[PA4-23] [04/17/2003 (Thr) 14:00 - 17:00 / Hall P]

Cytotoxicity and Genotoxicity Study of CKD-712 in mammalian cell system

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CKD-712, named S-YS49 is a chiral compound derived from higenamine (one component of *Aconite spp.*) derivatives. To compare the cytotoxicity of CKD-712 between in the absence and in the presence of S9 metabolic activation system, we performed trypan blue dye exclusion assay in Chinese hamster lung (CHL) cell. In CHL cells, the cytotoxicity (IC_{50}) of CKD-712 was 92.9 ㎍/ml and 186.1 ㎍/ml in the absence and presence of S9 metabolic activation, respectively. And we also investigated the induction of DNA damages in mammalian cells. To perform the single cell gel electrophoresis, we determined optimum concentration in mouse lymphoma L5178Y cells using trypan blue dye exclusion assay. Each IC_{20} of CKD-712 was determined the concentration of 23.4 ㎍/ml and 24.8 ㎍/ml in the absence and presence of S9 metabolic activation, respectively. In the comet assay, DNA damage was not observed at the concentration range from 23.4 ㎍/ml to 5.9 ㎍/ml in the absence of S9 metabolic activation system. In the presence of S9 metabolic activation system, however, the concentration of 24.8 ㎍/ml was shown significant increase of tail moment. From these results, it is assumed that CKD-712 may be metabolized to less cytotoxic metabolite(s). However, these metabolite(s) may be involved in genotoxic effect.

[PA4-24] [04/17/2003 (Thr) 14:00 - 17:00 / Hall P]

The Cytotoxic Activity of 13(E)-Labd-13-ene-8α,15-diol from Brachyglottis monroi

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The cytotoxic activity of 13(E)-Labd-13-ene-8α,15-diol(1), isolated from the ethanol extract of Brachyglottis monroi was evaluated against tumor cell lines such as P388, SNU-C4 MDA-MB231, B16 melanoma and A549 in vitro. By mean of spectral analysis particularly by the aid of various two dimensional NMR experiments, 1H-NMR and 13C-NMR signals of (1) was completely assigned, and thus the structure of (1) was established unambiguously.

[PA4-25] [04/17/2003 (Thr) 14:00 - 17:00 / Hall P]

Effect of Solanum lyratum Extract on Dimethylnitrosamine-Induced Liver Damage in Rats

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Solanum lyratum (Solanaceae) has been used as a traditional analgesic, antipyretic and hepatoprotective agents in Korea. In this study, we investigated the hepatoprotective effect of ethylacetate extract of Solanum lyratum (SL) on the dimethylnitrosamine (DMN)-induced liver damage in rats. Oral administration of SL (150, 300 mg/kg daily for 4 weeks) into the DMN-treated rats remarkably prevented the elevation of serum alanine transaminase, aspartate transaminase and alkaline phosphatase levels. SL also increased serum protein level and reduced the hepatic level of malondialdehyde in DMN-treated rats. Furthermore, DMN-induced elevation of hydroxyproline content was reduced by the treatment of SL. In conclusion, these results demonstrated that SL exhibited in vivo hepatoprotective effect against DMN-induced liver injury, and suggest that SL may be useful in the prevention of liver damage.

[PA4-26] [04/17/2003 (Thr) 14:00 - 17:00 / Hall P]

Effect of Proanthocyanidins on Dimethylnitrosamine-Induced Liver Damage in Rats

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Proanthocyanidins, one of the major natural polyphenolic compounds of grape has been reported to exhibit a wide range of pharmacological properties. In this study, we investigated the hepatoprotective effect of proanthocyanidins on the dimethylnitrosamine (DMN)-induced liver damage in rats. Oral administration of proanthocyanidins (20, 50mg/kg daily for 4 weeks) into the DMN-treated rats remarkably prevented the elevation of serum alanine transaminase, aspartate transaminase and alkaline phosphatase, and bilirubin levels. Proanthocyanidins also increased serum protein level and reduced the hepatic level of malondialdehyde in DMN-treated rats. Furthermore, DMN-induced elevation of hydroxyproline content was reduced by the treatment of proanthocyanidins and which result was consistent with a histochemical analysis of liver tissue stained with Sirius red. In conclusion, these results demonstrate that the in vivo hepatoprotective effect of proanthocyanidins against DMN-induced liver injury, and suggest that proanthocyanidins may be useful in the prevention of liver damage.

[PA4-27] [04/17/2003 (Thr) 14:00 - 17:00 / Hall P]

Inhibition of capsaicin on pulmonary metastasis of B16-F10 melanoma cells

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Capsaicin (8-methyl-N-vanillyl-6-nonenamide), a pungent ingredient of hot chili peppers, has been reported to possess substantial anticarcinogenic and antimutagenic activities. In the