

A new lectin was purified from the larvae of *Allomyrina dichotoma* by physiological saline extraction, salt fractionation, anion exchange column chromatography on DEAE Sephadex A-50 and gel filtration column on Sephadex G-200. This purified lectin was designated as ADL. Several biochemical properties of ADL were characterized as follows: ADL showed single band on SDS-PAGE and agglutinated the erythrocytes of human and rabbit. Agglutination-ability was relatively stable at basic pH, temperature below 40°C, and was not affected by metal ions. This lectin was proved to be a glycoprotein containing 0.47% of sugars. The molecular weight of ADL was estimated to be 97,000 by SDS-PAGE. The gene expressions of 5 cytokines (IL-1, IL-2, IL-6, IFN γ , TNF α) from human peripheral blood mononuclear cells, stimulated with ADL, were investigated by RT-PCR and the productions of the cytokines were measured by ELISA. ADL induced the highest secretion of IL-2 at 8hr, TNF α at 4hr, and IFN γ at 24hr, respectively. This lectin was proved to be a potent agglutinin for cancer cells such as HeLa, L929 and L1210.

[PD2-39] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Antioxidative activity screening of Herbal drugs

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Recently, oxygen free radical injury and lipid peroxidation have been suggested as major causes of atherosclerosis, cancer, liver disease and the aging process. In order to search for antioxidants from the plants, MeOH extracts from about 80 herbal medicines were investigated. The DPPH radical scavenging activity and lipid peroxidation inhibitory activity of each extracts were measured. As a result, *Ulmus parvifolia macrocarpa*, *Trogopterus xanthipes*, *Myristica fragrans*, *Amomum tsao-ko* showed relatively strong antioxidative activities.

[PD2-40] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Free Radical Scavenging and Hepatoprotective Compounds in vitro of Mori Ramulus

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Isolation and structure elucidation of free radical scavenging and hepatoprotective compounds of Mori Ramulus was investigated. 1,1-Diphenyl-2-picrylhydrazyl (DPPH) was used for free radical scavenging activity, and protective effect against tacrine-induced cytotoxicity in human liver-derived Hep G2 cells was used for hepatoprotective activity. Assay-guided fractionation of an EtOH extract of Mori Ramulus furnished three compounds which are two prenylated flavonoids and a stilbene.

[PD2-41] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Hepatoprotective constituents from *Hedyotis diffusa* and *Gardenia jasminoides*

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In the course of search for hepatoprotective constituents from medicinal plants, each methanol extract of *Hedyotis diffusa* Willd. and *Gardenia jasminoides* J. Ellis. showed significant hepatoprotective activity using the carbon tetrachloride (CCl₄) or galactosamine (GalN)-injured primary cultures of rat hepatocytes as screening systems. Six phenylpropanoids from *Hedyotis diffusa* and seven phenyl propanoids including three novel lignans from *Gardenia jasminoides* were isolated as hepatoprotective components by the repetitive column chromatography on silica gel, Sephadex LH 20, MCI and HP 20 gel and further purification using HPLC.

[PD2-42] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Torilin from *Torilis japonica*, as a new class inhibitor of testosterone-5 α -reductase

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The methanolic extract of *Torilis japonica* showed potent 5 α -reductase inhibitory activity in vitro. Bioactivity-guided fractionation of the methanolic extract of the fruits followed by repeated silica gel chromatography led to the isolation of active principle and the structure was identified as torilin with spectroscopic data. IC₅₀ value of torilin was lower than that of finasteride.

[PD2-43] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Screening of Mushrooms for antioxidative activity

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This study was carried out to investigate the antioxidative activities of mushrooms for purpose of development of novel antioxidant from natural products. In order to search for antioxidants, MeOH extracts from about 40 kinds of mushrooms were investigated. The DPPH radical scavenging activity and lipid peroxidation inhibitory activity of each extracts were measured. *Inonotus gibba*, *Fomes fomentarius*, cultivated *Phellinus linteus* showed potent antioxidative effects.

[PD2-44] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

New Quinolone Alkaloid with Antioxidant Activity from the Aleurone Layer of Anthocyanin-Pigmented Rice

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The anthocyanin-pigmented rice (*Oryza sativa* cv. *Heugjinmi*) having dark purple-colored grains, is broadly known as an enriched rice for taste and health improvements. Cyanidin-3-O- β -D-glucoside having oxygen radical absorbing capacity, is most abundant in anthocyanin-pigmented rice grain. As a part of our study on the bioactive components of the aleurone layer of pigmented rice grain, a new