inhibitory effect against MAO in a dose dependant manner with the IC50 value of 4 μg, and inhibited both MAO-A and B with the IC50 value of 4 μg and 3 μg respectively. Compound 1 was found to be competitive MAO inhibitor.

[PD2-45] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Phelolic compounds from Needles of Pinus densiflora and Their Cytotoxic Activities on Mouse Melanoma Cell line

Kim JeeHun°, Kwon YoungMin, Choi JongMoon, Yeom SeungHwan, Lee JaeHee, Lee MinWon

Choong-Ang University

Phytochemical examination of needles of Pinus densiflora isolated eight phenolic compounds and the cytotoxic activity of these compounds on mouse melanoma cell line were evaluated by 3-(4,5-dimethylthiazole-2-yl)-2,5-diphenyl-2H-tetrazalium bromide (MTT) colorimetric method. Several compounds showed significant cytotoxic activity. These result suggested that some phenolic compounds from needles of Pinus densiflora might be developed to anti-cancer agent.

[PD2-46] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Inhibitory effects of medicinal herbs on cytochrome P450 drug metabolizing enzymes

Jeong Hye Gwang, You Ho Jin1, Chang Young-Su°, Park Sung Jun, Moon Young Hee, Woo Eun-Rhan

College of Pharmacy, [1]College of Medicine, Chosun Univ., Kwangju 501-759, Korea

The MeOH ext., CH_2Cl_2Frac., EtOAc Frac., n-BuOH Frac., and H_2O Frac.of 23 Korean medicinal herbs were prepared and were tested the inhibitory effects on Cytochrome P450 (Cyp) 1A1/2, 2B1/2, 2E1. Among the tested samples, the extracts of *Selaginella tamariscina, Euonymus alatus, Salvia miltiorhiza, Angelica acutiloba, Rheum palmatum, Paeonia moutan, Scutellaria barbata, Tribulus terrestris, Hedyotis diffusa, Curcuma zedoaria, Rehmania glutinosa, Trogopterus xanthipes, Melandryum firmum, Achyranthes bidentata, Leonurus sibricus, Panax ginseng, Paeonia lactiflora, Poncirus trifoliata, Cnidium officinale, Cyperus rotundus, Corydalis ternata* showed significant inhibitory effects on Cyp 1A1/2, 2B1/2, 2E1. The IC_{50} values of those extracts were found to be below 50 μg/ml.

[PD2-47] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Effect of Panax ginseng head butanol fraction on collagen-induced arthritis in DBA/1J mice

Jeong ChoonSik°, Hyun JinEe, Suh InOk , Cho SoYean , Kim YeongShik

1College of Pharmacy, Duksung Women's University, 2Natural Products Research Institute, Seoul National University, 3Korea Food and Drug Administration

Head of *Panax ginseng* C. A. Meyer indicates its growth number of years and it has been widely used for supplying energy to weak person. In the previous study, we reported that butanol fraction of *Panax ginseng* head not only has antigastritic and anti-ulcerative properties but also showed anti-inflammatory activity. It is widely known that arthritis has relevance to inflammatory, thus we inclined to investigate the effect of *Panax ginseng* head butanol fraction on arthritis animal model.
Collagen-induced arthritis is recognized as an in vivo tool in researching the mechanism of RA. Male DBA/1J mice, aged 5-6 weeks, were treated under the intradermally with bovine type II collagen emulsified in Freund's complete adjuvant, and a booster injection was given under the same conditions on the 21th day. Butanol fraction of *Panax ginseng* head showed significant inhibition on hind paw edema test and anti-

CII antibody titer, human leukocyte elastase level, TNF-α activity and histopathological changes in DBA/1J mice, and showed high safety on acute toxicity test in rats.

[PD2-48] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Ginsenoside Rb1 : Antigastritic and anti-ulcerative constituent from Panax ginseng head

Jeong ChoonSik°, Suh InOk, Hyun JinEe1, Li DaWei2

1College of Pharmacy, Duksung Wonen's University, 2Natural Products Research Institute, Seoul National University

Head of *Panax ginseng* C. A. Meyer indicates its growth number of years and it has been widely used for supplying energy to weaklings or used as vomit nowadays. However the underlying mechanisms are not sufficiently reported. Thus, we inclined to study with the active constituents from head of *Panax ginseng* in gastritis and gastric ulcer.
We previously reported the antigastritic and anti-ulcerative effect of the head of *Panax ginseng* butanol fraction on several gastritis and ulcer models in rats. The fraction was systematically isolated with silica-gel open column. The activity-guided isolation from the head of *Panax ginseng* butanol fraction was performed with HCl·ethanol-induced gastritis and the most active constituent was identified to ginsenoside Rb1. In addition, ginsenoside Rb1 also showed significant effectiveness on indomethacin- induced, Shay ulcer but did not show any significance gastric secretion.

[PD2-49] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Hepatoprotective effects 18b-glycyrrhetinic acid on carbon tetrachloride-induced liver injury

Lee kyungJin°, Jeong HyeGwang

Department of Pharmacology, Chosun University, Kwangju, South Korea

The protective effects of 18b-glycyrrhetinic acid (GA) on carbon tetrachloride (CCl4)-induced hepatotoxicity were investigated in mice. Pretreatment with GA prior to the administration of CCl4 significantly prevented an increase in serum aminotransferase activities and hepatic lipid peroxidation in a dose-dependent manner. In addition, pretreatment with GA also significantly prevented the depletion of glutathione content in the livers of CCl4-intoxicated mice. The effects of GA on the cytochrome P450 (P450) 2E1, the major isozyme involved in CCl4 bioactivation, were also investigated. Treatment of mice with GA resulted in a significant decrease of the P450 2E1-dependent hydroxylation of p-nitrophenol and aniline. Consistent with these observations, the P450 2E1 expressions were also decreased. GA also showed anti-oxidant effects upon FeCl2-ascorbate induced lipid peroxidation in mice liver homogenate and upon superoxide radical scavenging activity. These results show that protective effects of GA against the CCl4-induced hepatotoxicity may be due to its ability to block the bioactivation of CCl4, primarily by inhibiting the expression and activity of P450 2E1, and its free radical scavenging effects.

[PD2-50] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Effect of bioconversioned ginseng on cisplatin-induced nephrotoxicity and adenine-induced renal failure in rats

Choi Hyuck-Jai°, Shin Yong-Wook, Park Jong-Eun, [2]Park Jeong-Hill, , [1]Kim Dong-Hyun, Kim Nam Jae

East-West Medical Research Institute and [1]College of Pharmacy, Kyung-Hee University, [2]College of Pharmacy, Seoul National University

To elucidate the effect of bioconversioned ginseng on the nephrotoxicity of cisplatin and adenine-induced renal failure, cisplatin was given i.p. to the rats and bioconversioned ginseng was given orally to the rats for