

〈一般論文〉

アルニカ抽出物による情報伝達物質の産生抑制

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Suppressive Effect of *Arnica montana* Extract on Mediators

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Abstract

Interleukin (IL)-6 is a well-known participant in cutaneous local reactions such as inflammation, pigmentation and carcinogenesis. Interestingly, previous studies demonstrated that IL-6 is involved in the central nervous system as well as local reactions. To discover compounds which down-regulate IL-6 production, we have examined the suppressive effect of *Arnica montana* extract (AM) on IL-6 production from RAW264.7 macrophage-like cells stimulated with lipopolysaccharide (LPS). Consequently, the extract from AM native to Europe significantly suppressed IL-6 expression in both protein and mRNA levels, with dose-relation manner. Furthermore, the suppressive effect of AM on prostaglandin (PG) E2 production was detected by using ELISA, but mRNA expression of COX II, a key enzyme in PG synthesis was not down-regulated. On the other hand, AM reduced nitric oxide (NO) production, concomitant with suppressing mRNA expressions of iNOS, a type of NO synthase. Conversely, AM did not increase the release of lactate dehydrogenase (LDH) as a cytotoxicity index, within the concentration used in the experiment. Taken together, these results suggest that AM is useful as a cosmetic ingredient for UV protection because AM suppressed the mediators to be produced and released from keratinocytes by UV irradiation.

Key words: *Arnica montana*, IL-6, mediators, ultraviolet irradiation.