2-dimensional NMR spectral analyses. They showed dose-dependent inhibitions on NO syntheses and the IC50's were 3.1, 3.8 μg/ml, respectively. The spectral data and activity mechanism of these compounds will be discussed. These new inhibitors of iNOS may have potential in the treatment of endotoxemia and inflammation accompanied by the overproduction of NO.

[PD2-31] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Curcumin and its analogue, inhibitor of Farnesyl Protein Transferase, isolated from *Curcuma longa* L.

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Farnesyl-protein transferase(FPTase) catalyzes the farnesylation of Ras protein on the cysteine residue near the C-terminus, which is critical for triggering ras oncogene toward tumor formation. During the course of a screening program for inhibitors of FPTase from natural products, inhibitors were isolated from the roots of Curcuma longa L. Curcumin and its analogue were isolated from C. longa L. Curcumin exhibited strong inhibition activity against FPTase. FPTase inhibitors were purified by silica and LH-20 column chromatography. Structures of the compounds were determined by NMR and MS spectroscopy. FPTase inhibitory activity was measured against partially purified FPTase enzyme, prepared from rat brain, and biotin-YRASNRSCAIM acceptor peptide using a scintillation proximity assay method. The compounds were also evaluated for cytotoxicity against five human tumor cell lines.

[PD2-32] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Anti-complement of terpenoids from the spores of Ganoderma lucidum

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A new lanostane-type terpenoid, lucidenic acid SP1 (**1**), was isolated from a chloroform-soluble fraction of the spores of *Ganoderma lucidum* together with four known compounds (**2-5**). The structure of lucidenic acid SP1 was determined as 3β,7β-dihydroxy-4,4,14α-trimethyl-11,15-dioxo-5α-chol-8-ene-24-oic acid by spectroscopic means including 2D-NMR. The anticomplementary property of **1-5** was investigated *in vitro*. Furthermore, triterpenes (**6-12**) isolated from the same spores were tested for their anticomplemantary activity. Compounds **1-5** were inactive, whereas ganoderiol F (**8**), ganodermanondiol (**9**) and ganodermanontriol (**10**) showed a strong anticomplement activity against the classical pathway (CP) of the complement system with IC_{50} values of 4.8, 41.7 and 17.2 μM, respectively. The inhibitory potency of triterpene alcohols **8-10** on the CP activity increased accompanied by increase in terminal hydroxymethyl group of the side chain moiety. On the other hand, ganoderic acid **1-7**, which are present a carboxyl group in the side chain, and lucidumols A and B (**11-12**) were inactive on this system.

[PD2-33] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Isolation of Anti-Septic Shock Agents from Moutan Cortex

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Septic shock is a complex pathophysiologic state which often leads to multiple organ dysfunction, multiple organ failure and death. It is the most common cause of death in intensive care units. Moutan Cortex is used as analgestic, sedative, antibacterial and antiinfalmmatory agent in Korean traditional medicine. By activity-guided isolation, we isolated twelve compounds. The structure of these compounds were determined by spectroscopic methods. Among these compounds. paeonol, oxypaeoniflorin and 2,5-dihydroxy-4- methoxyacetophenone showed the inhibitory effects against lethality induced by LPS.

[PD2-34] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Inhibitors of Nitric Oxide Synthesis from Artemisia iwayomogi in Activated Macrophages

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The overproduction of nitric oxide (NO) by inducible nitric oxide synthase(iNOS) is one of the major characteristic features of inflammation and sepsis. Therefore, we intended to find the iNOS inhibitors from natural products. In order to find out iNOS inhibitor, RAW 264.7 cells were activated by lipopolysaccharide(LPS) in the presence of plant samples. Then the amount of NO formed by iNOS was determined by using Griess reagent in the form of NO_2^-.

The methnol extract of *Artemisia iwayomogi* was fractionated with Ether, EtOAc and BuOH sequentially. Activity-guided purification process was performed with ether fraction of *A. iwayomogi* by using repeated silicagel chromatography and reverse phase semi-prep HPLC. Four compounds from *A.iwayomogi* were identified as active principles. The structure of one of them was determined as *1β,3α*-dihydroxyarbusculin (armefolin) by spectroscopic method and its IC_{50} values (the concentration required for 50% inhibition of NO production) was 2.5 μM. This new inhibitor of iNOS may have potential in the treatment of endotoxemia and inflammation accompanied by the overproduction of NO.

[PD2-35] [10/19/2001 (Fri) 14:00 - 17:00 / Hall D]

Studies on the Constituents and Anticancer Activity of Sophora subprostrata

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Sophora subprostrata Radix (Leguminosae) has been used as a Korean traditional medicine for the treatment of fever, inflammation, peptic ulcer and cancer. In our continuous research for anti-cancer agents from natural products, we found that the CH2Cl2 and EtOAc extracts of S. subprostrata showed cytotoxic activity against HCT116 and SNU638 cells. By means of bioactivity-guided fractionation, trifolirhizin (1), (-)-maackiain (2), 2-hydroxy-8,9-methylenedioxypterocarpan (3), lupeol (4), daidzin (5) 4',7-dihydroxyflavone (6) and (+)-syringaresinol (7) were isolated from these extracts. Among isolated compounds, trifolirhizin (1) exhibited cytotoxic effect on HL-60 cells (IC50 = 75.6 μg/ml), whereas (+)-syringaresinol (7) showed cytotoxicity on HepG2 cells (IC50 = 67.2 μg/ml). We found that the cytotoxic effect of trifolirhizin (1) was due to the induction of apoptosis in HL-60 cells, which was confirmed by observing the typical DNA fragmentation and PI staining. Furthermore, a new pterocarpan, 2-hydroxy-8,9-methylenedioxypterocarpan (3) was isolated. On the other hands, daidzin (5) and 4', 7-dihydroxyflavone (6) were first isolated from this plant.