To investigate changes in skin microbiome composition and correlation with clinical response upon treatment with 1.5% ruxolitinib cream in patients aged 18 to 64 years with mild to moderate atopic dermatitis (AD) in the phase 2 SCRATCH-AD study (NCT04839380)

Methods

- **Study Design and Sample Collection**
  - The study design has been described previously
  - Lesional and non-lesional skin swab samples were collected on different body regions (eg, abdomen, arm, leg, back) at baseline and Days 8, 15, and 29 and were profiled by 16S V4 rRNA sequencing using the BenchMark™ platform (Biomark, New Bhighton, MA, USA)
  - Samples with insufficient microbial DNA (>4 ng/μL) were discarded

- **Other endpoints included differences in alpha diversity (microbial diversity within each sample, as measured by the phylogenetic diversity whole-tree index and Shannon diversity index):**
  - Lesional and non-lesional skin at baseline
  - Treated lesional and non-lesional skin at Days 8, 15, and 29 vs baseline

- **Exploratory endpoints included relative abundance of bacteria in each sample for lesional skin at baseline and Days 8, 15, and 29 and correlation of relative abundance of Staphylococcus and Corynebacterium with clinical measures**

- **Statistical analysis was performed in R (v 4.1.1) using packages ALDex2 and mossr**

Conclusions

- Microbiome diversity of AD lesions was rapidly restored with 1.5% ruxolitinib cream, with a reduction in the relative abundance of *Staphylococcus* within 1 week of treatment

- Reductions in the relative abundance of *Staphylococcus* correlated with a clinical reduction in the severity and extent of AD in patients aged 18 to 64 years

**Disclosures**

Air, IN, and SHS are employees and hold stock and/or stock options in Incyte Biosciences International. RB is an employee and holds stock and/or stock options in Innovaderm Research; AV, HN, and SHS are employees and may hold stock and/or stock options in Incyte Corporation. BL, 8, 15, 29 BL, 8, 15, 29 BL 8 15 29 BL 8 15 29 BL 8 15 29 BL 8 15 29

**References**


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