

Skin rejuvenation by remodeling of the cornified layer

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Chemical peeling is used clinically to improve the cosmetic appearance of the skin that has been damaged by exposure to the sun, which is typically accompanied by pigmentation, dullness and wrinkles. A new peeling agent, 30% salicylic acid in polyethylene glycol (SA-PEG), specifically affects the cornified layer and improves the skin texture without any adverse reaction. SA-PEG treatment did not inhibit the epidermal prostaglandin E₂ production in mice. In mouse epidermal keratinocytes, the level of phosphorylated ERK, which was decreased by chronological aging, was rescued by SA-PEG treatment. These results suggest that the rejuvenation by chemical peeling of the cornified layer is not by inhibition of cyclooxygenase, but is due to unique mechanism that modulates mechanical stress in the epidermis.