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Enhancement of the Mutagenicity of Trp-P-1, Trp-P-2 and Benzo (a)-pyrene by Bupleuri Radix Extract.

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Boiling-water extract of Korean-Saiko (Bupleuri Radix, from South Korea, *Bupleurum falcatum* L.) enhanced the mutagenic activity of Trp-P-1, Trp-P-2 and benzo (a) pyrene with S9mix. The boiling-water extract was fractionated with ether and then *n*-BuOH. Both the ether and the *n*-BuOH fractions also enhanced mutagenicity of Trp-P-1, respectively. The *n*-BuOH fraction was separated into seven fractions by silica gel chromatography and the chloroform eluate had the strongest enhancing effect on the mutagenic activity of Trp-P-1 with S9mix.

[Shoyakugaku Zasshi 44, 225 (1990)]

Antimutagenic Activity by the Medicinal Plants in Traditional Chinese Medicines.

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Antimutagenic activity by the traditional Chinese medicine was investigated. Thirty-three kinds of medicinal plants were tested for their antimutagenic activity on benzo[a]pyrene mutagenicity using the Ames system. The antimutagenic activity was found in the aqueous extracts of *Paeonia lactiflora*, *Acanthopanax trifoliatum*, *Agrimonia pilosa*, *Kadsura coccinea*, *Rosa laevigata*, *Breynia fruticosa*, *Millettia sp.*, *Euscaphis japonica*, and then in the ethyl acetate fractions of *Paeonia lactiflora*, *Euscaphis japonica* and *Breynia fruticosa*, in the *n*-butanol fractions of *Breynia fruticosa*, *Euscaphis japonica*, *Acanthopanax trifoliatum*, *Millettia, sp.*.

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Prevalence of metallothioneinuria among the population living in the Kakehashi River basin in Japan—an epidemiological study.

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An epidemiological study to evaluate cadmium-induced renal dysfunction by urinary metallothionein levels was carried out in an environmentally-exposed Japanese population. The mean metallothionein levels in urine of the cadmium-exposed population were 157.8 ± 2.2 and 248.0 ± 2.2 $\mu\text{g/g}$ creatinine for men and women, respectively. Further selection of the population, based on life-time residence in the polluted area, showed an even greater prevalence of metallothioneinuria: 5.4% in men and 10.9% in women of all ages. The prevalence of metallothioneinuria increased with age and duration of residence in the polluted area. These results suggest that metallothioneinuria can be used as an indicator of renal dysfunction due to environmental cadmium exposure.