[PD2-1] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

The DNA Strand-Scission principles of Mucunar birdwoodiana

Han Ah-Reum1, Park Gowooni°1, Je Kang-Hoon2, Mar Woongchon2, Seo Eun-Kyoung1*

1Natural Products Chemistry Laboratory, College of Pharmacy, Ewha Womans University; 2Natural Products Research Institute, Seoul National University; 3College of Pharmacy

During our research program to find DNA strand-scission agents from higher plants, the MeOH extracts of the wood bark of Mucunar birdwoodiana Tutcher. (Leguminosae) exhibited the most potent activity with an IC_{50} value of 4.9 μg/ml. Thus, detailed laboratory investigation was performed, and led to the isolation of the known compounds, catechin (1) and epicatechin (2) as the active principles. Isolates 1 and 2 showed significant activity with IC_{50} values of 10.8 and 7.5 μg/ml, respectively (positive control, bleomycin: IC_{50} 3.3 μg/ml). More details will be discussed in the presentation.

[PD2-2] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Monoamine Oxidase Inhibitory Components from the Fruits of Cudrania tricuspidata

Hong Seong Su°, Han Xiang Hua, Jeong Seon Hwa, Park Byung Min, Lee Seon A, Lee Kyong Soon, Lee Myung Koo, Hwang Bang Yeon, Ro Jai Seup

College of Pharmacy, Chungbuk National University, Cheongju 361-763, Korea

Monoamine oxidase (MAO) is flavin-containing enzyme that catalyzes the oxidation of variety of amine-containing neurotransmitters such as catecholamines and serotonin to yield the corresponding aldehyde. Thus, MAO activity might play important roles in some pathological states of central nervous system diseases such as depression, alcoholism, and schizophrenia. Two known pyranoisoflavones, alpinumisoflavone (1) and 4'-O-methylalpinumisoflavone (2), were isolated from the fruits of Cudrania tricuspidata (Moraceae) by activity-guided isolation method. The structures of these compound were elucidated on the basis of spectral data including 2D-NMR experiments. The isolation, structure determination, and MAO inhibitory effect on these isolates will be discussed in this presentation.

[PD2-3] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

A Chemical Component of the Marine Alga Ishige Okamurae

Kim EunSook°, Choi ByoungWook, Lee BongHo

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]