

(Leguminosae), which is a perennial shrub widely distributed throughout China (called "Zao Jiao Ci") and in Gyeongju city area in Korea (called "Jo Gak Ja") and has been used in traditional medicine for the treatment of swelling, suppuration, carbuncle and skin diseases, led to the isolation of one triterpenoid and four steroids, which were identified as D:C-friedours-7-en-3-one (1), stigmastane-3,6-dione (2), β -sitosterol (3), stigmasterol (4), and stigmast-4-en-3,6-dione (5). Triterpenoid 1 was found for the first time in the natural sources and steroids 2-5 were isolated first from this plant. Stigmasterol showed the most active antimutagenic property examined in a plate incorporation assay against the mutagens, MNNG and NQO using the test strain E. coli PQ37 (SOS chromotest) and against mutagens, NPD and NaN_3 using Salmonella typhimurium test strains TA98 and TA100 (Ames test). Some NMR data of steroids obtained have to be revised by 2D-NMR methods..

[PD2-49] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Neuroprotective effects of Hexane fraction of M61 on Delayed Neuronal Death after Transient global Ischemia in Gerbil Hippocampus

haw jung Kim^o, Kang Hoon Je, Woongchon Mar

Natural Products Research Institute, College of Pharmacy, Seoul National University

Several lines of recent evidences have shown that several pro-inflammatory genes or mediators, such as inducible nitric oxide synthase (iNOS) are strongly expressed in the ischemic brain. Inflammation is now recognized as a significant contributing mechanism in cerebral ischemia because anti-inflammatory compounds or inhibitors of iNOS have been proven to reduce ischemic brain damage. In iNOS assay, hexane fraction of M61 inhibited NO (iNOS IC₅₀, 0.7 μ g/ml). In vivo study was carried out to evaluate neuroprotective effect of hexane fraction of M61 after transient global ischemia using Mongolian gerbil ischemia model. The morphological study was performed 7 days after ischemia or sham-operation. Histopathological evaluation of delayed neuronal death (DND) was performed by microtubule associated protein 2 (MAP2) as a marker protein in dendrites. In addition, the effects of hexane fraction of M61 on the apoptosis in the hippocampal CA1 region of gerbils following transient global ischemia were investigated via immunohistochemistry for caspase-3 and terminal deoxynucleotidyl transferase-mediated dUTP nick end labeling (TUNEL) assay. Enhanced TUNEL, and caspase-3 positivities were detected in the hippocampal CA1 region in the ischemic gerbils. Hexane fraction of M61 treatment suppressed the ischemia-induced increment in the number of TUNEL-, and caspase-3-positive cells. These results suggest that hexane fraction of M61 treatment alleviates ischemia-induced apoptosis and may aid in the recovery following ischemic cerebral injury.

[PD2-50] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Protoberberine alkaloids from the rhizome of Coptis japonica Makino

Min Yong deuk^{1o}, Chung Ae Kyung², Shim Sang Ho², Lim Bang Ho², Shin Dae Hee², Lee Kang Ro^{1#}

¹*Natural Products Laboratory, College of Pharmacy, SungKyunKwan University, Suwon 440-746,*

²*Institute of Complementary Medicine, Conmaul Oriental Hospital & Medical Clinic, Seoul*

As part of our program to isolate bioactive compounds from korean natural sources, we have screened traditional medicinal plants to cytotoxicity on human tumor cells. Of them, the MeOH extract from rhizome of Coptis japonica Makino was found to be active against five cultured human tumor cell lines. So, the MeOH extract was subjected to successive solvent partitioning to give n-hexane, chloroform and BuOH. The activity was concentrated into the chloroform extract. The extract was chromatographed on a silica gel column and resulted in the isolation 5 alkaloids. Their structures were determined by physicochemical and spectroscopic methods. The bioactivity study of the isolated compounds are under going.

[PD2-51] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Cytotoxic Activity of StyraX japonica S. et Z.

Kim Mi-Ran^{1o}, Lee Hyang-Hee¹, Hahm Kyung-Soo¹, Woo Eun-Rhan^{1,2}