withheld). Such counsel, among other things, shall render its written opinion to the Company and the Indemnitee as to whether and to what extent the Indemnitee would be permitted to be indemnified under applicable law. The Company agrees to abide by such opinion and to pay the reasonable fees of the Independent Legal Counsel referred to above and to fully indemnify such counsel against any and all expenses (including attorneys' fees), claims, liabilities and damages arising out of or relating to this Agreement or its engagement pursuant hereto.

f. Mandatory Payment of Expenses. Notwithstanding any other provision of this Agreement, to the extent that the Indemnitee has been successful on the merits or otherwise, including, without limitation, the dismissal of an action without prejudice, in the defense of any action, suit, proceeding, inquiry or investigation referred to in Section 1(a) hereof or in the defense of any claim, issue or matter therein, the Indemnitee shall be indemnified against all Expenses incurred by the Indemnitee in connection herewith.

2. Expenses; Indemnification Procedure.

a. Advancement of Expenses. The Company shall advance all Expenses incurred by the Indemnitee. The advances to be made hereunder shall be paid by the Company to the Indemnitee as soon as practicable but in any event no later than five (5) days after written demand by the Indemnitee therefor to the Company.

b. Notice/Cooperation by the Indemnitee. The Indemnitee shall give the Company notice in writing as soon as practicable of any Claim made against the Indemnitee for which indemnification will or could be sought under this Agreement. Notice to the Company shall be directed to the Chief Executive Officer of the Company at the Company's address (or such other address as the Company shall designate in writing to the Indemnitee).

c. No Presumptions; Burden of Proof. For purposes of this Agreement, the termination of any Claim by judgment, order, settlement (whether with or without court approval) or conviction, or upon a plea of nolo contendere, or its equivalent, shall not create a presumption that the Indemnitee did not meet any particular standard of conduct or

have any particular belief or that a court has determined that indemnification is not permitted by applicable law. In addition, neither the failure of the Reviewing Party to have made a determination as to whether the Indemnitee has met any particular standard of conduct or had any particular belief, nor an actual determination by the Reviewing Party that the Indemnitee has not met such standard of conduct or did not have such belief, prior to the commencement of legal proceedings by the Indemnitee to secure a judicial determination that the Indemnitee should be indemnified under applicable law, shall be a defense to the

Indemnitee's claim or create a presumption that the Indemnitee has not met any particular standard of conduct or did not have any particular belief. In connection with any determination by the Reviewing Party or otherwise as to whether the Indemnitee is entitled to be indemnified hereunder, the burden of proof shall be on the Company to establish that the Indemnitee is not so entitled.

d. Notice to Insurers. If, at the time of the receipt by the Company of a notice of a Claim pursuant to Section 2(b) hereof, the Company has liability insurance in effect that may cover such Claim, the Company shall give prompt notice of the commencement of such Claim to the insurers in accordance with the procedures set forth in each of the policies. The Company shall thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of the Indemnitee, all amounts payable as a result of such Claim in accordance with the terms of such policies.

e. Selection of Counsel. If the Company shall be obligated hereunder to pay the Expenses of any Claim, the Company shall be entitled to assume the defense of such Claim, with counsel approved by the Indemnitee, upon the delivery to the Indemnitee of written notice of its election to do so. After delivery of such notice, approval of such counsel by the Indemnitee and the retention of such counsel by the Company, the Company will not be liable to the Indemnitee under this Agreement for any fees of counsel subsequently incurred by the Indemnitee with respect to the same Claim; provided that, (i) the Indemnitee shall have the right to employ the Indemnitee's counsel in any such Claim at the Indemnitee's expense and (ii) if (A) the employment of counsel by the Indemnitee has been previously authorized by the Company, (B) the Indemnitee shall have reasonably concluded that there is a conflict of interest between the Company and the Indemnitee in the conduct of any such defense, or (C) the Company shall not continue to retain such counsel to defend such Claim, then the fees and expenses of the Indemnitee's counsel shall be at the expense of the Company.

3. Additional Indemnification Rights; Nonexclusivity.

a. Scope. The Company hereby agrees to indemnify the Indemnitee to the fullest extent permitted by law, even if such indemnification is not specifically authorized by the other provisions of this Agreement, the Company's certificate of incorporation, the Company's bylaws or by statute. In the event of any change after the date of this Agreement in any applicable law, statute or rule that expands the right of a Delaware corporation to indemnify a member of its Board of Directors or an officer, stockholder, employee, controlling person, agent or fiduciary, it is the intent of the parties hereto that the Indemnitee shall enjoy by this Agreement the greater benefits afforded by such change. In the event of any change in any applicable law, statute or rule that narrows the right of a Delaware corporation to indemnify a member of its Board of Directors or an officer, employee, agent or fiduciary, such change, to the extent not otherwise required by such law, statute or rule to be applied to this Agreement, shall

have no effect on this Agreement or the parties' rights and obligations hereunder except as set forth in Section 8(a) hereof.

b. Nonexclusivity. The indemnification provided by this Agreement shall be in addition to any rights to which the Indemnitee may be entitled under the Company's certificate of incorporation, its bylaws, any agreement, any vote of stockholders or disinterested directors, the DGCL, or otherwise. The indemnification provided under this Agreement shall commence upon the date the Indemnitee first serves in an indemnified capacity and shall continue as to the Indemnitee for any action the Indemnitee took or did not take while serving in an indemnified capacity even though the Indemnitee may have ceased to serve in such capacity.

4. No Duplication of Payments. Except as otherwise set forth in Section 3(b) above, the Company shall not be liable under this Agreement to make any payment in connection with any Claim made against the Indemnitee to the extent the Indemnitee has otherwise actually received payment (under any insurance policy, certificate of incorporation, bylaw or otherwise) of the amounts otherwise indemnifiable hereunder.

5. Partial Indemnification. If the Indemnitee is entitled under any provision of this Agreement to indemnification by the Company for any portion of Expenses incurred in connection with any Claim, but not, however, for all of the total amount thereof, the Company shall nevertheless indemnify the Indemnitee for the portion of such Expenses to which the Indemnitee is entitled.

6. Mutual Acknowledgement. The Company and the Indemnitee acknowledge that in certain instances, Federal law or applicable public policy may prohibit the Company from indemnifying its directors, officers, employees, controlling persons, agents or fiduciaries under this Agreement or otherwise. The Indemnitee understands and acknowledges that the Company has undertaken or may be required in the future to undertake with the Securities and Exchange Commission to submit the question of indemnification to a court in certain circumstances for a determination of the Company's rights under public policy to indemnify the Indemnitee.

7. Liability Insurance. To the extent the Company maintains liability insurance applicable to directors, officers, employees, control persons, agents or fiduciaries, the Indemnitee shall be covered by such policies in such a manner as to provide the Indemnitee the same rights and benefits as are accorded to the most favorably insured of the Company's directors, if the Indemnitee is a director, or of the Company's officers, if the Indemnitee is not a director of the Company but is an officer; or of the Company's key employees, controlling persons, agents or fiduciaries, if the Indemnitee is not an officer or director but is a key employee, agent, control person or fiduciary.

8. Exceptions. Any other provision herein to the contrary notwithstanding, the Company shall not be obligated pursuant to the terms of this Agreement:

a. Claims Initiated by the Indemnitee. To indemnify or advance expenses to the Indemnitee with respect to Claims initiated or brought voluntarily by the Indemnitee and not by way of defense, except: (i) with respect to actions or proceedings to

establish or enforce a right to indemnify under this Agreement or any other agreement or insurance policy or under the Company's certificate of incorporation or bylaws now or hereafter in effect relating to Claims for Indemnifiable Events; (ii) in specific cases if the Board of Directors has approved the initiation or bringing of such Claim; or (iii) as otherwise required under Section 145 of the DGCL, regardless of whether the Indemnitee ultimately is determined to be entitled to such indemnification, advance expense payment or insurance recovery, as the case may be; or

b. Claims Under Section 16(b). To indemnify the Indemnitee for expenses and the payment of profits arising from the purchase and sale by the Indemnitee of securities in violation of Section 16(b) of the Exchange Act or any similar successor statute; or

c. Claims Excluded Under Section 145 of the DGCL. To indemnify the Indemnitee if: (i) the Indemnitee did not act in good faith and in a manner reasonably believed to be in or not opposed to the best interests of the Company or (ii) with respect to any criminal action or proceeding, the Indemnitee had reasonable cause to believe the conduct was unlawful or (iii) the Indemnitee shall have been adjudged to be liable to the Company unless and only to the extent the court in which such action was brought shall permit indemnification as provided in Section 145(b) of the DGCL.

9. Period of Limitations. No legal action shall be brought and no cause of action shall be asserted by or in the right of the Company against the Indemnitee or the Indemnitee's estate, spouse, heirs, executors or personal or legal representatives after the expiration of five (5) years from the date of accrual of such cause of action, and any claim or cause of action of the Company shall be extinguished and deemed released unless asserted by the timely filing of a legal action within such five (5)-year period; provided, however, that if any shorter period of limitations is otherwise applicable to any such cause of action, such shorter period shall govern.

10. Construction of Certain Phrases.

a. For purposes of this Agreement, references to the "Company" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger that, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, stockholders, employees, agents or fiduciaries, so that if the Indemnitee is, was or may be deemed a director, officer, stockholder, employee, agent, control person, or fiduciary of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee, control person, agent or fiduciary of another corporation, partnership, limited liability company, joint venture, employee benefit plan, trust or other enterprise, the Indemnitee shall stand in the same position under the provisions of this Agreement with respect to the resulting or surviving corporation as the Indemnitee would have with respect to such constituent corporation if its separate existence had continued.

b. For purposes of this Agreement, references to "other enterprises" shall include employee benefit plans; references to "fines" shall include any excise taxes assessed on the Indemnitee with respect to an employee benefit plan; and references to "serving

at the request of the Company" shall include any service as a director, officer, employee, agent or fiduciary of the Company that imposes duties on, or involves services by, such director, officer, employee, agent or fiduciary with respect to an employee benefit plan, its participants or its beneficiaries; and if the Indemnitee acted in good faith and in a manner the Indemnitee reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan, the Indemnitee shall be deemed to have acted in a manner "not opposed to the best interests of the Company" as referred to in this Agreement.

c. For purposes of this Agreement a "Change in Control" shall be deemed to have occurred if: (i) any "person" (as such term is used in Sections 13(d)(3) and 14(d)(2) of the Exchange Act), other than a trustee or other fiduciary holding securities under an employee benefit plan of the Company or a corporation owned directly or indirectly by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company, (A) who is or becomes the beneficial owner, directly or indirectly, of securities of the Company representing ten percent (10%) or more of the combined voting power of the Company's then outstanding Voting Securities, increases his beneficial ownership of such securities by five percent (5%) or more over the percentage so owned by such person, or (B) becomes the "beneficial owner" (as defined in Rule 13d-3 under said Exchange Act), directly or indirectly, of securities of the Company representing more than twenty percent (20%) of the total voting power represented by the Company's then outstanding Voting Securities, (ii) during any period of two (2) consecutive years, individuals who at the beginning of such period constitute the Board of Directors of the Company and any new director whose election by the Board of Directors or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds (2/3) of the directors then still in office who either were directors at the beginning of the period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof, or (iii) the stockholders of the Company approve a merger or consolidation of the Company with any other corporation other than a merger or consolidation that would result in the Voting Securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into Voting Securities of the surviving entity) at least eighty percent (80%) of the total voting power represented by the Voting Securities of the Company or such surviving entity outstanding immediately after such merger or consolidation, or the stockholders of the Company approve a plan of complete liquidation of the Company or an agreement for the sale or disposition by the Company of (in one transaction or a series of transactions) all or substantially all of the Company's assets.

d. For purposes of this Agreement, "Independent Legal Counsel" shall mean an attorney or firm of attorneys, selected in accordance with the provisions of Section 2(e) hereof, who shall not have otherwise performed services for the Company or the Indemnitee within the last three (3) years (other than with respect to matters concerning the right of the Indemnitee under this Agreement, or of other indemnitees under similar indemnity agreements).

e. For purposes of this Agreement, a "Reviewing Party" shall mean any appropriate person or body consisting of a member or members of the Company's Board of Directors or any other person or body appointed by the Board of Directors who is not a party to the particular Claim for which the Indemnitee is seeking indemnification, or Independent Legal Counsel.

f. For purposes of this Agreement, "Voting Securities" shall mean any securities of the Company that vote generally in the election of directors.

11. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall constitute an original. This Agreement may, upon execution by a party, be transmitted by facsimile or other electronic transmission with the same effect as if such party had delivered an executed original counterpart of this Agreement.

12. Binding Effect; Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of and be enforceable by the parties hereto and their respective successors, assigns, including any direct or indirect successor by purchase, merger, consolidation or otherwise to all or substantially all of the business and/or assets of the Company, spouses, heirs and personal and legal representatives. The Company shall require and cause any successor (whether direct or indirect by purchase, merger, consolidation or otherwise) to all, substantially all, or a substantial part, of the business and/or assets of the Company, by written agreement in form and substance satisfactory to the Indemnitee, expressly to assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform if no such succession had taken place. This Agreement shall continue in effect with respect to Claims relating to Indemnifiable Events regardless of whether the Indemnitee continues to serve as a director, officer, employee, agent, controlling person or fiduciary of the Company or of any other enterprise, including subsidiaries of the Company, at the Company's request.

13. Attorneys' Fees. In the event that any action is instituted by the Indemnitee under this Agreement or under any liability insurance policies maintained by the Company to enforce or interpret any of the terms hereof or thereof, the Indemnitee shall be entitled to be paid all Expenses incurred by the Indemnitee with respect to such action, regardless of whether the Indemnitee is ultimately successful in such action, and shall be entitled to the advancement of Expenses with respect to such action, unless, as a part of such action, a court of competent jurisdiction over such action determines that each of the material assertions made by the Indemnitee as a basis for such action was not made in good faith or was frivolous. In the event of an action instituted by or in the name of the Company under this Agreement to enforce or interpret any of the terms of this Agreement, the Indemnitee shall be entitled to be paid all Expenses incurred by the Indemnitee in defense of such action (including costs and expenses incurred with respect to the Indemnitee counterclaims and cross-claims made in such action), and shall be entitled to the advancement of Expenses with respect to such action, unless, as a part of such action, a court having jurisdiction over such action determines that each of the Indemnitee's material defenses to such action was made in bad faith or was frivolous.

14. Notice. All notices and other communications required or permitted hereunder shall be in writing, shall be effective when given, and shall in any event be deemed to be given: (a) five (5) days after deposit with the U.S. Postal Service or other applicable postal service, if delivered by first class mail, postage prepaid; (b) upon delivery, if delivered by hand; (c) one (1) business day after the business day of deposit with Federal Express or similar overnight courier, freight prepaid; or (d) one (1) day after the business day of delivery by facsimile transmission, if deliverable by facsimile transmission, with copy by first class mail, postage prepaid, and shall be addressed if to the Indemnitee, at the Indemnitee's address as set

forth beneath the Indemnitee's signature to this Agreement and if to the Company at the address of its principal corporate offices (attention: Secretary) or at such other address as such party may designate by ten (10) days' advance written notice to the other party hereto.

15. Consent to Jurisdiction. The Company and the Indemnitee each hereby irrevocably consent to the jurisdiction of the courts of the State of Delaware for all purposes in connection with any action or proceeding that arises out of or relates to this Agreement and agree that any action instituted under this Agreement shall be commenced, prosecuted and continued only in the Court of Chancery of the State of Delaware in and for New Castle County, which shall be the exclusive and only proper forum for adjudicating such a claim.

16. Severability. The provisions of this Agreement shall be severable in the event that any of the provisions hereof (including any provision within a single section, paragraph or sentence) are held by a court of competent jurisdiction to be invalid, void or otherwise unenforceable, and the remaining provisions shall remain enforceable to the fullest extent permitted by law. Furthermore, to the fullest extent possible, the provisions of this Agreement (including, without limitations, each portion of this Agreement containing any provision held to be invalid, void or otherwise unenforceable, that is not itself invalid, void or unenforceable) shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforceable.

17. Choice of Law. This Agreement shall be governed by and its provisions construed and enforced in accordance with the laws of the State of Delaware, as applied to contracts between Delaware residents, entered into and to be performed entirely within the State of Delaware, without regard to the conflict of laws principles thereof.

18. Subrogation. In the event of payment under this Agreement, the Company shall be subrogated to the extent of such payment to all of the rights of recovery of the Indemnitee who shall execute all documents required and shall do all acts that may be necessary to secure such rights and to enable the Company effectively to bring suit to enforce such rights.

19. Amendment and Termination. No amendment, modification, termination or cancellation of this Agreement shall be effective unless it is in writing signed by all parties hereto. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provisions hereof (whether or not similar) nor shall such waiver constitute a continuing waiver. Notwithstanding the foregoing, the Company may amend this Agreement without the consent of the Indemnitee solely to add additional Indemnitees hereunder.

20. Integration and Entire Agreement. This Agreement sets forth the entire understanding between the parties hereto and supersedes and merges all previous written and oral negotiations, commitments, understandings and agreements relating to the subject matter hereof between the parties hereto.

21. No Construction as Employment Agreement. Nothing contained in this Agreement shall be construed as giving the Indemnitee any right to be retained in the employ of the Company or any of its subsidiaries.

22. Board and Stockholder Approval. The Company represents that this agreement has been approved by the Company's board of directors and stockholders.

[SIGNATURE PAGE FOLLOWS]

Exhibit 21.1

Subsidiaries of Aclaris Therapeutics, Inc.

Name of Subsidiary	Jurisdiction of Incorporation or Organization
Aclaris Therapeutics International, Ltd.	United Kingdom

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the use in this Registration Statement on Form S-1 of Aclaris Therapeutics, Inc. of our report dated April 2, 2015 relating to the financial statements of Aclaris Therapeutics, Inc., which appears in such Registration Statement. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP

Philadelphia, Pennsylvania
August 17, 2015

QuickLinks