Kashika Sareen

University of British Columbia, Canada

Biography

Kashika, has completed her B.Sc. and Master's in Biomedical Sciences at the University of Guelph, Ontario. She is a third-year medical student at the University of British Columbia with a strong interest in dermatology, preventive medicine, and patient-centered care, integrating research, clinical excellence, and advocacy across diverse clinical settings nationwide.

Addressing the Field, Not Just the Lesion: A Translational Study of Skin Quality and Actinic Keratoses Improvement

Abstract:

Actinic keratoses (AKs) are visible markers of chronic ultraviolet (UV) induced photodamage and accelerated cutaneous aging. Standard treatments are effective but constrained by side effects, adherence challenges, and recurrence. Consequently, interest is growing in preventive strategies, including adaptogenic cosmeceuticals, to enhance cellular repair and skin resilience against UV damage. A topical adaptogenic cosmeceutical with GMA7 technology was evaluated using mechanistic, clinical, and real-world data. In vitro assays assessed UV-induced oxidative stress, inflammation, extracellular matrix integrity, hypoxia signaling, and cellular senescence. In vivo antioxidant capacity was measured by PAOT analysis. Thirteen patients with recurrent AKs applied the formulation twice daily for ≥12 weeks, with/without adjunctive 1% simvastatin, and were assessed by AKASI. A separate cohort evaluated longitudinal AK burden, and multicentre questionnaires assessed tolerability. The formulation demonstrated activity across pathways implicated in cutaneous aging, including reduced UV-induced inflammation, restoration of extracellular matrix and hypoxia-related markers, and senescence attenuation. All patients in the prospective cohort improved, with mean AKASI reduction of 2.10 ($p<0.0001$) and no treatment-related adverse events. AK counts also showed consistent reductions across visits, with high reported (≥83%) global satisfaction, convenience, perceived effectiveness, and minimal side effects. The formulation engaged multiple targets related to aging skin. The reductions in AK burden, combined with visible improvement in surrounding photodamaged tissue, support this cosmeceutical as a promising adjunct for aesthetic and anti-aging practice. Its effects align with prevention-focused care, field-directed rejuvenation strategies, and long-term optimization of skin health for patients seeking high-quality regenerative outcomes.