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Ficus deltoidea leaf extract as a potential epidermal protecting agent

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Medicinal plants have been used widely to treat variety of skin diseases for the ages. The demand for plant based medicines is growing as they generally considered being safer and less harmful than conventional allopathic drugs. *Ficus deltoidea* from the Moraceae family is a popular medicinal herb in Malaysia. In the present study, the anti-inflammatory, anti-ageing and wound healing effects of *F. deltoidea* extract on UVB-irradiated HaCaT keratinocytes and normal human dermal fibroblasts were investigated. Treatment with the *F. deltoidea* extract dramatically inhibited the UV-induced TNF- α , IL-1 α , IL-6 and COX-2 expression. The decreased collagen synthesis of fibroblasts as a result of UVB exposure was restored to a normal level after treatment with the *F. deltoidea* extract. In addition, the enhanced MMP-1 expression upon UVB irradiation was down regulated by the *F. deltoidea* extract in a dose-dependent manner. In scratch assay, *F. deltoidea* leaf extract significantly accelerated the wound closure process in comparison to cells treated with ascorbic acid and untreated cells. Following 24 hours of incubation, cells treated with *F. deltoidea* leaf extract showed remarkable proliferative and wound closure effect. Collectively, these findings suggested that *F. deltoidea* leaf extract possesses photo-protective and wound healing potential and may be useful for the development of efficient epidermal protecting cosmetic agent.

Biography

Rosnani Hasham has completed her PhD in Biochemical Engineering related to skin barrier function and anti-photo ageing ingredients. She is currently an IBD's Senior Lecturer involved in R&D and commercialization of cosmeceutical products for the past 14 years.

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