Zogenix Announces Positive Top-Line Results from its Third Pivotal Phase 3 Clinical Trial (Study 3) of FINTEPLA® in Dravet Syndrome

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- *Results corroborate highly statistically significant convulsive seizure reductions seen in earlier multinational Phase 3 studies of FINTEPLA in Dravet syndrome*
- *FINTEPLA at 0.7 mg/kg/day achieved a 64.8% greater reduction in mean monthly convulsive seizures compared to placebo (p<0.0001) and FINTEPLA at a lower dose of 0.2 mg/kg/day achieved a 49.9% greater reduction in mean monthly convulsive seizures compared to placebo (p<0.0001)*
- *Positive study will support Japanese new drug application (J-NDA) submission, planned for 2021*

EMERYVILLE, Calif., Sept. 10, 2020 (GLOBE NEWSWIRE) -- Zogenix (Nasdaq: ZGNX), a global biopharmaceutical company developing and commercializing rare disease therapies, today reported positive top-line results from its third Phase 3 study (Study 3) of FINTEPLA® (fenfluramine) oral solution for the treatment of seizures associated with Dravet syndrome. The study corroborates the substantial impact of FINTEPLA on convulsive seizure reduction previously demonstrated in two earlier Phase 3 trials (Studies 1 and 2) in patients with this severe, rare and often debilitating form of infant-onset epilepsy. It also expands the countries where FINTEPLA has been evaluated to include Japan and Study 3 will be the pivotal study included in the Company's planned submission of a new drug application (J-NDA) in that country, expected to occur in 2021.

"There remains a substantial unmet need in the Dravet treatment landscape globally and these compelling results corroborate the substantial levels of seizure control provided by FINTEPLA in Dravet syndrome that was also demonstrated in Studies 1 and 2," said Stephen J. Farr, Ph.D., President & CEO of Zogenix. "Importantly, Study 3 included subjects from Japan and, based on our prior discussions with Japan's Pharmaceuticals and Medical Devices Agency (PMDA), should meet the requirements to serve as the pivotal study for a J-NDA submission. We are excited to work with our commercialization partner in Japan, Nippon Shinyaku, to leverage their expertise and commitment to rare diseases to provide FINTEPLA, if approved, as a potential new treatment option for patients and their families. On behalf of everyone at Zogenix, I would like to extend sincere gratitude to the patients, families and investigators involved in this study. With FINTEPLA now commercially available in the U.S. and under regulatory review in Europe, we are excited to continue our work to bring FINTEPLA to patients in additional countries over time."

Study 3 was a multi-national, randomized, double-blind, placebo-controlled, Phase 3 study enrolling 143 children and young adults with Dravet syndrome, whose seizures were not adequately controlled by existing anti-epileptic drugs. The median age of patients was 9 years (range, 2-18 years) and the average baseline convulsive seizure frequency across the study groups was approximately 63 seizures per month.

Following a six-week baseline observation period, patients were randomized to one of three treatment groups: FINTEPLA 0.7 mg/kg/day (26 mg maximum daily dose; n=49), FINTEPLA 0.2 mg/kg/day (n=46) or placebo (n=48), in which FINTEPLA or placebo was added to each patient's current treatment regimen of anti-epileptic drugs. Patients were titrated to their target dose of FINTEPLA over two weeks and then remained at that fixed dose for 12 weeks.

The study met its primary objective in demonstrating that patients in the FINTEPLA 0.7 mg/kg/day group achieved a 64.8% greater reduction in mean monthly convulsive seizures compared to the placebo group (p<0.0001). The median percent reduction in monthly convulsive seizure frequency was 73.7% among FINTEPLA 0.7 mg/kg/day patients compared to 7.6% in placebo patients.

The same analyses comparing FINTEPLA at a lower dose of 0.2 mg/kg/day versus placebo was a key secondary objective and demonstrated that patients in the lower dose group achieved a 49.9% greater reduction in mean monthly convulsive seizures compared to placebo (p<0.0001). Collectively, these top-line data are highly consistent with the results of Study 1 in demonstrating a dose-response relationship for FINTEPLA in the treatment of convulsive seizures in Dravet syndrome.

"Dravet syndrome is a rare, highly refractory form of childhood onset epilepsy marked by frequent and often prolonged seizures that are difficult to control with existing medications," said Joseph Sullivan, M.D., Professor of Neurology & Pediatrics and Director of the Pediatric Epilepsy Center of Excellence at the UCSF Benioff Children's Hospitals, and the Principal Investigator for FINTEPLA in Dravet syndrome. "Given the profound reductions in convulsive seizure frequency seen across clinical studies, combined with the ongoing, robust safety monitoring that will be part of this medicine's use, I continue to believe that it will offer an extremely important treatment option for Dravet syndrome patients, and bring new hope to families around the world living with the severe effects of this disease."

Additional key secondary objectives of the study were to compare FINTEPLA 0.7 mg/kg/day and 0.2 mg/kg/day (independently) with placebo in terms of (1) the proportion of patients who achieved ≥50% reductions in monthly convulsive seizures and (2) the

median of the longest convulsive seizure-free interval. These results are shown in the following table. The proportion of patients who achieved ≥75% seizure reductions, a secondary efficacy measure, is also presented.

	FINTEPLA 0.7 mg/kg/day (N=48)	FINTEPLA 0.2 mg/kg/day (N=46)	Placebo (N=48)
Patients with ≥50% reduction in monthly convulsive seizures	72.9% (p<0.0001)	45.7% (p<0.0010)	6.3%
Patients with ≥75% reduction in monthly convulsive seizures	47.9% (p=0.0001)	28.3% (p=0.0047)	4.2%
Longest seizure-free interval (median)	43 days (p<0.0001)	24 days (p<0.0010)	13.3 days

FINTEPLA was generally well-tolerated in this study, with adverse events consistent with those observed in Study 1 and Study 2 and with the known safety profile of fenfluramine. The incidence of treatment-emergent adverse events was higher in the treatment groups as compared to the placebo group, with 91.7% (n=44) of patients in the 0.7 mg/kg/day group and 91.3% (n=42) of patients in the 0.2 mg/kg/day group experiencing at least one treatment-emergent adverse event compared to 83.3% (n=40) of patients in the placebo group. The incidence of serious adverse events was similar in all three groups with 6.3% (n=3) of patients in the 0.7 mg/kg/day group and 6.5% (n=3) of patients in the 0.2 mg/kg/day group experiencing at least one treatment-emergent serious adverse event compared to 4.2% (n=2) of patients in the placebo group, including one placebo patient who died due to SUDEP (sudden unexpected death in epilepsy). Prospective cardiac safety monitoring throughout the study showed that no study patients developed valvular heart disease or pulmonary arterial hypertension.

FINTEPLA was approved by the U.S. Food and Drug Administration (FDA) in June 2020 for the treatment of seizures associated with Dravet syndrome in patients 2 years of age and older and a Marketing Authorization Application (MAA) is under review by the European Medicines Agency (EMA). In March 2019, Zogenix entered into an exclusive distribution agreement with Nippon Shinyaku, Co., Ltd. for the commercialization of FINTEPLA in Japan. Zogenix will supply product to Nippon Shinyaku and retains responsibility for completing its global clinical development programs for FINTEPLA, including those underway to support Zogenix's planned submissions of new drug applications in Japan for Dravet syndrome and Lennox-Gastaut syndrome.

About Zogenix

Zogenix is a global biopharmaceutical company committed to developing and commercializing therapies with the potential to transform the lives of patients and their families living with rare diseases. The company's first rare disease therapy, FINTEPLA ® (fenfluramine) oral solution, C-IV has been approved by the U.S. FDA, is under review in Europe, and is in development in Japan for the treatment of seizures associated with Dravet syndrome, a rare, severe childhood onset epilepsy. FINTEPLA is also in development for the treatment of seizures associated with Lennox-Gastaut syndrome, another rare childhood-onset epilepsy. Through its subsidiary Modis Therapeutics, Zogenix is also developing MT1621, an investigational novel substrate enhancement therapy for the treatment of TK2 deficiency, a rare genetic disorder.

Forward Looking Statements

Zogenix cautions you that statements included in this press release and the conference call that are not a description of historical facts are forward-looking statements. Words such as "believes," "anticipates," "plans," "expects," "indicates," "will," "intends," "potential," "suggests," "assuming," "designed," and similar expressions are intended to identify forward-looking statements. These statements include: FINTEPLA providing an important treatment option for patients with Dravet syndrome; Zogenix's plans to submit the J-NDA supported by the Study 3 trial results and the timing thereof; Zogenix's belief that results from Study 3 corroborate the results from Study 1 and Study 2; and Zogenix's plans to bring FINTEPLA to patients in additional countries over time. These statements are based on Zogenix's current beliefs and expectations. The inclusion of forward-looking statements should not be regarded as a representation by Zogenix that any of its plans will be achieved. Actual results may differ from those set forth in this release due to the risks and uncertainties inherent in Zogenix's business, including, without limitation: top-line data Zogenix reports is based on preliminary analysis of key efficacy and safety data, and such data may change following a more comprehensive review of the data related to the clinical trial and such top-line data may not accurately reflect the complete results of a clinical trial, and the Japanese regulatory authority may not agree with the Zogenix's interpretation of such results; the Japanese regulatory authority may disagree that results of Study 3 may serve as a pivotal trial to support the J-NDA or that the existing safety and efficacy data, or Zogenix's analysis of such data, is sufficient to support marketing approval in Japan; the COVID-19 pandemic may disrupt Zogenix's business operations, impairing the ability to commercialize FINTEPLA and Zogenix's ability to generate product revenue; unexpected adverse side effects or inadequate therapeutic efficacy of FINTEPLA that could

limit commercialization, or that could result in recalls or product liability claims; additional data from Zogenix's ongoing studies may contradict or undermine the data reported for Dravet syndrome; Zogenix's dependence on third parties for the manufacture of FINTEPLA;; and other risks described in Zogenix's prior press releases as well as in public periodic filings with the U.S. Securities & Exchange Commission. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof, and Zogenix undertakes no obligation to revise or update this press release to reflect events or circumstances after the date hereof. All forward-looking statements are qualified in their entirety by this cautionary statement. This caution is made under the safe harbor provisions of Section 21E of the Private Securities Litigation Reform Act of 1995.

CONTACTS:

Zogenix
Melinda Baker
Senior Director, Corporate Communications
+1 (510) 788-8732
corpcomms@zogenix.com

Investors
Brian Ritchie
Managing Director, LifeSci Advisors LLC
+1 (212) 915-2578
britchie@lifesciadvisors.com

Media
Stefanie Tuck
Vice President, Porter Novelli
+1 (978) 390-1394
stefanie.tuck@porternovelli.com

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