Tazarotene 0.045% Lotion for Acne: Formulation, Application Characteristics, and Clinical Efficacy and Safety

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INTRODUCTION AND FORMULATION
- Tazarotene 0.045% lotion was developed using polymedic emulsion technology to provide uniform and rapid distribution of the active ingredient and hydrating excipients at the skin surface and to efficiently deliver tazarotene into skin.
- Toleraibility may be improved by the vehicle design and the homogenous nature of the delivery as well as the lower dose of tazarotene used compared with all other tazarotene formulations.

POLYMERIC EMULSION TECHNOLOGY FOR TAZAROTENE 0.045% LOTION

PATIENT PREFERENCE
- Healthy female participants aged 35–45 years (N=112) answered in questionnaire on the properties of the vehicle lotion for tazarotene 0.045%.
- Most participants (93–100%) responded favorably (strongly agree or agree) to all questions about the various attributes of the vehicle lotion after application.

CORNEOMETRY AND TRANSEPIDERMAL WATER LOSS (TEWL)
- Skin hydration and epidermal barrier maintenance with the vehicle lotion were assessed through corneometry and TEWL (N=30).
- The vehicle lotion provided rapid and sustained increases in skin moisturization (left) and improved barrier function (right).

SKIN DEPOSITION: TAZAROTENE 0.045% LOTION vs TAZAROTENE 0.01% CREAM
- Tazarotene 0.045% lotion demonstrated significantly greater mean percent change in retention at both superficial and deep skin layers, but the absolute difference drastically decreased in deeper layers.

PHASE 2 STUDY: TAZAROTENE 0.045% LOTION, TAZAROTENE 0.01% CREAM, AND VEHICLE
- A total of 210 participants aged >12 years with moderate-to-severe acne (Evaluator’s Global Severity Score [EGSS] of 3 or 4) were randomized (2:2:1) to receive once-daily tazarotene 0.045% lotion, tazarotene 0.01% cream, lotion vehicle, or cream vehicle for 12 weeks.

RESULTS
- Tazarotene 0.045% lotion demonstrated significantly greater mean percent reductions in inflammatory and noninflammatory lesion counts vs vehicle at week 12.
- Rates of treatment-emergent adverse events (TEAEs), serious adverse events, and treatment-related TEAEs were lower with tazarotene 0.045% lotion compared with tazarotene 0.01% cream.

AUTHOR DISCLOSURES
- Has served as speaker for Novartis, Ortho Dermatologics, Sun Pharma, Lilly, Galderma, AbbVie, and Dermira; has served as consultant for Bausch Health US, LLC; has served as member of advisory board for Bausch Health US, LLC.

REFERENCES