**Tapinarof Cream 1% Once Daily for Plaque Psoriasis: Interim Analysis of a Long-Term Extension Trial of a Novel Therapeutic Aryl Hydrocarbon Receptor Modulating Agent**

**BACKGROUND**
- If disease worsening occurred, defined as a PGA score ≥ 2.
- Patients entering with a PGA score ≥ 2 at the time of data cut (November 2020) were included in this pre-specified interim analysis.
- Data from all enrolled patients at the time of data cut (November 2020) are included in this interim analysis.
- Efficacy analyses were based on the intent-to-treat (ITT) population using observed case (OC) analysis.
- Data from all enrolled patients at the time of data cut (November 2020) are included in this pre-specified interim analysis; this includes 871 patients who completed assessments up to 18 weeks and 395 patients who completed a follow-up of at least 4 weeks to the end of the trial.

**OBJECTIVE**
- To present a pre-specified interim analysis of Tapinarof cream 1% QD in the long-term extension trial of a novel therapeutic Aryl Hydrocarbon Receptor Modulating Agent for the treatment of plaque psoriasis.

**METHODS**
- Study Design
  - All patients completing Tapinarof 1% QD or 2% could enroll in Tapinarof 3 for up to 40 weeks of open-label treatment with tapinarof 1% QD followed by a 4-week off-treatment follow-up period (Figure 1).
  - As such, patients randomized to receive tapinarof 1% QD during the 12-week phase 3 pivotal trials were eligible for up to 40 weeks of tapinarof 1% QD treatment before enrolling in the Tapinarof 3 trial.
- In Tapinarof 3, patients were randomized to the Physician Global Assessment (PGA) score: responders or achieving a PGA score of 0 or 1, and non-responders or achieving a PGA score of 2 or more.
  - Patients entering a PGA score of 1% QD and those who completed disease clearance were assessed for safety endpoints, including: use of tapinarof 1% QD (pivotal) or tapinarof 1% QD (off-treatment).

**RESULTS**
- Disease Clearance (PGA of 0):
  - Complete disease clearance (PGA of 0) was achieved by 39.2% (299/763) of patients; this included 78 patients entering the trial with a PGA score ≥ 2 at the time of data cut (November 2020).
- Durability of response (absence of tachyphylaxis on therapy) was demonstrated for up to 52 weeks with intermittent use of tapinarof 1% QD, indicating no washout phenomenon groups based on proportion of patients achieving a PGA score of 0 or 1, and improvements in 40% of patients overall.
- Safety:
  - AE, adverse event; AESI, adverse event of special interest; CTCAE, Common Terminology Criteria for Adverse Events; MedDRA, Medical Dictionary for Regulatory Activities (GPP3) guidelines.
- There were no apparent differences in baseline demographics between groups.
- Lower baseline disease scores in patients previously randomized to tapinarof 1% QD (pivotal) 1% QD and tapinarof 1% QD (off-treatment) with vehicle QD (vehicle QD) post-docs reflective of the significance of efficacy of tapinarof in the pivotal trials.
- 16.4% (33/199) versus 2.2% (15/674) of patients had complete disease clearance, defined as a PGA of 0, and 60.6% (33/199) versus 65.2% (674/1030) of patients reached the vehicle QD goal.

**CONCLUSIONS**
- Tapinarof cream 1% QD demonstrated continued and substantial improvement in efficacy endpoints beyond the 12 weeks of treatment observed in the pivotal trial.
- A high rate of complete disease clearance (32.6%) and a remittive effect of approximately 4 months off therapy was demonstrated with tapinarof 1% QD which was observed over 12 weeks.
- Tapinarof cream 1% QD was well tolerated with long-term use and had a safety profile consistent with previous studies.
- Tapinarof cream 1% QD may provide a novel non-steroidal topical therapeutic option for the care of patients with plaque psoriasis that is highly effective and well tolerated.

**REFERENCES**
- Bruce Strober, MD, PhD, Robert Bissonnette, MD, April Armstrong, MD, MPH, Linda Stein Gold, MD, Andrew Blauvelt, MD, MBA, Leon Kircik, MD, Philip M Brown, MD, JD, Anna M Tallman, PharmD, Mark Lebwohl, MD.
- Background image: University of New Haven and Central Connecticut Dermatology Research, Cromwell, CT, USA; Innovaderm Research Inc., Montreal, DC, Korea; Connecticut School of Medicine at University of Southern California, Los Angeles, CA, USA; Henry Ford Health System, Detroit, MI, USA; Oregon Medical Research Center, Portland, OR, USA; ‘Skin Sciences PLLC, Louisville, KY, USA; ‘Icahn School of Medicine at Mount Sinai, New York, NY, USA; ‘Dermavant Sciences, Inc., Morrisville, NC, USA.

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