

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

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

SANGAMO BIOSCIENCES, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

68-0359556
(IRS Employer
Identification No.)

501 Canal Boulevard
Richmond, California 94804
(Address of principal executive offices) (Zip Code)

Sangamo BioSciences, Inc. Amended and Restated 2013 Stock Incentive Plan
(Full title of the Plans)

Edward O. Lanphier II
President and Chief Executive Officer
Sangamo BioSciences, Inc.
501 Canal Boulevard
Richmond, California 94804
(Name and address of agent for service)

(510) 970-6000
(Telephone number, including area code, of agent for service)

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 of the Exchange Act. (Check one):

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 (1) | Amount to be Registered(2) | Proposed Maximum Offering Price Per Share(3) | Proposed Maximum Aggregate Offering Price(3) | Amount of Registration Fee |
|---|----------------------------|--|--|----------------------------|
| Sangamo BioSciences, Inc. Amended and Restated 2013 Stock Incentive Plan Common Stock, \$0.01 par value | 5,300,000 | \$8.00 | \$42,400,000 | \$4,926.88 |

- This registration statement (the "Registration Statement") covers shares of the Registrant's common stock, \$0.01 par value per share ("Common Stock"), which are issuable pursuant to the Registrant's Amended and Restated 2013 Stock Incentive Plan (the "2013 Plan").
- This Registration Statement shall also cover any additional shares of Common Stock which become issuable under the 2013 Plan by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the Registrant's receipt of consideration which results in an increase in the number of the outstanding shares of Registrant's Common Stock.
- Calculated solely for purposes of this offering under Rule 457(h) of the Securities Act of 1933, as amended, on the basis of the average of the high and low prices per share of Registrant's Common Stock on August 6, 2015 as reported by the NASDAQ Global Select Market.

PART II

Information Required in the Registration Statement

Item 3. Incorporation of Documents by Reference

Sangamo BioSciences, Inc. (the “Registrant”) hereby incorporates by reference into this Registration Statement the following documents previously filed with the Securities and Exchange Commission (the “Commission”):

- (a) The Registrant’s Annual Report on Form 10–K for the fiscal year ended December 31, 2014, filed with the Commission on February 25, 2015, pursuant to Section 13 of the Securities Exchange Act of 1934, as amended (the “1934 Act”);
- (b) The Registrant’s Quarterly Report on Form 10–Q for the fiscal quarters ended March 31, 2015, and June 30, 2015 filed with the Commission on April 28, 2015 and August 6, 2015, respectively, pursuant to Section 13 of the 1934 Act;
- (c) All other reports filed pursuant to Section 13(a) or 15(d) of the 1934 Act since the end of the fiscal year covered by the Registrant’s Annual Report referred to in (a) above; and
- (d) The Registrant’s Registration Statement No. 000-30171 on Form 8-A filed with the Commission on March 31, 2000 pursuant to Section 12(g) of the 1934 Act, in which there is described the terms, rights, and provisions applicable to the Registrant’s outstanding Common Stock.

All reports and definitive proxy statements filed pursuant to Section 13(a), 13(c), 14 or 15(d) of the 1934 Act after the date 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. Unless expressly incorporated into this Registration Statement, a report furnished by not filed on Form 8-K under the 1934 Act shall not be incorporated by reference into this Registration Statement. 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 herein or in any subsequently filed document which also is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration 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 indemnification to directors and officers in terms sufficiently broad to permit the indemnification under certain circumstances for liabilities (including reimbursement for expenses incurred) arising under the Securities Act of 1933, as amended (the “1933 Act”). Article VIII of Registrant’s certificate of incorporation provides for mandatory indemnification of its directors to the maximum extent permitted by the Delaware General Corporation Law. Registrant’s certificate of incorporation provides that, subject to Delaware law, its directors will not be personally liable for monetary damages for breach of the director’s fiduciary duty as director to Registrant and its stockholders. This provision in the certificate of incorporation does not eliminate a director’s fiduciary duty, and in appropriate circumstances equitable remedies such as injunctive or other forms of non-monetary relief will remain available under Delaware law. In addition, each director will continue to be subject to liability for breach of the director’s duty of loyalty to Registrant or its stockholders for acts or omissions not in good faith or involving intentional misconduct, for knowing violations of law, for actions leading to improper personal benefit to the director, and for payment of dividends or approval of stock purchases or redemptions that are unlawful under Delaware law. The provision also does not affect a director’s responsibilities under any other law, such as the federal securities laws or state or federal environmental laws. Registrant has entered into indemnification agreements with its officers and directors. On July 27, 2015, the Registrant’s Board of Directors (the “Board”) approved a new form of indemnification agreement (the “Indemnification Agreement”) to be entered into with the Registrant’s directors and certain officers to be designated by the Board (each, an “Indemnitee”). The indemnification agreement clarifies and enhances the rights and obligations of the Registrant and the Indemnitee with respect to indemnification and advancement of expenses provided in the prior form of indemnification agreement and the Company’s Certificate of Incorporation. A copy of the form of Indemnification Agreement is filed as Exhibit 10.2 to the Registrant’s Quarterly Report on Form 10-Q for the period ended June 30, 2015.

Item 7. Exemption from Registration Claimed

Not Applicable.

Item 8. Exhibits

| <u>Exhibit Number</u> | <u>Exhibit</u> |
|-----------------------|---|
| 4 | Instruments Defining the Rights of Stockholders. Reference is made to Registrant's Registration Statement No. 000-30171 on Form 8-A, together with the exhibits thereto, which are incorporated herein by reference pursuant to Item 3(d) to this Registration Statement. |
| 5 | Opinion and Consent of Morgan, Lewis & Bockius LLP. |
| 23.1 | Consent of Independent Registered Public Accounting Firm. |
| 23.2 | Consent of Morgan, Lewis & Bockius LLP is contained in Exhibit 5. |
| 24 | Power of Attorney. Reference is made to page II-4 of this Registration Statement. |
| 99.1(1) | Sangamo BioSciences, Inc. Amended and Restated 2013 Stock Incentive Plan |

(1) Exhibit 99.1 is incorporated by reference to Appendix A of the Company's Definitive Proxy Statement on Schedule 14A filed with the Commission on April 28, 2015.

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 1933 Act, (ii) to reflect in the prospectus any facts or events arising after the effective date of this 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 and (iii) to include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement; provided, however, that clauses (1)(i) and (1)(ii) shall not apply if the information required to be included in a post-effective amendment by those clauses is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the 1934 Act that are incorporated by reference into this Registration Statement; (2) that for the purpose of determining any liability under the 1933 Act 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; and (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 2013 Plan.

B. The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the 1933 Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the 1934 Act that is incorporated by reference into this 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 1933 Act may be permitted to directors, officers or controlling persons of the Registrant pursuant to the indemnification provisions summarized in Item 6 or otherwise, the Registrant has been advised that, in the opinion of the Commission, such indemnification is against public policy as expressed in the 1933 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 1933 Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, 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 Richmond, State of California on this 6th day of August, 2015.

SANGAMO BIOSCIENCES, INC.

By: /s/ Edward O. Lanphier II
Edward O. Lanphier II
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS:

That each person whose signature appears below constitutes and appoints Edward O. Lanphier II, President and Chief Executive Officer, and H. Ward Wolff, Executive Vice President and Chief Financial Officer, and each of them, as such person's true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for such person and in such person's name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, and to file same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his or her substitutes, may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

| <u>Signature</u> | <u>Title</u> | <u>Date</u> |
|--|---|----------------|
| <u>/s/ Edward O. Lanphier II</u> Edward O. Lanphier II | President, Chief Executive Officer and Director (Principal Executive Officer) | August 6, 2015 |
| <u>/s/ H. Ward Wolff</u> H. Ward Wolff | Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer) | August 6, 2015 |
| <u>/s/ Paul B. Cleveland</u> Paul B. Cleveland | Director | August 6, 2015 |
| <u>/s/ Stephen G. Dilly</u> Stephen G. Dilly, M.B.B.S., Ph.D. | Director | August 6, 2015 |
| <u>/s/ John W. Larson</u> John W. Larson | Director | August 6, 2015 |
| <u>/s/ Steven J. Mento</u> Steven J. Mento, Ph.D. | Director | August 6, 2015 |
| <u>/s/ H. Stewart Parker</u> H. Stewart Parker | Director | August 6, 2015 |
| <u>/s/ Saira Ramasastry</u> Saira Ramasastry | Director | August 6, 2015 |
| <u>/s/ William R. Ringo</u> William R. Ringo | Chairman of the Board | August 6, 2015 |

EXHIBIT INDEX

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| 5 | Opinion and Consent of Morgan, Lewis & Bockius LLP. |
| 23.1 | Consent of Independent Registered Public Accounting Firm. |
| 23.2 | Consent of Morgan, Lewis & Bockius LLP is contained in Exhibit 5. |
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| 99.1(1) | Sangamo BioSciences, Inc. Amended and Restated 2013 Stock Incentive Plan |
| (1) | Exhibit 99.1 is incorporated by reference to Appendix A of the Company's Definitive Proxy Statement on Schedule 14A filed with the Commission on April 28, 2015. |

OPINION AND CONSENT OF MORGAN LEWIS & BOCKIUS LLP

August 6, 2015

Sangamo BioSciences, Inc.
501 Canal Boulevard
Richmond, California 94804

Re: Sangamo BioSciences, Inc.- Registration Statement on Form S-8 for 5,300,000 Shares of Common Stock

Ladies and Gentlemen:

We have acted as counsel to Sangamo BioSciences, Inc., a Delaware Corporation (the "Company"), in connection with the registration on Form S-8 (the "Registration Statement") under the Securities Act of 1933, as amended, of 5,300,000 shares of Common Stock (the "Shares") under the Company's Amended and Restated 2013 Stock Incentive Plan (the "2013 Plan").

This opinion is being furnished in accordance with the requirements of Item 8 of Form S-8 and Item 601(b)(5)(i) of Regulation S-K.

We have reviewed the Company's charter documents and the corporate proceedings taken by the Company in connection with the establishment and implementation of the 2013 Plan. Based on such review, we are of the opinion that, if, as and when the Shares have been issued and sold (and the consideration therefor received) pursuant to the (a) provisions of option agreements duly authorized under the 2013 Plan and in accordance with the Registration Statement, or (b) duly authorized restricted stock units or other stock-based awards under the 2013 Plan and in accordance with the Registration Statement, such Shares will be duly authorized, legally issued, fully paid and nonassessable.

We consent to the filing of this opinion letter as Exhibit 5 to the Registration Statement. In giving the opinion set forth in this letter, we do not hereby admit that we are acting within the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, or the rules or regulations of the Securities and Exchange Commission thereunder.

This opinion letter is rendered as of the date first written above 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. Our opinion is expressly limited to the matters set forth above and we render no opinion, whether by implication or otherwise, as to any other matters relating to the Company, the 2013 Plan or the Shares.

Very truly yours,

/s/ MORGAN LEWIS & BOCKIUS LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the Sangamo Biosciences, Inc. Amended and Restated 2013 Stock Incentive Plan of our reports dated February 25, 2015, with respect to the consolidated financial statements of Sangamo Biosciences, Inc. and the effectiveness of internal control over financial reporting of Sangamo Biosciences, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2014, filed with the Securities and Exchange Commission.

/s/Ernst & Young LLP

Redwood City, CA
August 6, 2015