

Chinese formulation, inhibited the intimal thickening in carotid artery after balloon injury in cholesterol-fed rats. To elucidate its mechanism, the effects of SRB on migration and proliferation of vascular smooth muscle cell (VSMC) were examined in vivo and in vitro. Methods: < In vivo-study> Rats were fed on diet containing 1% cholesterol and SRB 3 days before and 4 days after denudation. Simvastatin was used as a positive control. 1) VSMC migration: By immuno-histochemical method, migration index was calculated: (Immuno-positive VSMC in intima) x 100 / (total VSMC in intima). < Ex vivo- and in vitro-study > VSMC (rat thoracic aorta SMC:A7r5) was cultured in DMEM containing 10% FBS. 1) VSMC migration: Modified Boyden chamber method: a) the addition of the serum obtained from cholesterol-fed rats orally administered SRB for 10 days (ex vivo "sero-pharmacology") and b) the direct addition of SRB extract to 10% rat serum (conventional in vitro). 2) VSMC proliferation: MTT colorimetric dye reduction method. 3) Cell cycle: VSMC was incubated in the direct addition of SRB extract and stained with PI in the presence of RNase and then stained cells were analyzed by flow cytometry. Results & Discussion: 1) SRB inhibited VSMC migration from the media to the intima in carotid artery 4 days after injury (in vivo). 2) The serum obtained from rats administered SRB also inhibited VSMC migration (ex vivo). This "sero-pharmacological" effects using SRB-serum on VSMC migration might be closer to the results obtained by in vivo experiments. 3) SRB inhibited VSMC migration and proliferation, and caused at the G₂/M cell cycle arrest (200-800 µg/ml: in vitro). It was found that SRB reduced the intimal thickening by inhibiting VSMC migration and proliferation. These results suggest that SRB may be a promising candidate as a clinical therapeutic strategy in atherosclerosis prevention.

[PD3-3] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

DMNQ S64 exerts antitumor activity on A549 cells via COX-2 inhibition

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We synthesized naphthazarin derivatives from shikonin, a major compound from *Lithospermum erythrorhizon* Sieb et ZUCC. Of derivatives, DMNQ S64, 2- or 6-(1-hydroxyiminoalkyl) effectively showed antitumor activity on A549, human lung cancer cells (IC₅₀= 30 µM). It significantly inhibited prostaglandin E₂(IC₅₀= 10 µM). We also confirmed it selectively downregulated the expression of cyclooxygenase 2(COX-2), while it didn't affect COX-1. The induction of apoptosis by DMNQ S64 is underway.

[PD3-4] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Effects of *Houttuynia cordata* Thunb on Atherosclerosis and Lipidperoxidation in 2,3,7,8-TCDD-Damaged Rats

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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. To investigate the effects of *Houttuynia cordata* Thunb (HCT) on the biochemical parameters of function, liver and serum of TCDD-treated rats were used. After 7 days from TCDD (1 µg/kg) injection, HCT (200 mg/kg) was administered into rats intraperitoneally for 4 weeks. The lipidperoxide content was examined by measuring the level of total cholesterol, HDL-cholesterol, LDL-cholesterol, total lipid and triglyceride (TG) in serum, and malondialdehyde (MDA) in liver tissue of rats. Result showed that lipidperoxidation was inhibited in the significant level when 2,3,7,8-TCDD-Damaged rats were treated with HCT.

[PD3-5] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Seasonal Variation of Loganin from *Lonicera japonica* Thunb.

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Lonicerae Folium et Caulis, the folium and stem of *Lonicera japonica* Thunb., has been used as diuretic, stomachic, antipyretic, analgesic and anti-inflammatory agent in Korea. We isolated a main iridoid, loganin which has some important biological effects from the folium and stem of this plant. Generally, it is known that iridoid compounds have variable contents by the collecting time and a part of plant. The content of main compound is important to evaluate its quality. In order to evaluate the quality of *Lonicerae Folium et Caulis*, the method of quantitative determination of loganin as a reference standard compound has been developed. We have collected it from Sahmyook University campus in June, Aug. and Nov. and were analyzed with HPLC using the H₂O : MeOH (7:3). The average content of loganin from *Lonicerae Folium et Caulis* is 0.00395% in leaves of Jun., 0.00428% in Aug. and 0.00424% in Nov. and 0.00244% in stems of Jun., 0.00336% in Aug. and 0.00469% in Nov..

[PD3-6] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

The urinary effect of *Polygoni cuspidati* Radix on rats

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Polygoni cuspidatum has been used as treatments of dermatitis, inflammation and hyperlipidemia, and diuretic in folk medicine. In order to evaluate the urinary effect of *Polygoni cuspidati* Radix, its MeOH extract was administered in rats by in vivo test. We measured urine volume, chemical parameters, and electrolytes in serum and urine of the rats. The results showed that *Polygoni cuspidati* Radix MeOH extract had urinary volume increase and normal level parameters in rats.

[PD3-7] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

The Inhibitory Effects of the Methanolic Fraction of *Pueraria Radix* on Hydrogen peroxide-induced Lipid peroxidation and Cadmium-induced cytotoxicity

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The effects of the methanol subfraction of *Pueraria radix* on hydrogen peroxide-induced lipid peroxidation and Cd-induced cytotoxicity were investigated in NIH3T3 fibroblasts. After the methanol subfraction treatment, the content of MDA induced by 600 μ M H₂O₂ significantly decreased in proportion to the subfraction concentrations as well as 50 μ M CdCl₂-induced cytotoxicity. Especially, 200 μ g/ml concentration of methanol subfraction was strongly shown inhibition of lipid peroxidation and detoxification of Cd. These results suggest that the methanol subfraction of *Pueraria radix* retains a potential antioxidant and protective effect against cadmium.

[PD3-8] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Antidiabetic activity of Cultivated *Cordyceps pruinosa*

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Cordyceps species has been used as antiinflammatory, antitoxic, diuretic in folk remedies. Recent research has been reported the effect of anticancer, antidiabetic, antimutagenic, antilipid peroxidation. We examined the antidiabetic activity of cultivated *Cordyceps pruinosa* on streptozotocin- induced diabetic rats. The blood glucose level was recovered by treatment with *Cordyceps pruinosa* ethanol extract. The contents of GPT, total cholesterol and xanthine oxidase, glutathione peroxidase, catalase activities of the cytosol were significantly decreased as compared to the diabetic group. Also, The lipid peroxidation of the hepatic mitochondria and microsome was significantly decreased by administration of its ethanol extract. These results suggest that *Cordyceps pruinosa* showed antidiabetic activity.