

then exercise time was measured by forced swimming in the water-pool (50 cm in depth ; 32 ± 2 °C). The methanol extracts from *Acanthopanax senticosus* (KS) protected rats from fatigue induced by forced swimming stress. These results suggest that the methanol extracts from *Acanthopanax senticosus* partially inhibit immobilization stress-induced increases in serum catecholamine and cortisol content, and reduce forced swimming stress-induced fatigue. It is, therefore, proposed the possibility that the methanol extracts from *Acanthopanax senticosus* might be developed as the promising antistress agent.

[PA1-54] [10/18/2002 (Fri) 09:30 – 12:30 / Hall C]

The anti-inflammatory activity of *Kalopanax pictus* bark extract (IV). Antirheumatic activity of kalopanaxsaponin A methyl ester

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In the previous study, we isolated kalopanaxsaponin A and pictoside A from the EtOAc fraction of *Kalopanax pictus* extract. In the present study, the BuOH fraction of *K. pictus* extract was hydrolyzed by alkali and antirheumatic effect of the fraction was evaluated. It was found that the hydrolysate of the BuOH fraction showed inhibition of adjuvant-induced arthritis in rats. Of the EtOAc and BuOH fractions of the hydrolysate, only the former exhibited anti-arthritic activity. From the active fraction, kalopanaxsaponin A, kalopanaxsaponin I, and kalopanaxsaponin A methyl ester were isolated. Kalopanaxsaponin A methyl ester exhibited anti-arthritic activity at dose of 50 mg/kg for 7-10 days, given orally, in rats and mice.

[PA1-55] [10/18/2002 (Fri) 09:30 – 12:30 / Hall C]

Luteolin-7-O- β D-glucuronopyranoside has the protective effect on gastritis and esophagitis in rats

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It is well known that flavonoids are the inhibitory effects on inflammations. This study was designed to determine the anti-inflammatory effects of luteolin-7-O- β D-glucuronopyranoside (LGC), newly synthesized flavonoids, which was extracted from *Salix gilgiana* leaves. We investigated the protective action of LGC on reflux esophagitis and gastritis in rats. Esophagitis and gastritis were induced by surgical procedures and the exposure to indomethacin (50 mg/kg), respectively. LGC was injected intraduodenally immediately after the surgical procedures and the exposure to indomethacin. We evaluated the effects of LGC by measuring the index of ulcer, gastric volume, gastric pH, acid out put, thiobarbituric acid response substances (TBARS) and glutathione. In esophagitis, LGC was effective in reducing ulcer index and area, gastric volume, and acid output and elevating gastric pH. LGC is also comparable inhibitory effects on gastritis to esophagitis in ulcer index. Additionally, LGC increased the level of glutathione and reduced TBARS level in gastritis. These results suggest that LGC has the preventive action on the development of gastritis and esophagitis of rat models.

[PA1-56] [10/18/2002 (Fri) 09:30 – 12:30 / Hall C]

Evaluations on Anti-angiogenic, Antioxidant and Anti-inflammatory Activities of

Phellinus linteus

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Phellinus linteus has been traditionally used as a folk medicine for centuries in Oriental countries, and attracts a great interest owing to its plausible anti-tumor effect. The 70% ethanolic extract of its fruiting bodies was shown to contain strong anti-angiogenic and antioxidant activities in the previous work. The successive hexane, ethyl acetate, n-butanol and aqueous fractions of the ethanolic extract were evaluated for their anti-angiogenic and antioxidant activities using chick choriallantoic membrane (CAM) and DPPH (1,1-diphenyl-2-picrylhydrazyl) assays, respectively. The n-butanol fraction showed anti-angiogenic activity in a dose-dependent manner. The IC50 values of ethyl acetate and n-butanol fractions were measured to be 7.0 and 7.6 g/ml, respectively, whereas L-ascorbic acid, used as a positive control, appeared to have an IC50 value of 9.2 g/ml. The 70% ethanolic extract showed topical anti-inflammatory activity in croton oil-induced ear edema in mice. Analgesic effect of the 70% ethanolic extract was also examined.

[PA1-57] [10/18/2002 (Fri) 09:30 - 12:30 / Hall C]

Further Studies on Anti-angiogenic Activity of Gardenia jasminoides Fruit

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Gardenia jasminoides Ellis has been used in traditional medicine for the treatment of inflammation, jaundice, headache, fever and hypertension. The 70% ethanolic extract of gardenia fruit was previously shown to possess strong anti-angiogenic activity in the CAM assay. In this work, hexane, ethyl acetate, n-butanol and aqueous fractions were prepared in succession from the 70% ethanolic extract. Among them, the n-butanol fraction was found to be most effective in the anti-angiogenic assay. Three different compounds purified from gardenia fruit, crocetin, geniposide and genipin, were used to examine their anti-angiogenic activities in the CAM assay. Geniposide showed potent anti-angiogenic activity, whereas crocetin and genipin did not. Analgesic and anti-inflammatory activities of the n-butanol fraction were tested using writhing test and croton oil-induced ear edema assay, respectively.

[PA1-58] [10/18/2002 (Fri) 09:30 - 12:30 / Hall C]

Microscopic Identification of "Chung Wi Dan"

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"Chung Wi Dan(清胃丹)" is a Chinese patent medicine, which is used for various purposes in Korea. According to traditional publications, they are mixtures of several powders made of herb medicines. Chung Wi Dan of 19 kinds of powder is used for catarrh of the gastrointestinal tract, indigestion, a pain in the chest, nausea. For the identification of individual ingredients in such powdery mixtures, microscopic method may advantageously be used as it requires only a small amount of specimens. In this paper, the effectiveness of this method is exemplified by the identification of the ingredients in "Chung Wi Dan"