Safety and Pharmacokinetics of Single Ascending Doses of Human Somatostatin Receptor 4 (hSSTR4) Agonist CNTX-0290 in Healthy Subjects

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INTRODUCTION

Chronic pain is often clinically challenging due to difficulty determining its etiology and the occurrence of overlapping pain syndromes, which can influence pain assessment and management. CNTX-0290 is a novel, long-acting hSSTR4 agonist that has shown promise in preclinical and clinical studies.

METHODS

This study evaluated the safety and PK of CNTX-0290 in cohorts of healthy subjects (Figure 1). For each dose cohort, the study was conducted in two parallel arms: one to evaluate the PK after a single oral dose of 20–300 mg, and the other to evaluate the PK after multiple oral doses of 20–300 mg. CNTX-0290 was administered in the fed and fasted states. Concomitant medications, physical examination, and clinical laboratory and electrocardiogram evaluations were performed prior to the first dose. Safety evaluations included effects of food on CNTX-0290 PK. The PK population included all subjects who received CNTX-0290 study drug, had no major deviations, and the PK data were available for analysis.

RESULTS

Results are presented in tables and figures (Figures 2–5). A summary of the PK parameters is shown in Table 2. The PK parameters for CNTX-0290 were consistent with a 2-compartment model (Table 3). The mean terminal elimination half-life (t1/2) for CNTX-0290 ranged from 1467.9 ± 12.7 h (12.7 days) to 22.9 ± 20.8 h for doses of 20–400 mg in healthy male and female subjects (Table 3).

CONCLUSIONS

The once-daily oral administration of CNTX-0290 in healthy subjects was well tolerated. All adverse events were mild and transient, and CNTX-0290 was well tolerated in healthy male and female subjects. The PK parameters were consistent with a 2-compartment model, and t1/2 ranged from 1467.9 ± 12.7 h (12.7 days) to 22.9 ± 20.8 h for doses of 20–400 mg in healthy male and female subjects.

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Table 2. Summary of PK Parameters for CNTX-0290 by Dose, PK Population

Table 3. Dose Proportionality of CNTX-0290

Table 4. Summary of PK Parameters by Food Status in Cohort 7

Table 5. Summary of PK Parameters in Cohort 7

Figure 2. Mean Plasma CNTX-0290 Concentrations by Treatments in Cohorts 1–6, PK Population

Figure 3. Dose Proportionality of CNTX-0290

Figure 4. Mean Plasma Concentration by Food Status in Cohort 7, PK Population

Figure 5. Dose Proportionality of CNTX-0290

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