1,081,082 Shares



Common Stock

This prospectus supplement updates and should be read in conjunction with the prospectus dated June 28, 2016 (the "Prospectus") relating to the resale or other disposition, from time to time, by the selling stockholders identified in the Prospectus under the caption "Selling Stockholders," of up to 1,081,082 shares of our common stock, par value \$0.00001 per share. We are not selling any shares of our common stock under the Prospectus and will not receive any proceeds from the sale or other disposition of shares by the selling stockholders. The selling stockholders will bear all commissions and discounts, if any, attributable to the sale or other disposition of the shares. We will bear all costs, expenses and fees in connection with the registration of the shares. To the extent that there is any conflict between the information contained herein and the information contained in the Prospectus, the information contained herein supersedes and replaces such information.

Current Report

This prospectus supplement incorporates into our Prospectus the information contained in our attached current report on Form 8-K that we filed with the Securities and Exchange Commission on August 4, 2016 (the "Form 8-K"). The Form 8-K, as filed, is set forth below.

The information contained in this Prospectus Supplement No. 2 supplements and supersedes, in relevant part, the information contained in the Prospectus, as amended and supplemented to date. This Prospectus Supplement No. 2 is incorporated by reference into, and should be read in conjunction with, the Prospectus, as amended and supplemented to date, and is not complete without, and may not be delivered or utilized except in connection with, the Prospectus, as amended and supplemented to date.

The Prospectus, together with Prospectus Supplement No. 1 and this Prospectus Supplement No. 2, constitutes the prospectus required to be delivered by Section 5(b) of the Securities Act of 1933, as amended, with respect to offers and sales of the securities as set forth in the Prospectus, as amended and supplemented. All references in the Prospectus to "this prospectus" are amended to read "this prospectus (as supplemented and amended to date)."

Our common stock is traded on the NASDAQ Global Select Market under the symbol "ACRS." The last reported sale price of our common stock on August 3, 2016 was \$18.88 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."

Investing in our common stock is highly speculative and involves a significant degree of risk. See "Risk Factors" beginning on page 5 of the Prospectus and the Risk Factors identified in our Annual Report for the year ended December 31, 2015 and in our Quarterly Report for the quarter ended March 31, 2016 for a discussion of information that should be considered before making a decision to purchase our common stock.

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.

The date of this prospectus supplement is August 4, 2016.

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

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): July 29, 2016

ACLARIS THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation)

001-37581 (Commission File No.)

46-0571712

(IRS Employer Identification No.)

101 Lindenwood Drive, Suite 400 Malvern, PA 19355

(Address of principal executive offices and zip code)
Registrant's telephone number, including area code: **(484) 324-7933**

(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation on the registrant under any of the following provisions:
Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

On July 29, 2016, Albert Cha provided notice to the board of directors (the "*Board*") of Aclaris Therapeutics, Inc. (the "*Company*") of his decision to resign from the Board, the Company's Compensation Committee and the Company's Nominating and Corporate Governance Committee, effective as of August 5, 2016. Dr. Cha's decision to resign was not the result of any disagreement with the Company. In order to ensure continued compliance with the NASDAQ listing rules, on August 4, 2016, the Board appointed Anand Mehra, a current director of the Company, to replace Dr. Cha as the chairman of the Company's Compensation Committee, effective as of August 5, 2016, and appointed Richard A. Bierly, a current director of the Company, to replace Dr. Cha as a member of the Company's Nominating and Corporate Governance Committee, effective as of August 5, 2016.

Also on August 4, 2016, the Board appointed William D. Humphries to serve as a director of the Company, effective as of September 1, 2016. Mr. Humphries will serve as a Class I director whose term will expire at the 2019 annual meeting of stockholders. The Company expects Mr. Humphries will replace Dr. Mehra as a member of the Company's Audit Committee and will replace Mr. Bierly as a member of the Company's Nominating and Corporate Governance Committee, effective as of September 1, 2016. There is no arrangement or understanding between Mr. Humphries any other person pursuant to which he was selected as a director of the Company, and there is no family relationship between Mr. Humphries and any of the Company's other directors or executive officers. The Company is not aware of any transaction involving Mr. Humphries requiring disclosure under Item 404(a) of Regulation S-K. Additional information about Mr. Humphries is set forth below.

William D. Humphries, age 49, has served as President and Chief Executive Officer of the North American business of Merz, Inc., an affiliate of Merz Pharma Group, a specialty healthcare company, since March 2012. From 2006 to March 2012, he served in a number of leadership positions with Stiefel Laboratories, Inc., a dermatology pharmaceutical company, including as its Chief Commercial Officer and then as its President beginning in 2008. Stiefel was acquired by GlaxoSmithKline in 2009. After the acquisition, Mr. Humphries served as the President of Dermatology for Stiefel from 2009 until March 2012. Before Stiefel, Mr. Humphries served in executive roles in sales and marketing, business development, and international marketing for Allergan, Inc., concluding as vice president of its U.S. skincare business. Mr. Humphries has served on the board of directors of Clearside Biomedical, Inc., a public clinical biopharmaceutical company, since 2012. Mr. Humphries has also served on the GlaxoSmithKline Portfolio Investment Board and the GlaxoSmithKline Ophthalmology Board. Mr. Humphries received his M.B.A. degree from Pepperdine University and a B.A. degree from Bucknell University.

In accordance with the Company's compensation policy for non-employee directors, upon his commencement of service as a director, Mr. Humphries will be granted a nonqualified stock option with a Black-Scholes value as of the date of grant of \$160,000. The stock option will have an exercise price per share equal the closing price of the Company's common stock on the date of grant. This option will vest and become exercisable in 36 equal monthly installments subject to Mr. Humphries's Continuous Service (as defined in the Company's 2015 Equity Incentive Plan) through such vesting dates. Additionally, Mr. Humphries will be entitled to receive a \$35,000 annual retainer for his service as director, a \$7,500 annual retainer for his service on the Nominating and Corporate Governance Committee. At each annual stockholder meeting following which Mr. Humphries's term as a director continues, Mr. Humphries will be entitled to receive an additional nonqualified stock option to purchase shares of the Company's common stock with a Black-Scholes value of \$90,000 on the date of grant, which option will vest and become exercisable in 12 equal monthly installments following the date of grant. Mr. Humphries has also entered into the Company's standard form of indemnification agreement.

Item 7.01 Regulation FD Disclosure.

On August 4, 2016, the Company issued a press release announcing the resignation of Dr. Cha and the appointment of Mr. Humphries. A copy of this press release is furnished herewith as Exhibit 99.1 to this Current Report. The information contained in the press release furnished as Exhibit 99.1 shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "*Exchange Act*"), and is not incorporated by reference into any of the Company's filings under the Securities Act of 1933, as amended, or the Exchange Act, whether made before or after the date hereof, except as shall be expressly set forth by specific reference in any such filing.

Item 9.01 Exhibits.

Date: August 4, 2016

(d) Exhibits

Exhibit	
Number	Exhibit Description
99.1	Procs Release dated August 4, 2016

Press Release dated August 4, 2016.

SIGNATURES

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

Aclaris Therapeutics, Inc.

By: /s/ Frank Ruffo

Frank Ruffo Chief Financial Officer



Aclaris Announces Appointment of Bill Humphries to Board of Directors

Malvern, PA – August 4, 2016 (GLOBE NEWSWIRE) – Aclaris Therapeutics, Inc. (NASDAQ: ACRS), a clinical-stage specialty pharmaceutical company, today announced the appointment of Bill Humphries, the President and Chief Executive Officer of Merz North America, a division of Merz, Inc. (an affiliate of Merz Pharma Group), to the Aclaris Board, effective September 1st.

Bill Humphries has more than 25 years of experience in the specialty pharmaceutical industry, with a majority of that time dedicated to commercializing specialty prescription dermatology products at Allergan PLC and Stiefel Laboratories, Inc., which was acquired by GlaxoSmithKline PLC in 2009. He is a member of the Merz Pharma Board and serves as chairman of the boards of Merz Pharmaceuticals LLC, Merz Aesthetics, and Merz Canada. Bill Humphries holds a Master of Business Administration degree from Pepperdine University and a Bachelor of Arts degree from Bucknell University. He will replace Dr. Albert Cha of Vivo Capital on the Aclaris board.

"On behalf of the Company and the entire Board, I would like to thank Dr. Albert Cha for his leadership and years of service," said Aclaris Chief Executive Officer Neal Walker. "I'd also like to take this opportunity to welcome our new board member, Bill Humphries, who will serve as an independent director. His significant leadership experience in the specialty pharmaceutical industry will be a valuable asset for Aclaris as we evolve into a fully integrated commercial company."

About Aclaris Therapeutics, Inc.

Aclaris Therapeutics, Inc. is a clinical-stage specialty pharmaceutical company focused on identifying, developing, and commercializing innovative and differentiated drugs to address significant unmet needs in dermatology. Aclaris is based in Malvern, Pennsylvania and more information can be found by visiting Aclaris' website at www.aclaristx.com

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