(CAM) assay. The ethanolic extract of media-cultured Paecilomyces japonica also showed significant anti-angiogenic activity in CAM assay. The Cordyceps militairs extract was found to contain anti-inflammatory activity in the carrageenin-induced edema test, and cordycepin, a component of C. militairs also showed anti-inflammatory activity in the same test. The C. militairs extract was shown to contain antioxidant activity, which was able to scavenge the stable free radical DPPH.

[PA1-12] [2003-10-10 14:00 - 17:30 / Grand Ballroom Pre-function]

(-) 3,5-Dicaffeoyl-muco-quinic acid isolated from Aster scaber contributes to the differentiation of PC12 cells: through tyrosine kinase cascade signaling

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Aster scaber T. (Asteraceae) has been used in traditional Korean and Chinese medicine to treat bruises, snakebites, headaches and dizziness. (-) 3,5-Dicaffeoyl-muco-quinic acid (DQ) isolated from Aster scaber induced neurite outgrowth in PC12 cells. It has been reported that the activation of the extracellular signal regulated kinase1/2 (Erk 1/2) and phosphoinositide 3 (PI3) kinase plays a crucial role in the NGF-induced differentiation of PC12 cells. This study showed that the effect of DQ on neurite outgrowth is mediated via the Erk 1/2 and PI3 kinase–dependent pathways like NGF. Furthermore, DQ stimulated the phosphorylation of Trk A. Overall, DQ elicited the differentiation of PC12 cells through Trk A phosphorylation followed by Erk1/2 and PI3 kinase activation.

[PA1-13] [2003-10-10 14:00 - 17:30 / Grand Ballroom Pre-function]

Minocycline Directly Blocks Activation of Caspases After Oxidative Stress in PC12 Cells

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Minocycline is known to protect neurons from microglia-mediated cell death in many experimental models of brain diseases including ischemic stroke, Huntington's disease (HD), amyotrophic lateral sclerosis (ALS), traumatic brain injury, multiple sclerosis, and Parkinson's disease. Activation of caspase-2, 3, 8, and 9 was evident within 2–8 hr following oxidative insult with 0.5 mM hydrogen peroxide in PC12 cells. Minocycline significantly attenuated activation of these caspases up to 18 hr, resulting a significant increase in cell viability as assessed by MTT assay. However, caspase-3-independent cell death or necrosis still appeared to occur in the presence of miocycline since calpain activation was not affected by minocycline. Moreover, co-treatment with minocycline and calpain inhibitors synergistically inhibited hydrogen peroxide-induced cell death. These data suggest that minocycline directly inhibited apoptosis, but not necrosis, after oxidative insult in PC12 cells

[PA1-14] [2003-10-10 14:00 - 17:30 / Grand Ballroom Pre-function]

Effects of Anonaine on Dopamine Biosynthesis in PC12 Cells.

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The effects of anonaine, an aporphine isoquinoline alkaloid, on dopamine biosynthesis and L-DOPA-induced neurotoxicity in PC12 cells were investigated. Treatment of PC12 cells with 0.05 μM anonaine showed a significant inhibition of dopamine content. The IC_{50} value of anonaine was 0.05 μM. Under the same conditions,