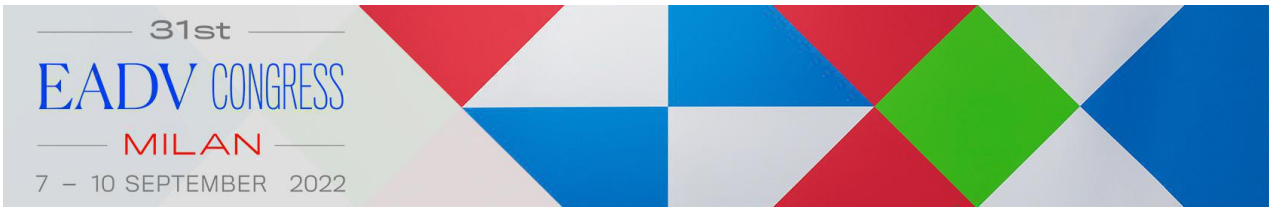

Abstract N°: 3473

Title: Top-line results from THRIVE-AA1: A clinical trial of CTP-543 (Deuruxolitinib), an oral JAK inhibitor, in adult patients with moderate to severe alopecia areata

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Introduction JAK inhibitors are emerging therapies for alopecia areata (AA). CTP-543, a selective JAK1/JAK2 inhibitor, produced significant hair regrowth in Phase 2 trials. Herein we report the first multinational (USA, Canada, Europe) Phase 3 clinical trial of CTP-543 in adult patients with AA.

Materials and methods In this double-blind, placebo-controlled trial, AA patients (18-65 years) with ≥50% scalp hair loss were randomized to placebo (PBO) or 8 or 12 mg CTP-543 twice daily (BID) for 24 weeks. Hair loss was measured by Severity of Alopecia Tool (SALT). The primary endpoint was the proportion of patients achieving a SALT score ≤20 (i.e., ≤≤20% scalp hair loss) at Week 24. Key secondary endpoints were the percentage of responders on the Hair Satisfaction Patient Reported Outcome (SPRO) scale at Week 24 and the percentage of patients achieving a SALT score ≤20 between Weeks 20 through 8. Other endpoints included percentage of patients achieving a SALT score ≤10 and changes in eyebrows or eyelashes. Safety was assessed by adverse events (AE), vital signs, ECGs, clinical laboratory, and physical exam.

Results 706 patients were randomized: PBO BID (N = 140), 8 mg CTP-543 BID (N = 351) or 12 mg CTP-543 BID (N = 215). Both doses of CTP-543 met the primary efficacy endpoint. For 8 mg BID and 12 mg BID, 29.6% (p <0.0001) and 41.9% (p <0.0001), respectively, of patients achieved a SALT score ≤20 at Week 24 compared to 0.8% for PBO. Significant differences from PBO for both doses of CTP-543 were seen as early as 8 weeks (p values <0.001). In addition, 21% and 35% of the 8 mg BID and 12 mg BID groups, respectively, achieved a SALT score ≤10 at Week 24 compared to 0% for PBO (p values <0.0001). For the SPRO, 42% and 53% of the 8 mg BID and 12 mg BID groups, respectively, reported being "satisfied" or "very satisfied" with their scalp hair at Week 24 compared to 5% for PBO (p values <0.0001). Patients with involvement of eyebrows or eyelashes at Baseline treated with CTP-543 had significant improvement compared to PBO over the 24-week treatment period (p values <0.001). The most common (≥5%) AEs were headache, nasopharyngitis, upper respiratory tract infection, increased CPK, COVID-19, and acne. Nine patients reported Serious AEs; one patient with 2 SAEs considered possibly related and 8 patients with SAEs considered not related to CTP-543.

Discussion Both doses of CTP-543 resulted in significant regrowth of scalp hair, starting as early as 8 weeks and continuing throughout the 24-week study period. There was a significantly higher level of satisfaction with CTP-543 treatment vs PBO, and >97% of eligible patients elected to enroll in an open label extension study. Both doses of CTP-543 were generally well tolerated. The overall safety profile of CTP-543 and its potential to treat moderate to severe alopecia areata are encouraging.