

potential anticancer activities.

[PA4-26] [2003-10-10 09:00 - 13:00 / Grand Ballroom Pre-function]

Antioxidative Effect of *Houttuynia cordata* Thunb in TCDD-Damaged Rats

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Houttuynia cordata Thunb (HCT) is a herbal plant growing in China, Japan and Korea. According to the records of the Chinese medicine, this plant has been used as folk medicine for analgesics, beriberi, edema, hepatitis, icterus, etc. TCDD (2,3,7,8-tetrachlorodibenzo-p-dioxin), one of the notorious toxic environmental pollutants, damages various organs including liver and is regarded as an endocrine disrupter. After 7 days from TCDD (1 $\mu\text{g}/\text{kg}$) injection, HCT (200 mg/kg) was administered into rats intraperitoneally for 4 weeks. In this study, the effect of antioxidative enzymatic activity on HCT was investigated. This antioxidative effects of HCT on TCDD-damaged rats were measured through that the activity of Aspartate aminotransferase (AST), Alanine aminotransferase (ALT) in serum and Superoxide dismutase (SOD), Catalase (CAT), Glutathione reduced form (GSH), Glutathione oxidized form (GSSG), Glutathione peroxidase (GPx) in liver tissue. HCT administered and TCDD-damaged (HTD) group showed inhibitory effect in AST and ALT activity compared to TCDD-damaged abnormal (TDA) group. GSH, GSSG and GPx of HTD group were significantly higher than those of TDA group. SOD and CAT in HTD administered group were increased compared to those of TDA group.

[PA4-27] [2003-10-10 09:00 - 13:00 / Grand Ballroom Pre-function]

Up-regulation of inducible nitric oxide synthase expression and inflammatory cytokines by collagen and gelatin in murine macrophages

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Synthetic polymers, biological polymer such as collagen and gelatin are employed extensively as backbones in the construction of hydrogels or cell/tissue scaffoldings for various biomedical applications. In the present study, we investigated the effect of collagen and gelatin on the inducible nitric oxide synthase (iNOS) gene expression in the mouse macrophage cell line RAW 264.7. The production of nitric oxide and expression level of iNOS mRNA were induced by both of collagen and gelatin in dose-dependent manner. The production of TNF- α , IL-1 β and IL-6 and their mRNA levels of cytokines were also increased in dose-dependent manner similarly with nitric oxide and expression level of iNOS mRNA. The effects of collagen and gelatin on the transcriptional activity of NF-kB were examined, since the transcriptional regulation of iNOS has been shown to be under the control of the NF-kB. Transient expression assay with the luciferase reporter vector containing three-copies of NF-kB binding site revealed that the increased level of iNOS mRNA induced by collagen or gelatin could be mediated by the NF-kB transcription factor complex. Furthermore, collagen and gelatin activates the DNA binding ability of NF-kB, in the result of electrophoretic mobility shift analyses using the NF-kB binding sequence within iNOS promoter as a probe. These results demonstrated that nitric oxide, TNF- α , IL-1 β and IL-6 production in the collagen- and gelatin-stimulated macrophages might be induced by the up-regulation of these genes expression through NF-kB transactivation.

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A Fatal Case Involving Venlafaxine Intoxication

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