

An evaluation of the effect of a topical product containing salicin on the visible signs of human skin aging

Remona Gopaul, MS, Helen E Knaggs, PhD, Janet F Lephart, MS, Kara C Holley, MS,
& Erica M Gibson, BS

Journal of Cosmetic Dermatology, 9, 196–201

Background There are many different visible signs of skin aging. These include wrinkles, hyperpigmentation, lack of firmness, poor texture, enlarged pores, and dryness. While there are many topical agents that claim to deliver wide-spectrum anti-aging benefits, few target all of the signs of skin aging to the same extent. Salicin, an extract from white willow bark, has been researched as a potent anti-inflammatory agent when taken orally. Based on unpublished in-house comprehensive consumer clinical studies, it is believed salicin may have anti-aging capabilities when applied topically to human skin.

Aim This research evaluated the effect of a topical serum formulation containing salicin at 0.5% on the visible signs of skin aging.

Materials and Methods This single-center study enrolled 30 female subjects, showing mild to moderate signs of aging, between the ages of 35 and 70 having Fitzpatrick skin types ranging between I and IV. Subjects used the study serum product containing 0.5% salicin on their face twice daily for 12 weeks. Ordinal grading on a nine-point scale (0 = none, 1–3 = mild, 4–6 = moderate, 7–9 = severe) of facial fine lines, mottled pigmentation, uneven skin tone, tactile roughness, global firmness appearance, jaw-line contour, radiance, and overall appearance was performed by investigator at baseline, week 1, week 4, week 8, and week 12. Digital photography, ultrasound, cutometry, and corneometry measurements were also performed at each time point.

Results Twenty-nine of 30 subjects successfully completed the study. No tolerability issues were reported. The clinical investigator found statistically significant improvements in wrinkles, tactile roughness, pore size, radiance, and overall appearance at week 1 time point ($P \leq 0.05$) against baseline and statistically significant improvements in mottled pigmentation, global firmness, and jaw-line contour at week 4 time point ($P \leq 0.05$) against baseline. Cutometry, corneometry, and ultrasound measurements showed significant improvements at week 12 time point ($P \leq 0.05$) against baseline.

Conclusion Based on the findings from this study, it can be concluded that salicin has the ability to reduce the visible signs of skin aging when applied topically.