Efficacy and safety of once-daily roflumilast cream 0.05% in pediatric patients 2 to 5 years of age with mild to moderate atopic dermatitis (INTEGUMENT-PED): a phase 3 randomized controlled trial

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Background: Roflumilast is a highly potent phosphodiesterase 4 inhibitor under investigation as a non-steroidal, once-daily cream for atopic dermatitis (AD).
Methods: INTEGUMENT-PED (NCT04845620) was a Phase 3 parallel-group, double-blind, vehicle-controlled trial. Children aged 2 to 5 years with mild to moderate AD were treated with roflumilast cream 0.05% (n=437) or vehicle (n=215) once-daily for 4 weeks. The primary efficacy endpoint was validated Investigator Global Assessment-Atopic Dermatitis (vIGA-AD) Success (defined as a score of 0 [clear] or 1 [almost clear] with 2-grade improvement from baseline) at Week 4. Secondary endpoints included 75% improvement in Eczema Area and Severity Index (EASI-75). Worst-Itch-Numeric Rating Score (WI-NRS) Success (≥4-point improvement in patients with baseline ≥4), safety, and tolerability were also assessed.

Results: At Week 4, significantly more roflumilast-treated than vehicle-treated patients achieved vIGA-AD Success (25.4% vs 10.7%; P<0.0001), EASI-75 (39.4% vs 20.6%; P<0.0001), and WI-NRS Success (35.3% vs 18.0%; nominal P=0.0002). Improvement in pruritus was observed by 24 hours after first application (nominal P=0.0014 versus vehicle). Incidence of treatment-emergent adverse events (AEs) was low in both arms, with 98.9% assessed as mild to moderate. AEs occurring in >2% of patients and greater in the roflumilast-treated group were upper respiratory tract infection, diarrhea, and vomiting. For local tolerability, >92% of roflumilast-treated patients reported no or mild sensation across arms at any timepoint.

Conclusion: In this phase 3 trial, once-daily roflumilast cream 0.05% improved AD in pediatric patients (2 to 5 years of age), while demonstrating favorable safety and tolerability. Sponsored by Arcutis Biotherapeutics, Inc.

Keywords: Atopic dermatitis, efficacy, pediatric patients, roflumilast cream, safety