Sangamo Therapeutics Announces Updated Phase 1/2 STAAR Study Data in Fabry Disease Showing Sustained Benefit and Differentiated Safety Profile

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- Sustained elevated expression of alpha-galactosidase A (α-Gal A) activity maintained for up to three years for the longest-treated patient as of the data cutoff date.

- All 12 patients withdrawn from enzyme replacement therapy (ERT) remain off ERT, with sustained elevated α-Gal A activity observed for up to 19 months as of the data cutoff date.

- Total antibody (Ab) or neutralizing antibody (Nab) titers against α-Gal A decreased markedly in all seven patients with antibodies associated with ERT at baseline, and became undetectable in five.

- In the 13 patients followed for 12 months or more after treatment, renal function remained stable and significant improvements in overall disease severity, quality of life (QoL) and gastrointestinal symptoms compared to baseline were reported.

- Continued favorable safety profile, with no liver function test (LFT) elevations requiring steroids post-treatment.

- Since the data cutoff date, four additional patients have been dosed. Enrollment in Phase 1/2 STAAR study is now complete, with dosing of remaining patients expected in the first half of 2024.

- Productive discussions are continuing with U.S. FDA and other health authorities on pathways to registration.

RICHMOND, Calif.--(BUSINESS WIRE)--Feb. 5, 2024-- Sangamo Therapeutics, Inc. (Nasdaq: SGMO), a genomic medicine company, today announced updated preliminary data from the Phase 1/2 STAAR clinical study evaluating isaralgagene civaparvovec, or ST-920, a wholly owned gene therapy product candidate for the treatment of Fabry disease. In the largest known clinical gene therapy program in Fabry disease to date, data from 24 patients continued to show durable safety and preliminary efficacy data as of the data cutoff date, which continue to underscore the potential of isaralgagene civaparvovec as a single-dose treatment option for Fabry disease.

These data will be shared at the 20th Annual WORLD*Symposium*™ in San Diego, CA on Wednesday, February 7, 2024, via an oral presentation in the Clinical Applications session from 8:00-9:00 a.m. P.T. and a poster presentation from 3:00-5:00 p.m. P.T. (Poster Ref: 145). These data will also be available on Sangamo's website on the Presentations page.

"Despite the availability of ERT and chaperone therapies, Fabry disease treatment is burdensome, with some patients still developing disease progression. To date, ST-920 has been well-tolerated, and the preliminary data showing sustained supraphysiologic α-Gal A activity and the ability to discontinue and remain off ERT are promising," said Dr. Robert Hopkin, M.D., Cincinnati Children's Hospital Medical Center, and investigator of the Phase 1/2 STAAR study. "The early improvements reported in disease severity, quality of life and gastrointestinal symptoms, together with evidence of reduced immunogenicity, illustrate the potential of ST-920 as a treatment option for adults with Fabry disease."

"We remain encouraged by the emerging safety and efficacy data supporting the potential durable benefit that ST-920 could offer patients with Fabry disease as a convenient single-dose treatment option," said Lisa Rojkjaer, M.D., Chief Medical Officer of Sangamo. "We expect to complete dosing of the remaining patients in the first half of this year as we continue to explore potential partnerships and other financing options to support the initiation of a registrational trial."

Updated Phase 1/2 STAAR Study Results

- As of the September 19, 2023 data cutoff date, 24 patients had been dosed; as of the treatment date, 13 (54%) were on ERT and 10 (42%) had mild to moderate renal dysfunction at baseline.

Safety:

- Isaralgagene civaparvovec continued to be generally well-tolerated. The most common adverse events were pyrexia, headache, COVID-19, fatigue and nasopharyngitis (majority Grade 1/2, with one Grade 3 pyrexia).
- No LFT elevations post-dosing requiring steroids occurred. No prophylactic steroids or other immunomodulatory agents were administered, as per protocol.

Efficacy (all dosed patients):

- Patients treated in the dose escalation and dose expansion phases exhibited sustained, elevated expression of α-Gal A activity for up to three years in the longest treated patient.
- The ERT naïve or pseudo-naïve patients receiving the highest dose (2.63×10^{13}) showed sustained supraphysiological α-Gal A activity up to nearly 500 days, with the largest reductions in plasma globotriaosylsphingosine (lyso-Gb3) levels seen in those subjects with the highest levels at baseline.
- All 12 patients who began the study on ERT and have subsequently been withdrawn from ERT, remained off ERT as of the September 19, 2023 data cutoff date. 11 of these patients continued to exhibit supraphysiological levels of α-Gal A activity

for up to 19 months for the longest treated patient, with one patient maintaining physiological levels. For the eight ERT-treated patients receiving the highest dose (2.63×10^{13}), plasma lyso-Gb3 levels remained stable following ERT withdrawal for up to one year.
- Progressive organ impairment linked to immunogenicity remains an issue with ERT. Seven patients had measurable titers of total antibodies (Ab) or neutralizing antibodies (Nab) against α-Gal A associated with ERT at baseline. Following dosing, total Ab or NAb titers decreased markedly in all seven patients and became undetectable in five, or 71% of patients. Isaralgagene civaparvovec did not induce anti-α-Gal A antibodies in seronegative patients.

Efficacy (13 patients followed for 12 months or more):

- Renal function remained stable, as evidenced by a mean annualized estimated glomerular filtration rate (eGFR) slope of -0.915 mL/min/1.73m^2/year.
- Statistically significant improvements in disease severity were reported in the Fabry Outcome Survey adaptation of the Mainz Severity Score Index (FOS-MSSI) age-adjusted score at week 52 (p=0.0269).
- Four patients improved their overall FOS-MSSI disease category (e.g., improving from 'Moderate' to 'Mild' categorization of Fabry disease compared to their baseline category) at week 52. Three of these individuals were on ERT at baseline, demonstrating the potential clinical benefit of isaralgagene civaparvovec over the currently approved standard of care.
- Significant improvements in the short form-36 (SF-36) QoL scores were reported, with mean changes in the General Health and Physical Component scores of 10.5 (p=0.0158) and 4.395 (p=0.0140), respectively, at week 52. For context, a 3- to 5-point change on any SF-36 score is the minimally clinically important difference.
- Significant improvements in the gastrointestinal symptom rating scale (GSRS) compared to baseline were also reported at week 52 (p=0.0226).
- Collectively, we believe these data support the potential for isaralgagene civaparvovec to be a promising new treatment option for previously treated and untreated patients with Fabry disease.

Since the September 19, 2023 data cutoff date, four additional patients have been dosed in the expansion phase to achieve a total of 28 treated patients, and one additional patient has been withdrawn from ERT. All 13 patients withdrawn from ERT remain off ERT as of February 5, 2024. Screening and enrollment are complete in the Phase 1/2 STAAR study and dosing of the remaining enrolled patients is expected in the first half of 2024. The Company is deferring additional investments in planning for a registrational trial until a collaboration partnership or financing is secured. Productive discussions continue with the U.S. FDA and other health authorities on pathways to registration.

Additionally, another oral presentation and poster presentation at World*Symposium*™ will feature pharmacology and safety data from the Company's nonclinical work for isaralgagene civaparvovec. The data demonstrated supraphysiological plasma and liver α-Gal A activity in mouse models, supporting Phase 1/2 and potential Phase 3 clinical dosing. The oral presentation will take place at WORLD*Symposium*™ on Thursday, February 8, 2024, in the Contemporary Forum session from 8:00-9:00 a.m. P.T. and a poster presentation will be from 3:00-5:00 p.m. P.T. (Poster Ref: 224).

A Current Report on Form 8-K summarizing the updated preliminary results from the Phase 1/2 STAAR study in more detail will be filed by Sangamo, and this press release is subject to the further detail provided in the Form 8-K.

About the STAAR Study

The Phase 1/2 STAAR study is a global open-label, single-dose, dose-ranging, multicenter clinical study designed to evaluate the safety and tolerability of isaralgagene civaparvovec, or ST-920, a gene therapy product candidate in patients with Fabry disease. Isaralgagene civaparvovec requires a one-time infusion without preconditioning. The STAAR study enrolled patients who are on ERT, are ERT pseudo-naïve (defined as having been off ERT for six or more months), or who are ERT-naïve. The U.S. Food and Drug Administration has granted Orphan Drug, Fast Track and RMAT designations to isaralgagene civaparvovec, which has also received Orphan Medicinal Product designation from the European Medicines Agency.

About Fabry Disease

Fabry disease is a lysosomal storage disorder caused by mutations in the galactosidase alpha gene (GLA), which leads to deficient alpha-galactosidase A (α-Gal A) enzyme activity, which is necessary for metabolizing globotriaosylceramide (Gb3). The buildup of Gb3 in the cells can cause serious damage to vital organs, including the kidney, heart, nerves, eyes, gut and skin. Symptoms of Fabry disease can include decreased or absent sweat production, heat intolerance, angiokeratoma (skin blemishes), vision problems, kidney disease, heart failure, gastrointestinal disturbance, mood disorders, neuropathic pain and tingling in the extremities.

About Sangamo Therapeutics

Sangamo Therapeutics is a genomic medicine company dedicated to translating ground-breaking science into medicines that transform the lives of patients and families afflicted with serious neurological diseases who do not have adequate or any treatment options. Sangamo's zinc finger epigenetic regulators are ideally suited to potentially address devastating neurological disorders and Sangamo's capsid discovery platform is making progress toward potentially expanding delivery beyond currently available intrathecal delivery capsids, including in the central nervous system. Sangamo's pipeline also includes multiple partnered programs and programs with opportunities for partnership and investment. To learn more, visit www.sangamo.com and connect with us on LinkedIn and Twitter.

Forward-Looking Statements

This press release contains forward-looking statements regarding our current expectations. These forward-looking statements include, without limitation, statements relating to: the safety and efficacy and therapeutic and commercial potential of isaralgagene civaparvovec, the anticipated plans and timelines for conducting our ongoing and potential future clinical trials and presenting clinical data from our clinical trials, expectations regarding the conclusion of dosing in our Phase 1/2 STAAR study, the anticipated advancement of isaralgagene civaparvovec to late-stage development,

including Sangamo's plans to seek a potential partner or additional financing to proceed with potential future Phase 3 trials of isaralgagene civaparvovec and the timing thereof, our plans to participate in industry and investor conferences, and other statements that are not historical fact. These statements are not guarantees of future performance and are subject to certain risks and uncertainties that are difficult to predict. Factors that could cause actual results to differ include, but are not limited to, risks and uncertainties related to our lack of capital resources to fully develop, obtain regulatory approval for and commercialize our product candidates, including our ability to secure the funding required to initiate a potential Phase 3 trial of isaralgagene civaparvovec in a timely manner or at all; our need for substantial additional funding to execute our operating plan and to continue to operate as a going concern; the effects of macroeconomic factors or financial challenges, including as a result of the ongoing overseas conflict, current or potential future bank failures, inflation and rising interest rates, on the global business environment, healthcare systems and business and operations of Sangamo and our collaborators, including the operation of clinical trials; the research and development process, including the operation and results of clinical trials and the presentation of clinical data; the impacts of clinical trial delays, pauses and holds on clinical trial timelines and commercialization of product candidates; the uncertain timing and unpredictable nature of clinical trial results, including the risk that the therapeutic effects observed in the latest preliminary clinical data from the Phase 1/2 STAAR study will not be durable in patients and that final clinical trial data from the study will not validate the safety and efficacy of isaralgagene civaparvovec, and that the patients withdrawn from ERT will remain off ERT; the unpredictable regulatory approval process for product candidates across multiple regulatory authorities; reliance on results of early clinical trials, which results are not necessarily predictive of future clinical trial results, including the results of any Phase 3 trial of our product candidates; the potential for technological developments that obviate technologies used by Sangamo; our reliance on collaborators and our potential inability to secure additional collaborations, and our ability to achieve expected future financial performance.

There can be no assurance that we and our current or potential future collaborators will be able to develop commercially viable products. Actual results may differ materially from those projected in these forward-looking statements due to the risks and uncertainties described above and other risks and uncertainties that exist in the operations and business environments of Sangamo and our collaborators. These risks and uncertainties are described more fully in our Securities and Exchange Commission, or SEC, filings and reports, including in our Annual Report on Form 10-K for the year ended December 31, 2022, as supplemented by our Quarterly Report on Form 10-Q for the quarter ended September 30, 2023, each filed with the SEC, and future filings and reports that Sangamo makes from time to time with the SEC. Forward-looking statements contained in this announcement are made as of this date, and we undertake no duty to update such information except as required under applicable law.

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