

**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.)

**15 New England Executive Park
Burlington, MA 01803
(781) 270-0630**

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

**2013 Equity Incentive Plan
2010 Employee, Director and Consultant Equity Incentive Plan
2004 Employee, Director and Consultant Stock Plan**
(Full title of plans)

**Todd C. Brady, M.D., Ph.D., President and Chief Executive Officer
15 New England Executive Park
Burlington, MA 01803
(781) 270-0630**

(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
(617) 648-9100**

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
Common Stock, \$0.001 par value per share	609,842 shares(2)	\$1.48(4)	\$902,566.17	\$116.26
Common Stock, \$0.001 par value per share	625,000 shares(3)	\$6.32(5)	\$3,950,000.00	\$508.76
TOTAL	1,234,842 shares	N/A	\$4,852,566.17	\$625.02

(1) Pursuant to Rule 416(a) promulgated under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall also cover

any additional shares of Registrant's Common Stock that become issuable under the plans set forth herein by reason of any stock dividend, stock split, recapitalization, or other similar transaction effected that results in an increase to the number of outstanding shares of Registrant's Common Stock.

- (2) Represents 23,954 shares of Common Stock reserved for future issuance upon the exercise of outstanding options under the 2004 Employee, Director and Consultant Stock Plan and 585,888 shares of Common Stock reserved for future issuance upon the exercise of outstanding options under the 2010 Employee, Director and Consultant Equity Incentive Plan. Upon the effective date of the initial public offering of the Registrant's Common Stock, as set forth in the Registrant's Prospectus dated April 10, 2014 relating to its initial public offering, no further awards will be made under the 2004 Employee, Director and Consultant Stock Plan or the 2010 Employee, Director and Consultant Equity Incentive Plan.
 - (3) Represents 625,000 shares of Common Stock reserved for future grant under the 2013 Equity Incentive Plan.
 - (4) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(h) of the 1933 Act. The Proposed Maximum Offering Price per Share is \$1.48, which is the weighted average exercise price of outstanding options granted under the 2004 Employee, Director and Consultant Stock Plan and the 2010 Employee, Director and Consultant Equity Incentive Plan.
 - (5) Estimated in accordance with Rule 457(c) and 457(h) solely for purposes of calculating the registration fee. The computation is based on the high and low prices of the Registrant's Common Stock as reported on the Nasdaq Capital Market on June 6, 2014.
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PART I

Information Required in the Section 10(a) Prospectus

The information specified in this Part I is omitted from this Registration Statement in accordance with Rule 428 under the Securities Act of 1933, as amended (“Securities Act”). In accordance with the rules and regulations of the Securities and Exchange Commission (the “Commission”) and the instructions to Form S-8, such documents are not being filed with the Commission either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424 under the Securities Act.

PART II

Information Required in the Registration Statement

Item 3. Incorporation of Documents by Reference.

The Registrant hereby incorporates by reference into this Registration Statement the following documents previously filed with the Commission:

- (a) the Registrant's prospectus filed on May 2, 2014 pursuant to Rule 424(b) under the Securities Act relating to the Registration Statement on Form S-1, as amended (File No. 333-193204) (the "Form S-1"), which contains audited financial statements for the Registrant's latest fiscal year for which such statements have been filed; and
- (b) the description of the Registrant's Common Stock contained in the Registrant's Registration Statement on Form 8-A (File No. 001-36332) filed with the Commission on March 4, 2014, including any amendments or reports filed for the purpose of updating such description.

All other reports and documents filed by the Registrant pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") subsequent to the filing of this Registration Statement and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which de-registers all securities then remaining unsold shall be deemed to be incorporated by reference into this Registration Statement and to be a part hereof from the date of filing of such documents, except as to documents or information deemed to have been furnished and not filed in accordance with the rules of the Commission. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained in any subsequently filed document which also is deemed to be incorporated by reference herein modifies or supersedes such statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to its directors and officers under certain circumstances and subject to certain limitations. The terms of Section 145 of the Delaware General Corporation Law are sufficiently broad to permit indemnification under certain circumstances for liabilities, including reimbursement of expenses incurred, arising under the Securities Act.

As permitted by the Delaware General Corporation Law, the Registrant's restated certificate of incorporation contains provisions that eliminate the personal liability of its directors for monetary damages for any breach of fiduciary duties as a director, except liability for the following:

- any breach of the director's duty of loyalty to the Registrant or its stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or knowing violation of law;
- under Section 174 of the Delaware General Corporation Law (regarding unlawful dividends, stock purchases or redemptions); or
- any transaction from which the director derived an improper personal benefit.

As permitted by the Delaware General Corporation Law, the Registrant's amended and restated bylaws provide that:

- the Registrant is required to indemnify its directors and officers to the fullest extent permitted by the Delaware General Corporation Law, subject to very limited exceptions;
- the Registrant may indemnify its other employees and agents;
- the Registrant is required to advance expenses, as incurred, to its directors and officers in connection with a legal proceeding, subject to very limited exceptions; and
- the rights conferred in the amended and restated bylaws are not exclusive.

In addition, the Registrant has entered into indemnity agreements with each of its current directors and executive officers to provide these directors and executive officers with additional contractual assurances regarding the scope of the indemnification set forth in the Registrant's restated certificate of incorporation and amended and restated bylaws and to provide additional procedural protections. The indemnification provisions in the Registrant's restated certificate of incorporation and restated bylaws and the indemnity agreements entered into between the Registrant and each of its directors and executive officers may be sufficiently broad to permit indemnification of the Registrant's directors and executive officers for liabilities arising under the Securities Act.

The Registrant has obtained director and officer liability insurance to cover liabilities directors and officers may incur in connection with their services to the Registrant.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

Exhibit Number	Exhibit Description	Form	Incorporated by Reference		Filing Date	Filed Herewith
			File No.	Exhibit		
3.1	Amended and Restated Certificate of Incorporation of the Registrant	S-1/A	333-193204	3.3	March 17, 2014	
3.2	Amended and Restated Bylaws of the Registrant	S-1/A	333-193204	3.4	March 17, 2014	
4.1	Reference is made to Exhibits 3.2 and 3.2					
4.2	Specimen Stock Certificate	S-1/A	333-193204	4.1	March 17, 2014	
5.1	Opinion of Gunderson Dettmer, LLP					X
23.1	Consent of BDO USA, LLP, independent registered public accounting firm					X
23.2	Consent of Gunderson Dettmer Stough Villeneuve Franklin & Hachigian, LLP is contained in Exhibit 5.1					X
24.1	Power of Attorney (included in the signature page to this Registration Statement)					X
99.1	2004 Employee, Director and Consultant Stock Plan, as amended, and form of option agreement thereunder	S-1	333-193204	10.6	January 6, 2014	
99.2	2010 Employee, Director and Consultant Equity Incentive Plan, as amended, and form of option agreement thereunder	S-1	333-193204	10.7	January 6, 2014	
99.3	2013 Equity Incentive Plan	S-1/A	333-193204	10.8	March 17, 2014	
99.4	Form Notice of Stock Option Grant under the 2013 Equity Incentive Plan	S-1/A	333-193204	10.8(a)	March 17, 2014	
99.5	Form Notice of Stock Unit Award under the 2013 Equity Incentive Plan	S-1/A	333-193204	10.8(b)	March 17, 2014	

Item 9. 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;

(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 this 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 percent 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;

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in this Registration Statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered herein, 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.

B. The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement 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.

C. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, 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 Burlington, Commonwealth of Massachusetts, on this 11th day of June, 2014.

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 Scott L. Young, 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 of 1933, as amended, 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 of 1933, as amended, 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 and Principal Financial and Accounting Officer)	June 11, 2014
<u>/s/ C. Boyd Clarke</u> C. Boyd Clarke	Chairman of the Board of Directors	June 11, 2014
<u>/s/ Ben Bronstein, M.D.</u> Ben Bronstein, M.D.	Director	June 11, 2014
<u>/s/ Martin J. Joyce</u> Martin J. Joyce	Director	June 11, 2014
<u>/s/ Gary Phillips, M.D.</u> Gary Phillips, M.D.	Director	June 11, 2014
<u>/s/ Jesse Treu, Ph.D.</u> Jesse Treu, Ph.D.	Director	June 11, 2014
<u>/s/ Neal Walker, D.O.</u> Neal Walker, D.O.	Director	June 11, 2014

EXHIBIT INDEX

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June 11, 2014

Aldeyra Therapeutics, Inc.
15 New England Executive Park
Burlington, MA 01803

Ladies and Gentlemen:

We refer to the registration statement on Form S-8 (the "Registration Statement") to be filed by Aldeyra Therapeutics, Inc., a Delaware corporation (the "Company"), with the Securities and Exchange Commission (the "Commission") in connection with the registration under the Securities Act of 1933, as amended (the "Act"), of an aggregate of up to 23,954 shares of the Company's common stock, \$.001 par value ("Common Stock"), reserved for issuance under the Company's 2004 Employee, Director and Consultant Stock Plan, an aggregate of up to 585,888 shares of Common Stock reserved for issuance under the 2010 Employee, Director and Consultant Equity Incentive Plan, and an aggregate of up to 625,000 shares of Common Stock reserved for issuance under the 2013 Equity Incentive Plan.

In connection with this opinion, we have reviewed the actions proposed to be taken by you in connection with the issuance and sale of the Stock to be issued under the Plans. We have also examined and relied upon the Registration Statement and the originals or copies certified to our satisfaction of such other documents, records, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. With your consent, we have relied upon certificates and other assurances of officers of the Company as to factual matters without having independently verified such factual matters. We have assumed the genuineness and authenticity of all documents submitted to us as originals, and the conformity to originals of all documents submitted to us as copies thereof and the due execution and delivery of all documents where due execution and delivery are a prerequisite to the effectiveness thereof.

This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement, other than as expressly stated herein with respect to the issue of the Stock. Our opinion is limited to the matters stated herein and no opinion is implied or may be inferred beyond the matters expressly stated. Our opinion herein is expressed solely with respect to the federal laws of the United States and the General Corporation Law of the State of Delaware (the "DGCL"). Our opinion is based on these laws as in effect on the date hereof, and we disclaim any obligation to advise you of facts, circumstances, events or developments which hereafter may be brought to our attention and which may alter, affect or modify the opinion expressed herein. We are not rendering any opinion as to compliance with any federal or state antifraud law, rule or regulation relating to securities, or to the sale or issuance thereof.

Based upon and subject to the foregoing, we advise you that, in our opinion, when the Stock has been issued and sold by the Company pursuant to the applicable provisions of the Plans and pursuant to the agreements which accompany the Plans, and in accordance with the Registration Statement, such Stock will be validly issued, fully paid and nonassessable.

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 or the rules and regulations of the Commission thereunder.

Very truly yours,

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

Consent of Independent Registered Public Accounting Firm

Aldeyra Therapeutics, Inc.
Burlington, Massachusetts

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated March 17, 2014, except for the effect of the reverse stock split as described in Note 2, as to which the date is May 1, 2014, relating to the financial statements of Aldeyra Therapeutics, Inc. for the year ended December 31, 2013 appearing in the Company's Registration Statement on Form S-1 (File No. 333-193204), as amended, filed on May 1, 2014.

/s/ BDO USA, LLP

Boston, Massachusetts

June 11, 2014