UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): December 7, 2020

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

Delaware	**000-30171**	**68-0359556**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(IRS Employer ID Number)**

7000 Marina Blvd., Brisbane, California 94005
(Address of principal executive offices) (Zip Code)

(510) 970-6000
(Registrant's telephone number, including area code)

Not Applicable
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, $0.01 par value per share	**SGMO**	**Nasdaq Global Select Market**

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 7.01 Regulation FD Disclosure.

On December 7, 2020, Sangamo Therapeutics, Inc. ("Sangamo") issued a joint press release (the "Press Release") with Pfizer Inc. ("Pfizer") announcing updated follow-up data from the Phase 1/2 Alta study of giroctocogene fitelparvovec (SB-525), an investigational gene therapy for patients with severe hemophilia A (the "Alta Study").

A copy of the Press Release is furnished hereto as Exhibit 99.1, and a copy of the slides containing updated follow-up data from the Alta Study that are expected to be presented today at the 62nd American Society of Hematology (ASH) Annual Meeting (the "Data Presentation") is furnished hereto as Exhibit 99.2.

The information contained in this Item 7.01 and in the Press Release and the Data Presentation furnished as Exhibit 99.1 and Exhibit 99.2, respectively, to this current report on Form 8-K shall not be deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that Section or Sections 11 and 12(a)(2) of the Securities Act of 1933, as amended. The information contained in this Item 7.01 and in the Press Release and Data Presentation furnished as Exhibit 99.1 and Exhibit 99.2, respectively, to this current report on Form 8-K shall not be incorporated by reference into any filing with the U.S. Securities and Exchange Commission made by Sangamo whether made before or after the date hereof, regardless of any general incorporation language in such filing.

Forward-Looking Statements

The Press Release attached hereto as Exhibit 99.1 contains forward-looking statements regarding Sangamo's current expectations. These forward-looking statements include, without limitation, statements relating to the therapeutic potential of giroctocogene fitelparvovec (SB-525), including its potential clinical benefit to patients with hemophilia A and its potential as an alternative to the standard of care for patients with hemophilia A, the anticipated readout from the Phase 3 AFFINE study and the expected timing thereof, the plan and related timelines for sharing additional clinical data, and other statements that are not historical fact. These statements are not guarantees of future performance and are subject to risks and uncertainties that are difficult to predict. Sangamo's actual results may differ materially and adversely from those expressed. There can be no assurance that Sangamo will earn any additional milestone or royalty payments under the Pfizer collaboration. Factors that could cause actual results to differ include, but are not limited to, risks and uncertainties related to: the evolving COVID-19 pandemic and its impact on the global business environment, healthcare systems and the business and operations of Sangamo and Pfizer; the research and development process; the uncertain timing and unpredictable nature of clinical trial results, including the risks that therapeutic effects observed in clinical trial results will not be durable in patients and that final clinical trial data will not validate the safety and efficacy of giroctocogene fitelparvovec; reliance on results of early clinical trials, such as the Phase 1/2 Alta study, which results are not necessarily predictive of future clinical trial results, including the results in the Phase 3 AFFINE study; the unpredictable regulatory approval process for product candidates across multiple regulatory authorities; the manufacturing of products and product candidates; the commercialization of approved products; the potential for technological developments that obviate technologies used by Sangamo and Pfizer in giroctocogene fitelparvovec; the potential for Pfizer to terminate the giroctocogene fitelparvovec program or to breach or terminate its collaboration agreement with Sangamo; and the potential for Sangamo to fail to realize its expected benefits of its collaboration with Pfizer, including the risk that Sangamo may not earn any additional milestone or royalty payments under its collaboration with Pfizer. These risks and uncertainties are described more fully in Sangamo's filings with the U.S. Securities and Exchange Commission, including its most recent Quarterly Report on Form 10-Q for the quarter ended September 30, 2020. The information contained in the Press Release is as of December 7, 2020, and Sangamo undertakes no duty to update forward-looking statements contained in the Press Release except as required by applicable laws.

Item 9.01 Financial Statements and Exhibits.

(d) *Exhibits.*

Exhibit No.	Description
99.1	Press release, dated December 7, 2020
99.2	2020 American Society of Hematology (ASH) Annual Meeting Data Presentation
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

SANGAMO THERAPEUTICS, INC.

Dated: December 7, 2020

By: /s/ GARY H. LOEB
Name: Gary H. Loeb

PFIZER AND SANGAMO ANNOUNCE UPDATED PHASE 1/2 RESULTS SHOWING SUSTAINED FACTOR VIII ACTIVITY LEVELS IN 3E13 VG/KG COHORT THROUGH ONE YEAR FOLLOWING HEMOPHILIA A GENE THERAPY

- *First patient was dosed in pivotal Phase 3 AFFINE study in October 2020*

New York, NY, and Brisbane, California – December 7, 2020 – Pfizer Inc. (NYSE: PFE) and Sangamo Therapeutics, Inc. (Nasdaq: SGMO), a genomic medicines company, today announced updated follow-up data from the Phase 1/2 Alta study of giroctocogene fitelparvovec (SB-525 or PF-07055480), an investigational gene therapy for patients with severe hemophilia A. These data are being presented today at the 62nd American Society for Hematology Annual meeting taking place virtually from December 5th—8th. The oral presentation slides, which include follow-up data up to 85 weeks for the longest treated patient, are available on Sangamo's website in the Investors and Media section under Events and Presentations.

All five patients in the high dose 3 x 10^{13} vg/kg cohort have had at least one year of follow-up and showed sustained factor VIII (FVIII) activity levels, with a group median FVIII activity of 56.9% and a group geometric mean FVIII activity of 70.4% via chromogenic assay from week 9 to 52. Steady-state FVIII activity was achieved for all patients in the 3 x 10^{13} vg/kg cohort within 9 weeks of treatment with giroctocogene fitelparvovec, with no bleeding events and no FVIII infusions (beyond 3 weeks post-infusion) within the first year. As of the cutoff date of August 31, 2020, one patient had one target joint bleed requiring FVIII therapy, occurring after week 52.

"It is promising to see how quickly all five patients in the 3 x 10^{13} vg/kg cohort achieved steady-state FVIII activity levels, with no bleeding events and no factor usage within the first year and only one target joint bleed after 52 weeks," said Andrew D. Leavitt, MD, Professor of Medicine, University of California, San Francisco, CA, and investigator of the Alta and AFFINE studies. "Our focus now is to confirm these exciting findings in the Phase 3 study, and to gather long-term data by following these patients and others in the Phase 3 study over a longer period of time."

Giroctocogene fitelparvovec was generally well tolerated. As previously reported, one patient in the 3 x 10^{13} vg/kg dose cohort had a treatment-related serious adverse event of hypotension (grade 3) and fever (grade 2), with symptoms of headache and tachycardia, which occurred six hours post-infusion with giroctocogene fitelparvovec, and which fully resolved within 24 hours. No other treatment-related serious adverse events were reported as of the cutoff date. Among the five patients in the 3 x 10^{13} vg/kg dose cohort, four received corticosteroids for liver enzyme (alanine aminotransferase, ALT) elevations. Three patients had subsequent ALT elevations that responded to corticosteroids. All episodes of ALT elevations fully resolved with oral corticosteroids, and as of the cutoff date no participants were on corticosteroids and no corticosteroid use has been initiated after week 52.

“We continue to be encouraged by the findings from this Phase 1/2 study, which now include durable factor VIII expression through one year of follow-up, and we look forward to continuing to follow these patients,” said Seng Cheng, Senior Vice President and Chief Scientific Officer of Pfizer’s Rare Disease Research Unit. “With the first patient dosed in the Phase 3 AFFINE study in October 2020, we are on track for a readout from this pivotal Phase 3 trial in 2022, which will allow us to better assess the potential of our gene therapy across a larger sample size.”

“These latest results demonstrate that this gene therapy may bring clinical benefit to patients and has the potential to serve as an alternative to the burdensome standard of care for patients with hemophilia A,” said Bettina Cockroft, M.D., M.B.A, Chief Medical Officer of Sangamo. “We look forward to continuing to support our collaboration partners at Pfizer as they conduct the Phase 3 AFFINE study and assess the full potential of this promising therapy.”

Pfizer and Sangamo plan to present further follow-up data from the Alta study when all five patients in the 3 x 10^{13} vg/kg dose cohort have been followed for at least two years.

About the Alta study

The Phase 1/2 Alta study is an open-label, dose-ranging, multicenter clinical trial designed to assess the safety and tolerability of giroctocogene fitelparvovec in patients with severe hemophilia A. The mean age of the 11 male patients assessed across four dose cohorts ($9x10^{11}$ vg/kg - 2 patients, 2 x 10^{12} vg/kg - 2 patients, $1x10^{13}$ vg/kg - 2 patients and 3 x 10^{13} vg/kg - 5 patients) is 30 years (range 18-47 years). After one year of follow-up for all patients in the study, participants will be assessed every 6 months until they enroll into a long-term follow-up study.

About the AFFINE study

The Phase 3 AFFINE (NCT04370054) study is an open-label, multicenter, single arm study to evaluate the efficacy and safety of a single infusion of giroctocogene fitelparvovec in more than 60 adult (ages 18-64 years) male participants with moderately severe to severe hemophilia A. Eligible study participants will have completed at least six months of routine FVIII prophylaxis therapy during the lead-in Phase 3 study (NCT03587116) in order to collect pretreatment data for efficacy and selected safety parameters.

The primary endpoint is impact on annualized bleeding rate (ABR) through 12 months following treatment with giroctocogene fitelparvovec. This will be compared to ABR on prior FVIII prophylaxis replacement therapy. The secondary endpoints include FVIII activity level after the onset of steady state and through 12 months following infusion of giroctocogene fitelparvovec.

About giroctocogene fitelparvovec

The U.S. Food and Drug Administration has granted Orphan Drug, Fast Track, and regenerative medicine advanced therapy (RMAT) designations to giroctocogene fitelparvovec, which also received Orphan Medicinal Product designation from the European Medicines Agency. Giroctocogene fitelparvovec is being developed as part of a collaboration agreement for the global development and commercialization of gene therapies for hemophilia A between Sangamo and Pfizer. In late 2019, Sangamo transferred the manufacturing technology and the Investigational New Drug (IND) application to Pfizer.

About Hemophilia A

Hemophilia is a genetic hematological rare disease that results in a deficiency of a protein that is required for normal blood clotting — clotting factor VIII in hemophilia A. The severity of hemophilia that a person has is determined by the amount of factor in the blood. The lower the amount of the factor, the more likely it is that bleeding will occur which can lead to serious health problems.

Hemophilia A occurs in approximately one in every 5,000-10,000 male births worldwide. For people who live with hemophilia A, there is an increased risk of spontaneous bleeding as well as bleeding following injuries or surgery. It is a lifelong disease that requires constant monitoring and therapy.

About Pfizer Rare Disease

Rare diseases include some of the most serious of all illnesses and impact millions of patients worldwide, representing an opportunity to apply our knowledge and expertise to help make a significant impact on addressing unmet medical needs. The Pfizer focus on rare disease builds on more than two decades of experience, a dedicated research unit focusing on rare disease, and a global portfolio of multiple medicines within a number of disease areas of focus, including rare hematologic, neurologic, cardiac and inherited metabolic disorders.

Pfizer Rare Disease combines pioneering science and deep understanding of how diseases work with insights from innovative strategic collaborations with academic researchers, patients, and other companies to deliver transformative treatments and solutions. We innovate every day leveraging our global footprint to accelerate the development and delivery of groundbreaking medicines and the hope of cures.

Click here to learn more about our Rare Disease portfolio and how we empower patients, engage communities in our clinical development programs, and support programs that heighten disease awareness.

Pfizer Inc.: Breakthroughs that change patients' lives

At Pfizer, we apply science and our global resources to bring therapies to people that extend and significantly improve their lives. We strive to set the standard for quality, safety and value in the discovery, development and manufacture of health care products, including innovative medicines and vaccines. Every day, Pfizer colleagues work across developed and emerging markets to advance wellness, prevention, treatments and cures that challenge the most feared diseases of our time. Consistent with our responsibility as one of the world's premier innovative biopharmaceutical companies, we collaborate with health care providers, governments and local communities to support and expand access to reliable, affordable health care around the world. For more than 150 years, we have worked to make a difference for all who rely on us. We routinely post information that may be important to investors on our website at www.pfizer.com. In addition, to learn more, please visit us on www.pfizer.com and follow us on Twitter at @Pfizer and @Pfizer_News, LinkedIn, YouTube and like us on Facebook at www.facebook.com/Pfizer.

About Sangamo Therapeutics

Sangamo Therapeutics is committed to translating ground-breaking science into genomic medicines with the potential to transform patients' lives using gene therapy, *ex vivo* gene-edited cell therapy, and *in vivo* genome editing and genome regulation. For more information about Sangamo, visit www.sangamo.com.

PFIZER DISCLOSURE NOTICE:

The information contained in this release is as of December 7, 2020. Pfizer assumes no obligation to update forward-looking statements contained in this release as the result of new information or future events or developments.

This release contains forward-looking information about an investigational hemophilia A therapy, giroctocogene fitelparvovec (SB-525, or PF-07055480), including its potential benefits and the anticipated timing and readout of the phase 3 clinical trial, that involves substantial risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statements.

Risks and uncertainties include, among other things, the uncertainties inherent in research and development, including the ability to meet anticipated clinical endpoints, commencement and/or completion dates for our clinical trials, regulatory submission dates, regulatory approval dates and/or launch dates, as well as the possibility of unfavorable new clinical data and further analyses of existing clinical data; risks associated with interim data; the risk that clinical trial data are subject to differing interpretations and assessments by regulatory authorities; whether regulatory authorities will be satisfied with the design of and results from our clinical studies; whether and when drug applications for any potential indications for giroctocogene fitelparvovec may be filed in any jurisdictions; whether and when regulatory authorities in any jurisdictions may approve any such applications, which will depend on myriad factors, including making a determination as to whether the product's benefits outweigh its known risks and determination of the product's efficacy and, if approved, whether giroctocogene fitelparvovec will be commercially successful; decisions by regulatory authorities impacting labeling, manufacturing processes, safety and/or other matters that could affect the availability or commercial potential of giroctocogene fitelparvovec; uncertainties regarding the impact of COVID-19 on Pfizer's business, operations and financial results; and competitive developments.

A further description of risks and uncertainties can be found in Pfizer's Annual Report on Form 10-K for the fiscal year ended December 31, 2019 and in its subsequent reports on Form 10-Q, including in the sections thereof captioned "Risk Factors" and "Forward-Looking Information and Factors That May Affect Future Results", as well as in its subsequent reports on Form 8-K, all of which are filed with the U.S. Securities and Exchange Commission and available at www.sec.gov and www.pfizer.com.

SANGAMO DISCLOSURE NOTICE:

This press release contains forward-looking statements regarding Sangamo's current expectations. These forward-looking statements include, without limitation, statements relating to the therapeutic potential of giroctocogene fitelparvovec (SB-525), including its potential clinical benefit to patients with hemophilia A and its potential as an alternative to the standard of care for patients with hemophilia A, the anticipated readout from the Phase 3 AFFINE study and the expected timing thereof, the plan and related timelines for sharing additional clinical data and other statements that are not historical fact. These statements are not guarantees of future performance and are subject to risks and uncertainties that are difficult to predict. Sangamo's actual results may differ materially and adversely from those expressed. There can be no assurance that Sangamo will earn any additional milestone or royalty payments under the Pfizer collaboration. Factors that could cause actual results to differ include, but are not limited to, risks and uncertainties related to: the evolving COVID-19 pandemic and its impact on the global business environment, healthcare systems and the business and operations of Sangamo and Pfizer; the research and development process; the uncertain timing and unpredictable nature of clinical trial results, including the risks that therapeutic effects observed in clinical trial results will not be durable in patients and that final clinical trial data will not validate the safety and efficacy of giroctocogene fitelparvovec; reliance on results of early clinical trials, such as the Phase 1/2 Alta study, which results are not necessarily predictive of future clinical trial results, including the results in the Phase 3 AFFINE study; the unpredictable regulatory approval process for product candidates across multiple regulatory authorities; the manufacturing of products and product candidates; the commercialization of approved products; the potential for technological developments that obviate technologies used by Sangamo and Pfizer in giroctocogene fitelparvovec; the potential for Pfizer to terminate the giroctocogene fitelparvovec program or to breach or terminate its collaboration agreement with Sangamo; and the potential for Sangamo to fail to realize its expected benefits of its collaboration with Pfizer, including the risk that Sangamo may not earn any additional milestone or royalty payments under its collaboration with Pfizer. These risks and uncertainties are described more fully in Sangamo's filings with the U.S. Securities and Exchange Commission, including its most recent Quarterly Report on Form 10-Q for the quarter ended September 30, 2020. The information contained in this release is as of December 7, 2020, and Sangamo undertakes no duty to update forward-looking statements contained in this release except as required by applicable laws.

Contact
Pfizer Media Contact:
Steve Danehy
212-733-1538

Pfizer Investor Contact:
Bryan Dunn
212-733-8917

Sangamo Investor Relations & Media Contact
Aron Feingold
628.252.7494
afeingold@sangamo.com

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Exhibit 99.2

Update for the Alta Study, a Phase 1/2 Gene Therapy Trial of Giroctocogene Fitelparvovec (SB-525) in Adults With Severe Hemophilia A

Andrew D. Leavitt, MD[1]; Barbara A. Konkle, MD[2,3]; Kimo Stine, MD[4]; Nathan Visweshwar, MD[5]; Thomas J. Harrington, MD[6]; Adam Giermasz, MD, PhD[7]; Steven Arkin, MD[8]; Annie Fang, MD, PhD[9]; Frank Plonski, RN, MA[8]; Lynne Smith, MBA[10]; Li-Jung Tseng, PhD, MBA[9]; Gregory Di Russo, MD[8]; Bettina M. Cockroft, MD, MBA[11]; Jeremy Rupon, MD, PhD[10]; Didier Rouy, MD, PhD[11]

[1]University of California, San Francisco, CA; [2]University of Washington, Seattle, WA;[3]Bloodworks Northwest and the University of Washington, Seattle, WA; [4]UAMS at Arkansas Children's Hospital, Little Rock, AR; [5]University of South Florida, Tampa, FL; [6]University of Miami Miller School of Medicine, Miami, FL; [7]University of California Davis, Sacramento, CA; [8]Pfizer Inc., Cambridge, MA; [9]Pfizer Inc., New York, NY; [10]Pfizer Inc., Collegeville, PA; [11]Sangamo Therapeutics, Brisbane, CA

Presented at the American Society of Hematology Annual Meeting, December 2–11, 2020, virtual event

Disclosures for:
Andrew D. Leavitt, MD

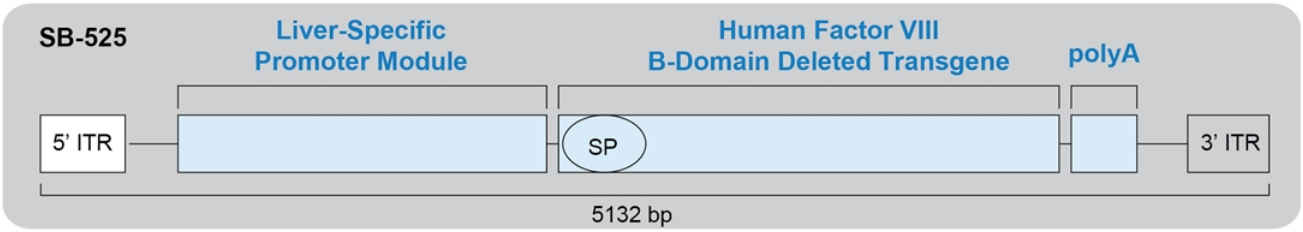
Conflict	Disclosure
Research Support	None
Director, Officer, Employee	None
Shareholder	Johnson & Johnson
Honoraria	None
Advisory Committee	BioMarin; Dova Pharmaceuticals; Catalyst Biosciences; Bio Products Laboratory
Consultant	Merck

Hemophilia A

- A bleeding disorder due to low circulating factor VIII (FVIII) activity levels secondary to *F8* gene mutations
- Current treatment involves replacement therapy with exogenous FVIII, or with emerging mimetic-based therapy
- Current treatment require frequent dosing via intravenous (IV) or subcutaneous administration
- Maintenance of FVIII activity in the mild (>5%) to normal range improves outcomes for patients with severe hemophilia A
- The wide therapeutic window and underlying single gene defect make hemophilia A an ideal candidate for gene therapy

Giroctocogene Fitelparvovec Gene Therapy for Hemophilia A

- Giroctocogene fitelparvovec (formerly SB-525 or PF-07055480) is a liver-tropic rAAV6 vector carrying a B-domain–deleted *F8* gene that is delivered through a single IV infusion



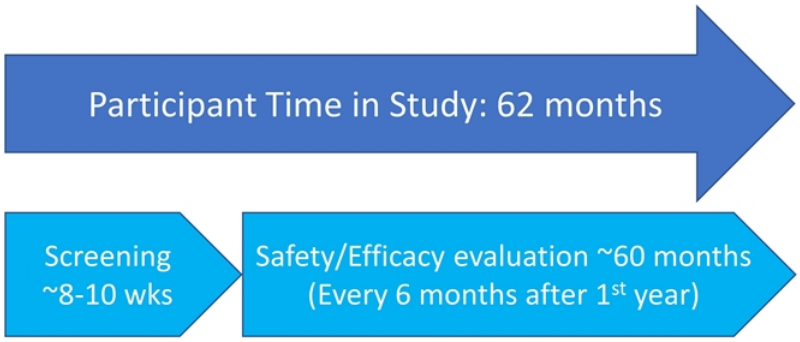
bp, base pairs; ITR, internal tandem repeat; IV, intravenous; rAAV6, recombinant adeno-associated virus serotype 6; SP, signal peptide.

Alta Study Design

- Alta is a phase 1/2, dose-ranging, single-dose, multicenter study to assess the safety and tolerability of giroctocogene fitelparvovec in adult participants (aged ≥18 years) with severe hemophilia A

Key Exclusion Criteria

- Neutralizing activity to AAV6 capsid and/or inhibitor to FVIII
- History of hypersensitivity response to FVIII replacement therapy
- History of liver dysfunction
- Contraindication to steroids



AAV6, adeno-associated virus serotype 6

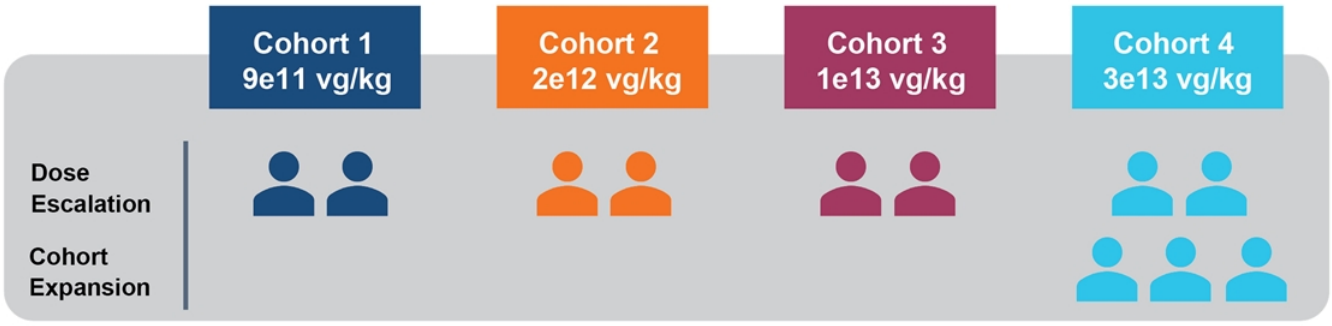
Study End Points

- Primary end points
  - Incidence of AEs and SAEs
  - Change in circulating FVIII activity
- Secondary end points
  - Change from baseline for FVIII replacement therapy
  - Change in frequency and severity of bleeding episodes
  - Measurement of FVIII inhibitor levels
  - Vector shedding in bodily fluids

AE, adverse event; FVIII, factor VIII; SAE, serious adverse event.

Study Design

- 4 dose cohorts, 2 participants each, and a high-dose cohort expansion of 3 participants (total of 11 participants dosed) with reactive corticosteroid use
- Corticosteroid treatment is initiated for ALT elevation that exceeds 1.5x baseline value
- Safety and efficacy data of each cohort were reviewed by an independent safety monitoring committee prior to each dose escalation and prior to initiating cohort 4 expansion
- Follow-up duration ranges from 1 to 3 years post infusion except for 1 participant in the 1e13-vg/kg cohort who prematurely discontinued the study (lost to follow-up)



ALT, alanine aminotransferase; vg, vector genomes.

Participant Demographics

Characteristic		Cohort 1 9e11 vg/kg	Cohort 2 2e12 vg/kg	Cohort 3 1e13 vg/kg	Cohort 4 3e13 vg/kg	All Participants
Age, years	n	2	2	2	5	11
	Mean (SD)	30.5 (9.19)	35.5 (16.26)	32.5 (0.71)	27.2 (6.10)	30.3 (7.81)
	Median	30.5	35.5	32.5	29.0	31.0
	Min, max	24, 37	24, 47	32, 33	19, 34	19, 47
Sex, n (%)	Male	2 (100)	2 (100)	2 (100)	5 (100)	11 (100)
Race, n (%)	Asian	–	1 (50)	–	–	1 (9.1)
	White	2 (100)	1 (50)	2 (100)	4 (80.0)	9 (81.8)
	Other	–	–	–	1 (20.0)	1 (9.1)
Ethnicity, n (%)	Hispanic or Latino	–	–	–	2 (40.0)	2 (18.2)
	Not Hispanic or Latino	2 (100)	2 (100)	2 (100)	3 (60.0)	9 (81.8)

Max, maximum; min, minimum; SD, standard deviation; vg, vector genomes.
Data cut: 31 August 2020.

Safety Summary

- 26 treatment-related AEs occurred in 6 participants, with most common being:
  - ALT: 13[a] events in 5 participants (cohorts 2 and 4)
  - AST: 5 events in 3 participants (cohorts 2 and 4)
- 1 participant in cohort 4 (3e13 vg/kg) experienced treatment-related SAEs of grade 3 hypotension and grade 2 fever along with headache and tachycardia ≈6 hours after completion of the vector infusion and resolved ≈12 hours post infusion
- No participant experienced a COVID-19 related AE
- No participant developed FVIII inhibitors
- 4 of 5 participants in cohort 4 required corticosteroid treatment for liver transaminase (ALT/AST) elevation; all resolved with intervention
  - 3 of the 4 had subsequent transaminase elevation after resolution of the initial increase, 1 of the 3 had an additional elevation; all transaminase elevations resolved with corticosteroids.
- No initiation of corticosteroid use was required to date after week 52 and all participants are currently off corticosteroids.

[a]One participant had an ALT increase per central lab results, but Investigator has not reported increase as an adverse event.
AE, adverse event; ALT, alanine aminotransferase; AST, aspartate aminotransferase; FVIII, factor VIII; SAE, serious adverse event; vg, vector genomes.

Treatment-Related Adverse Events

MedDRA Preferred Term	Cohort 2 2e12 vg/kg (n=2)		Cohort 4 3e13 vg/kg (n=5)		All Participants (N=11)	
	Subjects, n (%)	No. of Events	Subjects, n (%)	No. of Events	Subjects, n (%)	No. of Events
Any treatment-related event	2 (100.0)	5	4 (80.0)	21	6 (54.4)	26
ALT increased[a]	2 (100.0)	3	3 (60.0)	10	5 (45.5)	13
Pyrexia			3 (60.0)	3	3 (27.3)	3
AST increased	1 (50.0)	2	2 (40.0)	3	3 (27.3)	5
Tachycardia			2 (40.0)	2	2 (18.2)	2
Fatigue			1 (20.0)	1	1 (9.1)	1
Hypotension			1 (20.0)	1	1 (9.1)	1
Myalgia			1 (20.0)	1	1 (9.1)	1

- No treatment-related AEs for participants in cohorts 1 and 3

[a]One participant had an ALT increase per central lab results that the Investigator has not reported increase as an adverse event.
Data cut: 31 August 2020. AE, adverse event; ALT, alanine transaminase; AST, aspartate aminotransferase; vg, vector genomes.

ALT Elevations: Cohort 4 (3 x 10^{13} vg/kg)

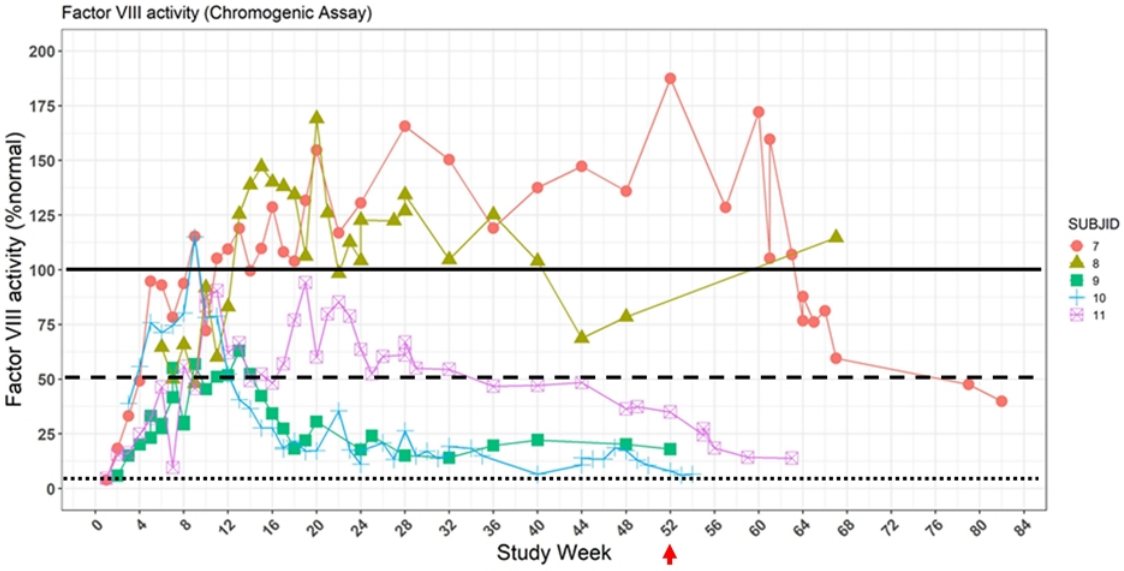
- 4 of 5 participants in cohort 4 had an ALT elevation

Participant ID Number	Time of First ALT Elevation (Week)	Maximum ALT Value, U/L (Grade)	Cortico-steroid Treatment Duration (Weeks)	FVIII Levels (Chromo, IU/dL) at Start of Cortico-steroids	FVIII Levels (Chromo, IU/dL) at End of Taper	Time of Second ALT Elevation (Week)	Weeks of Cortico-steroids After Second Elevation
7	4.5	91 (gr 1)	11	94.8	108.2	48[a]	16[a]
8	12	66 (gr 1)	16	83.1	112.6	N/A	N/A
10	5.5	91 (gr 1)	6	46.4	57.1	20	9
11	8	192 (gr 2)	7	80.2	27.7	16	18

[a]Participant had an additional isolated elevation of ALT at week 28 that was treated with corticosteroids for 1 week, then discontinued (not reported as AE).
Data cut: 31 August 2020. ALT, alanine transaminase; chromo, chromogenic assay; FVIII, factor VIII; N/A, not available; vg, vector genomes.

Efficacy – Cohort 4 (3e13 vg/kg)

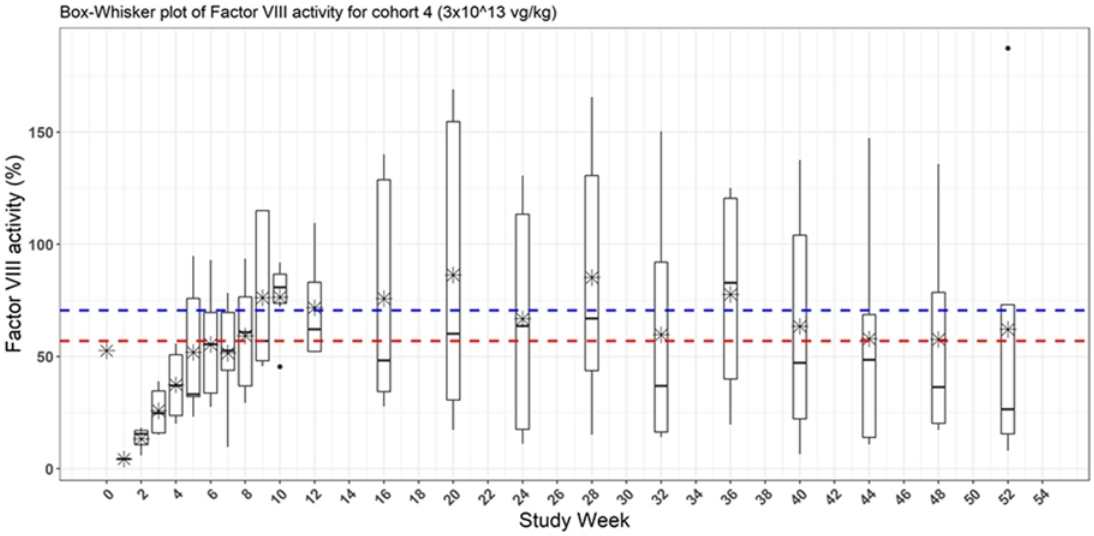
FVIII Activity as Measured at Central Laboratory With Chromogenic Assay



Latest available FVIII values from August 2020 data cut.

FVIII, factor VIII; vg, vector genomes.

Efficacy – Central Laboratory, Chromogenic Assay



- - -Mean FVIII activity from week 9 to week 52 (based on group mean): 70.4% (SD=7.3%)
- - -Median FVIII activity from week 9 to week 52 (based on group median): 56.9% (SD=14.2%)
✳Mean (box and whisker plot) ▬ Median (box and whisker plot) • Outliers

Week 52: n=4 participants
1 participant had FVIII measured at week 67 instead of week 52 due to COVID-19 restrictions

Data cut: 31 August 2020.
FVIII, factor VIII; vg, vector genomes; SD, standard deviation.

Efficacy Summary

- FVIII activity increase from baseline was generally dose dependent
- At 24 months, 1 participant in Cohort 3 remains in the mild range for factor VIII activity
- **Cohort 4 (3e13 vg/kg)**
  - Steady-state FVIII activity achieved by week 9 post infusion
  - Median steady-state (of geometric means from week 9 to latest follow up) FVIII activity level 50.2% (mean 63%) via central laboratory chromogenic assay (includes all FVIII levels up to data cut)
  - One treated target joint bleed was reported during the 2nd year following vector infusion.

FVIII, factor VIII; vg, vector genomes.

Conclusions

- Interim data with at least 1 year and up to 3 years of follow up post infusion continue to show that giroctocogene fitelparvovec is generally well tolerated
  - 1 participant experienced treatment-related SAE immediately following vector infusion, no additional treatment-related SAE
- Cohort 4 (3e13 vg/kg) Participants achieved steady state at week 9, with mean FVIII activity maintained through week 52
- The ongoing phase 1/2 study supports further development of giroctocogene fitelparvovec

Development Update: First participant in the AFFINE phase 3 study (3e13 vg/kg) was dosed in October 2020

FVIII, factor VIII; vg, vector genomes.

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