

Climbazole ups retinoid-linked biological activities

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(HealthDay)—Climbazole enhances retinoid-associated biological

activities in vivo and in vitro, according to a study published online Jan. 19 in the *International Journal of Cosmetic Science*.

Jean Adamus and colleagues from Unilever R & D in Trumbull, Conn., assessed cellular retinoic acid-binding protein 2 (CRABP2) mRNA expression by real time-qualitative [polymerase chain reaction](#) after treating primary human dermal fibroblasts (HDFs) from six to 48 hours with retinoids alone or in combination with climbazole. Skin equivalent (SE) cultures were topically treated with a retinol or retinyl propionate, with or without climbazole. On the outer forearm of 16 subjects, the authors ascertained the effects of low or high levels of retinol, retinyl propionate, climbazole, or a combination or retinol/climbazole.

The researchers found that treatment of HDFs with retinol or retinyl propionate resulted in significantly higher sustained CRABP2 mRNA expression compared with treatment with retinyl palmitate or vehicle control, but the treatments were unaffected by climbazole. Climbazole combined with retinol or retinyl propionate boosted retinoid-related activity more than the retinoid alone in SEs. Low-dose [retinol](#) or climbazole alone did not increase most evaluated biomarkers, but in combination there were significant increases in retinoid and aging biomarkers.

"Based upon the evidence presented here, we suggest that the topical skin application of climbazole in combination with retinoids, could deliver [skin](#) aging benefits more than a less robust retinoid alone," the authors write.

All the authors and employees of Unilever R & D, which funded the study.

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