

nitration of bovine serum albumin and low-density lipoprotein by ONOO<sup>-</sup> in a dose-dependent manner. Its cytoprotective effect against ONOO<sup>-</sup> is under further study. Alaternin and nor-rubrofusarin glucose can be developed as an effective ONOO<sup>-</sup> scavenger for the prevention of the ONOO<sup>-</sup>-involved diseases.

[PC1-20] [ 10/17/2002 (Thr) 13:30 - 16:30 / Hall C ]

Induction of apoptosis in human promyelocytic leukaemia HL-60 cells by yomogin involves release of cytochrome c and activation of caspase

Jeong SeoungHee<sup>○</sup>, Koo SungJa, Ryu ShiYong, Park HeeJun, Lee KyungTae

College of Pharmacy, Dept. of Food and Nutrition, KyungHee University, Seoul, Korea  
Research Institute of Chemical Technology, Yuseong, Dept. of Botanical Resources, SangJi University, Wonju

Yomogin, an eudesmane sesquiterpene isolated from *Artemisia princeps*, was found to induce apoptosis in human promyelocytic leukaemia, HL-60 cell with characteristic apoptotic features like nuclear condensation, apoptotic body formation, flipping of membrane phosphatidylserine, release of mitochondrial cytochrome c and caspase-8, -9, and -3 activation. Furthermore, early yomogin-induced cytochrome c release was not affected by the caspase inhibitor Z-VAD fmk and preceded loss of mitochondrial membrane potential. The results suggest that induction of apoptosis by yomogin may provide a pivotal mechanism for their cancer chemopreventive function.

[PC1-21] [ 10/17/2002 (Thr) 13:30 - 16:30 / Hall C ]

Effects of chitosan on the decreased renal dipeptidase release by nitric oxide from renal proximal tubules

Hyun Joong Yoon<sup>○</sup>, Eun Mi Park, Haeng Soon Park

College of Pharmacy, Chonnam National University, Kwangju 500-757, Korea

Chitin is a major component of the shells of crustacea such as crab, shrimp and crawfish. Renal dipeptidase (RDPase, EC 3.4.13.19), an ectoenzyme of renal proximal tubules, is covalently bound to outer leaflet of lipid bilayer via glycosylphosphatidylinositol (GPI)-anchor. The biological role of RDPase was suggested as the hydrolysis of dipeptide into free-amino acids before renal reabsorption. The underlying biochemical mechanism of decreased RDPase release was suggested as nitric oxide (NO) production. This study was investigated to examine the effect of chitosan, a deacetylated derivative of chitin which is the second most abundant natural biopolymer, on the decreased RDPase release by NO from renal proximal tubules. Porcine proximal tubules were prepared with the protocol of Taub et al (1990) and were treated with chitosan (0.01, 0.05 and 0.1%) in the presence of SNP (NO direct donor, 0.25mM) or L-Arginine (substrate of NO synthase, 10mM) for 30 min at 37 °C followed by centrifugation (18000g, 5min). The activity of released RDPase was assayed according to the fluorometric method of Ito et al (1984). It was observed that the decreased RDPase release by NO (SNP; 52.8%, L-Arg; 47%, control: 100%) was restored more than 80% as a function of chitosan concentration. We confirmed that the effect of chitosan was connected with NO-signal pathway. The results suggest that chitosan may elevate the renal function decreasing cyto-toxic effect of NO on the proximal tubule cells.

[PC1-22] [ 10/17/2002 (Thr) 13:30 - 16:30 / Hall C ]

Antioxidative Enzymatic Activity of *Saururus Chinensis* Baill & *Houttuynia cordata* Thunb in the liver of rats treated with CCl<sub>4</sub>

Park SunYi, Jung Haejin, Ha Baejin<sup>○</sup>

신라대학교 생명공학과

*Saururus chinensis* Baill (*Saururaceae*) is a perennial plant that has been used in the treatment of edema, jaundice and gonorrhoea in Korean folk medicine. *Houttuynia* sodium bisulphate (HSB), alpha hydroxyl-capryl-