

<sup>1</sup>Dept of Agric Chem, Kyungpook National Univ, Taegu 702-701, Korea, <sup>2</sup>School of Medicine, Konyang Univ, Nonsan, Chungnam 320-711, Korea, <sup>3</sup>Inst for Biomedical Res, Handong Univ, Pohang, Kyungpook 791-940, Korea

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

Kwon HakCheol<sup>o</sup>, Yang MinCheol, Min YongDeuk, Lee SungOck, Lee WonBin, Chung AeKyung, Lee KangRo

Natural products Laboratory, College of pharmacy, SungKyunKwan University, Suwon 440-746, Korea

*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.<sup>1)</sup> Several sterols were reported from *Bombycis corpus*.<sup>2)</sup> 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

Lee Chu-Hyun<sup>o</sup>, Jung Myung-Ju, Kim Sang-In, Song Kyung-Sik

Department of Agricultural Chemistry, Kyungpook National University, Taegu 702-701, Korea

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