



AESTHETIC AND COSMETIC DERMATOLOGY (LASERS SEPARATE CATEGORY)

NOVEL ROTATIONAL TOPICAL TREATMENT PROVIDES QUANTITATIVE EVIDENCE OF PROGRESSIVE AND SUSTAINED IMPROVEMENT IN FACIAL WRINKLE APPEARANCE

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Introduction: Topically applied anti-aging products are first-line intervention to reduce the appearance of facial wrinkles, however users perceive products stop working overtime. Therefore, we took a novel approach based on skin's response to established anti-aging ingredients and developed a rotational product that treats skin with complimentary active ingredients on alternating weeks.

Materials and Methods: Twenty-five combinations of selected ingredients were initially screened in human dermal fibroblast cultures. Phytol and retinol were selected for in-vitro and ex-vivo study. Subsequently, a rotational product was tested in a double-blind randomized trial involving 130 subjects with mild to moderate facial photo-damage. Subjects applied phytol/retinol to a half-face once daily for 52 weeks, with the other half of the face untreated as a control. The rotational product's effects were judged at set times by expert grading, wrinkle analysis of digital images, bio-instrumentation, tissue biopsy using immune-histo-morphometric analysis, and subjective self-assessment.

Results: The in-vitro and ex-vivo tests showed that application of phytol then retinol increased new procollagen-1 (PC1) synthesis, and hyaluronic acid (HA) levels compared to control and individual ingredients ($p \leq 0.05$). Clinical trial results demonstrated significant ($p \leq 0.05$) visit-to-visit improvement in crow's feet wrinkles over the 52-week period; corroborated by in vivo trial biopsies, which showed increased epidermal thickness, plus dermal PC1 and HA levels ($p \leq 0.05$). Other wrinkle parameters also indicated a similar response pattern. Interestingly, response seemed related to starting severity for wrinkle parameters. Bioinstrumentation revealed increased firmness. Subjects perceived progressive improvement in their wrinkles.





Conclusion: A novel topical that rotates weekly application of phytol and retinol resulted in epidermal and dermal improvements in vitro and ex vivo. These results were mirrored in a 52-week clinical trial, showing progressive enhancements in wrinkle endpoints and self-assessments. Taken together, these findings show a unique rotational anti-aging product continues to deliver sustained measurable benefits over time.

