ZOGENIX

Study 1601 Phase 3 Top-Line Results

February 6, 2020

Forward Looking Statement

Zogenix cautions you that statements included in this presentation 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 statement regarding FINTEPLA’s potential as a treatment for seizures associated with Lennox-Gastaut syndrome (LGS); and the projected timing of Zogenix’s applications for regulatory approvals of FINTEPLA in the U.S. and Europe. 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 presentation due to the risks and uncertainties inherent in Zogenix’s business, including, without limitation: the top-line data Zogenix has reported 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 U.S. Food and Drug Administration (FDA) may not agree with Zogenix’s interpretation of such results; later developments with the FDA that may be inconsistent with feedback received at prior meetings with the FDA; the potential for the FDA to delay the Prescription Drug User Fee Act (PDUFA) target action date related to the Dravet syndrome NDA due to the FDA’s internal resource constraints or other reasons; additional data from Zogenix’s ongoing studies may contradict or undermine the data submitted in the Dravet syndrome NDA for FINTEPLA or reported for LGS; unexpected adverse side effects or inadequate therapeutic efficacy of FINTEPLA that could limit approval and/or commercialization, or that could result in recalls or product liability claims; and other risks described in Zogenix’s public periodic filings with the U.S. Securities and 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 presentation 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.

ZOGENIX

ZOGENIX

Committed to developing and commercializing transformative therapies to improve the lives of patients and their families living with rare diseases.

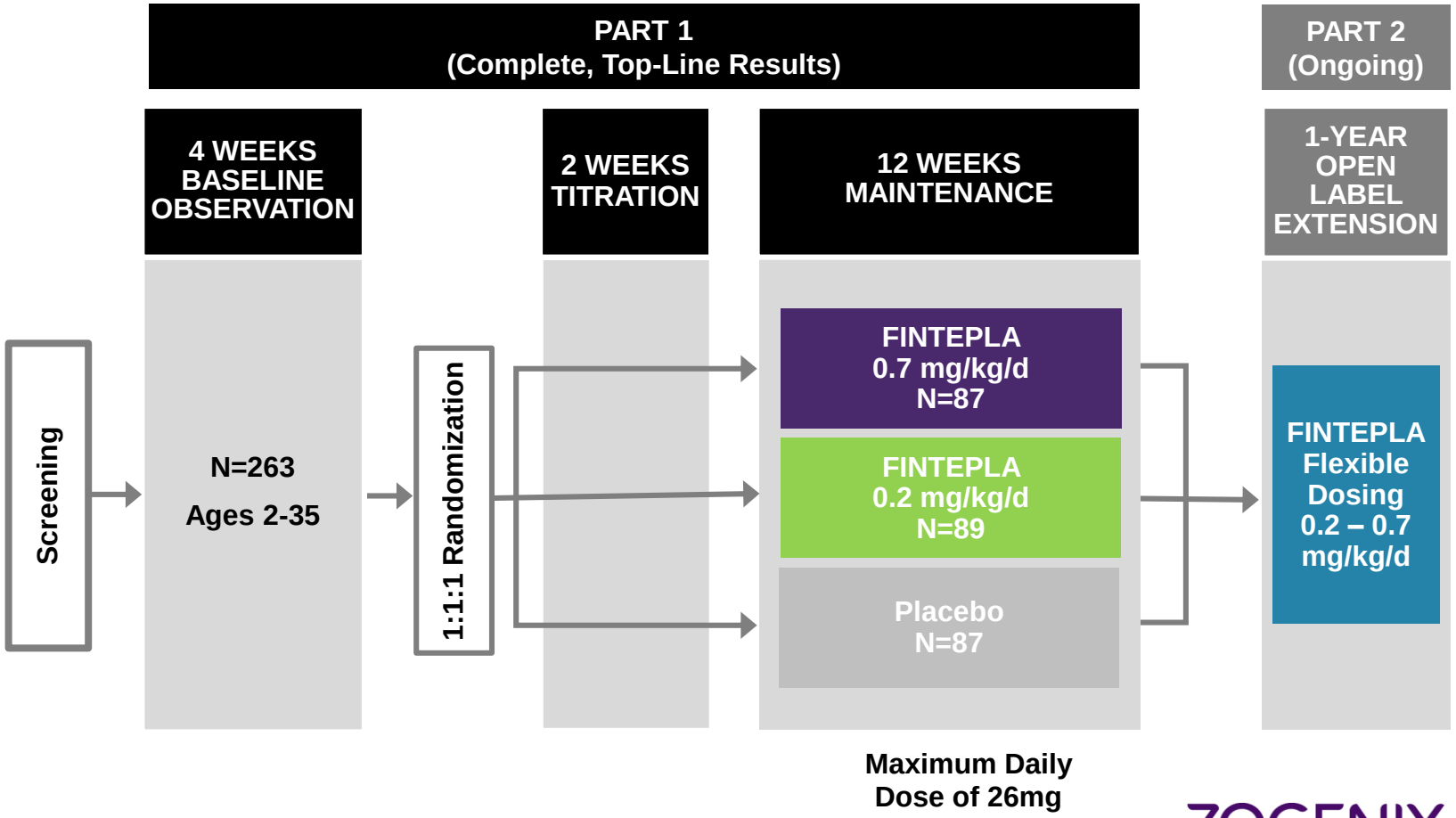
FINTEPLA Phase 3 Study 1601 Top-Line Results
Lennox-Gastaut syndrome

Trial met primary endpoint of change in frequency of monthly drop seizures: FINTEPLA 0.7 mg/kg/day compared to placebo

Key secondary endpoint met: number of subjects with ≥50% reduction in drop seizures: FINTEPLA 0.7 mg/kg/day group compared to placebo

FINTEPLA Phase 3 Study 1601 Design

Prospective, randomized, double-blind, placebo-controlled study of FINTEPLA in children and adults with LGS



ZOGENIX

Study 1601 Demographics

- Demographics were well balanced across dose groups
- The median baseline drop seizure frequency across all groups was 77 per 28 days
- Patients had previously received a median of 7 anti-epileptic drugs (AEDs) prior to entering the study

	Placebo (n=87)	FINTEPLA 0.2 mg/kg/d (n=89)	FINTEPLA 0.7* mg/kg/d (n=87)	All Patients (N=263)
Mean Age in years (SD) Median (min, max)	14.4 (7.71) 13.0 (2, 35)	13.4 (7.79) 13.0 (3, 35)	13.4 (7.28) 13.0 (2, 35)	13.7 (7.59) 13.0 (2, 35)
Age Group (years) 2 - <6 6 - <12 12 - <18 18 - 35	 9 (10.3%) 23 (26.4%) 29 (33.3%) 26 (29.9%)	 17 (19.1%) 24 (27.0%) 23 (25.8%) 25 (28.1%)	 12 (13.8%) 25 (28.7%) 25 (28.7%) 25 (28.7%)	 38 (14.4%) 72 (27.4%) 77 (29.3%) 76 (28.9%)
% Female	47.1%	48.3%	37.9%	44.5%
US Europe**	47.1% 47.1%	47.2% 48.3%	44.8% 43.7%	46.4% 46.4%
Mean Weight (kg) Median	43.9 38.7	42.4 41.0	42.4 39.0	42.8 39.0

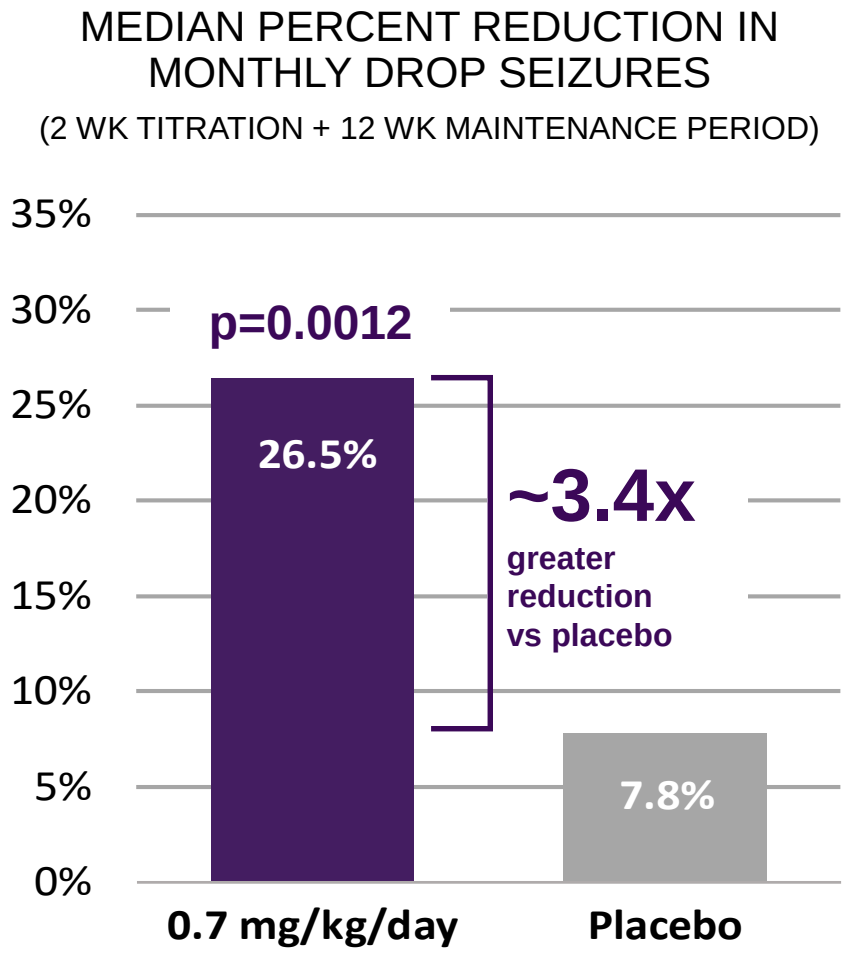
*0.7 mg/kg/day of fenfluramine base is equivalent to 0.8 mg/kg/day of fenfluramine hydrochloride salt
**Patients were also enrolled from Canada, Australia, and Mexico

ZOGENIX

Study 1601 Met Primary Efficacy Endpoint

Study 1601 met primary endpoint demonstrating FINTEPLA, at a dose of 0.7 mg/kg/day, was superior to placebo as adjunctive therapy in the treatment of LGS based on median percent change in monthly frequency of seizures that result in drops ***(p=0.0012)***

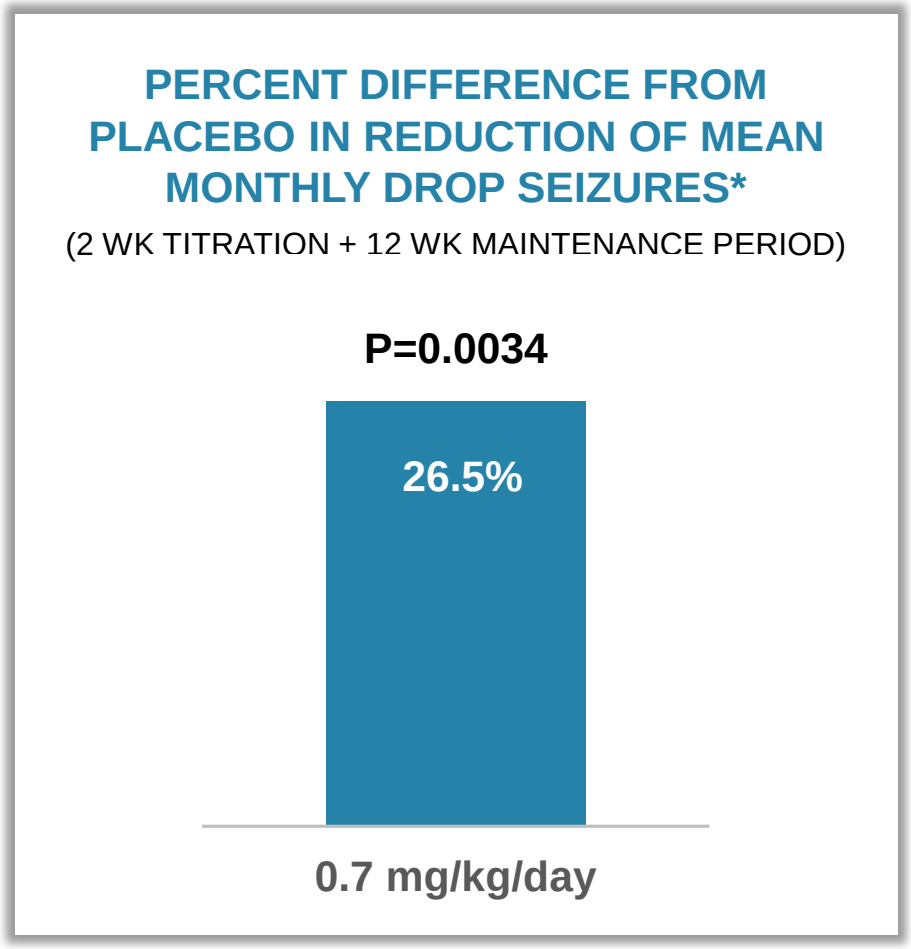
FINTEPLA 0.7 mg/kg/day dose provided ***~3.4x*** *greater median percent reduction in monthly drop seizures versus placebo*



p-value is treatment compared with placebo

ZOGENIX

Study 1601 Mean Percent Seizure Reduction vs. Placebo



* Estimate based on a parametric analysis of a baseline-adjusted change in drop seizure frequency from baseline, 0.7 mg/kg/day vs. placebo

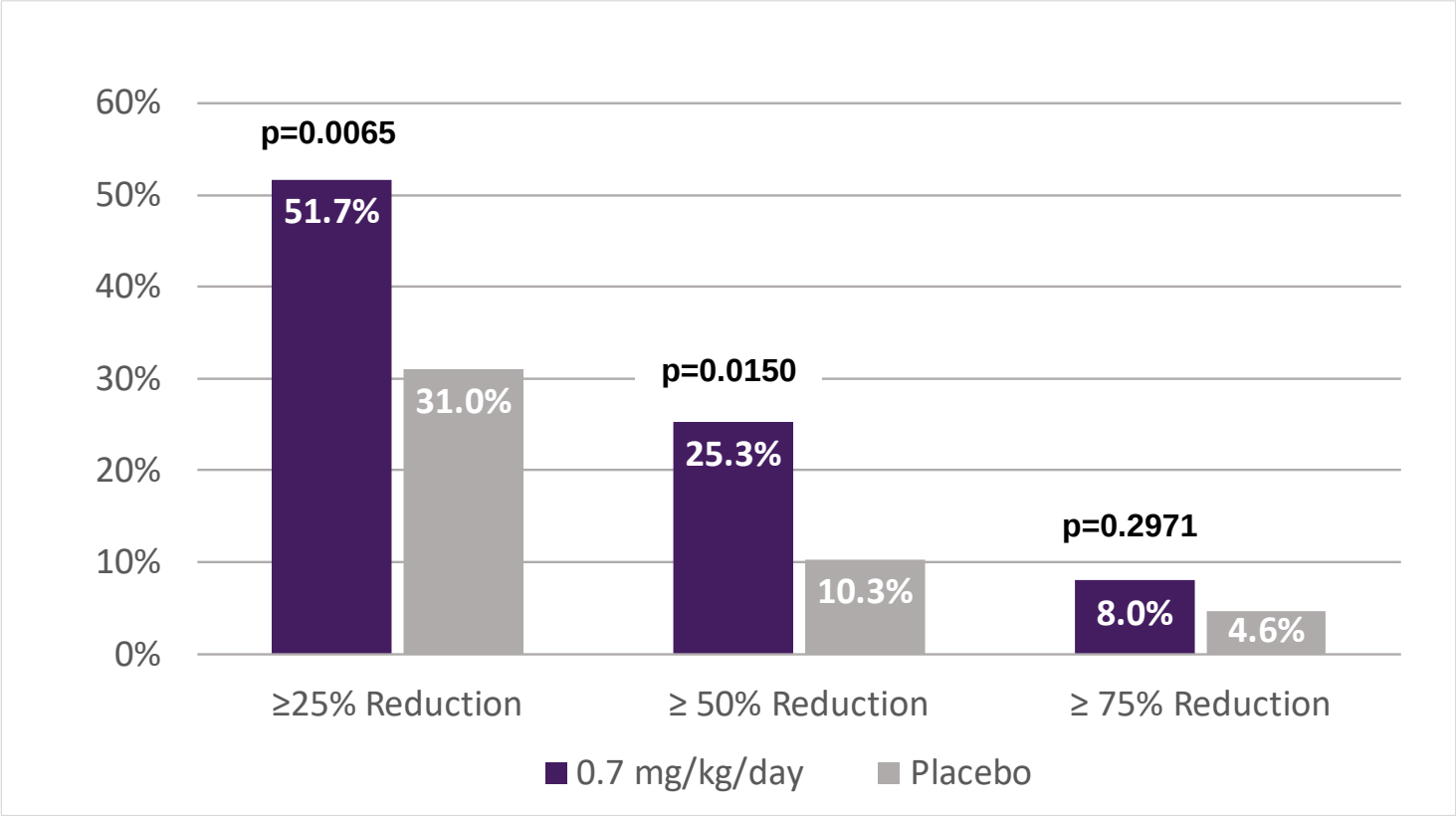
p-value is treatment compared with placebo group

ZOGENIX

Study 1601 Drop Seizure Responder Rates

PROPORTION OF PATIENTS WHO ACHIEVED ≥25%, ≥50% AND ≥75% REDUCTION IN MEAN MONTHLY DROP SEIZURES

(2 WK TITRATION + 12 WK MAINTENANCE PERIOD)



p-values are treatment compared with placebo

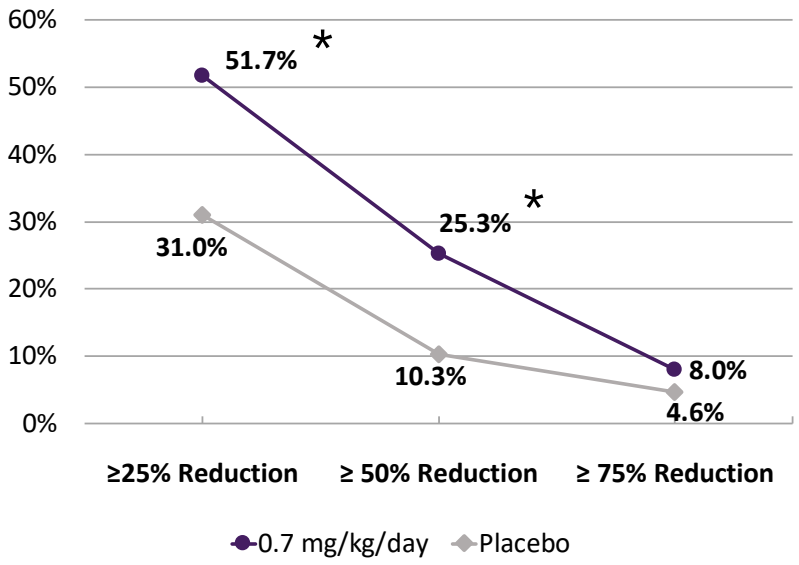
Comparisons based on a logistic regression model

ZOGENIX

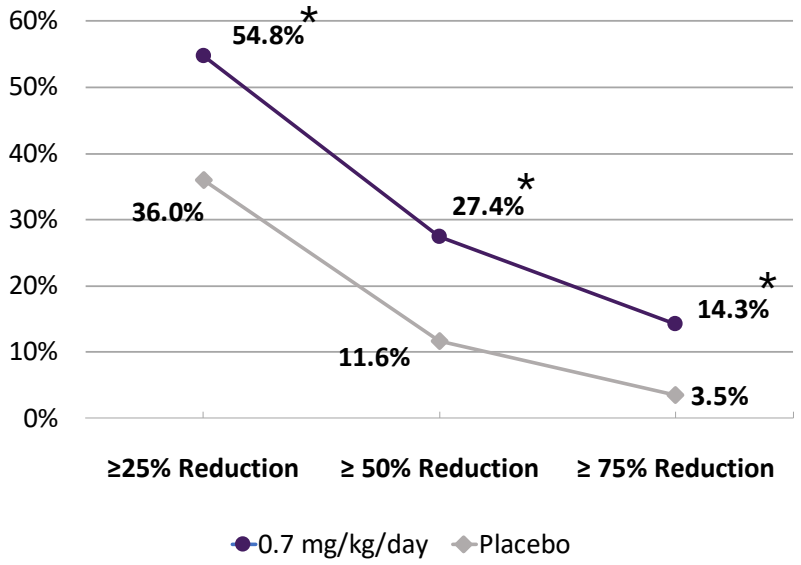
Study 1601 Maintenance Period Responder Rates

PROPORTION OF PATIENTS WHO ACHIEVED ≥25%, ≥50%, AND ≥75%
REDUCTION IN MEAN MONTHLY DROP SEIZURES
MAINTENANCE COMPARED TO TITRATION + MAINTENANCE

Titration + Maintenance
(week 1-14)



Maintenance
(week 3-14)



* $p < 0.05$

p-values are treatment compared with placebo

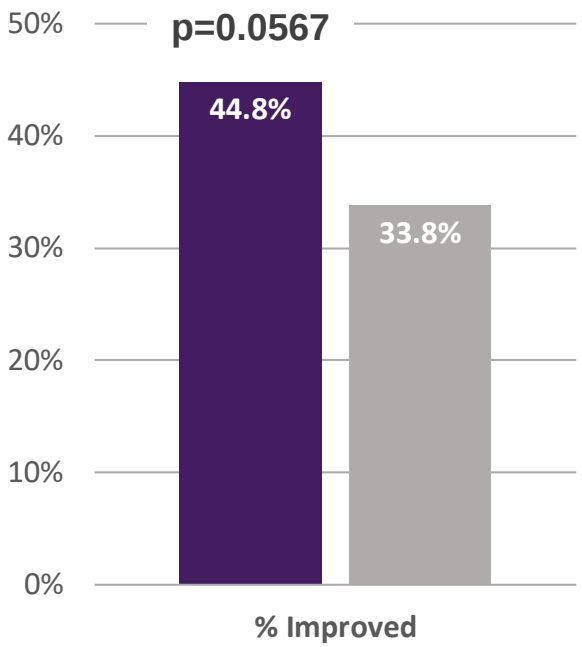
ZOGENIX

Study 1601 Clinical Global Impression - Improvement

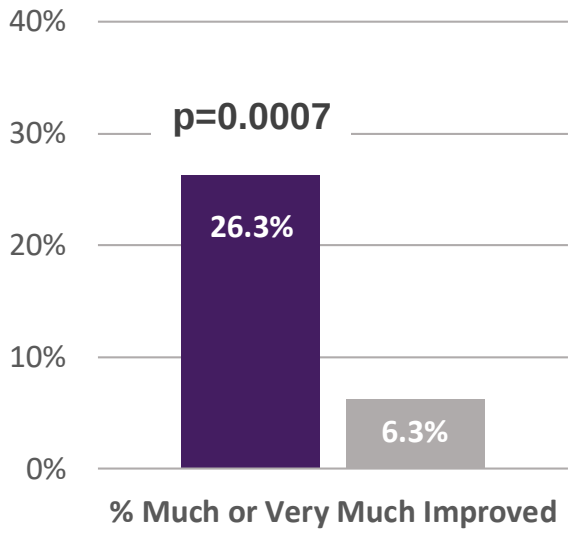
PROPORTION OF PATIENTS WITH IMPROVEMENT IN CGI-I INVESTIGATOR RATING

(BASELINE VERSUS 2 WK TITRATION + 12 WK MAINTENANCE PERIOD)

PROPORTION OF PATIENTS
[1] Very Much Improved, [2] Much Improved or [3] Minimally Improved



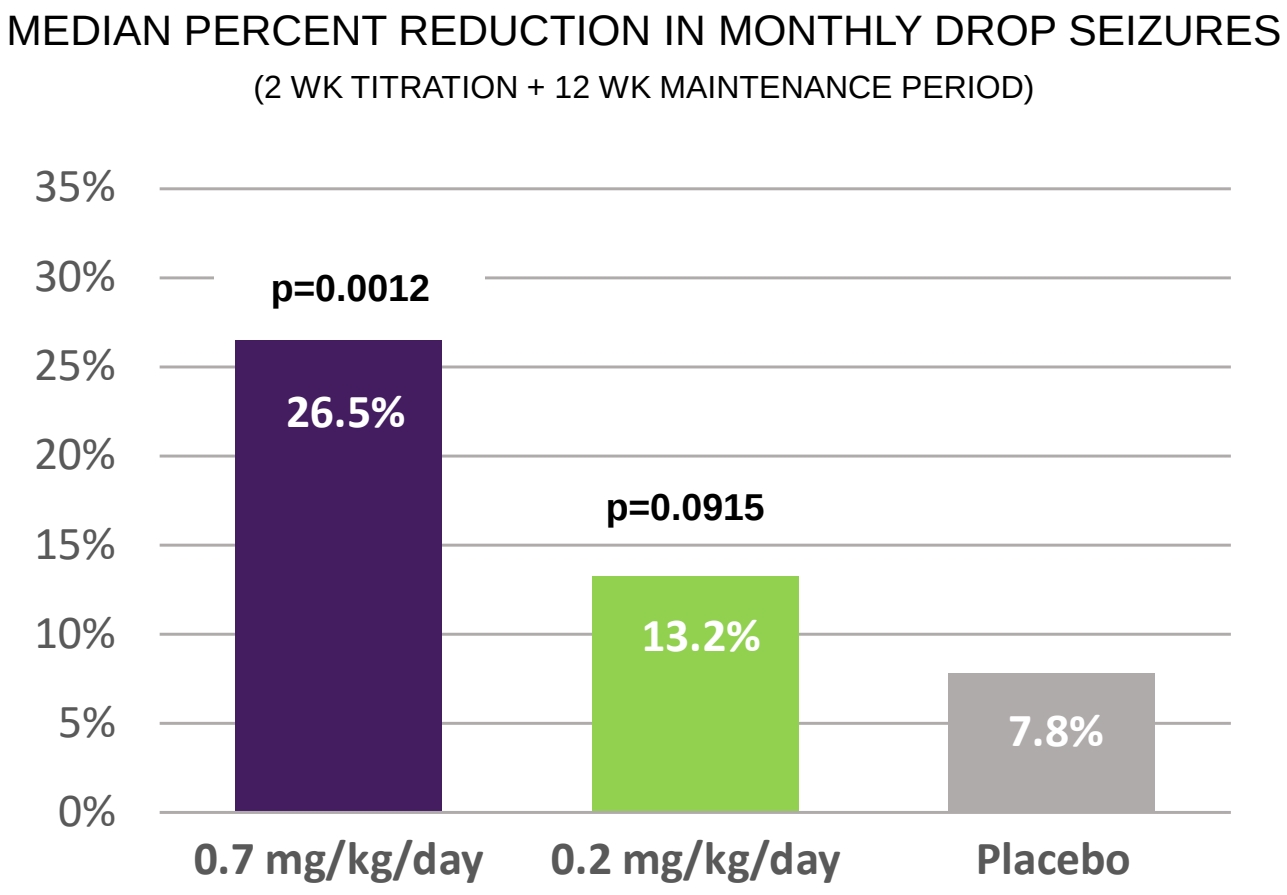
PROPORTION OF PATIENTS
[1] Very Much Improved or [2] Much Improved



p-values are treatment compared with placebo

ZOGENIX

Study 1601 Median Drop Seizure Reduction - All Doses



p-values are treatment compared with placebo

ZOGENIX

Study 1601 Safety Results

- Generally well-tolerated with adverse events consistent with known safety profile of fenfluramine
- No cases of valvular heart disease or pulmonary arterial hypertension
- Six patients in the 0.7/mg/kg/d group had an AE that led to a discontinuation compared to four patients in the 0.2/mg/kg/d group and one patient in the placebo group
- One death during the trial caused by SUDEP in a patient in the 0.7/mg/kg/d/group assessed to be unrelated to study drug

	Placebo (n=87)	0.2 mg/kg/d (n=89)	0.7 mg/kg/d (n=87)
Number of Subjects With at Least One Treatment Emergent Adverse Event (AE)	79.3%	76.4%	89.7%
Number of Subjects With at Least One Serious Treatment Emergent Adverse Event (SAE)	4.6%	4.5%	11.5%

Most Common Adverse Events (>10%)	Placebo (n=87)	0.2 mg/kg/d (n=89)	0.7 mg/kg/d (n=87)
Decreased Appetite	13 (14.9%)	18 (20.2%)	32 (36.8%)
Diarrhea	4 (4.6%)	10 (11.2%)	11 (12.6%)
Vomiting	5 (5.7%)	12 (13.5%)	9 (10.3%)
Fatigue	11 (12.6%)	8 (9.0%)	16 (18.4%)
Pyrexia	11 (12.6%)	11 (12.4%)	9 (10.3%)
Seizure	5 (5.7%)	11 (12.4%)	5 (5.7%)
Somnolence	10 (11.5%)	10 (11.2%)	15 (17.2%)

ZOGENIX

ZOGENIX

Committed to developing and commercializing transformative therapies to improve the lives of patients and their families living with rare diseases.

FINTEPLA Phase 3 Study 1601 Top-Line Results
Lennox-Gastaut syndrome

Trial met primary endpoint of change in frequency of monthly drop seizures: FINTEPLA 0.7 mg/kg/day compared to placebo

Key secondary endpoint met: number of subjects with ≥50% reduction in drop seizures: FINTEPLA 0.7 mg/kg/day group compared to placebo