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January 22, 2010

VIA EDGAR, FACSIMILE AND FEDERAL EXPRESS

Mr. Jeffrey P. Riedler, Assistant Director
Division of Corporation Finance
United States Securities and Exchange Commission
Judiciary Plaza
450 Fifth Street, N.W.
Washington, DC 20549-0306

NOTE: Portions of this Correspondence are the subject of a confidential treatment request by Sangamo Biosciences, Inc. to the Securities and Exchange Commission (the "SEC"). Such portions have been redacted and are marked with a "[***]" in the place of the redacted language. The redacted information has been filed separately with the SEC.

Re: Sangamo BioSciences, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2008
Filed on March 3, 2009
First Response Filed November 18, 2009
File Number: 000-30171

Ladies and Gentlemen:

On behalf of our client, Sangamo BioSciences, Inc. (the "Company" or "Sangamo"), we are responding to the supplemental comments from the staff (the "Staff") of the Securities and Exchange Commission ("SEC") in a letter dated December 22, 2009 (the "Comment Letter") with respect to Sangamo's Annual Report Form 10-K for the fiscal year ended December 31, 2008. The Staff's supplemental comments are repeated below and followed by the Company's response.

In accordance with 17 C.F.R. § 200.83, we have provided a letter to the Staff and the Office of Freedom of Information and Privacy Act Operations requesting confidential treatment for certain portions of the Company's responses set forth in this response letter (the "Specified Information"). The Company has redacted the Specified Information from the letter filed via EDGAR and has included such information, set forth in brackets and bold typeface, solely in paper copies of the letter submitted to the Staff.

Corporate Relationships

Enabling Technology Programs and Partners, page 15

1. We refer to your response to comment 3 of our letter dated November 4, 2009 and reissue the comment. Notwithstanding the grant of confidential treatment for the referenced agreement, please be advised that under the confidential treatment rule the staff has the authority to reconsider our actions in the future. Moreover, we note that each of the referenced applications for confidential treatment was given "no review" status and therefore not subject to staff review. Accordingly, the staff is not precluded from requiring that certain information in the subject exhibits be disclosed in future filings.

Therefore, please expand your disclosure of the Genentech, OMT and La Roche agreements on pages 16-17 to provide all of the material terms of these agreements, including the amount of any upfront and access fees; a range of royalty rates; aggregate milestones; any other material payments specified; usage restrictions; exclusivity provisions; obligations/rights to defend; other rights obtained and material obligations that must be met to keep the agreement in place; duration and termination provisions.

In response to the Staff's comments regarding expanded disclosure about the terms of the Research and License Agreement, dated April 27, 2007, with Genentech, Inc. ("Genentech"), the Second Research and License Agreement, dated February 27, 2008, with Genentech, the License Agreement, dated April 2, 2008, with Open Monoclonal Technology, Inc. ("OMT") and the Research and License Agreement, dated July 2, 2008, with F. Hoffman-La Roche Ltd. and Hoffman-La Roche, Inc. (collectively, "Roche"), the Company intends to revise its disclosure regarding these agreements in its Form 10-K for the fiscal year ended December 31, 2009.

With respect to the agreements with Genentech, we propose to revise the disclosure under the subheading "Pharmaceutical Protein Production" substantially as follows:

Genentech Agreements

In April 2007, we entered into a research and license agreement with Genentech, Inc. pursuant to which we provide Genentech with access to our proprietary ZFN technology for use in mammalian cell-based protein pharmaceutical production. Under the research and license agreement, we developed and delivered to Genentech ZFNs capable of making certain targeted modifications to the genome of an identified Genentech cell line to generate cell lines with novel characteristics for protein pharmaceuticals. In the research and license agreement, we granted Genentech a non-exclusive, worldwide, sublicensable right to use our ZFNs to generate cell lines with novel characteristics for protein pharmaceutical production purposes and to generate the same targeted modifications in the Genentech cell lines using our ZFN technology or any other technology that is covered by our ZFN-related intellectual property. Under the research and license agreement, to date Genentech has paid us a total of $1.2 million, which consists of an up-front fee, technology access fees and milestone payments for the achievement of research-based milestones. Genentech has continuing obligations to pay us an annual technology access fee and, for each product developed by Genentech containing a protein expressed by the modified cell line created using our ZFN technology, milestone payments upon achievement of specified milestones

relating to the development and commercialization of such products. We have retained the sole right, at our discretion, to enforce alleged infringements on our ZFP intellectual property; provided, however, that if we fail to abate such alleged infringements involving modifications to the genome of the identified Genentech cell line within a specified period of time, Genentech has the right to reduce the amount of the milestone payments until we abate such infringement or until there is a final determination regarding the infringement. The research and license agreement continues until the later of ten years or expiration of the last valid patent claim covering the products containing a protein expressed by the modified cell line generated using our ZFN technology or any other technology that is covered by our ZFN-related intellectual property. In addition, Genentech may terminate the research and license agreement upon thirty days written notice. Either party may terminate the agreement upon a material breach by the other party.

In February 2008, we entered into a second research and license agreement with Genentech, which expanded the relationship established in the April 2007 research and license agreement by increasing the number of potential targets in the genome of the identified Genentech cell line against which Genentech may use or apply our ZFN technology in mammalian cell-based protein pharmaceutical production. With respect to each potential target identified by Genentech, Genentech will pay us an up-front fee, an annual on-going technology access fee, and milestone payments upon achievement of specified milestones relating to the construction and delivery of ZFNs. In addition, for each product developed by Genentech containing a protein expressed by a modified cell line using our ZFN technology, Genentech will make milestone payments upon the achievement of specified milestones relating to the development and commercialization of such products. Under the second license and research agreement, to date Genentech has paid us $275,000 for an up-front fee, annual technology access fees and the achievement of research-based milestones. We have retained the sole right, at our discretion, to enforce alleged infringements on our ZFP intellectual property; provided, however, that if we fail to abate such alleged infringements involving the modifications to the genome of the identified Genentech cell line relating to the second research and license agreement within a specified period of time, Genentech has the right to reduce the amount of the milestone payments until we abate such infringement or until there is a final determination regarding the infringement. The second research and license agreement continues until the later of ten years or expiration of the last valid patent claim covering the products containing a protein expressed by the modified cell line generated using our ZFN technology or any other technology that is covered by our ZFN-related intellectual property. In addition, Genentech may terminate at any time any research plan or license relating to a designated target. Either party may terminate the agreement upon a material breach by the other party.

In addition, pursuant to a license agreement between Sangamo and Sigma-Aldrich Corporation (“Sigma”), effective as of July 10, 2007, Sigma has the exclusive right to offer certain services to Genentech involving Sangamo’s ZFN technology that are covered under the second research and license agreement. Notwithstanding such exclusive right, Sigma has agreed to permit Sangamo to directly offer the ZFN-related services to Genentech under the second research and license agreement, and in exchange we have and will continue to share certain payments made to us under the second research and license agreement.

Although the Research and License Agreement with Genentech (the "First Genentech Agreement") and the Second Research and License Agreement with Genentech (the "Second Genentech Agreement" and, together with the First Genentech Agreement, the "Genentech Agreements") provide for milestone payments, it is not possible to determine the aggregate milestone payments under either agreement. In Sections 3.6(a) and (b) of the First Genentech Agreement and the Second Genentech License Agreement, there are six specified development and commercial milestones and corresponding milestone payments of **[***].** However, these milestones apply to each product developed by Genentech containing a protein expressed by the modified cell line created using Sangamo's zinc finger protein nuclease ("ZFN") technology in accordance with the First Genentech Agreement or the Second Genentech Agreement, as applicable. Because there are no limitations in the First Genentech Agreement or the Second Genentech Agreement on the number of such products that Genentech is permitted to develop using the modified cell lines and Genentech has no obligation to and does not disclose to Sangamo its development plans relating to Sangamo's ZFN technology, it is not possible to determine or estimate the aggregate development and commercial milestones under the First Genentech Agreement or the Second Genentech Agreement.

Sangamo believes that disclosing the actual development and commercial milestones set forth in Sections 3.6(a) and (b) of the First Genentech Agreement or the Second Genentech Agreement, either by specific milestone or on a product basis, would not add to investors' understanding of the structure of the Genentech Agreements, which is described in the proposed disclosure and apparent in the copies of the Genentech Agreements filed with the SEC. In addition, such disclosure would not provide them with insight into the magnitude of the potential benefits of the Genentech agreements to Sangamo because there is no basis for determining or estimating the aggregate milestone payments. **[***]**

Furthermore, Sangamo believes that the disclosure of such information would cause substantial economic harm to the competitive position of Sangamo. In July 2007, Sangamo entered into a License Agreement with Sigma-Aldrich Corporation ("Sigma"), pursuant to which Sangamo granted Sigma the exclusive right to use its proprietary zinc finger DNA-binding protein ("ZFP") technology to develop and commercialize research products and services in the research field. As a result, future deals with companies for mammalian cell-based protein pharmaceutical production will be negotiated between Sigma and the companies desiring to use Sangamo's ZFP technology. **[***]**

Sangamo has not included the following potential future fees in its proposed Genentech related disclosures:

First Genentech Agreement

Fee Description	Amount
Annual technology access	$[***]

FOIA CONFIDENTIAL TREATMENT REQUESTED BY SANGAMO BIOSCIENCES, INC.;
OMMITTED INFORMATION HAS BEEN FILED UNDER SEPARATE COVER WITH THE COMMISSION
(REQUEST NO. 01.22.10)

Second Genentech Agreement

Fee Description	Amount
Up-front fee per designated modified gene	**$[***]**
Annual technology license fee per designated modified gene	**$[***]**
Research completion milestone payment	**[***]**
Research success milestone payment	**$[***]**

Sangamo believes that the fees described in the table above are not material terms to the First Genentech Agreement and the Second Genentech Agreement, respectively, or necessary to provide an investor with a sufficient level of information to evaluate Sangamo's prospects. This belief is based upon the limited size of fees, considered separately and together. In addition, Sangamo has included in the proposed disclosures aggregate fees paid to date under the First Genentech Agreement and the Second Genetech Agreement for the purpose of giving investors a general sense of the magnitude of payments possible under the Genentech Agreements.

[***]

Finally, the amount of the research completion milestone payment under the Second License Agreement is not disclosed because it is not ascertainable at this time.

With respect to the agreements with OMT and Roche, under the subheading "Transgenic Animals" the disclosure will be substantially as follows:

Open Monoclonal Technologies, Inc.

In April 2008, we entered into a license agreement with Open Monoclonal Technology, Inc. ("OMT"), pursuant to which we granted a royalty-bearing, non-exclusive, sublicensable worldwide license to OMT for the commercial use of a transgenic animal generated using our ZFP technology. In addition, we have agreed not to transfer ZFPs to third parties for commercial uses similar to OMT's intended use under the Agreement. In consideration of the license and rights granted to OMT, OMT paid us an upfront license fee, and will pay us for each product created or developed through use of the transgenic animal payments upon the achievement of certain specified clinical development milestones based on each product created or developed through use of the transgenic animal, a low single-digit percentage of share of payments received by OMT from sublicensees, and a small percentage royalty on sales of any products developed using Sangamo's ZFP technology. For any given OMT Product, OMT has the right to buy out its future royalty payment obligations under the license agreement by paying a lump sum fee to us.

To date, OMT has paid us $250,000 under the license agreement. We have retained the sole right, at our discretion, to take appropriate actions against persons infringing on our transgenic animal related intellectual property. The license agreement shall continue in effect until neither OMT nor we have any further payment obligations. OMT may terminate the license agreement at any time. Either party may terminate the agreement upon a material breach by the other party.

F. Hoffman-La Roche Ltd and Hoffman-La Roche, Inc.

In July 2008, we entered into a research and license agreement with F. Hoffmann-La Roche Ltd and Hoffmann-La Roche Inc. (collectively, "Roche"), pursuant to which we provided Roche with access to aspects of our proprietary ZFN technology. During an initial research term, Roche had the right to use ZFNs provided by us to generate ZFN-modified cell lines and animals having targeted modifications in a specified gene in a specified species, solely for research purposes. In November 2009, pursuant to the research and license agreement Roche exercised an option to receive an exclusive, worldwide license to use such animals in the production of therapeutic and diagnostic products. This exclusive commercial license shall continue, on a country-by-country and product-by-product basis, until the later of 10 years after the first commercial sale in such country or the expiration of the last valid patent claim covering such product. We have agreed not to transfer or license to third parties the specific ZFNs provided to Roche under the research and license agreement, or derivatives of such ZFNs.

Under the research and license agreement, to date Roche has paid us $550,000 for research milestone payments, quarterly maintenance research fees and an option license fee. Roche has agreed to pay us an additional research fee upon the delivery of the ZFN specified in the research and license agreement, a quarterly ongoing research maintenance fee during the research term and milestone payments upon the achievement of certain clinical development milestones relating to products produced under such commercial license, and low-single digit royalties on sales of such products. The aggregate milestone payments for therapeutic products will not exceed $5.75 million, but the diagnostics milestone payments are not similarly capped. Under the research and license agreement, on a product-by-product basis, Roche has the right to buy out its future royalty payment obligations by paying specified fixed amounts. Roche has the right to terminate this research and license agreement in its entirety or in part (on a country and product basis) upon thirty days advance written notice. Either party may terminate the agreement upon a material breach by the other party.

Pursuant to the July 2007 License Agreement between Sigma and Sangamo, Sigma has the exclusive right to offer certain services involving Sangamo's ZFN technology that are covered under the research and license agreement. Notwithstanding this exclusive right, Sigma has agreed that we may directly offer the ZFN-related services to Roche under the research and license agreement and in return we have and will continue to share certain payments made to us under the research and license agreement.

As indicated in the proposed disclosure above, the License Agreement with OMT (the "OMT License Agreement") provides for **[***]** development and commercial milestones and corresponding milestone payments of **[***]** for each product developed through the use of Sangamo's technology

licensed by OMT. Similar to the Genentech Agreements, there are no limitations on the number of products that OMT is permitted to develop and OMT has not shared with Sangamo its product development plans, so it is not possible to determine or estimate the aggregate development and commercial milestones under the OMT License Agreement.

Because the OMT License Agreement is filed with the SEC and its material terms are described in the proposed disclosure, Sangamo believes that disclosing the actual development and commercial milestones set forth in the OMT License Agreement, either by specific milestone or on a product basis, is not necessary to ensure that investors have a sufficient level of information to understand the OMT License Agreement and its potential implications for Sangamo. Furthermore, disclosure of such milestones will not provide investors with additional information about the potential commercial benefits to Sangamo because there is no basis for determining or estimating the aggregate milestone payments. **[***]**

Furthermore, Sangamo believes that the disclosure of such information would cause substantial economic harm to the competitive position of Sangamo. In October 2009, Sangamo amended its License Agreement with Sigma to expand Sigma's exclusive license to Sangamo's ZFP technology to cover, among other things, commercial uses of ZFP-modified transgenic animals. As a result, future transactions for ZFP-modified transgenic animals will be negotiated with Sigma. **[***]**

Intellectual Property and Technology Licenses, page 18

2. We refer your response to comment 4 of our prior letter and reissue the comment. Full disclosure of the significant terms of your material contracts, including the economic terms, provides investors with a more complete understanding of the Company's potential, as well as actual, obligations thereunder. Therefore, please expand the disclosure of your agreements with Johnson & Johnson, the Massachusetts Institute of Technology, the Johns Hopkins University and the Scripps Research Institute to describe the material terms of each, including, but not limited to any payment provisions, a range of royalty rates, aggregate milestones, usage restrictions, exclusivity provisions, obligations/rights to defend, other rights obtained and material obligations that must be met to keep the agreement in place, duration and terminations provisions.

In response to the Staff's comments regarding expanded disclosure about the terms of the License Agreement, dated June 29, 1995, with Johns Hopkins University ("JHU"), the Patent License Agreement, dated May 9, 1996, with the Massachusetts Institute of Technology ("MIT"), the Sublicense Agreement, dated May 9, 1996, with Johnson & Johnson ("J&J") and the License Agreement, dated March 14, 2000, with The Scripps Research Institute ("Scripps"), the Company intends to revise its disclosure regarding these agreements in its Form 10-K for the year ended December 31, 2009. Such disclosure will be made under the heading "INTELLECTUAL PROPERTY AND TECHNOLOGY LICENSES" and will be substantially as follows:

"We believe that these in-licensed patents and patent applications include several of the early and important patent filings directed at the design, selection, composition and use of ZFPs, ZFP TFs and ZFNs, particularly the agreements with Johns Hopkins

University, the Massachusetts Institute of Technology, Johnson & Johnson and The Scripps Research Institute.

Technology Licenses

Johns Hopkins University

We entered into a license agreement with the Johns Hopkins University on June 29, 1995, as subsequently amended, whereby Johns Hopkins University granted us a worldwide exclusive license to technology and patents relating to nuclease and gene targeting technology for all fields of use, including the right to sublicense. Under the license agreement, we are obligated to pay low single-digit royalties on licensed product sales, a low single-digit percentage of license fees received from sublicensees and a high single-digit or low teens percentage of sublicense royalties received from sublicensees for sales of products. We are subject to an annual minimum royalty, which we currently pay. The license agreement expires upon the expiration of the last patent covered by the license agreement. Based on currently issued patents, the license agreement will terminate on approximately February 10, 2014. Johns Hopkins University may terminate the license agreement upon a material default by us that remains uncured following written notice. We may terminate the license agreement at any time upon six months' written notice.

Massachusetts Institute of Technology

We entered into a patent license agreement with the Massachusetts Institute of Technology, or MIT, on May 9, 1996, as subsequently amended, whereby Massachusetts Institute of Technology granted us a worldwide exclusive license to technology and patents relating to the design, selection and use of ZFPs for all fields of use, including the right to sublicense. Under the patent license agreement, we are obligated to pay an annual license fee, low single-digit royalties of product sales, an up-front sublicense and annual sublicense fees, a percentage of its sublicense revenues, and milestone payments upon achievement of certain commercial development milestones. The aggregate milestone payments under the patent license agreement are $450,000, of which $150,000 has been paid. The patent license agreement expires upon the expiration of the last patent covered by the patent license agreement. Based on currently issued patents and currently filed patent applications, the patent license agreement will terminate on or about September 13, 2022. MIT may terminate the license agreement upon a material default by us that remains uncured following written notice. We may terminate the license agreement at any time upon six months' written notice.

Johnson & Johnson

We entered into a sublicense agreement with Johnson & Johnson on May 9, 1996, whereby Johnson & Johnson granted us a worldwide exclusive sublicense to technology and patents for the research, development and commercialization of human

and animal therapeutic and diagnostic products using engineered ZFPs, including the right to sublicense. These patents were originally exclusively licensed by Johnson & Johnson from The Scripps Research Institute. Under the sublicense agreement, we will pay low single-digit royalty payments based upon sales of license products by us or our sublicensees and a milestone payment upon the achievement of a commercial development milestone. The sublicense agreement expires upon the expiration of the last patent covered by the sublicense agreement. Based on currently issued patents and currently filed patent applications, the sublicense agreement will terminate on or about June 5, 2018. Johnson & Johnson has the right to terminate the sublicense agreement upon a breach or default by us that remains uncured following written notice of such default. We may terminate the sublicense agreement at any time upon sixty days' written notice.

The Scripps Research Institute

We entered into a license agreement with The Scripps Research Institute on March 14, 2000, whereby The Scripps Research Institute granted us a worldwide exclusive license to technology and patents for the research, development and commercialization of products and services using engineered ZFPs, excluding the use of engineered ZFPs in plant agriculture, therapeutics and diagnostics. Under the license agreement, we are required to pay a low-single digit royalty on sales of licensed products by us and our sublicensees, subject to an annual minimum. The license agreement expires upon the expiration of the last patent covered by the license agreement. Based on currently issued patents and currently filed patent applications, the license agreement will terminate on or about June 5, 2018. Each party may terminate the license agreement upon a material default by the other party that remains uncured following written notice.

Each of the License Agreement with JHU, the Patent License Agreement with the MIT, the Sublicense Agreement with J&J and the License Agreement with Scripps includes provisions regarding responsibility for prosecution of patents and the protection of licensed intellectual property. Sangamo believes that the terms of such provisions are customary and provide Sangamo with the ability to ensure that the licensed intellectual property is adequately protected. Accordingly, Sangamo believes that these provisions are not material terms of these agreements. Furthermore, the specific terms regarding the prosecution of patents and the enforcement of licensed intellectual property are available for review by investors as Sangamo has not redacted any terms of these provisions in the copies field with the Commission. Therefore, Sangamo has not described them in its proposed disclosures.

In addition, each of the Patent License Agreement with the MIT, the License Agreement with J&J and the License Agreement with Scripps impose similar due diligence obligations on Sangamo. In general, these obligations are to apply a significant level of effort to develop and commercialize products covered by the licensed intellectual property and to sell such products. The agreements also require Sangamo to provide to the licensors periodic reports regarding its efforts and progress. Sangamo believes that these diligence provisions are not material terms because they are satisfied in the pursuit of Sangamo's core business proposition in the ordinary course, i.e., the development and commercialization of ZFP technology. Therefore, Sangamo has not described these provisions in its proposed disclosure. In

addition, the License Agreement with JHU does not have any unsatisfied diligence requirements that must be met in order to keep the agreement in place.

* * * * *

In connection with the Company's response to the Staff's comments, the Company hereby acknowledges that:

- The Company is responsible for the adequacy and accuracy of the disclosure in the filings;
- Staff comments or changes to disclosure in response to Staff comments in the filings reviewed by the Staff do not foreclose the Commission from taking any action with respect to the filing; and
- The Company may not assert Staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Sangamo respectfully requests the Staff's assistance in completing the review as soon as possible. Please advise us if we can provide any further information or assistance to facilitate your review. Please direct any further comments or questions regarding this letter to the undersigned at (415) 442-1091.

Sincerely,

Scott D. Karchmer

cc: Michael Rosenthall
Staff Attorney
Division of Corporation Finance
Securities and Exchange Commission

Edward O. Lanphier II
Chief Executive Officer
Sangamo BioSciences, Inc.

H. Ward Wolff
Chief Financial Officer
Sangamo BioSciences, Inc.