

〈シンポジウム〉
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香粧品科学領域における難題への挑戦 ——抗老化剤評価へのアプローチ——

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Challenge to Difficult Problems in Cosmetic Science —Approach to the Evaluation of Anti-Aging Agents—

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Abstract

Skin aging, which include photoaging and intrinsic aging, caused the formation of wrinkle and sagging. In the aging skin, it is well understood that dermal matrix components have been changed qualitatively and quantitatively. In this review, I will summarize both definition and the evaluation method of anti-aging agents which can prevent or repair wrinkles and sagging. It has been reported that the basic cell functions (proliferation, mitochondrial respiration, production of matrix components) of dermal fibroblasts are reduced with aging. Furthermore, there are many reports that reactive oxygen species are responsible for structural changes of dermal matrix. Therefore, it will be required to develop a new anti-aging agents which affect for activation of dermal fibroblast functions reduced with aging. I will describe with the following examples on: 1) acceleration of mitochondrial activity, 2) acceleration of cell proliferation, 3) acceleration of hyaluronic acid synthesis, 4) improvement of collagen fiber bundle, 5) up-regulation of redox ability in the cells.

Key words: skin aging, photoaging, anti-aging agent, dermal matrix, dermal fibroblasts.