

〈一般論文〉

生体成分カルノシンの細胞外マトリックス産生促進作用
ならびにシワに対する臨床効果

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**Effects of Biogenic Substance, Carnosine on Production of Extracellular
Matrix and Clinical Efficacy to Human Skin Wrinkle**

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Abstract

The anti-aging or anti-oxidative effects of biogenic substance, carnosine (β -alanyl-L-histidine), have been studied. We hereby examined the effect of carnosine on human dermal and epidermal cells and skins. The addition of carnosine significantly suppressed the cell death of dermal fibroblasts and keratinocytes induced by several radical oxygen species. Carnosine also promoted the production of type I collagen and laminin 5 in fibroblasts and keratinocytes, respectively, suggesting that it might be an effective anti-aging material. Furthermore, 2-month application of carnosine solution to human eye corners resulted in significant reduction of wrinkle area, volume, and grade, compared to placebo group. Therefore, carnosine was suggested to have an anti-wrinkle effect *in vivo*.

Key words: carnosine, β -alanyl-L-histidine, human skin, anti-aging, anti-wrinkle