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Astragali Radix extract as a therapeutics on osteoporosis

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Aging and estrogen deficiency after menopause induce bone loss and result in osteoporosis. This study was investigated effects of n-hexane fraction (Hx) extracted from Astragali Radix on osteoporosis with osteoblast-like cell line (MG-63 and Saos-2) and an ovariectomized (OVX) rat model. Proliferation of osteoblast-like cells, MG-63 and Saos-2, was tested with MTT and alkaline phosphatase (ALP) assays. Young adult SD rats (10 weeks old) and senile SD rats (52 weeks old) were divided into four groups consisted with sham-operated and placebo dose, OVX and placebo dose as control, OVX and 17 β -estradiol at 1 μ g/kg/day (E2), and OVX and Hx at 1 mg/kg/day (Hx), respectively. Animals in each group were given an i.p. daily for 9 weeks. Trabecular bone areas (TBAs) of tibia and lumbar were measured by bone histomorphometry. In results, Hx increased osteoblast proliferation (approximately 130% of control) but did not increase ALP activities on osteoblast. The TBAs of tibia in young Hx group were increased 174% of control. However, in senile Hx group, the TBAs of lumbar were 126% of control (P=0.017) and those of tibia were only 122% of control. Effects of Astragali Radix extract on osteoporosis were not the same in both old and young rats. (Supported partially by a grant, #HMP-98-D-4-0043, from HPEB, Korea)

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Analgesic Effect of the Essential Oil from the Rhizomes of *Cnidium officinale*

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The rhizomes of *Cnidium officinale* Makino (Umbelliferae) has been used as sedatives and analgesics in the Traditional Medicine in Korea.

The essential oil of this rhizomes has been reported to possess CNS depressant activity, however, its analgesic activity has not yet been investigated.

We evaluated the analgesic action of the essential oil by administration in oral, on inhalation and after inunction with the phenylquinone- and acetic acid-induced Writhing test and hot plate test. The essential oil showed the most potent analgesic effect after inunction in the phenylquinone-induced Writhing test, but exhibited almost no analgesic activity in the acetic acid-induced Writhing test. Moreover, the analgesic action of the essential oil (100mg/kg, p.o) was more effective than that of acetaminophen (80mg/kg, p.o), a positive control, in the hot plate test, which suggests that this essential oil may affect central nerve system, revealing an analgesic activity.

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Antinociceptive effects of 3,4-Dicaffeoyl Quinic Acid of *Ligularia fischeri* var. *spiciformis*, caffeic acid and its methyl ester

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The plant *Ligularia fischeri* var. *spiciformis*(Compositae) is a candidate for available functional foods. It has been used to treat *diabetes mellitus* and *rheumatoid arthritis*. We have reported the isolation of a new eremophilanolide named 6-oxoeremophilanolide and cytotoxic intermedeol together with the isolation of hydrophilic constituents, chlorogenic acid, 3,4-di-O-caffeoylquinic acid (1), and 5-O-[1-butyl]-3,4-di-O-caffeoylquinic acid. Compound 1 was again isolated by combination of silica gel- and ODS column chromatography for the anti-nociceptive action. Compound 1 along with caffeic acid(2) and its methyl ester (3) were assayed in hot plate-