

Approach for application of extracts of the fruit hull of mangosteen, *Garcinia mangostana*, to development of multifunctional cosmetics

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The fruit hull of mangosteen, *Garcinia mangostana*, has been used for many years as traditional medicine for treatment of skin infection, wounds, and diarrhea in Thai. However, its mechanism of action as a medicine has not been elucidated. In the present study, we examined the effects of mangosteen extracts (100% ethanol, 70% ethanol, 40% ethanol and water) on prostaglandin (PG) E₂ synthesis and histamine release. All extracts of mangosteen potently inhibited A23187-induced PGE₂ synthesis in C6 glioma cells. Also it was found that the 40% ethanol extract of mangosteen appreciably reduced IgE-mediated histamine release from RBL-2H3 cells. Furthermore γ -mangostin, one of main constituents in the fruit hull of this plant, inhibited COX-2 gene transcription by preventing the IKK/I κ B/NF- κ B system in C6 rat glioma cells. These results suggest that the 40% ethanol extract of mangosteen has potent inhibitory activities of both PGE₂ synthesis and histamine release. It is also suggested that γ -mangostin serves as an anti-inflammatory agent.