[*J. Trad. Med.*, **15**, 208-215 (1998)] [Lab. of Pharmacology]

Effect of Byakko-ka-ninjin-to on Experimental Allergic Cutaneous Reaction.

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The effects of traditional Chinese herbal medicine, Byakko-ka-ninjin-to (TJ-34), on allergic cutaneous reactions were investigated in mice. TJ-34 clearly inhibited not only IgE-mediated biphasic immediate and late phase cutaneous reaction but also DNFB-induced contact dermatitis. TJ-34 inhibited histamine- and TNF-α-induced cutaneous responses but did not affect an anaphylactic histamine release and anti-CD3 antibody- or LPS-induced cytokine production except for IFN-γ production. These data indicate that TJ-34 shows an inhibitory action on IgE-mediated biphasic cutaneous allergic reaction by mainly interfering with the cutaneous response caused by histamine and TNF-α, and on contact dermatitis through the inhibition of IFN-γ production.

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Effects of Vitamin B_6 Deficiency on Cytokine Levels and Lymphocytes in Mice.

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The effects of vitamin B6 (B6) deficiency on cytokine levels and proportions of lymphocyte subsets in BALB/ c mice were investigated. The proportion of lymphocytes from the thymus and spleen of mice given no B6, that were $CD4^+$ $CD8^-$ T cells, was larger than in mice given B6, and the ratio of $CD8^+$ to $CD4^+$ T cells in the thymus of mice given no B6 was lower. The concentrations of interleukin-5 and 10 in spleen cells stimulated in vitro with concanavalin A were significantly higher in the mice with B6 deficiency, as was the plasma corticosterone concentrations. These results suggested that B6 is necessary to maintain cytokine levels and lymphoid function in the thymus and spleen of mice.

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Production of Cornoside in *Abeliophyllum distichum* Cell Suspension Cultures.

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The production of phenylethanoid derivatives in callus and cell suspension cultures of four oleaceous plants, *Abeliophyllum distichum, Forthytia suspensa, F. viridissima* and *F. koreana* was investigated. Of two types of *A. distichum* cultured cells, the friable fine cells produced only the 4-hydroxyphenylethanoid-type glucoside, cornoside, whereas the small cell aggregates produced the 3,4-dihydroxyphenylethanoid-type glycosides (i.e. verbascoside) predominantly. In the cultured cells of *F. suspensa* and *F. viridissima,* the latter-type glycosides were produced predominantly and from those of *F. koreana,* lignan glucosises with 3,4-dioxygenated phenyl groups were isolated.

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Synthesis of ^{13}C-Labeled Possible Intermediates in the Biosynthesis of Phenylethanoid Derivatives, Cornoside and Rengyosides.

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In order to clarify the biosynthetic pathway of C_6-C_2 unit compounds containing salidroside, cornoside and rengyosides A and B inoleaceous plants, ^{13}C-labeled putative precursors, 4-hydroxyphenylethanoid, salidroside and cornoside, were prepared.