

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

**FORM S-8  
REGISTRATION STATEMENT**  
*Under  
The Securities Act of 1933*

**ALDEYRA Therapeutics, Inc.**

(Exact name of Registrant as specified in its charter)

**Delaware**  
(State or Other Jurisdiction of  
Incorporation or Organization)

**20-1968197**  
(I.R.S. Employer  
Identification No.)

131 Hartwell Avenue, Suite 320  
Lexington, MA 02421  
(781) 761-4904

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

2013 Equity Incentive Plan  
2016 Employee Stock Purchase Plan  
(Full title of plan)

**Todd C. Brady, M.D., Ph.D., President and Chief Executive Officer**  
131 Hartwell Avenue, Suite 320  
Lexington, MA 02421  
(781) 761-4904

(Name, address, including zip code, and telephone number, including area code, of agent for service)

*Please send copies of all communications to:*

**Jay K. Hachigian  
Keith J. Scherer**  
**Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP**  
One Marina Park Drive, Suite 900  
Boston, MA 02210  
Telephone: (617) 648-9100  
Telecopy: (617) 648-9199

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 definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer  (Do not check if a smaller reporting company)

Smaller reporting company

**CALCULATION OF REGISTRATION FEE**

Title of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Stock Options and Common Stock, \$0.001 par value per share, in each case, reserved for issuance pursuant to the 2013 Equity Incentive Plan	700,000 shares	\$5.90(2)	\$4,130,000.00(2)	\$415.90
Common Stock, \$0.001 par value per share, reserved for issuance	97,500 shares	\$5.02(3)	\$489,450.00(3)	\$49.29

pursuant to the 2016 Employee Stock Purchase Plan			
<b>TOTAL</b>	797,500 shares		\$4,619,450.00

\$465.19

- (1) This Registration Statement shall also cover any additional shares of Common Stock which become issuable under the plans set forth herein by reason of any stock dividend, recapitalization or other similar transaction effected without the receipt of consideration which results in an increase in the number of the outstanding shares of Common Stock of Aldeyra Therapeutics, Inc.
- (2) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(c) and (h)(1) under the Securities Act of 1933, as amended (the "Securities Act"). The offering price per share and aggregate offering price for the unissued stock options and shares of Common Stock issuable under the Company's 2013 Equity Incentive Plan (the "Equity Incentive Plan") are based upon the average of the high and low prices of the Registrant's common stock as reported on The NASDAQ Stock Exchange Capital Market on August 8, 2016.
- (3) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(c) and (h)(1) under the Securities Act. The offering price per share and aggregate offering price for the shares of Common Stock issuable under the Company's 2016 Employee Stock Purchase Plan (the "Purchase Plan") are based upon the average of the high and low prices of the Registrant's common stock as reported on The NASDAQ Stock Exchange Capital Market on August 8, 2016, multiplied by 85%.

**PART I**

**EXPLANATORY NOTE**

**INFORMATION REQUIRED IN THE SECTION 10(A) PROSPECTUS**

Pursuant to General Instruction E to Form S-8 under the Securities Act, this Registration Statement is filed by Aldeyra Therapeutics, Inc. (the “Company”) for the purposes of registering additional shares of Common Stock issuable under the Equity Incentive Plan and registering the shares of Common Stock initially issuable under the Purchase Plan. On March 16, 2016, the Company’s Board of Directors approved (i) an amendment to the Equity Incentive Plan, subject to stockholder approval, which, among other things, increases the aggregate number of shares of Common Stock authorized for issuance under the Equity Incentive Plan by 700,000 shares, from 1,180,950 shares to 1,880,950 shares (the “Amendment”) and (ii) the adoption the Purchase Plan, subject to stockholder approval, which, among other things, offers certain eligible employees of the Company the opportunity to acquire shares of Common Stock of the Company at a discounted price pursuant to payroll deductions or other approved contributions periodically applied to the purchase of shares of the Company. On June 9, 2016, both the Amendment and the Purchase Plan were approved by the stockholders at the Company’s Annual Meeting of Stockholders. This Registration Statement registers both the additional 700,000 shares of Common Stock that the Company is authorized to reserve for issuance under the Equity Incentive Plan as a result of the Amendment and the 97,500 shares of Common Stock that the Company is authorized to reserve for issuance under the Purchase Plan.

Of the 1,880,950 shares currently authorized by the Equity Incentive Plan, (i) 333,333 have already been registered pursuant to the currently effective Registration Statement on Form S-8 (Registration No. 210492) filed on March 30, 2016 (the “Third Registration Statement”) (ii) 222,617 have already been registered pursuant to the Registration Statement on Form S-8 (Registration No. 333-203076) filed on March 27, 2015 (the “Second Registration Statement”) and (iii) 625,000 have already been registered pursuant to the Registration Statement on Form S-8 (Registration No. 333-196674) filed on June 11, 2014 (the “Original Registration Statement”). The contents of the Third Registration Statement, the Second Registration Statement and the Original Registration Statement, including any amendments thereto or filings incorporated therein, are incorporated herein by this reference. Any items in the Third Registration Statement, the Second Registration Statement and the Original Registration Statement not expressly changed hereby shall be as set forth in the Third Registration Statement, the Second Registration Statement and the Original Registration Statement, as applicable.

**PART II**

**INFORMATION REQUIRED IN THE REGISTRATION STATEMENT**

**Item 8. Exhibits.**

<u>Exhibit Number</u>	<u>Exhibit</u>
5.1	Opinion and consent of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP.
23.1	Consent of BDO USA, LLP, Independent Registered Public Accounting Firm.
23.2	Consent of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP is contained in Exhibit 5.1.
24.1	Power of Attorney. Reference is made to page II-3 of this Registration Statement.
99.6	Amendment No. 1 to the Aldeyra Therapeutics, Inc. 2013 Equity Incentive Plan (filed as Exhibit 10.26 to the Registrant's Quarterly Report on Form 10-Q filed on August 10, 2016, and incorporated herein by reference).
99.7	Aldeyra Therapeutics, Inc. 2016 Employee Stock Purchase Plan (filed as Exhibit 10.27 to the Registrant's Quarterly Report on Form 10-Q filed on August 10, 2016, and incorporated herein by reference).

**SIGNATURES**

Pursuant to the requirements of the Securities Act, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Lexington, Commonwealth of Massachusetts, on this 10<sup>th</sup> day of August, 2016.

**ALDEYRA THERAPEUTICS, INC.**

/s/ Todd C. Brady, M.D., Ph.D.

**Todd C. Brady, M.D., Ph.D.**

**President and Chief Executive Officer**

## POWER OF ATTORNEY

**KNOW ALL PERSONS BY THESE PRESENTS**, that the undersigned officers and directors of Aldeyra Therapeutics, Inc., a Delaware corporation, do hereby constitute and appoint Todd C. Brady, M.D., Ph.D. and Stephen Tulipano, and each of them, the lawful attorneys-in-fact and agents with full power and authority to do any and all acts and things and to execute any and all instruments which said attorneys and agents, and any one of them, determine may be necessary or advisable or required to enable said corporation to comply with the Securities Act, and any rules or regulations or requirements of the Securities and Exchange Commission in connection with this Registration Statement. Without limiting the generality of the foregoing power and authority, the powers granted include the power and authority to sign the names of the undersigned officers and directors in the capacities indicated below to this Registration Statement, to any and all amendments, both pre-effective and post-effective, and supplements to this Registration Statement, and to any and all instruments or documents filed as part of or in conjunction with this Registration Statement or amendments or supplements thereof, and each of the undersigned hereby ratifies and confirms that all said attorneys and agents, or any one of them, shall do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Todd C. Brady, M.D., Ph.D.</u> Todd C. Brady, M.D., Ph.D.	President, Chief Executive Officer and Director (Principal Executive Officer)	August 10, 2016
<u>/s/ C. Boyd Clarke</u> C. Boyd Clarke	Chairman of the Board of Directors	August 10, 2016
<u>/s/ Ben Bronstein, M.D.</u> Ben Bronstein, M.D.	Director	August 10, 2016
<u>/s/ Martin J. Joyce</u> Martin J. Joyce	Director	August 10, 2016
<u>/s/ Gary Phillips, M.D.</u> Gary Phillips, M.D.	Director	August 10, 2016
<u>/s/ Jesse Treu, Ph.D.</u> Jesse Treu, Ph.D.	Director	August 10, 2016
<u>/s/ Neal Walker, D.O.</u> Neal Walker, D.O.	Director	August 10, 2016
<u>/s/ Stephen Tulipano</u> Stephen Tulipano	Chief Financial Officer (Principal Financial and Accounting Officer)	August 10, 2016

## EXHIBIT INDEX

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August 10, 2016

Aldeyra Therapeutics, Inc.  
131 Hartwell Avenue, Suite 320  
Lexington, MA 02421

Re: Aldeyra Therapeutics, Inc. (the "Company") Registration  
Statement on Form S-8 for 797,500 Shares of Common  
Stock

Ladies and Gentlemen:

We refer to your registration statement on Form S-8 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Act") in connection with the registration of (i) 700,000 shares of Common Stock (the "Equity Incentive Plan Shares") of Aldeyra Therapeutics, Inc. (the "Company") issuable in the aggregate under the Company's 2013 Equity Incentive Plan, as amended (the "Equity Incentive Plan") and (ii) 97,500 shares of Common Stock (the "ESPP Shares" and, together with the Equity Incentive Plan Shares, the "Shares") of the Company issuable in the aggregate under the Company's 2016 Employee Stock Purchase Plan (the "ESPP" and, together with the Equity Incentive Plan, the "Plans").

As your counsel, we have examined such matters of fact and questions of law as we have deemed necessary in order to render the opinion set forth herein. In connection with our opinion expressed below, we have relied as to certain factual matters on information obtained from public officials, officers of the Company and other sources believed by us to be responsible. We express no opinion as to matters governed by any laws other than the laws of the Delaware General Corporation Law and the federal laws of the United States.

Based upon and subject to the foregoing, we advise you that, in our opinion, when the Shares have been issued and sold pursuant to the applicable provisions of the Plans, and in accordance with the Registration Statement, such Shares will be validly issued, fully paid and nonassessable shares of the Company's Common Stock.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act.

Very truly yours,

/s/ Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP  
Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP



Consent of Independent Registered Public Accounting Firm

Aldeyra Therapeutics, Inc.  
Lexington, Massachusetts

We hereby consent to the incorporation by reference in the Prospectus constituting a part of this Registration Statement on Form S-8 of our report dated March 30, 2016, relating to the financial statements of Aldeyra Therapeutics, Inc., appearing in the Company's Annual Report on Form 10-K for the year ended December 31, 2015.

/s/ BDO USA, LLP  
Boston, Massachusetts

August 8, 2016