Sangamo BioSciences Reports Updated Clinical Data from ZFP Therapeutic® Program for HIV/AIDS at the 2015 Interscience Conference of Antimicrobial Agents and Chemotherapy

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Data Reported in Recent Scientific Publications, Major Medical and Scientific Meetings, and at the NIH RAC Highlight the Company's Therapeutic Genome Editing Platform and Clinical Translation Plans

RICHMOND, Calif., Sept. 21, 2015 /PRNewswire/ -- Sangamo BioSciences, Inc. (Nasdaq: SGMO) presented data demonstrating sustained functional control of viral load in the absence of antiretroviral drugs (ART) in two of three HIV-infected subjects treated in Cohort 3* of its Phase 1/2 study (SB-728-1101) of its ZFP Therapeutic (SB-728-T) for the treatment of HIV/AIDS. The subjects remain on extended treatment interruption (TI), past the initial 16 week TI period. The data, which led to expanded enrollment of this Cohort, were presented at the 2015 Interscience Conference of Antimicrobial Agents and Chemotherapy (ICAAC) in San Diego from September 17-21.

Data on the Company's ZFP Therapeutic pipeline were also presented at the annual European Society of Gene and Cell Therapy (ESGCT) Congress, in Helsinki, Finland, which was held from September 17-20; and the International Society for Experimental Hematology meeting, in Kyoto, Japan from September 17-19. Additional related preclinical data were detailed in recent publications in both *Nature Methods* and *Blood*, the official journal of the American Society of Hematology.

ICAAC Presentation of Updated Clinical Data from Sangamo's SB-728-T Program

In a presentation at this year's ICAAC meeting, Sangamo scientists reported on the progress of two of three subjects in Cohort 3*, who had received an SB-728 product that included CCR5 modified CD8 T-cells. These patients' regimen differed from subjects treated in other cohorts in the 1101 study, who had received only CCR5-modified CD4 T-cells after Cytoxan preconditioning. The Cohort 3* treatment regimen was designed to test whether inclusion of CCR5-modified CD8 T-cells, the immune cells responsible for controlling viral infections, could improve HIV viral load control.

"The ability of subjects treated in Cohort 3* to suppress and sustain control of viral load, combined with durable increases in CD4 and CD8 cells, provide support for our hypothesis of an immunologic mechanism of action for SB-728," said Dale Ando, M.D., Sangamo's vice president of therapeutic development and chief medical officer. "The prolonged positive effects observed in these Cohort 3* subjects have not been seen before with other treatments and have encouraged us to enroll and treat an additional five subjects with this regimen."

"Sangamo has also published preclinical data supporting our ZFP Therapeutic genome editing applications in hemoglobinopathies (1) and our In Vivo Protein Replacement Platform™(2) which underpin programs in beta thalassemia, hemophilia and lysosomal storage disorders," commented Edward Lanphier, Sangamo's president and CEO. "We are pleased with the recent review of our IVPRP Factor IX program and its unanimous recommendation by the NIH DNA recombinant advisory committee and the interest that our publications and presentations have generated. We expect to move these programs into clinical studies over the next twelve to eighteen months."

Sangamo's Therapeutic Genome Editing Programs Featured at International Scientific Congresses, and in Major Journals

In presentations at the European Society of Gene and Cell Therapy (ESGCT) Congress, Michael Holmes, Ph.D., Sangamo's vice president, research, provided an overview of Sangamo's therapeutic genome editing platform and chaired a session that included a presentation of preclinical data supporting the company's collaborative hemoglobinopathies programs with Biogen Inc. titled "Genome editing of the BCL11A erythroid-specific enhancer in bone marrow-derived CD34+ cells for the treatment of hemoglobinopathies." At the same meeting, Fyodor Urnov, Ph.D., Sangamo senior scientist, presented preclinical data supporting a genome editing approach in hematopoietic stem cells for the correction of X-linked chronic granulomatous disease.

As an invited speaker, Edward Rebar, Ph.D., Sangamo's vice president of technology, discussed hematological applications of zinc finger nucleases at the Annual Scientific Meeting of the International Society for Experimental Hematology.

New data supporting the Company's fundamental ZFP Therapeutic platform, with applications for multiple potential clinical indications, were recently published online:

1. **Functional footprinting of regulatory DNA**. ***Nat Methods. 2015 Aug 31.*** – Reports preclinical data supporting Sangamo and Biogen's ZFP Therapeutic BCL11A Enhancer approach designed to provide a long-lasting treatment for both beta-thalassemia and sickle cell disease. More generally, the approach used represents a novel method for discovering and exploiting regulatory DNA sequences.
2. **In vivo genome editing of the albumin locus as a platform for protein replacement therapy**. ***Blood. 2015 Aug 21.*** – Reports the preclinical data underlying Sangamo's novel proprietary In Vivo Protein Replacement Platform™ (IVPRP™). Sangamo is developing this platform as a treatment for diseases, such as hemophilia A and B and lysosomal storage

disorders, which are currently treated using protein or enzyme replacement therapies (ERT). The one-time treatment is designed to provide life-long production of corrective enzyme from the patient's own liver in sufficient quantities to potentially eliminate the need for ERT.

About Sangamo

Sangamo BioSciences, Inc. is focused on Engineering Genetic Cures™ for monogenic and infectious diseases by deploying its novel DNA-binding protein technology platform in therapeutic gene regulation and genome editing. The Company has a Phase 2 clinical program to evaluate the safety and efficacy of novel ZFP Therapeutics® for the treatment of HIV/AIDS (SB-728). Sangamo's other therapeutic programs are focused on monogenic and rare diseases. The Company has formed a strategic collaboration with Shire International GmbH to develop therapeutics for Huntington's disease, and with Biogen Inc. for hemoglobinopathies, such as sickle cell disease and beta-thalassemia. It has also established strategic partnerships with companies in non-therapeutic applications of its technology, including Dow AgroSciences and Sigma-Aldrich Corporation. For more information about Sangamo, visit the company's website at www.sangamo.com.

ZFP Therapeutic® is a registered trademark of Sangamo BioSciences, Inc.

This press release contains forward-looking statements regarding Sangamo's current expectations. These forward looking statements include, without limitation, references to timing of commencement of certain clinical studies, the research and development of novel ZFNs as ZFP Therapeutics and therapeutic application and the scope of such applications of Sangamo's ZFP technology platform to specific human diseases and unmet medical needs, including the development of ZFP Therapeutics for monogenic diseases. These statements are not guarantees of future performance and are subject to certain risks, uncertainties and assumptions that are difficult to predict. Factors that could cause actual results to differ include, but are not limited to, the early stage of ZFP Therapeutic development, the lengthy and uncertain regulatory approval process, uncertainties related to the timing of initiation and completion of clinical trials, whether clinical trial results will validate and support the safety and efficacy of ZFP Therapeutics, and the ability to establish strategic partnerships. Further, there can be no assurance that the necessary regulatory approvals will be obtained or that Sangamo and its partners will be able to develop commercially viable gene-based therapeutics. Actual results may differ from those projected in forward-looking statements due to risks and uncertainties that exist in Sangamo's operations and business environments. These risks and uncertainties are described more fully in Sangamo's Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q as filed with the Securities and Exchange Commission. Forward-looking statements contained in this announcement are made as of this date, and Sangamo undertakes no duty to update such information except as required under applicable law.

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