acid moiety was defined by NMR and CD spectroscopy. The compounds were evaluated for cytotoxicity against five human tumor cell lines to display significant potency.

[PD2-14] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Phytochemical Constituents of Chrysanthemi Flos

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The flowers of Chrysanthemum boreale and C. indicum (Compositae) have been used in the name of "Yagukhwa" for the treatment of headache and eye disease in the Korean traditional medicine. The extracts of Chrysanthemi Flos have been reported to exhibit antispasmodic, anti-inflammatory and antiviral activity. The genus Chrysanthemum is known to contain numerous flavonoids as well as sesquiterpene lactones. During our search for antiviral compounds from natural products, an ethyl acetate fraction of Chrysanthemi Flos was found to potently inhibit HIV-1 integrase. By means of bioassay-directed chromatographic fractionation, six flavonoids and three quinic acid derivatives were isolated. The structural determination of these compounds by the aid of spectroscopic analyses (1H-1H COSY, DEPT, HMQC and HMBC) will be discussed. Among isolated compounds, apigenin-7-glucuronide and three quinic acid derivatives were isolated from this plant for the first time.

[PD2-15] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Diarylheptanoids from Barks of Alnus japonica

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Barks of Alnus japonica have been used as a traditional medicine for the remedies of inflammation, hemorrage, fever, diarrhea and alcoholism. We tried to investigate the barks of Alnus japonica chemically and isolated 10 diarylheptanoids. Structures of these compounds were identified as hirsutanonol, hirsutenone, platyphylloside, oregonin, 1,7-bis-(3,4-dihydroxyphenyl)-heptane-3-O-β-D-glucopyranosyl(1→3)-β-D-xylopyranoside, 1,7-bis-(3,4-dihydroxyphenyl)-heptane-3-O-β-D-apiofuranosyl(1→6)-β-D-glucopyranoside, 1,7-bis-(3,4-dihydroxyphenyl)-heptane-3-one-5-O-β-D-glucopyranoside, 1,7-bis-(3,4-dihydroxyphenyl)-heptane-5-O-β-D-glucopyranoside, 1,7-bis-(3,4-dihydroxyphenyl)-5-hydroxyheptane and 1,7-bis-(3,4-dihydroxyphenyl)-5-hydroxyheptane-3-O-β-D-glucopyranoside by comparison with previously reported spectral data.

[PD2-16] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Panaxynone A, a New Inhibitor of Acyl-CoA: Cholesterol Acyltransferase from the roots of Panax ginseng

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Acyl-CoA: cholesterol acyltransferase (ACAT, EC 2.3.1.26) is responsible for intracellular esterification

of cholesterol and plays a key role in intestinal absorption of cholesterol, hepatic production of lipoproteins and accumulation of cholesteryl esters within macrophages and smooth muscle cells of the atheroma. Therefore, ACAT is an attractive target for new treatments of hypercholesterolemia and atherosclerosis. In the course of our search for Acyl-CoA: cholesterol acyltransferase (ACAT) inhibitors from natural sources, panaxynone A was isolated from petroleum ether extract of Panax ginseng C. A. Mayer. panaxynone A , which was obtained as a pale yellow oil, exhibited a molecular ion peak at m/z 261 (M+H) in the FAB-MS and the molecular formula was established as C17H24O2 by high resolution FAB-MS. On the basis of spectral evidence, the structure of panaxynone A was determined as 9,10-epoxy-heptadecane-4,6-diyn-3-one. panaxynone A inhibited ACAT activity with the IC50 value of 2.2 μ M in an enzyme assay using rat liver microsomes with a dose dependent fashion

[PD2-17] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Antioxidative Caffeic acid p-Hydroxy Phenethyl Esters from the stem bark of Lycium chinense

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Oxidative stress resulting from the toxic effects of free radicals on tissues plays an important role in aetiology or pathogenesis of various degenerative diseases of aging such as brain dysfunction, cancer, cardiovascular disease, etc. A number of studies have been performed to discover antioxidants from natural products. In our search for new antioxidative compounds from natural products, three hundreds of samples were screened. Among them, the ethylacetate soluble fraction of L.chinense was shown to have inhibitory effects on free radical scavenging activities. By means of repeated column chromatography using silica-gel, sephadex LH 20, Licrosorb RP-18, and preparative HPLC, five caffeic acid p-hydroxy phenethyl esters were isolated. Theses compounds were first isolated from the stem bark of L. chinense and showed potent antioxidative activities. The structural elucidation and antioxidative activities for the isolated compounds will be discussed.

[PD2-18] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Cytotoxic Saponins from the Starfish Certonardoa semiregularis

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Three new sulphated glycosides of polyhydroxysterols were isolated from a brine shrimp active fraction of the methanolic extract of the starfish Certonardoa semiregularis. The gross structures were determined by NMR spectroscopy and MS spectroscopy.The stereochemistry of the cholestane side chain was defined by NMR spectroscopy.The compounds were evaluated for cytotoxicity against a pane of five human tumor cell lines.

[PD2-19] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

An Triterpene from Korean Mistletoe and Its Apoptosis-Inducing Activity

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