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MeOH extract of *Opuntia vulgaris* Mill. was fractionated to five solvent fractions, hexane fr. (fr I), 90 % MeOH fr. (fr II), EtOAc fr. (fr III), BuOH fr. (fr IV) and H₂O fr. (fr V). They were investigated on their anti-coagulant and/or platelet anti-aggregatory activities by aPTT and Modified Smear Method. Fr. II showed a potential anti-coagulant activity and Fr. III showed inhibitory effects on rat platelet aggregation against adenosine 5'-diphosphate (ADP), Collagen and Arachidonic Acid.

[PA1-20] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

The Antioxidative Activities of *Petasites japonicus* MAX

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MeOH extract of *Petasites japonicus* MAX was fractionated to five solvent fractions, hexane fr (fr I), 90 % MeOH fr (fr II), EtOAc fr (fr III), BuOH fr (fr IV) and H₂O fr (fr V). The five fractions were tested for their antioxidative activities by scavenging effects on 1-diphenyl-2-picrylhydrazyl (DPPH) radical and their antioxidative effects were compared to the widely used antioxidants, L-ascorbic acid, 1,2,3-trihydroxybenzene (pyrogallol) and tocopherol. The total phenol content and the approximate flavonoid content was spectrometrically determined at 760 nm and 425 nm, respectively. Among the five fractions, fr II, fr III, fr IV showed the stronger antioxidative effects than other fractions, and the significant relationship between their antioxidative activities and total phenol contents. Fr III showed the strongest activity and the highest flavonoid content, and was suggested to have antioxidative flavonoids.

[PA1-21] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

Neuroprotective and Neurotropic effect of a isolated Phospholipids from *Bombycis corpus*

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We examined the neuroprotective effects and NGF-potentiating activities of phospholipids compounds isolated from *Bombycis corpus*. Three phospholipids (1 ~ 3) were obtained from Domestic *Bombycis corpus*. On the basis of spectroscopic data, their structures have been elucidated as 1-O-(9Z-octadecenoyl)-2-O-(8Z,11Z-octadecadienoyl)-sn-glycero-3-phosphorylcholine (1), 1,2-di-O-hexadecanoyl-sn-glycero-3-phosphorylcholine (2) and 1,2-di-O-9Z-octadecenoyl-sn-glycero-3-phosphorylcholine (3) Diacylglycerophosphorylcholines (1 ~ 3) from *Bombycis corpus* increased the proportion on the neurite outgrowth from PC 12 cells. By examining the neurite outgrowth from PC12 cells and the synthesis of neurotrophic factor (NGF) in C6 glial cells. These compounds increased the proportion of neurite-bearing cells. In addition, after 6h incubation of C6 cells with this compound, NGF levels in the cultured medium increased 200 fold of the control. In RT-PCR analysis, the NGF gene expression was found to reach 2-fold of the control level we also investigated the effect of this compound on the phosphorylation of MAP kinase (Erk p42/44) which play a crucial role in the survival and differentiation of neurons. These results suggest that these phospholipids might potentially used be as a neuroprotective agent.

[PA1-22] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

Experimental Study on Inhibitory Activity Against Platelet Aggregation of 29 Species of Vietnamese Plants

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29 species of Vietnamese Plants were tested by modified smearing method for evaluating their inhibitory activity against platelet aggregation induced by ADP and collagen. Through repeated screens, five effective plants *Goniothalamus vietnamensis*, *Myxopyrum nervosum*, *Disporopsis longifoliae*, *Heteropanax fragrans*, *Glycosmis stenocarpa* which showed inhibitory effects against collagen and ADP induced platelet aggregation and four plants *Elaeocarpus angustifolius*, *Aglaia aphanamixis*, *Chloranthus glabra*, *Ardicia conspersa* which showed inhibitory effects against collagen induced platelet aggregation were suggested to be potential inhibitors.

[PA1-23] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

Wogonin protects neuronal cells from excitotoxic and oxidative injuries in primary cultured rat cortical cells

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The present study evaluated neuroprotective effects of 5,7-dihydroxy-8-methoxyflavone (wogonin) on excitotoxic and oxidative stress-induced neuronal damage in primary cultured rat cortical cells. Wogonin attenuated the excitotoxicity induced by N-methyl-D-aspartic acid in a concentration-dependent fashion. In contrast, wogonin did not affect the 2(RS)-amino-3-hydroxy-5-methyl-4-isoxazolepropionate (AMPA)- or kainate-induced toxicity at the concentration ranges of 1 ~ 300 µg/ml. Wogonin, in addition, dramatically inhibited the oxidative neuronal damage provoked by hydrogen peroxide or xanthine/xanthine oxidase. These results suggest that wogonin may exhibit beneficial actions in the treatment of neurodegenerative disorders by modulating both NMDA receptor and oxygen free radicals.

[PA1-24] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

Anti-Proliferative Activity of Green Tea Catechin on Vascular Smooth Muscle Cells

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We have reported the antithrombotic activity and mode of action of green tea catechins (GTC). GTC potently inhibited human platelet aggregation and prevented thrombosis in mice. However, little has been known about functional role in vascular smooth muscle cells (VSMCs). In this study, a possible anti-proliferative effect of GTC on rat aortic VSMCs was investigated. GTC (1-40 µg/mL) significantly inhibited 5% fetal bovine serum (FBS)- and PDGF-BB-induced proliferation of rat aortic VSMCs evaluated by direct counting of cell number and [³H]-thymidine incorporation assay. There was no evidence of cellular toxicity or apoptosis of GTC (40 µg/mL) as determined by trypan blue exclusion assay, flow cytometric analysis and DNA fragmentation assay. The intracellular signaling effect of GTC on the FBS- and PDGF-BB-induced activation of extracellular signal-regulated kinase 1/2 (ERK1/2) and Akt cascade by western blot. Pre-treatment of VSMCs with GTC resulted in a significant inhibition of the FBS- and PDGF-BB-induced phosphorylation of ERK1/2 and Akt kinase. These results indicate that GTC may inhibit vascular smooth muscle cell proliferation through blocking of ERK 1/2 and Akt cascade.