

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

[Lab. of Pharmacology]

**Effect of Byakko-ka-ninjin-to on Experimental Allergic Cutaneous Reaction.**Hiroichi NAGAI,\* Noriko NAKAI, Takeshi NISHIYORI, Hitoshi OGISO, Takashi OCHI,  
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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- $\alpha$ -induced cutaneous responses but did not affect an anaphylactic histamine release and anti-CD3 antibody- or LPS-induced cytokine production except for IFN- $\gamma$  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- $\alpha$ , and on contact dermatitis through the inhibition of IFN- $\gamma$  production.

[*Biosci. Biotechnol. Biochem.*, 62, 1008-1010 (1998)]

[Lab. of Pharmacology]

**Effects of Vitamin B<sub>6</sub> Deficiency on Cytokine Levels and Lymphocytes in Mice.**

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The effects of vitamin B<sub>6</sub> (B<sub>6</sub>) 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 B<sub>6</sub>, that were CD4<sup>+</sup> CD8<sup>-</sup> T cells, was larger than in mice given B<sub>6</sub>, and the ratio of CD8<sup>+</sup> to CD4<sup>+</sup> T cells in the thymus of mice given no B<sub>6</sub> 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 B<sub>6</sub> deficiency, as was the plasma corticosterone concentrations. These results suggested that B<sub>6</sub> is necessary to maintain cytokine levels and lymphoid function in the thymus and spleen of mice.

[*Phytochemistry*, 48, 273-277 (1998)]

[Lab. of Pharmacognosy]

**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 glucosides with 3,4-dioxygenated phenyl groups were isolated.

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[Lab. of Pharmacognosy]

**Synthesis of <sup>13</sup>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<sub>6</sub>-C<sub>2</sub> unit compounds containing salidroside, cornoside and rengyosides A and B inoleaceous plants, <sup>13</sup>C-labeled putative precursors, 4-hydroxyphenylethanoid, salidroside and cornoside, were prepared.