



WOUND HEALING

THE EFFECTS OF AUREOBASIDIUM PULLULANS FERMENT ON SKIN ANTI-AGING IN VITRO

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Introduction: Recently, there are some studies about health effects of probiotics on the skin. Aureobasidium pullulans is a black-yeast-like fungus used for production of the polysaccharide pullulan. A. pullulans strain named GJW had abundant productivity of crude exopolysaccharides (EPS), and the ferment extract of A. pullulans GJW (GJW extract) has not yet investigated the efficacy on anti-aging.

Objective: The aim of this study was to investigate the efficacy of GJW extract on anti-aging in vitro.

Materials and Methods: GJW extract, Normal human epidermal keratinocytes (NHEKs) and human dermal fibroblasts (NHDFs) were used for the experiments. The CCK8 assay, scratch assay, proliferation assay, ATP assay and Real time PCR were conducted.

Results: GJW extract significantly induces the migration of keratinocytes after wounding, the proliferation of fibroblasts and the recovery of ATP. GJW extract also upregulated the expression level of differentiation-involved mRNA, ABCA12. Therefore, we found out that GJW extract helps to improve several factors associated with skin aging.

Conclusions: Together, Our findings suggest that GJW extract could be a good candidate for active ingredient in anti-aging cosmetics.





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