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

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**FORM S-1  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933**

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**Aclaris Therapeutics, Inc.**

(Exact name of registrant as specified in its charter)

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**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**2834**  
(Primary Standard Industrial  
Classification Code Number)

**46-0571712**  
(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)

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**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)

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**Copies to:**

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**Kamil Ali-Jackson  
Chief Legal Officer  
Aclaris Therapeutics, Inc.  
101 Lindenwood Drive, Suite 400  
Malvern, PA 19355  
(484) 324-7933**

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

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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.

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.

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.

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.

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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 Exchange Act. (Check one):

Large Accelerated Filer       Accelerated Filer       Non-accelerated Filer       Smaller Reporting Company

**CALCULATION OF REGISTRATION FEE**

<b>Title of Each Class of Securities to be Registered</b>	<b>Amount to be Registered<sup>(1)</sup></b>	<b>Proposed Maximum Aggregate Offering Price Per Share<sup>(2)</sup></b>	<b>Proposed Maximum Aggregate Offering Price<sup>(2)</sup></b>	<b>Amount of Registration Fee<sup>(3)</sup></b>
Common Stock, \$0.00001 par value per share	1,081,082	\$19.975	\$21,594,612.95	\$2,174.58

(1) Represents shares offered by the selling stockholders. Includes an indeterminate number of additional shares of common stock, pursuant to Rule 416 under the Securities Act of 1933, as amended, that may be issued to prevent dilution from stock splits, stock dividends or similar transactions that could affect the shares to be offered by selling stockholders.

(2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) under the Securities Act of 1933, as amended, based on the average high and low prices of the Registrant’s common stock on June 14, 2016, as quoted on the NASDAQ Global Select Market.

(3) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price.

**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 which 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.**

The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is declared effective. This preliminary prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

**PROSPECTUS (Subject to Completion)**

**Dated June 17, 2016**

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**1,081,082 Shares**



**Aclaris Therapeutics, Inc.**

## **Common Stock**

This prospectus relates to the resale by the selling stockholders identified in this prospectus of up to 1,081,082 shares of our common stock that we sold to the selling stockholders in connection with a private placement completed on June 2, 2016. We will not receive any proceeds from the sale of these shares by the selling stockholders.

We are not selling any shares of common stock and will not receive any proceeds from the sale of the shares under this prospectus.

We have agreed to bear all of the expenses incurred in connection with the registration of these shares. The selling stockholders will pay or assume brokerage commissions and similar charges, if any, incurred for the sale of shares of our common stock.

The selling stockholders identified in this prospectus, or their pledgees, donees, transferees or other successors-in-interest, may offer the shares from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices. For additional information on the methods of sale that may be used by the selling stockholders, see the section entitled "Plan of Distribution" beginning on page 11. For a list of the selling stockholders, see the section entitled "Selling Stockholders" beginning on page 8.

We may amend or supplement this prospectus from time to time by filing amendments or supplements as required. You should read the entire prospectus and any amendments or supplements carefully before you make your investment decision.

Our common stock is traded on the NASDAQ Global Select Market under the symbol "ACRS." On June 16, 2016, the closing sale price of our common stock on the NASDAQ Global Select Market was \$19.47 per share. You are urged to obtain current market quotations for the common stock.

We are an "emerging growth company" as defined by the Jumpstart Our Business Startups Act of 2012 and, as such, we have elected to comply with certain reduced public company reporting requirements for this prospectus and future filings. Please see "Prospectus Summary—Implications of Being an Emerging Growth Company."

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**Investing in our common stock involves a high degree of risk. Please read "[Risk Factors](#)" beginning on page 5 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.**

**Prospectus dated \_\_\_\_\_, 2016.**

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You should rely only on the information contained in this prospectus, any supplement to this prospectus or in any free writing prospectus filed with the Securities and Exchange Commission. Neither we nor the selling stockholders have authorized anyone to provide you with additional information or information different from that contained in this prospectus filed with the Securities and Exchange Commission. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. The selling stockholders are offering to sell, and seeking offers to buy, our common stock only in jurisdictions where offers and sales are permitted. The information contained 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 shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

For investors outside the United States: Neither we nor the selling stockholders 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. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside the United States.

To the extent there is a conflict between the information contained in this prospectus, on the one hand, and the information contained in any document incorporated by reference filed with the Securities and Exchange Commission before the date of this prospectus, on the other hand, you should rely on the information in this prospectus. If any statement in a document incorporated by reference is inconsistent with a statement in another document incorporated by reference having a later date, the statement in the document having the later date modifies or supersedes the earlier statement.

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## PROSPECTUS SUMMARY

*The following summary highlights selected information contained or incorporated by reference 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 and other documents incorporated by reference in this prospectus, as well as the information under the caption "Risk Factors" herein and under similar headings in the other documents that are incorporated by reference into 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 subsidiaries.*

### **Business Overview**

We are a clinical-stage specialty pharmaceutical company focused on identifying, developing and commercializing innovative and differentiated drugs to address significant unmet needs in dermatology. Our lead drug candidate, A-101 Topical Solution, 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. In the first quarter of 2016, we initiated two multi-center, double-blind Phase 3 clinical trials and one open label Phase 3 clinical trial of A-101 in patients with SK. If the results of these trials are favorable, we plan to submit a New Drug Application for A-101 for the treatment of SK to the U.S. Food and Drug Administration in the fourth quarter of 2016. We also intend to develop A-101 as a prescription treatment for common warts, also known as verruca vulgaris, and A-102, a proprietary gel dosage form of hydrogen peroxide, as a prescription treatment for SK and common warts. In the fourth quarter of 2015, we initiated a Phase 2 clinical trial to evaluate A-101 for the treatment of common warts.

We have also in-licensed the exclusive, worldwide rights to inhibitors of the Janus kinase, or JAK, family of enzymes, for specified dermatological conditions. We plan to develop these JAK inhibitors, ATI-50001 and ATI-50002, as potential treatments for hair loss associated with an autoimmune skin disease known as alopecia areata, and potentially for other dermatological conditions, including androgenetic alopecia, also known as male or female pattern baldness, and vitiligo. We intend to in-license or acquire additional drug candidates for other dermatological conditions to build a fully integrated dermatology company.

### **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, Pennsylvania 19355. Our telephone number is (484) 324-7933. Our common stock is listed on the NASDAQ Global Select Market under the symbol "ACRS."

Our internet website address is [www.aclaristx.com](http://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.

### **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:

- 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;
- 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 stockholder approval of any golden parachute payments not previously approved.

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) December 31, 2020, (2) the last day of the fiscal year in which we have total annual gross revenue of at least \$1.0 billion, (3) the last day of the fiscal year 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 (4) any date on which we have issued more than \$1.0 billion in non-convertible debt during the prior 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 our public filings, 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	1,081,082 shares
Common stock outstanding	21,403,005 shares
Use of proceeds	We will not receive any proceeds from the sale of shares in this offering. See "Use of Proceeds."
Risk factors	See "Risk Factors" beginning on page 5 and the other information included in this prospectus for a discussion of factors you should carefully consider before deciding to invest in our common stock.
NASDAQ Global Select Market symbol	ACRS

The number of shares of our common stock outstanding is based on 21,403,005 shares of our common stock outstanding as of June 10, 2016 and excludes the following:

- 1,886,891 shares of common stock issuable upon the exercise of options outstanding as of June 10, 2016, at a weighted average exercise price of \$13.85 per share;
- 85,000 shares of common stock subject to restricted stock units outstanding as of June 10, 2016; and
- 1,613,805 shares of common stock reserved for future issuance under our 2015 equity incentive plan, plus any additional shares of our common stock that may become available under our 2015 equity incentive plan.

Unless otherwise indicated, all information in this prospectus assumes no exercise of outstanding options after June 10, 2016.

**SUPPLEMENTARY FINANCIAL INFORMATION**

Below is selected quarterly financial data for the three months ended March 31, 2016, which has been derived from our unaudited condensed consolidated financial statements incorporated by reference in this prospectus. For selected quarterly financial data for each quarter of the years ended December 31, 2015 and 2014, see Note 15 to our audited consolidated financial statements incorporated by reference in this prospectus. The following table should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and the consolidated financial statements and related notes to those statements incorporated by reference in this prospectus.

	<b>Three Months Ended March 31, 2016</b>	
	(in thousands, except for per share data)	
Revenue	\$	—
Operating expenses		13,139
Other income, net		100
Net loss	\$	(13,039)
Net loss attributable to common stockholders	\$	(13,039)
Net loss per share attributable to common stockholders, basic and diluted	\$	(0.65)

## RISK FACTORS

*Investing in our common stock involves a high degree of risk. You should consider carefully the following risks and uncertainties as well as the risks and uncertainties described in the section entitled “Risk Factors” contained in our Annual Report on Form 10-K for the year ended December 31, 2015, as filed with the SEC on March 23, 2016, and in our Quarterly Report on Form 10-Q for the quarter ended March 31, 2016, as filed with the SEC on May 11, 2016, which descriptions are incorporated in this prospectus by reference in their entirety, as well as in any prospectus supplement hereto. These risks and uncertainties are not the only risks and uncertainties we face. Additional risks and uncertainties not currently known to us, or that we currently view as immaterial, may also impair our business. If any of the risks or uncertainties described in our SEC filings or any additional risks and uncertainties actually occur, our business, financial condition, results of operations and cash flow could be materially and adversely affected. In that case, the trading price of our common stock could decline and you might lose all or part of your investment.*

### **Risks Related to this Offering**

***Sales of shares issued in this offering may cause the market price of our shares to decline.***

On June 2, 2016, we issued and sold 1,081,082 shares of our common stock in connection with a private placement. We have agreed to register for resale with the SEC such shares of common stock. The registration statement of which this prospectus forms a part has been filed to satisfy this obligation. Upon the effectiveness of the registration statement, the 1,081,082 shares we sold in the private placement may be freely sold in the open market. The sale of a significant amount of these shares of common stock in the open market, or the perception that these sales may occur, could cause the market price of our common stock to decline or become highly volatile.

***We may have to pay liquidated damages to the selling stockholders, which would increase our expenses and reduce our cash resources.***

In connection with the private placement, we entered into a registration rights agreement. Under the terms of the registration rights agreement, subject to certain limited exceptions, if the registration statement of which this prospectus forms a part has not been declared effective within the time periods specified in the registration rights agreement or we otherwise fail to comply with certain provisions set forth in the registration rights agreement, we will be required to pay the investors, as liquidated damages, 1.0% of the amount invested for each 30-day period (or a pro rata portion thereof) during which such failure continues until the shares are sold or can be sold without restriction under Rule 144 promulgated under the Securities Act of 1933, as amended, or the Securities Act. There can be no assurance that the registration statement of which this prospectus forms a part will be declared effective by the SEC or will remain effective for the time periods necessary to avoid payment of liquidated damages. Any payment of liquidated damages would increase our expenses, reduce our cash resources and may limit or preclude us from advancing our product candidates through clinical trials or otherwise growing our business.

## **SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This prospectus, including the information that we incorporate by reference, contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future operating results and financial position, business strategy, and plans and objectives of management for future operations, are forward-looking statements. In many cases, you can identify forward-looking statements by terms such as “may,” “should,” “expects,” “plans,” “anticipates,” “could,” “intends,” “target,” “projects,” “contemplates,” “believes,” “estimates,” “predicts,” “potential,” or “continue” or the negative of these terms or other similar expressions.

The forward-looking statements contained in this prospectus reflect our views as of the date of this prospectus about future events and are subject to risks, uncertainties, assumptions, and changes in circumstances that may cause our actual results, performance, or achievements to differ significantly from those expressed or implied in any forward-looking statement. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future events, results, performance, or achievements. A number of important factors could cause actual results to differ materially from those indicated by the forward-looking statements, including, without limitation, those factors described in “Risk Factors.” Except as required by law, after the date of this prospectus, we are under no duty to update or revise any of the forward-looking statements contained or incorporated by reference herein, whether as a result of new information, future events or otherwise.

You should read this prospectus, including the information that we incorporate by reference, 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.

## USE OF PROCEEDS

We are filing the registration statement of which this prospectus forms a part to permit holders of the shares of our common stock described in the section entitled “Selling Stockholders” to resell such shares of common stock. We will not receive any proceeds from the resale of any shares offered by this prospectus by the selling stockholders.

## PRICE RANGE OF COMMON STOCK

Our common stock commenced trading on The NASDAQ Global Select Market under the symbol “ACRS” on October 7, 2015. Prior to our initial public offering, there was no public market for our common stock. The following table sets forth for the periods indicated the high and low sales prices of our common stock as reported on The NASDAQ Global Select Market.

	<u>High</u>	<u>Low</u>
<b>Year ending December 31, 2016</b>		
First Quarter	\$ 27.93	\$ 14.12
Second Quarter (through June 16, 2016)	\$ 23.58	\$ 16.86
<b>Year ended December 31, 2015</b>		
Fourth Quarter (beginning October 7, 2015)	\$ 33.88	\$ 10.99

On June 16, 2016, the last reported sale price of our common stock was \$19.47 per share. As of June 16, 2016, there were approximately 62 holders of record of our common stock.

## 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.

## SELLING STOCKHOLDERS

On June 2, 2016, pursuant to a securities purchase agreement with certain accredited investors dated May 27, 2016, we sold in a private placement 1,081,082 shares of our common stock at a price per share of \$18.50. The table below sets forth, to our knowledge, information about the selling stockholders as of June 10, 2016.

We do not know when or in what amounts the selling stockholders may offer shares for sale. The selling stockholders might not sell any or all of the shares registered pursuant to the registration statement of which this prospectus forms a part. Because the selling stockholders may offer all or some of the shares pursuant to the registration statement of which this prospectus forms a part and because there are currently no agreements or understandings with respect to the sale of any shares, we cannot estimate the number of shares that will be held by the selling stockholders after completion of this offering. However, for purposes of this table, we have assumed that, after completion of this offering, none of the shares covered by this prospectus will be held by the selling stockholders.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to shares of our common stock. The number of shares of common stock beneficially owned prior to the offering for each selling stockholder includes (i) all shares of our common stock held by such selling stockholder prior to the private placement plus (ii) all shares of our common stock purchased by such selling stockholder pursuant to the private placement and being offered pursuant to the prospectus. The inclusion of any shares in this table does not constitute an admission of beneficial ownership by the person named below.

Throughout this prospectus, when we refer to the shares of our common stock being offered by this prospectus on behalf of the selling stockholders, we are referring to the shares of our common stock sold in the private placement, unless otherwise indicated.

The selling stockholders may have sold or transferred, in transactions exempt from the registration requirements of the Securities Act, some or all of their shares of common stock since the date on which the information in the table below is presented. Information about the selling stockholders may change over time.

Name and Address	Prior to Offering <sup>(1)</sup>		Number of Shares Offered	After Offering <sup>(1)</sup>	
	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned		Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned
Aisling Capital IV LP <sup>(2)</sup> 888 7th Avenue, 12th Floor New York, NY 10106	405,405	1.9%	405,405	—	—%
Cormorant Global Healthcare Master Fund, LP <sup>(3)</sup> 200 Clarendon Street, 52nd Floor Boston, MA 02116	753,393	3.5	207,500	545,893	2.6
CRMA SPV, L.P. <sup>(3)</sup> PO Box 309, Uglan House Grand Cayman, Cayman Islands KY1-1104	147,893	*	42,500	105,393	*
Eventide Healthcare & Life Sciences Fund <sup>(4)</sup> One International Place, 35th Floor Boston, MA 02110	140,000	*	140,000	—	—

Name and Address	Prior to Offering <sup>(1)</sup>		After Offering <sup>(1)</sup>		
	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned	Number of Shares Offered	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned
Rock Springs Capital Master Fund LP <sup>(5)</sup> c/o Rock Springs Capital Management LP 650 S. Exeter St., Suite 1070 Baltimore, MD 21202	991,177	4.6	95,677	895,500	4.2
Monashee Capital Master Fund LP <sup>(6)</sup> 125 High Street, 28th Floor Boston, MA 02180	60,000	*	60,000	—	—
Sabby Healthcare Master Fund, Ltd. <sup>(7)</sup> 10 Mountainview Road, Suite 205 Upper Saddle River, NJ 07458	55,000	*	55,000	—	—
CVI Investments, Inc. <sup>(8)</sup> 101 California Street, Suite 3250 San Francisco, CA 94111	55,000	*	55,000	—	—
Mossrock Capital, LLC <sup>(9)</sup> 19 Martin Lane Englewood, CO 80113	43,451	*	20,000	23,451	*

\* Represents beneficial ownership of less than 1%.

- (1) This table is based upon information supplied by the selling stockholders, which information may not be accurate as of the date hereof. We have determined beneficial ownership in accordance with the rules of the SEC. Except as indicated by the footnotes below, we believe, based on the information furnished to us, that the selling stockholders named in the table above have sole voting and investment power with respect to all shares of common stock that they beneficially own, subject to applicable community property laws. Applicable percentages are based on 21,403,005 shares outstanding on June 10, 2016, adjusted as required by rules promulgated by the SEC.
- (2) These shares of common stock are owned directly by Aisling Capital IV LP (“Aisling”) and held indirectly by Aisling Capital Partners IV, LP (“Aisling GP”), as general partner of Aisling, Aisling Capital Partners IV LLC (“Aisling Partners”), as general partner of Aisling GP, and each of the individual managing members of Aisling Partners. The individual managing members (collectively, the “Managers”) of Aisling Partners are Dr. Andrew Schiff and Steve Elms. Aisling GP, Aisling Partners and the Managers share voting and dispositive power over the shares directly held by Aisling.
- (3) Cormorant Global Healthcare GP, LLC serves as the general partner of Cormorant Global Healthcare Master Fund, LP, and Cormorant Asset Management, LLC serves as the investment manager of Cormorant Global Healthcare Master Fund, LP. Cormorant Asset Management, LLC also serves as the special limited partner of CRMA SPV, L.P. Bihua Chen serves as the managing member of Cormorant Global Healthcare GP, LLC and Cormorant Asset Management, LLC. Cormorant Global Healthcare Master Fund, LP, Cormorant Global Healthcare GP, LLC, Cormorant Asset Management, LLC, and Ms. Chen share dispositive and voting power of the shares of common stock beneficially owned by Cormorant Global Healthcare Master Fund, LP. Cormorant Asset Management, LLC and Ms. Chen share dispositive and voting power of the shares of common stock beneficially owned by CRMA SPV, L.P.
- (4) Eventide Healthcare & Life Sciences Fund is a registered investment company for which Eventide Asset Management, LLC acts as investment adviser. Eventide Asset Management, LLC has voting and investment power with respect to all of such shares.
- (5) Rock Springs General Partner LLC is the general partner of Rock Springs Capital Master Fund LP and Graham McPhail is the managing director of Rock Springs General Partner LLC.

- (6) Monashee Investment Management LLC, as the general partner of Monashee Capital Master Fund LP, has voting and investment control over the shares held directly by Monashee Capital Master Fund LP.
- (7) Hal Mintz has voting and investment power over the shares held by Sabby Healthcare Master Fund, Ltd. Sabby Management, LLC serves as the investment manager of Sabby Healthcare Master Fund, Ltd., and Hal Mintz is the manager of Sabby Management, LLC.
- (8) Heights Capital Management, Inc., the authorized agent of CVI Investments, Inc. (“CVI”), has discretionary authority to vote and dispose of the shares held by CVI and may be deemed to be the beneficial owner of these shares. Martin Kobinger, in his capacity as Investment Manager of Heights Capital Management, Inc., may also be deemed to have investment discretion and voting power over the shares held by CVI.
- (9) Thomas Malley is the owner and general partner of Mossrock Capital, LLC and has voting and investment power over such shares.

## PLAN OF DISTRIBUTION

We are registering the shares of common stock previously issued to permit the resale of these shares of common stock by the holders of the common stock from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling stockholders of the shares of common stock. We will bear all fees and expenses incident to our obligation to register the shares of common stock, except that, if the shares of common stock are sold through underwriters or broker-dealers, the selling stockholders will be responsible for underwriting discounts or commissions or agent's commissions.

The selling stockholders may sell all or a portion of the shares of our common stock beneficially owned by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. The shares of common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions,

- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- through the writing of options, whether such options are listed on an options exchange or otherwise;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales;
- sales pursuant to Rule 144 of the Securities Act;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

If the selling stockholders effect such transactions by selling shares of our common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling stockholders or commissions from purchasers of the shares of our common stock for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of the shares of our common stock or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares of our common stock in the course of hedging in positions they assume. The selling stockholders may also sell shares of our common stock short and deliver shares of our common stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The selling stockholders may also loan or pledge shares of our common stock to broker-dealers that in turn may sell such shares.

The selling stockholders may pledge or grant a security interest in some or all of the shares of our common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time pursuant to this prospectus or other applicable provisions of the Securities Act, amending, if necessary, the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer and donate the shares of our common stock in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The selling stockholders and any broker-dealer participating in the distribution of the shares of our common stock may be deemed to be “underwriters” within the meaning of the Securities Act, and any commission paid, or any discounts or concessions allowed to, any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act. At the time a particular offering of the shares of our common stock is made, a prospectus supplement, if required, will be distributed which will set forth the aggregate amount of shares of our common stock being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the selling stockholders and any discounts, commissions or concessions allowed or reallocated or paid to broker-dealers.

Under the securities laws of some states, the shares of our common stock may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the shares of our common stock may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

There can be no assurance that any selling stockholder will sell any or all of the shares of our common stock registered pursuant to the registration statement, of which this prospectus forms a part.

The selling stockholders and any other person participating in such distribution will be subject to applicable provisions of the Exchange Act, and the rules and regulations thereunder, including, without limitation, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares of our common stock by the selling stockholders and any other participating person. Regulation M may also restrict the ability of any person engaged in the distribution of the shares of our common stock to engage in market-making activities with respect to the shares of our common stock. All of the foregoing may affect the marketability of the shares of our common stock and the ability of any person or entity to engage in market-making activities with respect to the shares of our common stock.

We will pay all expenses of the registration of the shares of our common stock pursuant to the registration statement of which this prospectus forms a part, including, without limitation, SEC filing fees and expenses of compliance with state securities or “blue sky” laws; provided, however, that the selling stockholders will pay all underwriting discounts and selling commissions, if any. We will indemnify the selling stockholders against liabilities, including some liabilities under the Securities Act, or the selling stockholders will be entitled to contribution. We may be indemnified by the selling stockholders against civil liabilities, including liabilities under the Securities Act, that may arise from any written information furnished to us by the selling stockholders specifically for use in this prospectus or we may be entitled to contribution.

Once sold under the registration statement of which this prospectus forms a part, the shares of our common stock will be freely tradable in the hands of persons other than our affiliates.

## 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.

## EXPERTS

The financial statements incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2015 have been so incorporated 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

This prospectus is part of the registration statement on Form S-1 we filed with the SEC under the Securities Act and does not contain all the information set forth in the registration statement. Whenever a reference is made in this prospectus to any of our contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated by reference into this prospectus for a copy of such contract, agreement or other document. Because we are subject to the information and reporting requirements of the Exchange Act, we file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the internet at the SEC's website at <http://www.sec.gov>. You may also read and copy any document we file at the SEC's Public Reference Room 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 Room.

We maintain a website at [www.aclaristx.com](http://www.aclaristx.com). Information found on, or accessible through, our website is not a part of, and is not incorporated into, this prospectus, and you should not consider it part of this prospectus.

## INCORPORATION OF DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" information from other documents that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus.

We incorporate by reference into this prospectus and the registration statement of which this prospectus form a part the information or documents listed below that we have filed with the SEC:

- our Annual Report on Form 10-K for the year ended December 31, 2015, filed on March 23, 2016 and amended on April 25, 2016;
- our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2016, filed on May 11, 2016;
- our Current Reports on Form 8-K filed on March 30, 2016, May 27, 2016 and June 2, 2016; and
- the description of our common stock contained in our Registration Statement on Form 8-A, filed on October 2, 2015, including any amendments or reports filed for the purposes of updating this description.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference in this prospectus, including exhibits to these documents. You should direct any requests for documents to Aclaris Therapeutics, Inc., Attn: Kamil Ali-Jackson, Chief Legal Officer, 101 Lindenwood Drive, Suite 400, Malvern, PA 19355; telephone: (484) 324-7933.

You also may access these filings on our website at [www.aclaristx.com](http://www.aclaristx.com). We do not incorporate the information on our website into this prospectus or any supplement to this prospectus and you should not consider any information on, or that can be accessed through, our website as part of this prospectus or any supplement to this prospectus (other than those filings with the SEC that we specifically incorporate by reference into this prospectus or any supplement to this prospectus).

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus will be deemed modified, superseded or replaced for purposes of this prospectus to the extent that a statement contained in this prospectus modifies, supersedes or replaces such statement.

**1,081,082 Shares**



**Aclaris Therapeutics, Inc.**

**Common Stock**

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**PRELIMINARY PROSPECTUS**

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, 2016

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**PART II**  
**INFORMATION NOT REQUIRED IN PROSPECTUS**

**Item 13. Other Expenses of Issuance and Distribution.**

The following table sets forth the costs and expenses, other than underwriting discounts and commissions, payable by the registrant in connection with the sale and distribution of the common stock being registered. All amounts are estimates except for the SEC registration fee.

SEC registration fee	\$ 2,175
Legal fees and expenses	90,000
Accounting fees and expenses	15,000
Printing and miscellaneous fees and expenses	42,825
Total	\$ 150,000

**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 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 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. 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.

## **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, 2013 through the date of the prospectus that forms a part of this registration statement.

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. In August 2015, we issued an aggregate of 12,944,984 shares of our Series C convertible preferred stock to 28 investors at a purchase price of \$3.09 per share, for aggregate consideration of \$40.0 million. On March 24, 2016, pursuant to a stock purchase agreement, we issued an aggregate of 159,420 restricted shares of the our common stock to three entities. On June 2, 2016, pursuant to a securities purchase agreement dated May 27, 2016, we sold in a private placement 1,081,082 shares of our common stock to nine investors at a purchase price of \$18.50 per share, for aggregate consideration of approximately \$20.0 million. The offers, sales and issuances of these securities 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.

From January 1, 2013 through October 6, 2015, we granted options to purchase an aggregate of 1,140,524 shares of our common stock under our 2012 equity compensation plan with a weighted average exercise price of \$6.50 per share. The offers, sales and issuances of these options were exempt from registration under Rule 701 promulgated under the Securities Act, in that the transactions were under a written compensatory benefit plan as provided under Rule 701. The recipients of such securities were our employees, directors or consultants.

On October 13, 2015, upon the closing of our initial public offering, all 40,286,041 shares of our then-outstanding convertible preferred stock were automatically converted into 11,677,076 shares of common stock. The issuance of such shares of common stock was exempt from the registration under Section 3(a)(9) of the Securities Act.

## **Item 16. Exhibits and Financial Statement Schedules**

### **(a) Exhibits**

The exhibits to the registration statement are listed in the exhibit index attached hereto and are incorporated herein by reference.

### **(b) Financial Statement Schedules**

Financial statement schedules have been omitted, as the information required to be set forth therein is included in the consolidated financial statements or notes thereto incorporated by reference into the prospectus forming part of this registration statement.

## **Item 17. Undertakings**

### **(a) The undersigned registrant hereby undertakes:**

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment 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.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness; provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(b) The undersigned registrant hereby undertakes to deliver or cause to be delivered with the prospectus, to each person to whom the prospectus is sent or given, the latest annual report to security holders that is incorporated by reference in the prospectus and furnished pursuant to and meeting the requirements of Rule 14a-3 or Rule 14c-3 under the Securities Exchange Act of 1934; and, where interim financial information required to be presented by Article 3 of Regulation S-X are not set forth in the prospectus, to deliver, or cause to be delivered to each person to whom the prospectus is sent or given, the latest quarterly report that is specifically incorporated by reference in the prospectus to provide such interim financial information.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted for our directors, officers and controlling persons of the Registrant pursuant to our Articles of Incorporation or Amended and Restated Bylaws, 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 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 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 the registrant is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

**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 17<sup>th</sup> day of June, 2016.

**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.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Neal Walker</u> Neal Walker	President, Chief Executive Officer and Director ( <i>Principal Executive Officer</i> )	June 17, 2016
<u>/s/ Frank Ruffo</u> Frank Ruffo	Chief Financial Officer ( <i>Principal Financial Officer and Principal Accounting Officer</i> )	June 17, 2016
<u>/s/ Stephen A. Tullman</u> Stephen A. Tullman	Chairman of the Board of Directors	June 17, 2016
<u>/s/ Albert Cha, M.D., Ph.D.</u> Albert Cha, M.D., Ph.D.	Director	June 17, 2016
<u>/s/ Richard A. Bierly</u> Richard A. Bierly	Director	June 17, 2016
<u>/s/ Christopher Molineaux</u> Christopher Molineaux	Director	June 17, 2016
<u>/s/ Anand Mehra, M.D.</u> Anand Mehra, M.D.	Director	June 17, 2016

**EXHIBIT INDEX**

<b>Exhibit Number</b>	<b>Description of Document</b>
2.1 <sup>^</sup>	Stock Purchase Agreement, by and among the Registrant, Vixen Pharmaceuticals, Inc., JAK1, LLC, JAK2, LLC, JAK3, LLC and Shareholder Representative Services LLC, dated as of March 24, 2016 (incorporated by reference to Exhibit 2.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37581), filed with the SEC on May 11, 2016).
3.1	Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-37581), filed with the SEC on October 13, 2015).
3.2	Amended and Restated Bylaws of the Registrant (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 001-37581), filed with the SEC on October 13, 2015).
4.1	Specimen stock certificate evidencing shares of Common Stock (incorporated by reference to Exhibit 4.1 to Amendment No. 2 to the Registrant's Registration Statement on Form S-1 (File No. 333-206437), filed with the SEC on September 25, 2015).
5.1*	Opinion of Cooley LLP.
10.1#	Clinical and Commercial Supply Agreement, by and between the Registrant and PeroxyChem LLC, dated as of August 6, 2014 (incorporated by reference to Exhibit 10.1 to the Registrant's Registration Statement on Form S-1 (File No. 333-206437), filed with the SEC on August 17, 2015).
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 (incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form S-1 (File No. 333-206437), filed with the SEC on August 17, 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 (incorporated by reference to Exhibit 10.3 to Amendment No. 2 to the Registrant's Registration Statement on Form S-1 (File No. 333-206437), filed with the SEC on September 25, 2015).
10.4#	Finder's Services Agreement, by and between the Registrant and KPT Consulting, LLC, dated as of August 25, 2012 (incorporated by reference to Exhibit 10.4 to the Registrant's Registration Statement on Form S-1 (File No. 333-206437), filed with the SEC on August 17, 2015).
10.5	Second Amended and Restated Investors' Rights Agreement, dated as of August 28, 2015, by and among the Registrant and certain of its stockholders (incorporated by reference to Exhibit 10.5 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 (File No. 333-206437), filed with the SEC on September 4, 2015).
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 (incorporated by reference to Exhibit 10.6 to the Registrant's Registration Statement on Form S-1 (File No. 333-206437), filed with the SEC on August 17, 2015).
10.7+	Amended and Restated 2012 Equity Compensation Plan (incorporated by reference to Exhibit 10.7 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 (File No. 333-206437), filed with the SEC on September 4, 2015)).
10.8+	Form of Stock Option Grant under Amended and Restated 2012 Equity Compensation Plan (incorporated by reference to Exhibit 10.8 to the Registrant's Registration Statement on Form S-1 (File No. 333-206437), filed with the SEC on August 17, 2015)).
10.9+	2015 Equity Incentive Plan (incorporated by reference to Exhibit 4.6 to the Registrant's Registration Statement on Form S-8 (File No. 333-207434), filed with the SEC on October 15, 2015).
10.10+	Form of Stock Option Grant Notice and Stock Option Agreement under 2015 Equity Incentive Plan (incorporated by reference to Exhibit 10.10 to Amendment No. 2 to the Registrant's Registration Statement on Form S-1 (File No. 333-206437), filed with the SEC on September 25, 2015).
10.11+	Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Award Agreement under 2015 Equity Incentive Plan (incorporated by reference to Exhibit 10.11 to Amendment No. 2 to the Registrant's Registration Statement on Form S-1 (File No. 333-206437), filed with the SEC on September 25, 2015).

- 10.12 Form of Indemnification Agreement (incorporated by reference to Exhibit 10.12 to the Registrant's Registration Statement on Form S-1 (File No. 333-206437), filed with the SEC on August 17, 2015).
- 10.13+ Non-Employee Director Compensation Policy (incorporated by reference to Exhibit 10.13 to Amendment No. 2 to the Registrant's Registration Statement on Form S-1 (File No. 333-206437), filed with the SEC on September 25, 2015).
- 10.14# License and Collaboration Agreement, by and between Aclaris Therapeutics International Limited and Rigel Pharmaceuticals, Inc., dated as of August 27, 2015 (incorporated by reference to Exhibit 10.14 to Amendment No. 3 to the Registrant's Registration Statement on Form S-1 (File No. 333-206437), filed with the SEC on October 1, 2015).
- 10.15+ Amended and Restated Employment Agreement, by and between the Registrant and Neal Walker, dated as of October 5, 2015 (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37581), filed with the SEC on November 18, 2015).
- 10.16+ Employment Agreement, by and between the Registrant and Stuart Shanler, dated as of October 4, 2015 (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37581), filed with the SEC on November 18, 2015).
- 10.17+ Employment Agreement, by and between the Registrant and Christopher Powala, dated as of September 17, 2015 (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37581), filed with the SEC on November 18, 2015).
- 10.18^ Exclusive License Agreement, by and between The Trustees of Columbia University in the City of New York and Vixen Pharmaceuticals, Inc., dated as of December 31, 2015 (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37581), filed with the SEC on May 11, 2016).
- 10.19^ Third Amendment to Services Agreement by and between the Registrant and NST Consulting, LLC, dated as of November 24, 2015 (incorporated by reference to Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37581), filed with the SEC on May 11, 2016).
- 10.20^ Fourth Amendment to Services Agreement by and between the Registrant and NST Consulting, LLC, dated as of January 8, 2016 (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37581), filed with the SEC on May 11, 2016).
- 10.21^ Fifth Amendment to Services Agreement by and between the Registrant and NST Consulting, LLC, dated as of January 8, 2016 (incorporated by reference to Exhibit 10.4 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37581), filed with the SEC on May 11, 2016).
- 10.22 Third Amendment to Amended and Restated Sublease, by and between the Registrant and NST Consulting, LLC, dated as of February 8, 2016 (incorporated by reference to Exhibit 10.5 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-37581), filed with the SEC on May 11, 2016).
- 10.23 Securities Purchase Agreement, dated May 27, 2016, by and between the Registrant and the investors named therein (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-37581), filed with the SEC on June 2, 2016).
- 10.24 Registration Rights Agreement, dated May 27, 2016, by and between the Registrant and the investors named therein (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K (File No. 001-37581), filed with the SEC on June 2, 2016).
- 10.25\* Amendment to 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 June 15, 2016.
- 21.1\* Subsidiaries of the Registrant.
- 23.1\* Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm.
- 24.1\* Power of Attorney (contained on signature page hereto).

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\* Filed herewith.

+ Indicates management contract or compensatory plan.

# Confidential treatment has been granted with respect to portions of this exhibit, indicated by asterisks, which portions have been separately filed with the SEC.

^ Confidential treatment has been requested with respect to portions of this exhibit, indicated by asterisks, which portions have been filed separately with the SEC.

Brian F. Leaf  
T: +1703 456 8053  
bleaf@cooley.com

EXHIBIT 5.1

June 17, 2016

Aclaris Therapeutics, Inc.  
101 Lindenwood Drive, Suite 400  
Malvern, PA 19355

Ladies and Gentlemen:

You have requested our opinion, as counsel to Aclaris Therapeutics, Inc., a Delaware corporation (the "**Company**"), in connection with the filing by the Company of a Registration Statement on Form S-1 (the "**Registration Statement**") with the Securities and Exchange Commission, including a related prospectus (the "**Prospectus**"), covering the registration for resale of 1,081,082 shares of the Company's common stock, par value \$0.00001 per share (the "**Common Stock**"), held by certain selling stockholders identified in the Prospectus (the "**Shares**").

In connection with this opinion, we have examined and relied upon (a) the Registration Statement and the Prospectus, (b) the Company's Amended and Restated Certificate of Incorporation and the Company's Amended and Restated Bylaws, each as currently in effect, and (c) the originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness and authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies, the accuracy, completeness and authenticity of certificates of public officials; and the due authorization, execution and delivery of all documents by all persons other than the Company where authorization, execution and delivery are prerequisites to the effectiveness of such documents. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not sought independently to verify such matters.

Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware. We express no opinion as to whether the laws of any particular jurisdiction other than those identified above are applicable to the subject matter of this opinion. We are not rendering any opinion as to compliance with any federal or state law, rule or regulation relating to securities, or to the sale or issuance thereof.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares have been validly issued and are fully paid and nonassessable.

We consent to the filing of this opinion as an exhibit to the Registration Statement.

Sincerely,

Cooley LLP

By: /s/ Brian F. Leaf  
Brian F. Leaf

**AMENDMENT TO ASSIGNMENT AGREEMENT**

This Amendment to Assignment Agreement (the “**Amendment**”) is entered into effective as of June 15, 2016, 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**”).

**RECITALS:**

A. Assignee and Miller Estate have entered into that certain Assignment Agreement having an effective date of August 20, 2012, (the “**Agreement**”), which provides for the assignment and conveyance from Miller Estate to Assignee of certain personal property described in the Agreement, including the Transferred Patents and Transferred Know-How.

B. 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.

C. The Agreement provides in Section 10.5 that Assignee’s sole responsibility with respect to each payment due under the Agreement is to make that payment to Miller Estate in accordance with the 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. Section 10.5 further provides that 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.

D. Pursuant to that certain Final Order Changing the Name of an Adult filed in the District Court of Travis County, Texas, on February 18, 2015, in Cause Number D-1-FM-15-000946 (a copy of which is attached to this amendment), Mickey Lyon’s name has been changed from Mickey Joe Lyon to Mickey Lyon Jamail.

E. The parties now wish to amend and supplement the Agreement as provided in this Amendment.

**AGREEMENTS:**

NOW, THEREFORE, in consideration of the foregoing, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignee and Miller Estate agree as follows:

- 1) Capitalized terms used but not otherwise defined herein shall have the meaning set forth in the Agreement.
  - 2) The second and third paragraphs of Section 10.5 of the Agreement are hereby deleted in their entirety and the following two paragraphs are hereby substituted therefor:
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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 further understood and agreed 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, or if Mickey J. Miller II has requested that split payments be made to the heirs, then to such heirs as designated by him in writing under the next paragraph. Except as set forth otherwise in 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 term 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 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. Notwithstanding the foregoing, Assignee acknowledges and agrees that Mickey J. Miller II may designate in writing, before or after the Miller Estate is closed and no later than ten (10) Business Days prior to the payment due date, that Assignee split subsequent payment(s) and make them to each of the heirs of the Miller Estate (*i.e.*, to Mickey J. Miller II and Mickey Lyon Jamail formerly known as Mickey Lyon) in equal percentages; and in the event of such written designation, Assignee will do so. Except as set forth in this paragraph, 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, or to make the split payments to the heirs designated in writing by him to receive payment as provided for above, as applicable.

3) Except as amended by this Amendment, all provisions of the Agreement as originally written shall remain in full force and effect. This Amendment may be executed simultaneously or in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

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IN WITNESS WHEREOF, the parties thereto have executed this Amendment as of the day and year first above written.

**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: 6/15/16

Date: 6/1/16

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## Subsidiaries of Aclaris Therapeutics, Inc.

Name of Subsidiary	Jurisdiction of Incorporation or Organization
Aclaris Therapeutics International, Ltd. Vixen Pharmaceuticals, Inc.	United Kingdom Delaware

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**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We hereby consent to the incorporation by reference in this Registration Statement on Form S-1 of our report dated March 23, 2016, relating to the financial statements, which appears in Aclaris Therapeutics, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2015. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP

Philadelphia, Pennsylvania  
June 17, 2016

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