And 40, 41, 44 (EtOH bot seed, fer jui polyphenols, scf peric polyphenol) showed about half inductive effect as compared to 100pM E2. These increase in luciferase activity by pomegranate was inhibited by Tamoxifene concomitant treatment. Therefore is reasonable to interpret that pomegranate extract increased luciferase activity via ER.

[PA4-21] [04/17/2003 (Thr) 14:00 - 17:00 / Hall P]

Cytotoxic Activity of Extracts from Houttuynia cordata

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This study was carried out to evaluate cytotoxic effects of Houttuynia cordata THUNB extracts on A549 (lung cancer), MDA-MB231 (breast cancer), SNU-C4 (colon cancer) and B16 (mouse melanoma) cell lines. We have determined by 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyl-2H-tetrazoliumbromide (MTT) assay. The 150 ㎍/㎖ concentration of methanol extract (63.81 %) of Houttuynia cordata THUNB was shown significantly antitoxic activity on A549 cell lines. The order of cytotoxicity of Houttuynia cordata THUNB extracts against cancer cell lines in vitro is as follows : hexane fraction layer 〉 chloroform fraction layer 〉 ethyl acetate fraction layer 〉 buthanol fraction layer〉 water fraction layer. These results suggest that the hexane fraction of Houttuynia cordata THUNB extract may be a valuable choice for the development of antitumor agents.

[PA4-22] [04/17/2003 (Thr) 14:00 - 17:00 / Hall P]

Genotoxicity Study of sophoricoside derivatives in mammalian cells system

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To develope the novel anti-allergic drug, many sophoricoside derivatives were synthesized. Among these derivatives, JSH-II-3, JSH-VI-3, JSH-VII-3, and JSH-VIII-3 were selected and subjected to high throughput toxicity screening (HTTS) because they revealed strong IL-5 inhibitory activity and limitation of quantity. Mouse lymphoma thymidine kinase ($tk^{+/-}$) gene assay (MOLY) and single cell gel electrophoresis (Comet) assay in mammalian cells were used as HTTS tool in our laboratory. In MOLY assay, JSH-VII-3 at 50 ~ 6 ㎍/ml concentrations was not shown significant mutagenic effect in the absence and presence of S-9 metabolic activation system. However, the concentration of JSH-II-3, 38 ㎍/ml, induced increased mutation frequency (MF) in the presence of S-9 metabolic activation system. Also in comet assay, DNA damage was not observed in JSH-VI-3 and JSH-VII-3, wherase concentration of 32.8 ㎍/ml in JSH-II-3 and 13.9 ㎍/ml in JSH-VII-3 were induced DNA damage in the absence of S-9 metabolic activation system. Therefore, we suggest that JSH-VI-3 and JSH-VII-3 have no genotoxic effects but JSH-II-3 and JSH-VIII-3 induce some mutagenicity and DNA strand breaks in mouse lymphoma cell line used this study.