Dep. of Chemical Technology, Hanbat National University

Marine Algae of order Chordariales are rich resources of bioactive metabolites. Methanolic extracts of the brown alga *Ishige Okamurae* exhibited potent antioxidative and butyrylcholinesterase(BChE) inhibitory effects. Bio-guided purification [solvent partition, ODS flash, silica flash, gel-filtration on Sephadex LH 20, ODS HPLC] of them gave a compound **1**. Its structure was elucidated by detailed analysis of spectroscopic data of **1** and comparison of literature data. A variety of bioassay for **1** is in progress.

[PD2-4] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Monoamine Oxidase Inhibitors from the Whole Plant of Cayratia japonica

Han Xiang Hua°, Hong Seong Su, Park Seon Soon, Huh Jae Doo, Lee Kyong Soon, Lee Myung Koo, Hwang Bang Yeon, Ro Jai Seup

College of Pharmacy, Chungbuk National University, Cheongju 361-763, Korea *Crown Pharmaceutical Co. Ltd., Anyang 430-817, Korea

As a part of our ongoing research to discover novel monamine oxidase (MAO) inhibitors of plant origin, we found that a MeOH extract from the whole plant of Cayratia japonica (Vitaceae) strongly inhibited the MAO activity in mouse brain. The EtOAc-soluble fraction was, therefore, subjected to the bioactivity-guided fractionations to isolate the active compounds. The finally purified substances, apigenin (1), luteolin (2), and luteolin-7-O-glucoside (3), were identified by comparison of their spectral data. Of these, apigenin (1) and luteolin (2) showed significant MAO inhibitory activity. The isolation, structure elucidation, and MAO inhibitory activity of these isolates will be presented.

[PD2-5] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Phenolic glycosides from *Pyrola japonica*

Kim JuSun°, Kang SamSik, Son KunHo, Chang HyeunWook, Kim HyunPyo, Bae KiHwan

Natural Products Research Institute, Seoul National University, 1 Department of Food and Nutrition, Andong National University, College of Pharmacy, 2 Yeongnam University, 3 Kangwon National University and 4 Chungnam National University

Six known phenolic glycosides, hyperin(**2**), androsin(**3**), homoarbutin(**4**), isohomoarbutin(**4a**), pirolatin(**7**) and monotropein(**6**), together with two new compounds, (**1**)[mp. 215~217 ℃, $C_{23}H_{32}O_{11}$] and (**5**)[mp. 121~123 ℃, $C_{18}H_{26}O_8$] were isolated from the BuOH fraction of *Pyrola japonica*(Pyrolaceae). The structures of the known compounds were determined by chemical and spectroscopic methods. The assignments of the ^1H- and ^{13}C-NMR spectra of these compounds were carried out by two-dimensional ^1H-^1H-COSY, NOESY and ^1H-^{13}C multiple-bond, multiple-quantum spectroscopic correlation techniques, and previous assignments for **4**, **4a** and **7** should be revised. The characterization of the two new compounds is now in progress.

[PD2-6] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Antitumor constituents from the sclerotium of Poria cocos

Li Gao°, Xu MingLu, Seo ChangSeob, Kim HyoJin, Lee YouJeong, Lee YeunKoung, Lee ChongSoon, Woo MiHee, Son JongKeun

College of Pharmacy, Yeungnam University; Institute of Natural Sciences, Yeungnam University; College of Science, Yeungnam University, Gyongsan 712-749, Korea and College of Pharmacy, Catholic University of Daegu, Gyongsan, 712-702, Korea

The bioactivity-guided fractionation of an active methylene chloride extract of the sclerotium of Poria cocos led to the isolation of compounds 1-5.These compounds were tested in the human colon carcinoma and human breast carcinoma cell lines, compounds 3, 4, and 5 exhibited IC50 values of 10.8, 15.4, and 5.1 μg/ml against human colon carcinoma cell line. In addition, compounds 3, 4 and 5 showed moderate activities as inhibitors of Topoisomerase I and all compounds were inactive in the Topoisomerase II inhibition.

[PD2-7] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Preventive Agents against Sepsis and New Phenylpropanoid Glucosides from the Fruits of Illicium verum

Lee SungWon, Li Gao°, Lee KyongSun, Jung JunSub, Xu MingLu, Seo ChangSeob, Song DongKeun, Son JongKeun

College of Pharmacy, Yeungnam University; Institute of Natural Sciences, Yeungnam University, Gyongsan, 712-749, Korea; Department of Pharmacology, Hallym University College of medicine, Institute of Natural medicine, Chunchon, 200-702, Korea

Abstract: The bioassay-guided fractionation of preventive agents against lethality due to septic shock from the fruits of Illicium verum lead to the isolation of two known racemic mixtures of phenylpropanoids (1 and 2), along with two known phenylpropanoid glucosides (3 and 5) and two new phenylpropanoid glucosides (4 and 6). Their chemical structures were elucidated on the basis of spectroscopic studies. Among them, 1 exhibited the highest survival rate in dose-dependent manner (100 % with a dose of 10 mg/kg against 40 % for the control experiment) and showed reduction of plasma alanine aminotransferase (ALT) value on the in vivo assay model of septic shock induced by tumor necrosis factor (TNF)-α.

[PD2-8] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Lignans from fruits of Schizandra chinensis

Lee HakJu°, Seo SunMi, Lee MyungKoo, Choi DonHa, Paik KiHyon

Div. Wood Chemistry & Microbiology, Korea Forest Research Institute, Department of Forest Resources and Environmental Science, Korea University, College of Pharmacy, and Research Center for Bioresource and Health, Chungbuk National University.

Schizandra chinensis known as OMIJA belongs to Schizandraceae family, and is being used in the formulation of traditional medicine. Various column chromatographies with various solvent systems were used to isolate its compounds. To identify compounds isolated, instrumental analysis methods such as NMR and MS were employed.
From fruits of Schizandra chinensis, five lignans were isolated and identified as followed : Gomisin N (1), Wuweizisu C (2), Gomisin L1 (3), (+)-deoxyschizandrin (4) and Gomisin J (5),