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): August 9, 2016

ALDEYRA THERAPEUTICS, INC.
(Exact name of Registrant as specified in its charter)

Delaware		
(State or other jurisdiction of incorporation)		
001-36332		**20-1968197**
(Commission File No.)		**(IRS Employer Identification No.)**

131 Hartwell Avenue, Suite 320
Lexington, MA 02421
(Address of principal executive offices and zip code)

Registrant's telephone number, including area code: (781) 761-4904

(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 of 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 7.01. Regulation FD Disclosure.

On August 9, 2016, management of Aldeyra Therapeutics, Inc. ("Aldeyra") will hold a conference call at 8:00 am ET to discuss positive data from its randomized, parallel-group, double-masked, vehicle-controlled clinical trial of a dermatologic formulation of NS2 for the treatment of the skin manifestations of Sjögren-Larsson Syndrome ("SLS"). A copy of the presentation being used in connection with this conference call is furnished herewith as Exhibit 99.1 and is incorporated by reference herein.

The information in this Item 7.01 of this Current Report on Form 8-K, including Exhibit 99.1 attached hereto, shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, or incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in any such filing.

Item 8.01. Other Events.

On August 9, 2016, Aldeyra issued a press release announcing positive data from its randomized, parallel-group, double-masked, vehicle-controlled clinical trial of a dermatologic formulation of NS2 for the treatment of the skin manifestations of SLS. A copy of Aldeyra's press release is attached hereto as Exhibit 99.2 and is incorporated by reference herein.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
99.1	Aldeyra Therapeutics, Inc. Presentation dated August 9, 2016
99.2	Aldeyra Therapeutics, Inc. Press Release dated August 9, 2016

SIGNATURE

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.

ALDEYRA THERAPEUTICS, INC.

By: /s/ Todd C. Brady, M.D., Ph.D.
Name: Todd C. Brady, M.D., Ph.D.
Title: President and Chief Executive Officer

Dated: August 9, 2016

EXHIBIT INDEX

Exhibit No.	Description
99.1	Aldeyra Therapeutics, Inc. Presentation dated August 9, 2016
99.2	Aldeyra Therapeutics, Inc. Press Release dated August 9, 2016

Results of a randomized, double-blind, vehicle-controlled clinical trial of topical dermatologic NS2 in patients with ichthyosis due to Sjögren-Larsson Syndrome

August 9, 2016

Disclaimers and Forward-Looking Statements

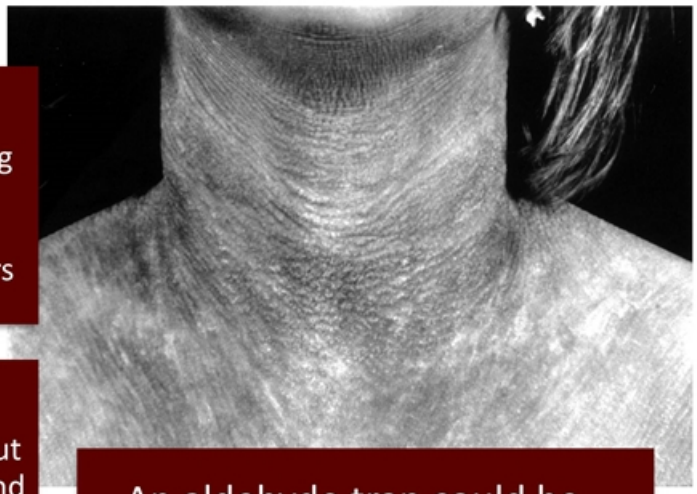
- This presentation contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, including statements regarding Aldeyra's possible or assumed future results of operations and expenses, business strategies and plans, research and development plans or expectations, trends, market sizing, competitive position, industry environment and potential growth opportunities, among other things. Forward-looking statements include all statements that are not historical facts and, in some cases, can be identified by terms such as "may," "might," "will," "objective," "intend," "should," "could," "can," "would," "expect," "believe," "anticipate," "project," "target," "design," "estimate," "predict," "potential," "plan" or similar expressions and the negatives of those terms.
- Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause Aldeyra's actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. These statements reflect Aldeyra's current views with respect to future events and are based on assumptions and subject to risks and uncertainties, including the development and clinical plans for NS2, in Sjogren Larsson Syndrome. Aldeyra is at an early stage of development and may not ever have any products that generate significant revenue. Important factors that could cause actual results to differ materially from those reflected in Aldeyra's forward-looking statements include, among others, the timing of commencement, enrollment and completion of Aldeyra's clinical trials; the timing and success of preclinical studies and clinical trials conducted by Aldeyra and its development partners; the ability to obtain and maintain regulatory approval to commercialize Aldeyra's product candidates, and the labeling for any approved products; the scope, progress, expansion, and costs of developing and commercializing Aldeyra's product candidates; the size and growth of the potential markets for Aldeyra's product candidates and the ability to serve those markets; Aldeyra's expectations regarding its expenses and revenue, the sufficiency or use of Aldeyra's cash resources and needs for additional financing; the rate and degree of market acceptance of any of Aldeyra's product candidates; Aldeyra's expectations regarding competition; Aldeyra's anticipated growth strategies; Aldeyra's ability to attract or retain key personnel; Aldeyra's ability to establish and maintain development partnerships; Aldeyra's expectations regarding federal, state and foreign regulatory requirements; regulatory developments in the United States and foreign countries; Aldeyra's ability to obtain and maintain intellectual property protection for its product candidates; the anticipated trends and challenges in Aldeyra's business and the market in which it operates; and other factors that are described in the "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections of Aldeyra's Annual Report on Form 10-K for the year ended December 31, 2015 and Quarterly Report on Form 10-Q for the quarter ended March 31, 2016, which are on file with the Securities and Exchange Commission (SEC) and available on the SEC's website at www.sec.gov. Additional factors may be set forth in Aldeyra's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016, to be filed with the SEC in the third quarter of 2016.
- In addition to the risks described above and in Aldeyra's other filings with the SEC, other unknown or unpredictable factors also could affect Aldeyra's results. No forward-looking statements can be guaranteed and actual results may differ materially from such statements. The information in this presentation is provided only as of August 9, 2016, and Aldeyra undertakes no obligation to update any forward-looking statements contained in this presentation on account of new information, future events, or otherwise, except as required by law.

Sjögren-Larsson Syndrome (SLS): A Rare Disease with No Approved Therapy

ALDEYRA THERAPEUTICS™

Rare disease caused by mutation in Fatty Aldehyde Dehydrogenase, leading to high levels of toxic aldehydes

Symptoms include severe skin thickening (ichthyosis), retinal disease, and neurological disorders



Present at birth, but no approved therapy that addresses disease; patients survive into 50s

Estimated 0.4 births/100,000 = about 1000 patients in US and a greater number in Europe*

An aldehyde trap could be analogous to enzyme replacement therapy

*Extrapolating from a Swedish estimate in addition to a US genetic mutation analysis, it is generally assumed that there are approximately 1,000 SLS patients in the United States and a greater number of SLS patients in Europe.

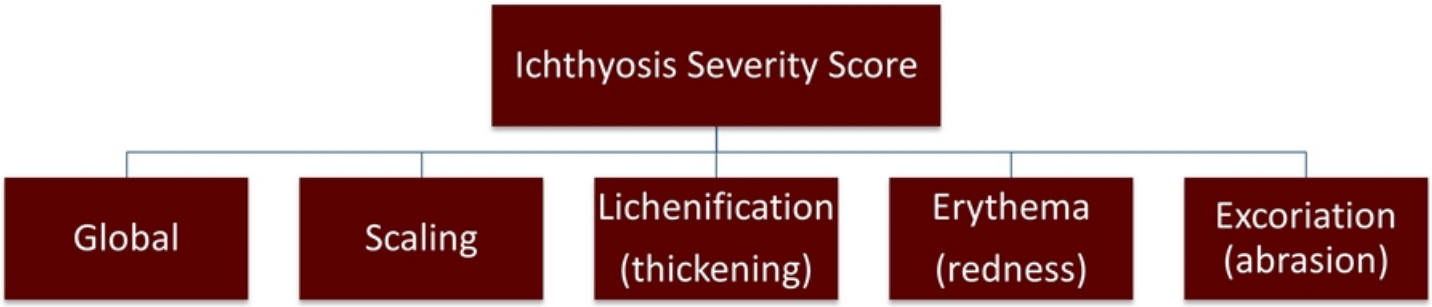
Sjögren-Larsson Syndrome Clinical Trial Design

Dosing	NS2 1% Topical Dermatologic Once Daily on 4x10 inch area
Randomization	Vehicle-Controlled 1:1
Enrollment	12 Patients with Moderate to Severe Ichthyosis
Treatment Time	8 Weeks
Endpoints	Ichthyosis Severity Score (Investigator Exam and Masked Central Review of Photography) Dermal Biomarkers

Further information can be found on www.clinicaltrials.gov: Trial #NCT02402309.

ALDEYRA THERAPEUTICS™

Sjögren-Larsson Syndrome Ichthyosis Assessment



Each measure rated separately as follows:

Score	Definition
0	Clear
1	Almost Clear
2	Mild
3	Moderate
4	Severe

Composite Ichthyosis Severity Score is the sum of all components (range 0-20)

Baseline Characteristics of Clinical Trial Subjects

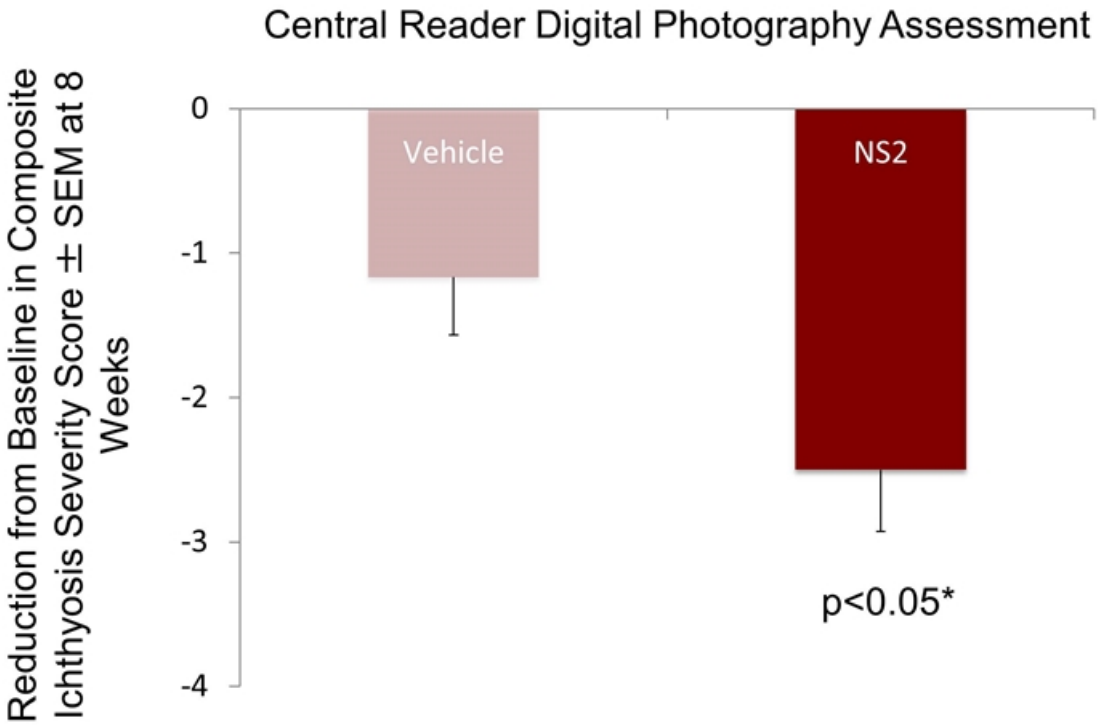
	NS2 (n=6)	Vehicle (n=6)
Age (years) ± SD	14 ± 5	17 ± 5
Gender (Male, Female)	3, 3	3, 3
Race (White, Black, Latino)	3,2,1	5,1,0
Body Surface Area (m^2) ± SD	1.54 ± 0.5	1.95 ± 0.9
Baseline Exam Ichthyosis Global Assessment ± SD	3.0 ± 0	3.2 ± 0.4

NS2 Demonstrated Clinical Activity in Patients with Sjögren-Larsson Syndrome

Digital Photography Central Review	NS2	Vehicle	Unadjusted Chi Square p value#
Subjects with composite Ichthyosis Severity Score of ≤ 5 at Week 8 (average rating of "almost clear")	5/6 (83%)	1/5 (20%)*	0.04
Subjects with ≥2 point reduction from baseline in composite Ichthyosis Severity Score at Week 8	5/6 (83%)	1/6 (17%)	0.02

*One patient excluded due to photographic rating of 2 at baseline
#p values are subject to change based on quality control analysis

NS2 Reduced Ichthyosis Severity Score



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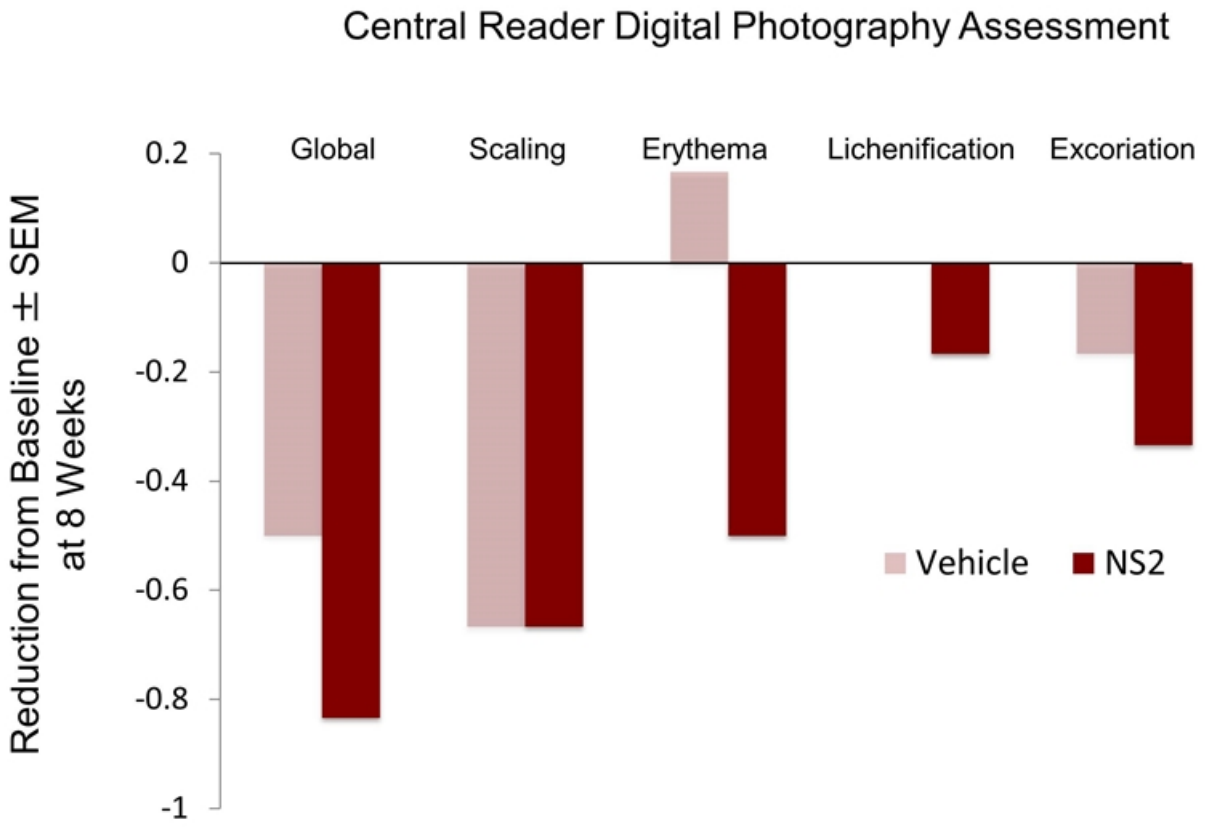
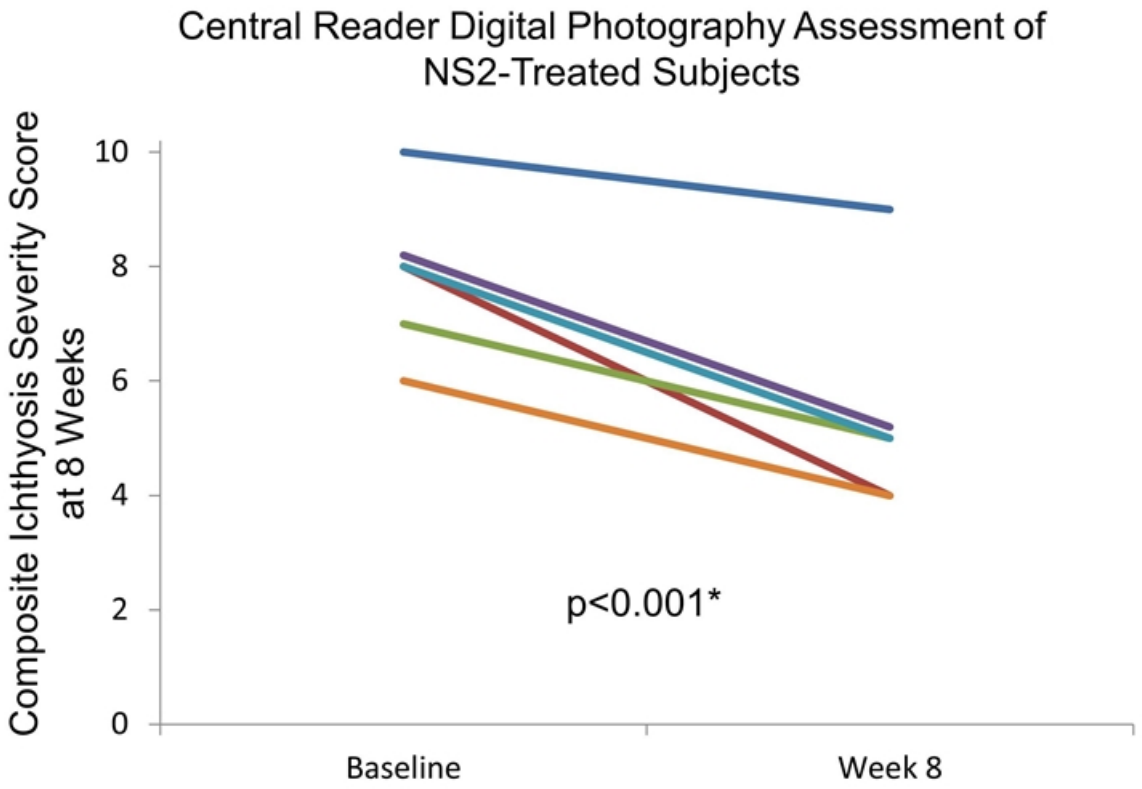
NS2 Reduced Ichthyosis Severity Score



Every NS2-Treated Subject Decreased in Ichthyosis Severity



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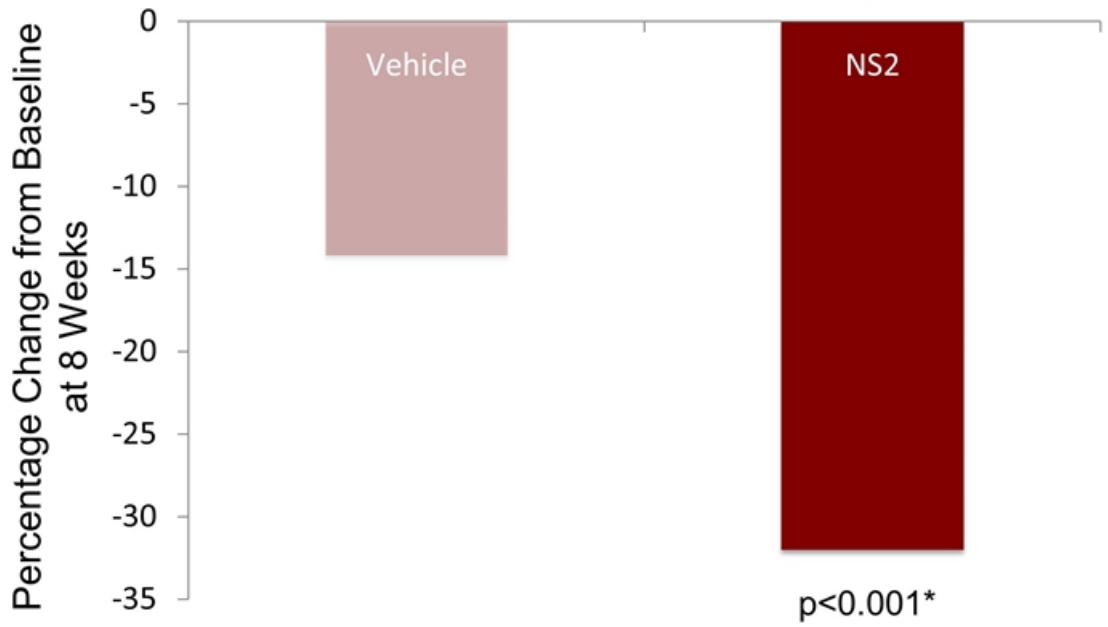
NS2 Observed to be Well Tolerated

- No significant adverse events, serious adverse events, or discontinuations in either group
- Itching was reported in two subjects (33%) in the NS2 treated group
  - Moderate itching in one subject classified as “possibly related to drug”
  - Mild itching in one subject classified as “unlikely related to drug”
- Overall, NS2 was well tolerated with no safety issues raised for future studies of topical dermatological NS2

Elevations in Skin Cholesterol Were Reduced with NS2 Treatment



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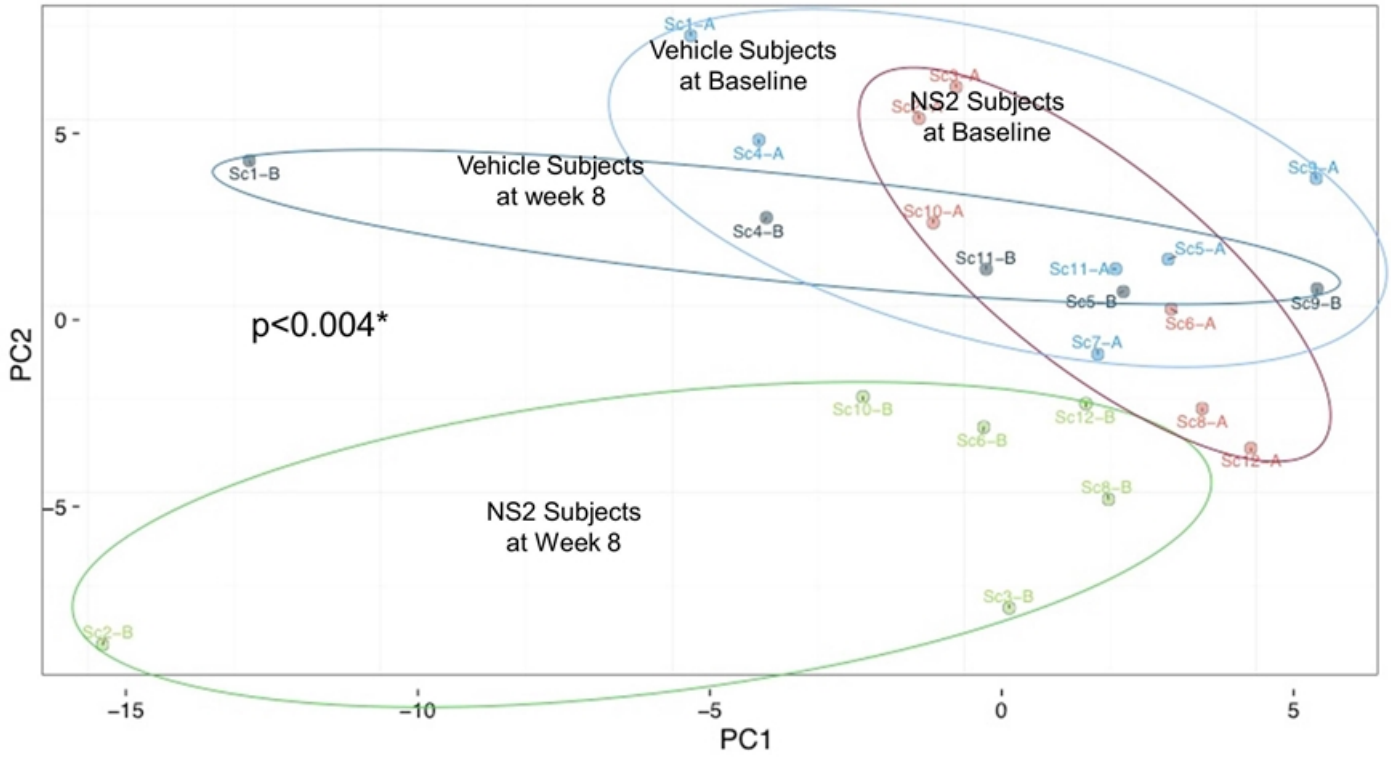
Skin Biomarkers in NS2-Treated (But Not Vehicle-Treated) Subjects Changed from Baseline



*p values are subject to change based on quality control analysis

NS2 Demonstrated Clinical Activity in Patients with Sjögren-Larsson Syndrome

In summary, this highly controlled clinical trial demonstrated:

- Clinically meaningful and statistically significant changes with NS2 relative to vehicle on the Ichthyosis Severity Score, as evidenced by moderate disease at baseline reduced to mild disease after 8 weeks of treatment with NS2;
- Clinical effects that correlated with dermal biomarkers; and,
- An acceptable safety and tolerability profile for NS2.

Aldeyra Therapeutics Announces Positive Results from a Randomized, Double-Blind, Vehicle-Controlled Clinical Trial of Topical Dermatologic NS2 in Patients with Sjögren-Larsson Syndrome

Data Demonstrate Superiority of NS2 over Vehicle in Achieving Clinically Meaningful Improvement

All NS2-Treated Patients Demonstrated Improvement During Therapy

Dermal Biomarker Changes Consistent with Biochemical Modification of Disease

LEXINGTON, MA — (Marketwired) – 8/9/2016 — Aldeyra Therapeutics, Inc. (NASDAQ: ALDX) (Aldeyra), a biotechnology company focused on the development of products to treat diseases related to aldehydes, today reported positive data from a randomized, parallel-group, double-blind, vehicle-controlled, multi-center clinical trial of topical dermatologic NS2, a novel aldehyde trap, for the treatment of the dermal manifestations of Sjögren-Larsson Syndrome (SLS).

“The results of this randomized and controlled clinical trial represent a significant advance in the effort to develop a treatment for SLS,” said Dr. William Rizzo, the principal investigator of the trial and a leading expert in SLS. “The data from this trial suggest that NS2, when applied topically to the skin, has the potential to help patients suffering from SLS by lowering toxic aldehyde levels and preventing the dermal dysfunction that causes ichthyosis. I am excited about these results, and I am particularly excited for SLS patients and their caregivers.”

Patients with SLS, a rare inborn error of aldehyde metabolism, suffer from ichthyosis, a debilitating dermatologic disease characterized by dry, thickened, scaly skin. The symptoms of SLS are thought to be related to high levels of toxic fatty aldehydes due to genetic mutations in fatty aldehyde dehydrogenase, an enzyme critical for the normal function of skin and other organs. NS2 is specifically designed to reduce levels of toxic aldehydes, and is the first therapy to be directed at the putative cause of SLS.

Twelve subjects with SLS and moderate to severe ichthyosis were randomized equally to receive NS2 1.0% dermatologic formulation or vehicle formulation administered once-daily (QD) on a 4 x 10 inch area of skin for two months. Investigators and subjects were blinded to treatment group. Ichthyosis was graded by a blinded central review of digital photographs, as well as by clinical exam, using the Ichthyosis Severity Score, which is comprised of assessments of global impression, scaling, erythema (redness), lichenification (thickness) and excoriation (abrasion). In addition, dermal tissue from subjects was analyzed for biomarkers relevant to fatty aldehyde dehydrogenase deficiency.

NS2 consistently produced clinically meaningful effects in reducing the severity of ichthyosis. As assessed by central review, five of six subjects (83%) treated with NS2 achieved a rating of “almost clear” or “mild” on global assessment. Six of six (100%) subjects treated with NS2 improved over the course of therapy as assessed by central review, and the improvement was greater than that observed with vehicle-treated patients ($p<0.05$). For NS2-treated subjects, mean reductions in ichthyosis severity were greater after 8 weeks of therapy than after 4 weeks of therapy, suggesting a disease modifying effect of NS2. Consistent with the clinical activity of NS2, significant dermal biomarker changes were noted in NS2-treated patients but not vehicle-treated patients ($p<0.004$). Cholesterol, which is

significantly elevated in the skin of SLS patients, was reduced in NS2-treated patients more than in vehicle-treated patients ($p<0.001$). NS2 was observed to be generally well tolerated and there were no significant adverse events, serious adverse events or discontinuations in the trial.

“We are thrilled to report positive data from this rigorous and controlled clinical trial studying the use of topical dermatologic NS2 to treat the severe skin disease associated with SLS,” said Todd C. Brady, M.D., Ph.D., President and CEO of Aldeyra. “There is currently no FDA-approved therapy for SLS, and we believe these results represent a major milestone for patients afflicted with this disease.”

Conference Call and Webcast Information

The Company will hold a conference call on Tuesday, August 9, 2016 at 8:00 a.m. EDT to discuss the results of the clinical trial. The dial-in numbers are 1-888-296-4215 for domestic callers and 1-719-325-2480 for international callers. The conference ID number for both is 4144869. A live webcast of the conference call and accompanying slides will also be available on the investor relations page of the Aldeyra Therapeutics corporate website at www.aldeyra.com.

After the live webcast, the call will remain archived on the Aldeyra Therapeutics website for one year. In addition, a telephonic replay of the call will be available until August 8, 2017. The replay dial-in numbers are 1-888-203-1112 for domestic callers and 1-719-457-0820 for international callers. Please use event passcode 4144869.

About Aldeyra Therapeutics

Aldeyra Therapeutics, Inc. is a biotechnology company devoted to improving lives by inventing, developing and commercializing products that treat diseases thought to be related to endogenous aldehydes, a naturally occurring class of pro-inflammatory and toxic molecules. Aldeyra’s lead product candidate, NS2, is an aldehyde trap in development for ocular inflammation, as well as for Sjögren-Larsson Syndrome and Succinic Semi-Aldehyde Dehydrogenase Deficiency, two inborn errors of aldehyde metabolism. NS2 has not been approved for sale in the U.S. or elsewhere.

About Sjögren-Larsson Syndrome

Sjögren-Larsson Syndrome is a rare inborn error of aldehyde metabolism caused by mutations in fatty acid aldehyde dehydrogenase, leading to elevated toxic fatty aldehyde levels that are thought to contribute to ichthyosis (scaly, thickened, dry skin), neurological disorders, and retinal disease. There is no therapy for SLS that has been approved by the U.S. Food and Drug Administration.

About NS2

NS2 is an aldehyde-binding small molecule based on an innovative platform technology focused on trapping aldehydes, which are toxic and pro-inflammatory mediators of numerous diseases. By decreasing aldehyde load, NS2 may mitigate excessive inflammation and address diseases where aldehyde metabolism is impaired, including certain inborn errors of metabolism.

Safe Harbor Statement

This release contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, including statements regarding Aldeyra’s plans for its product candidates. In some cases, you can identify forward-looking statements by terms such as “may,” “might,” “will,” “objective,” “intend,” “should,” “could,” “can,” “would,” “expect,” “believe,” “anticipate,” “project,” “target,” “design,” “estimate,” “predict,” “potential,” “aim,” “plan” or the negative of these terms, and similar expressions intended to identify forward-looking statements. Such forward-looking statements are based upon current expectations that involve risks, changes in

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