

Exploration of natural cosmetic agents that regulate Wnt signaling pathway

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Wnt signaling is conserved in various species, and implicated in numerous aspects of development, cell biology, and physiology. Particularly, it is involved in melanogenesis and hair inducing process including regeneration of hair follicle. Thus, compounds that regulate Wnt signaling could be effective cosmetic agents for whitening or hair restoration. We screened the plants and actinomycetes extracts from our natural resource library for Wnt signaling regulating natural compounds. Activity-guided fractionation led to the isolation of new limonoid from *Xylocarpus granatum* and six cardenolides from *Calotropis gigantea* as active compounds. Also, several active compounds such as macrolactams were obtained from the fermented actinomycetes sampled from Chiba prefecture. These active compounds would be helpful and evidence-based cosmetic agents.