

Poster Presentations – Field D3. Oriental Medicine

[PD3-1] [04/18/2003 (Fri) 13:30 – 16:30 / Hall P]

Free Radical Scavenging and Hepatoprotective Effects of Osumokkya-tang

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In order to find the new hepatoprotective agents the preliminary screening of 12 prescriptions which have been used for the treatment of hepatic disease in Oriental traditional medicine has been carried out. Both DPPH free radical scavenging and hepatoprotective effect on tacrine-induced cytotoxicity in Hep G2 cells are performed.

Osumokkya-tang which is one of the prescription belongs to interior-warming properties showed the DPPH free radical scavenging effect as well as hepatoprotective activity significantly. Mutual assistant effect between Evodiae Fructus and Chaenomelis Fructus also exhibited.

[PD3-2] [04/18/2003 (Fri) 13:30 – 16:30 / Hall P]

Hispidin from the Mycelial Cultures of Phellinus linteus Inhibits A β -Secretase (BACE1) and proyl endopeptidase

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The γ - and β -secretase are one of the most important proteases, which cleave amyloid precursor protein (APP) into neurotoxic A β peptide in Alzheimer's type dementia.

In the course of screening for anti-dementia agents from natural products, the mycelial culture of mushroom Phellinus linteus showed potent inhibition against β -secretase (BACE1). The inhibitor was isolated from the culture broth of P. linteus and the active substance was identified as hispidin [6-(3,4-dihydroxystyryl)-4-hydroxy-2-pyrone] by spectral analysis and chemical synthesis. The IC₅₀ value of hispidin against BACE1 was 48.3 μ M. Hispidin also effectively inhibited proyl endopeptidase (IC₅₀=15.9 μ M), which has been known as a tentative γ -secretase, but it was less inhibitory to other proteases such as chymotrypsin, trypsin, and elastase.

The maximal hispidin production was reached at twelve days after onset of inoculation.

[PD3-3] [04/18/2003 (Fri) 13:30 – 16:30 / Hall P]

Study on the Inhibition of anti-platelet and Anticoagulant activity from Rhus verniciflua Stokes

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Rhus verniciflua Stokes (RVS) is a widely used herbal plant with various biological properties. Our previous study using in vitro platelet aggregation in whole blood showed that the fractions of RVS had strong anti-aggregatory activity. In this study, using in vitro platelet aggregation in PRP and coagulation parameters, to investigate the anti-platelet activity and anticagulant effects of RVS ethyl acetate layer, the layer was subsequently fractionated by ODS column chromatograph (50% MeOH). As a result, the fraction 4 was most inhibited the aggregation of PRP in rat by collagen and ethyl acetate layer of RVS was detected strong anticoagulant effect. These results suggested that fractions of *Rhus verniciflua* Stokes have potent anti-platelet and anticoagulant activity.

[PD3-4] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Screening of Cytotoxicity of Hexane Extracts from *Cornis fructus*

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Cornis fructus were extracted by successive extraction and then fractionated with hexane extract to get active fractions. This study was performed to determine the cytotoxic effect of hexane extract from *Cornis fructus* on NIH 3T3 fibroblasts and cancer cell lines using MTT assay. Hexane extract showed cytotoxic effect against A549, B16 melanoma and MDA-MB-231. Further fractionation with hexane extract were performed to obtain effective fraction, fraction 3 showed the cytotoxic effect against A549 and MDA-MB-231 cell line.

[PD3-5] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Dopamine β -Hydroxylase Inhibitory Activity of Chinese Herbal Drugs

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Dopamine β -hydroxylase (DBH) synthesizes norepinephrine from dopamine under the presence of ascorbate as a coenzyme. Dopamine is transported into the vesicles of the varicosity, where the synthesis and the storage of norepinephrine take place. Some drugs such as DBH inhibitors, dopaminergic agonists, etc. are known to assist in treating Parkinson's disease. The MeOH extracts of forty Chinese herbal drugs were screened for the inhibitory activities against bovine adrenal DBH, utilizing tyramine as a substrate. Among them, *Biota orientalis*, *Adina pilulifera*, *Dioscorea cirrhosa* showed the strong inhibitory activities against DBH.

[PD3-6] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Hepatoprotective Effects of Chinese Traditional Prescription, Dalwoneum