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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]

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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 CCl₄-induced hepatotoxicity 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 CCl₄-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 hepatoprotective, antidiabetic effects, and those effective on diabetic complications.

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Pharmacological Activities of the Mushroom *Ganoderma lucidum*

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