

***Nypa fruticans* wurmb regulates the secretion level of inflammatory cytokines in vitro models.**

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ABSTRACT

Nypa fruticans wurmb (NF) has been used as traditional medicinal food in Asian countries. Especially, NF has been used for conventional medicine to treat inflammatory periodontal diseases. Previous studies have been shown that NF has large amount of useful constituents such as phenolic acids, polyphenols and flavonoids. Also, NF is known as having medicinal effects such as anti-oxidant, anti-inflammatory and cholesterol-lowering effects. NF has recently been attracted to use complementary medicinal food on inflammatory diseases in Korea. However, there are no obvious effects in inflammatory and metabolic diseases also mechanisms has been studied yet. The purpose of this study was to investigate the anti-inflammatory effects of NF and steamed-NF (SNF), which recently has been used as health food, using Human keratinocyte cell line (HaCaT) and Human mast cell line (HMC-1). The cytotoxicities of NF and SNF were measured by using MTT assays in HaCaT cells and HMC-1 cell. To evaluate anti-inflammatory effects of NF and SNF, HaCaT cells were stimulated with tumor necrosis factor (TNF)- α and Interferon (IFN)- γ . Also, HMC-1 cells were stimulated with phorbol-12-myristate-13-acetate (PMA) and A23187 calcium ionophore (A23187) to induce allergic inflammation. Inflammatory cytokine were measured by enzyme-linked immunosorbent assay (ELISA). In this result, the extract of NF and SNF (0.01 – 1mg/ml) did not show cytotoxicity in HaCaT cells and HMC-1 cells. In addition, the NF and SNF suppressed the production of interleukin (IL)-6 and IL-8 in HaCaT cells at highest concentration. Furthermore, the treatment of SNF significantly inhibited the secretion level of IL-8 in PMA plus A23187-stimulated HMC-1 cells compared with NF treatment group. These results suggest that the extract of NF and SNF may serve as a potential therapy for skin inflammatory diseases.

Key words: *Nypa fruticans* wurmb , Anti-inflammation, keratinocyte, HMC-1.

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