

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 erythrorhion* 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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