[PA1-36] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

Inhibitory Effects of Coptis Japonica on Morphine-Induced Conditioned Place Preference in Mice

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Morphine is an analgesic with significant abuse potential. Morphine is considered addictive because of drug craving and psychological dependence. It is reported that repeated treatment of morphine could produce conditioned place preference (CPP) showing reinforcing effect in mice. The CPP is a useful method for screening of morphine-induced psychological dependence.
In the present study, we have investigated the effect of methanol extract of coptis japonica (MCJ) on morphine-induced CPP in mice. Furthermore, we have examined c-fos and p-CREB expression in the cortex, striatum, and hippocampus of the mouse brain produced morphine-induced CPP.
Treatment of MCJ 100 mg/kg inhibited the morphine-induced CPP. Expression of c-fos and p-CREB was increased in the cortex, striatum, and hippocampus of the mouse brain produced morphine-induced CPP. These increases of expression were reduced by treatment of MCJ 100 mg/kg, compared to morphine control group.
Taken together, these results suggest that MCJ inhibits morphine-induced psychological dependence through the regulation of c-fos and p-CREB in mouse brain.[This work was supported by grant No 2000-1-21300-001-3 from Basic Research Program of the Korea Science & Engineering Foundation]

[PA1-37] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

Hepatoprotective and Antidiabetic Effects of Pelvetia siliquosa in Rats

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Pelvetia siliquosa Tseng et Chang(Fucaceae) is one of seaweeds grown on the craggy surfaces near the seashores of the southern area of Korean peninsula. It has traditionally been used as seasoned greens for religious services or as an health food, however, studies on its biological activities have not yet been carried out.
In the course of the evaluation of bioactive principles from this plant, the effects of various fractions from the whole plant on the CCl_4-induced heptotoxicity as well as on streptozotocin(STZ)-induced diabetes in rats were investigated.
The methanol extracts and 60% ethanol soluble fraction from the water extracts, when administered orally in Sprague-Dawley rats, were found to cause a significant inhibition of the rise in the serum transaminase activities in CCl_4-intoxicated rats, and fractions such as the ether soluble fraction and the ethylacetate fraction from the methanol extracts exhibited a significant inhibition of not only serum glucose concentrations but also sorbitol accumulations in the lenses, red blood cells and sciatic nerves in the STZ-induced diabetic rats.
These results suggested that this plant might possess constituents with haptoprotective, antidiabetic effects, and those effective on diabetic complications.

[PA1-38] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

Pharmacological Activities of the Mushroom Ganoderma lucidum

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Fresh fruit bodies of Ganoderma lucidum, used as a folk medicine and believed to be effective against various diseases, were extracted with 70% ethanol at room temperature. The extract (GL) showed significant anti-angiogenic activity, which was detected using the chick embryo chorioallantoic membrane assay. The in vitro antioxidant activities of GL were evaluated using two different bioassays. GL was able to markedly scavenge the stable free radical 1,1-diphenyl-2-picrylhydrazyl (DPPH), and inhibited lipid peroxidation in a concentration-dependent manner. However, it weakly inhibited xanthine oxidase activity. In addition, GL significantly inhibited LPS-induced NO production in RAW264.7 macrophages.

[PA1-39] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

The inhibitory effect of luteolin-7-O-β-D-glucuronopyranoside on esophagitis and gastritis in rats

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This study was designed to determine anti-inflammatory effects of luteolin-7-O-β-D-glucuronopyranoside (LGC), which were isolated from Salix gilgiana leaves. We investigated inhibitory action of LGC on reflux esophagitis and gastritis in rats. Esophagitis and gastritis was induced by surgical procedure and administration of indomethacin(50 mg/kg), respectively. Intraduodenal administration of LGC inhibited the development of reflux esophagitis and the gastric secretion in dose-dependent manner. Administration of LGC also reduced a significant increase in size of gastric lesions induced by exposure of the gastric mucosa to indomethacin. These results suggest that LGC has the inhibitory action in gastritis and esophagitis model of rats.

[PA1-40] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

Pharmacological Effects of Cordyceps militaris

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Dongchunghacho, one of folk medicines, is traditionally believed to be effective against various diseaseas. It includes many different genera such as Cordyceps, Paecilomyces, Torrubiella and Podonectria. Cordyceps militaris is one of well-known species. The 70% ethanolic extract was prepared from two different sources of C. militaris, fruiting bodies with host material (BD) and liquid medium-cultured cells (MI). Anti-angiogenic activity was determined by the chick embryo chorioallantoic membrane assay. Both BD and MI were found to contain strong anti-angiogenic activities. The extracts at the dose of 10 mg showed anti-angiogenic activity comparable to that of retinoic acid (dose, 1 mg), used as a control agent. Anti-angiogenic activities of BD and MI appeared to be dose-dependent. No significant differences were found between the effects of BD and MI. Cordycepin, an inhibitor of RNA synthesis identified in some Dongchunghacho species, showed anti-angiogenic activity. These results might suggest the plausible anti-tumor activity of C. militaris. Other pharmacological actions of C. militaris were examined. The extracts were found to inhibit writhing syndromes in mice induced by acetic acid. The extracts of C.militaris suppressed strongly 2.5% croton oil induced mouse ear edema. The acute toxicity(LD50) of the extracts has been also evaluated.

[PA1-41] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

Comparisons of antidiabetic activity between Sopungsungi-won (SP) water extract and 70% ethanol extract in streptozotocin-induced diabetic rats

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