ethyl-sodium-sulphonate, is a product formed by reacting sodium bisulphate with houttuynin, which is obtained from a medicinal herb Houttuynia cordata Thunb. The effects of S. chinensis Root(SAM-R), S. chinensis Growth (SAM-G), S. chinensis Fermentation(SAM-F), H. cordata Root(HUT-R), H. cordata Growth (HUT-G), H. cordata Fermentation (HUT-F) and S. chinensis + H. cordata (SAM+HUT) were investigated in the levels of liver tissue total homogenates of SD-rats intoxicated with carbon tetrachloride(CCl4). Lipid peroxide content in liver was increase by CCl4-induced rats. It was decrease when the extracts from *Saururus Chinensis Baill & Houttuynia* cordata thunb was treated to the rat. Extracts of SAM-R, SAM-G, SAM-F treated group markedly inhibited lipid peroxidation by 37.7%, 26.9%, 29.5% and HUT-R, HUT-G, HUT-F 32.9%, 43%, 50.4%, SAM+HUT 22% respectively.
SOD(Superoxide dismutase), CAT(catalase) and GPX(glutathione peroxidase) activities were increased and MDA (malondialdehyde) decreased in the liver tissue homogenates

[PC1-23] [10/17/2002 (Thr) 13:30 - 16:30 / Hall C]

In vitro Antiinflammatory Activity of 23-Hydroxyursolic Acid Isolated from Cussonia bancoensis in Murine Macrophage RAW 264.7 Cells

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We investigated the effect of various triterpenoids isolated from the Cussonia bancoensis, such as ursolic acid, 23-hydroxyursolic acid, 3-O-α-L-arabinopyranosyl-23 -hydroxyursolic acid, 3-O-β-D-glucopyranosyl-23-hydroxy-ursolic acid and 28-O-α-L-rhamnopyranosyl(1-4)-β-D-glucopyranosyl(1-6)-β-D-glucopyranosylester of 23-hydroxyursolic acid, have been evaluated on lipopolysaccharide (LPS)-induced nitric oxide (NO) and prostaglandin E2 (PGE2) release by the macrophage cell line RAW 264.7. Among the tested triterpenoids, 23-hydroxyursolic acid was the most potent inhibitor of NO production, and it also significantly decreased PGE2 release. Consistent with these observations, the expression level of iNOS and COX-2 protein was inhibited by 23-hydroxyursolic acid in a concentration-dependent manner. Furthermore, 23-hydroxyursolic acid inhibit NF-κB DNA binding. Thus, this study suggests that sugar attachment to 23-hydroxyursolic acid significantly reduced in vitro anti-inflammatory effect and the sapogenin could be an active moiety of the isolates.

[PC1-24] [10/17/2002 (Thr) 13:30 - 16:30 / Hall C]

Sophoricoside analogs inhibit COX isozymes but not iNOS and TNF in LPS-stimulated macrophages Raw264.7

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Macrophages activated by lipopolysaccharide (LPS) are known to induce several proinflammatory proteins including COX-2, iNOS and TNF which produce chemical mediators involved in inflammatory response. Sophoricoside and its analogs (genistin, genistein and orobol) from Sophora japonica (Leguminosae) showed differential inhibitory effects on COX-1 and 2 activities. Sophoricoside and genistin showed IC50 values of 4 uM and 6 uM on COX-2 activity and of 1,497 uM and 135 uM on COX-1 activity, respectively. Genistein and orobol showed IC50 values of 3 uM and 1 uM on COX-2 activity and of 28 uM and 18 uM on COX-1 activity, respectively. Therefore, the legume isoflavonoids seems to be selective COX-2 inhibitors. However, sophoricoside and its analogs did not show inhibitory effects on synthesis of COX-2, iNOS and TNF transcripts, which were identified by the RT-PCR.

[PC1-25] [10/17/2002 (Thr) 13:30 - 16:30 / Hall C]

Isolation, structure, and NF-κB modulatory activity of Harzianum A and B: trichothecene from fungi (B000527)

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Nuclear factor κB (NF-κB) represents a family of eukaryotic transcription factors participating in the regulation of various cellular genes. Since aberrant regulation of NF-κB has been implicated in the pathogenesis of various diseases including inflammation, asthma, atherosclerosis, AIDS, septic shock, arthritis, and cancer, this transcription factor has been shown to be an interesting target of new drug discovery. While searching for NF-κB modulators from natural resources, we found that an ethyl acetate extract of the culture broth of fungi B000527 activated NF-κB activity as assessed by a NF-κB reporter assay. Two closely related trichothecenes, Harzianum A (1) and a new compound Harzianum B (2), were identified as the active principles by activity-guided fractionation. The structure of 1 and 2 was determined by extensive spectral analyses including EI-MS, ^{1}H and ^{13}C-NMR, HMQC. Compound 2 contains a (*E, Z, E*)-2, 4, 6-octatriendioic acid esterified on the 4 bata-hydroxyl group of trichodermol. These two compounds significantly increased NF-κB activity in RAW264.7 cells transfected with NF-κB reporter construct in a dose-dependent manner with ED_{50} values of 0.01 *ug/ml* and 0.1 *ug/ml*, respectively, without affecting cell viability. Furthermore, treatment of compound 1 to RAW264.7 cells induced the degradation of IκBα as well as DNA-binding activity of NF-κB.

[PC1-26] [10/17/2002 (Thr) 13:30 - 16:30 / Hall C]

The effects of some natural products on mouse melanoma cells in vitro

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To indentify inhibitors of melanogenesis, we compared the effect of some natural products on mushroom tyrosinase, human melanocytic tyrosinase activity and melanin content. The cytotoxicity of the component were also tested on cultured mouse melanoma cells. Each extract significantly inhibited tyrosinase activity and melanin synthesis in vitro and B 16 melanoma cell lines. In B 16 cell lines, watermelon's inner shell extract inhibited tyrosinase activity as strong as kojic acid at 150㎍/㎖ concentration. And morning glory'seed extract inhibited melanin synthesis more than kojic acid at 150㎍/㎖ concentration. Each extract were strong inhibitors of tyrosinase activity and total melanin synthesis in B 16 mouse melanoma cell lines at less than 100㎍/㎖ concentration. These result show that extract of watermelon's inner shell, lettuce, morning glory's seed and licorice root could be developed as skin whitening component of cosmetics.

[PC1-27] [10/17/2002 (Thr) 13:30 - 16:30 / Hall C]

Inhibitory effects of a new iridoids , patridoid I and II on TNF, iNOS and COX-2 expression in cultured murine macrophages

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Possible role of anti-inflammatory effects of a new iridoids, patridoid I, II and II-A which were isolated from Patrinia saniculaefolia, examined by assessing their effects on tumor necrosis factor α (TNFα) and 2 enzymes, inducible nitric oxide synthase (iNOS) and cyclooxygenase-2 (COX-2) in the lipopolysaccaride (LPS)-stimulated murine macrophage-like cell line RAW 264.7. Among them, patridoid II consistently inhibited the production of TNFα and NO production in a dose dependent manner. But patridoid I and patrioid II isomer patrioid II-A, these compounds very weakly inhibited NO production. Moreover, treatment of macrophage with these compounds, the decrease in NO products was accompanied by a decrease in iNOS protein level as assessed by Western Blot. But these compounds did not affect COX-2 protein expression in LPS-stimulated macrophage. Our results suggest that patridoid II could become a leading compound for developing a novel type of anti-inflammatory drugs.

[PC1-28] [10/17/2002 (Thr) 13:30 - 16:30 / Hall C]