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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In *in vitro* analysis of cytotoxic activity using RAW 264.7 murine tumor cells, dichloromethane extract of Korean mistletoe (*Viscum album var. coloratum*) showed significant activity against tumor cells. An active compound, which was designated as VD-3, was isolated from the extract by repeated silicagel chromatography and recrystallization. VD-3 exhibited strong cytotoxicity against RAW 264.7 as well as Colon 26-M3.1, NIH-3T3 and B16-BL6 tumor cells while it was not cytotoxic to normal cells (murine splenocytes). Tumor cells treated with VD-3 showed typical patterns of apoptotic cell death, such as apparent morphological changes and DNA fragmentation. In addition, it was shown that VD-3 enhanced the activity of caspase-3 cytosolic enzyme of tumor cells during apoptosis induction. VD-3 was identified as *epi*-oleanolic acid by spectral data and it was confirmed by chemical synthesis. These results indicated that Korean mistletoe contains a highly cytotoxic compound against tumor cells, and the most responsible low-molecular compound for the activity is *epi*-oleanolic acid.

[PD2-20] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Phospholipids from Domestic Bombycis corpus

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Bombycis corpus is a silkworm larvae killed by inoculation of the fungi, *Beauberia bassiana*. It is a traditional medicine to treat palsy, headache, convulsion, stroke induced speech problem and tremor.[1] Several sterols were reported from *Bombycis corpus*.[2] To search for bioactive compounds from domestic *Bombycis corpus*, Dried and powdered material was extracted with methanol and resultant methanol extract followed by successive solvent partition with hexane, chloroform and butanol. The repeated column chromatographic separation of the butanol soluble portion led to the isolation of three diacylglycerophosphatidylcholines and three aromatic amines. Their structures were determined by physicochemical and spectroscopic method.

1) Shanghai Science and Technologic Publisher and Shougakukan, The Dictionary of Chinese Drugs, Shougakukan, Tokyo, pp.2238-2240 (1985)
2) Cheng, K.P., Nagano, H., Bang, L., Ourisson, G., Beck, J.P. *Journal of Chemical Research* (S), 217 (1977)

[PD2-21] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Neuraminidase inhibitors isolated from Reynoutria elliptica

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Influenza is an important disease with high levels of mortality and morbidity each season. Influenza virus neuraminidase(NA) catalyses the cleavage of sialic acid residues terminally linked to glycoprotein and plays an important role in the replication of the virus.
In the course of screening NA inhibitors from oriental medicine, *Reynoutria elliptica* exhibited a high inhibitory activity against NA. Four active compounds were isolated from the ethyl acetate soluble