

50% methanol and then partitioned with Ether, EtOAc, BuOH, H₂O Fraction. From Ether, EtOAc Fraction, two new hydroxybenzyl flavonoid glycoside (6-*p*-hydroxybenzyl kaempferol-7-*O*- β -D-glucopyranoside, 6-*p*-hydroxybenzyl quercetin-7-*O*- β -D-glucopyranoside) and three known flavonoids (quercetin-7-*O*- β -D-glucopyranoside, kaempferol-7-*O*- β -D-glucopyranoside, aromadendrin) were isolated and elucidated through spectroscopic methods. (IR, Mass, NMR)

In order to evaluate the efficacy of anti-oxidative, its fractions and compounds were measured radical scavenging activity and anti-lipid peroxidative efficacy on human low density lipoprotein(LDL) with DPPH method and TBARS assay.

It was revealed that Ether, EtOAc fractions and hydroxybenzyl quercetin glycoside, hydroxybenzyl kaempferol glycoside, quercetin glycoside, kaempferol glycoside have significant antioxidative activity.

[PD2-42] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Antifungal Activity of Herbal Essential Oils against *Candida* spp.

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The antifungal activities of the essential oils from *Anthemis nobilis*, *Ciderus atlantica*, *Eukalyptus globulus*, *Juniperus communis*, *Lavandula angustifolia*, *Pelargonium graveolens*, *Pogestemon patchouli*, *Rosmarinus officinalis*, *Styrax tonkinensis*, and *Thymus vulgaris* which have been recommended for the treatment of microbial infections in aromatherapy and complementary medicines, were tested against *Candida* spp. by broth dilution method and disk diffusion test.

[PD2-43] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

α -Glucosidase Inhibitory Activity of Tannins from the Fruits of *Rubus coreanum*

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Inhibitory activity assay of α -glucosidase on tannins, pedunculagin and 2,3-(S)-HHDP-D-glucose, (+)-catechin, (-)-epicatechin and procyanidin B4 which were isolated from the fruits of *Rubus coreanum* used as a tonic in Korea, were performed as a research to find out anti-diabetic principle from natural product. This study showed that a part of the hypoglycemic activity of tannins is based on α -glucosidase inhibitory activity.

[PD2-44] [04/19/2002 (Fri) 10:00 - 13:00 / Hall E]

Monoamine Oxidase Inhibitory Component from *Lithospermi Radix* (II)

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Monoamine oxidase(MAO) [EC 1.4.3.4] is a mitochondrial enzyme responsible for the catabolism of biogenic amines, including serotonin, norepinephrine, and dopamine. Thus, MAO activity might play important roles in some pathological states of central nervous system diseases such as depression, alcoholism and schizophrenia. To investigate the potential antidepressant activity, we had screened medicinal plants to search for MAO inhibitory compounds. By the screening results, we discovered that the MeOH extract of *Lithospermi Radix* showed high inhibition against MAO. According to the activity-guided fractionation, MAO inhibitory compound was isolated from Hexane fraction. Compound 1 showed significant

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]

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

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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-tetrazolium 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

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The MeOH ext., CH₂Cl₂Frac., EtOAc Frac., n-BuOH Frac., and H₂O 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 sibiricus*, *Panax ginseng*, *Paeonia lactiflora*, *Poncirus trifoliata*, *Cnidium officinale*, *Cyperus rotundus*, *Corydalis ternata* showed significant inhibitory effects on Cyp 1A1/2, 2B1/2, 2E1. The IC₅₀ 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

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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-