[PD2-7] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

Constituents from Hedyotis diffusa protect against glutamate -induced neurotoxicity in primary cultures of rat cortical cells

Kim Youngleem, Kim Jinwoong, Kim So Ra, and Kim Young Choong

College of Pharmacy, Seoul National University

In a bioassay-guided search for neuroprotective compounds from medicinal plants, a MeOH extract of whole plants of Hedoytis diffusa yielded five flavonol glycosides; kaempferol 3-O-[2-O-(6-O-E-feruloyl)- -D-glucopyranosyl]- -D-galactopyranoside (1), quercetin 3-O-[2-O-(6-O-E-feruloyl)- -D-glucopyranosyl]- -D-galactopyranoside (2), quercetin 3-O-[2-O-(6-O-E-feruloyl)- -D-glucopyranosyl]- -D-glucopyranoside (3), kaempferol 3-O-(2-O- -D-glucopyranosyl)- -D-galactopyranoside (4), and quercetin 3-O-(2-O- -D-glucopyranosyl)- -D-galactopyranoside (5) and four O-acylated iridoid glycosides; 6-O-Z-p-methoxycinnamoyl scandoside methyl ester (6), 6-O-E-p-methoxycinnamoyl scandoside methyl ester (7), 6-O-Z-p-coumaroyl scandoside methyl ester (8), 6-O-E-p-coumaroyl scandoside methyl ester (9). Compounds 1 and 2 are previously unreported natural products and all these 9 compounds exhibited significant neuroprotective activity in primary cultures of rat cortical cells damaged by L-glutamate.

[PD2-8] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

Isolation and Quantitative Determination of Ursolic acid from Prunellae Herba

Kang SS, Kim JS°, Lee KS1, Chang SY2

Natural Products Research Institute, Seoul National University, 1Dept. of Pharmacy, Chung Buk National University, 2Natural Medicines Standardization Division, Korea Food and Drug Administration

Ursolic acid was isolated from Prunellae Herba(Prunella vulgaris) and identified by direct comparison with an authentic sample. A method of analysis for the evaluation of rusolic acid was developed based on extraction of ground plant material, followed by quantitative determination using capillary gas chromatography of the TMS derivative. Quantitative analysis by GC after derivatisation under mild silylating conditions showed 0.31% ursolic acid in 20 samples collected throughout regions of Korea while no ursolic acid was detected in the samples of the whole plant of Thesium chinense, a substitute for Prunellae Herba in southern regions of Korean peninsula.

[PD2-9] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

An Enzyme-linked Immunosorbent Assay for IH-901, an Active Metabolite of Ginsenoside Rb1

Jung DW°[1], Cho SH[1], Sung JH[2], Sung CK [1]

[1]Lab. of Pharmacognosy, College of Pharmacy, Chonnam National University, Kwangju 500-757 and [2]Central Research Institute, Il-hwa Pharmaceutical Co., Kuri 471-711, Korea

IH-901 is considered as one of the major metabolites of ginsenoside Rb_1 formed by intestinal bacterial flora. In addition, recent studies show that IH-901 has anti-tumor activities. Ako *et al.* developed a sensitive enzyme immunoassay for the active metabolite, however, the assay seems to be less specific for its side chain moiety (C_{20}-C_{27}). Therefore, we established a specific enzyme-linked immunosorbent assay (ELISA) for measuring IH-901 in biological fluid using polyclonal antibodies, which can recognize the side chain moiety.
In order to obtain the specific antibody for the side chain of IH-901 as well as its aglycone, a carrier protein of bovine serum albumin (BSA) was coupled to the sugar moiety of IH-901. The IH-901-BSA conjugate was inoculated into rabbits as immunogen. 5,000-fold diluted the polyclonal antibodies were employed for the optimization of IH-901-specific ELISA.
The measuring rage of this assay extended from 250 pg/well to 5 ng/well. The effects of plasma and urine on this assay are under investigation.

[PD2-10] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

Stilbenes from the Root of Pleuropterus cilinervis Nakai

Lee JP°, Ren-Bo An, Na MK, Kim JG*, Kim YH, Bae KH

College of Pharmacy, * Chungnam National University, * College of Pharmacy, Chungbuk National University

*Pleuropterus cilinervis*Nakai(Polygonaceae) is an indigenous plant and distributed in mountain area of Korea. Phytochemical study was carried out the EtOAC fraction from the root of P. cilinervis. Four stilbenes were isolated with the repeated silica gel column chromatography. By using spectroscopic methods, these compounds were identified as *trans*-resveratrol, *trans*-resveratrol-3-O-β
-glucoside(piceid), piceid-6-O-gallate, and *trans*-resveratrol-4'-coumaroyl-glucoside.

[PD2-11] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

Lyso-PAF Congeners and Sulphated Sphingosines from the Sponge Spirastrella abata

Alam N°, Bae BH, Hong JK[1], Shin BA[2], Lee CO[3], Im KS, and Jung JH*

Pusan National University, [1]Korea Basic Science Institute, [2]Chonnam National University, [3]Korea Research Institute of Chemical Technology

In our continuing search for bioactive substances from the marine sponge *Spirastrella abata*, we have further isolated four new lyso-PAF (Platelet Activating Factor) from a brine shrimp active fraction of the methanolic extract of the sponge. Two of them were 2'-methoxy substituted lyso-PAF congeners which were not previously reported from natural sources. Two new sphingosines having a sulphate moiety at position 4 were also isolated from the same fraction. The structures have been determined with the help of modern spectroscopic techniques and mass analyses. This is also the first report of sulphated sphingosines from marine sources. The stereochemistry at C-2 of the lyso-PAF congeners were not determined while the stereochemistry of the sphingosine is being studied. The lyso-PAF congeners displayed mild inhibition on the cholesterol synthesis in the liver cell which might be ascribed to its inherent cytotoxicity.

[PD2-12] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]