action represents a new approach to the treatment of inflammatory and autoimmune diseases. Caffeic acid phenethyl ester (CAPE), an active ingredient of honeybee propolis, has been identified to show anti-inflammatory, anti-viral and anti-cancer activities. However, the molecular basis for anti-inflammatory properties of CAPE has not been known. The present study examined effects of CAPE on iNOS expression induced by lipopolysaccaride plus interferon-gamma in RAW 264.7 macrophages. CAPE inhibited NO production, iNOS enzyme activity, and iNOS protein expression in a concentration-dependent manner. In addition, CAPE inhibited iNOS mRNA expression. The findings suggest that CAPE exerts anti-inflammatory effect by inhibiting both transcriptional expression and enzyme activity of iNOS.

[PA1-17] [10/19/2000 (Thr) 10:00 - 11:00 / [Hall B]]

Involvement of antioxidant action in the neuroprotective effects of Acori graminei rhizoma

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We have previously reported that the methanol extract and essential oils from Acori graminei rhizoma (AGR) exhibited protective action against excitotoxic neuronal death, and that the neuroprotective action was primarily due to the blockade of the NMDA receptor function. In the present study, we evaluated the effects of AGR extracts on the oxidative damage induced in primary cultured rat cortical cells, and identified the active principle through the activity-guided fractionation. The crude methanol extract inhibited the Fe2+-induced oxidative neuronal degeneration in a concentration-dependent manner. The oxidative damage induced by Zn2+ and H2O2 was partially inhibited by the extract. To isolate the active component(s) in AGR, the methanol extract was subsequently fractionated with butanol, chloroform, ethylacetate, hexane, and water. The potent antioxidant action was retained in the ethylacetate and chloroform fractions. Further purification and structure analyses demonstrated that the active principle is asarone, the major essential oil component in AGR. Asarone dramatically inhibited the increase in the levels of lipid peroxide in the brain homogenates. Based on these results and our previous reports, asarone is the major principle in AGR exhibiting neuroprotection against excitotoxic and oxidative neuronal death.

[PA1-18] [10/19/2000 (Thr) 10:00 - 11:00 / [Hall B]]

Methanol extracts of Fructus Psoraleae inhibit bradykinin -mediated pain reactions

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Methanol extracts of Fructus Psoraleae (FP) has been tested to determine if it has some analgesic actions. In both acetic acid writhing assays and tail flick assays, the extract has been shown to contain significant pain inhibition activities when 1 - 100 mg/Kg was administered via IP. It also contained some antiinflammatory actions in the rat paw edema tests.
To explore potential mechanism of analgesic actions of FP extracts, rat ileum contraction studies were carried out. FP extracts blocked the bradykinin-induced rat ileum contractions in dose-dependent manners.
Acute toxicity of the FP extracts was examined by measuring LD50 value.
The calculated LD50 was more than 20g/Kg, suggesting that the safety margin of the methanol extract of FP is relatively wide.