

〈シンポジウム II〉『環境と皮膚』

体外環境と皮膚 紫外線環境と皮膚

表皮ヒアルロン酸代謝における紫外線照射の影響

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Effect of UV Irradiation on the Hyaluronan Metabolism in Epidermis

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Abstract

The word “hyaluronan” brings to mind its beneficial effects such as hydration in skin care products and lubrication and cushioning of arthritic joints. Internet searches result in multimillion hits, indicating that hyaluronan has indeed become a familiar substance. Hyaluronan has important functions in the skin, and it is widely known that the amount of hyaluronan decreases with age, necessitating supplementation by cosmetics and so on. We recently examined the effect of single doses of UV irradiation on the expression of genes related to hyaluronan synthesis and degradation in human epidermal keratinocytes and found that keratinocytes were sensitive to UVB but not to UVA. Although high UVB doses decreased hyaluronan production moderate doses of UVB caused it to increase, suggesting that up to a certain level of UVB irradiation, cytoprotective mechanisms of keratinocytes may function and that hyaluronan may play an important role in that mechanism.

Key words: hyaluronan, hyaluronan synthase, UV, keratinocytes.