

Tyrosine kinase inhibitors reverse lawsone methyl ether stimulation of renal dipeptidase release but not of alkaline phosphatase release.

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Lawsone methyl ether (LME, 2-methoxy-1,4-naphthoquinone) is a natural compound found in balsaminaceae. In this study the effect of LME on the release of renal dipeptidase (RDPase) and alkaline phosphatase (APase) known as glycosylphosphatidylinositol (GPI) anchored proteins was examined from the renal proximal tubules. Compared with control, LME (0.5mM) increased RDPase release (218%) and APase release (135%). The increase of RDPase release by LME showed concentration-dependent effect but the release pattern of APase did not. It was also confirmed by time-dependent manner. Signaling via several GPI anchored proteins is known to be mediated mostly via cytoplasmic molecules such as protein tyrosine kinases or trimeric G-protein. Therefore we investigated that the influence of LME might involve intracellular phosphorylation using genistein and herbimycin A, tyrosine kinase inhibitors. Genistein and herbimycin A treatment completely abolished the stimulatory effect of LME on RDPase release. On the contrary, both of tyrosine kinase inhibitors elevated the release of alkaline phosphatase in comparison with the group of LME control. Different pathways are likely to regulate the effect of LME on the RDPase and APase release. LME stimulation of RDPase, but not APase, may involve tyrosine phosphorylation signaling.

[PC1-29] [ 10/17/2002 (Thr) 13:30 - 16:30 / Hall C ]

The Lipidperoxidative effect of *Houttuynia cordata* Thunb & *Saururus chinensis*

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*Houttuynia cordata* Thunb is a traditional medicine which has been used as antidote and antiphlogistic agent. *Saururus chinensis* is a perennial herb which cultivated as medicinal and decorative use, the aerial part of which have been used for the treatment of edema, jaundice and gonorrhoea in Korean folk medicine. The lipid peroxidation inhibition effects of *Houttuynia cordata* Thunb, *Saururus chinensis* Leaf, *H. cordata*, *S. chinensis* Root and *H. cordata*, *S. chinensis* Fermentation were investigated in the levels of liver tissue total homogenates and serum of SD-rats intoxicated with carbon tetrachloride (CCl<sub>4</sub>). The rats were intraperitoneally given *Houttuynia cordata* Thunb and *Saururus chinensis* at dose of 100mg/kg daily for two weeks. Aspartate aminotransferase (AST), Alanine aminotransferase (ALT), Total cholesterol, HDL, LDL-cholesterol, Total lipid, Triglyceride were determined in serum. MDA levels were determined in the liver. The results showed that *Houttuynia cordata* Thunb and *Saururus chinensis* inhibited lipid peroxidation.

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Curcumin Inhibits Phorbol Ester-induced Expression of Cyclooxygenase-2 In Vivo through Suppression of Extracellular Signal-regulated Kinase (ERK)1/2 and NF- $\kappa$ B in Mouse Skin

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Curcumin derived from turmeric (*Curcuma longa* L., Zingiberaceae) has been shown to possess marked chemopreventive activities, but the underlying molecular mechanisms remain unclear. In the present work, curcumin was found to inhibit 12-O-tetradecanoylphorbol-13-acetate (TPA)-induced expression of cyclooxygenase-2 (COX-2) in female ICR mouse skin as determined by Western and Northern blot analysis as well as immunohistochemical staining. Curcumin treatment attenuated TPA-stimulated epidermal NF- $\kappa$ B activation, which was associated with its blockade of degradation and phosphorylation of the inhibitory protein I $\kappa$ B $\alpha$  and also of subsequent translocation of the p65 subunit to nucleus. Curcumin also inhibited activation of ERK1/2 and p38 MAP kinase in mouse skin. In this study, we further examined the roles of p38 and ERK in TPA-