designed at the regions which are highly conserved among known cytochrome P_{450}s. One of these domains, close to the C-terminal end of the protein, is involved in binding the cytochrome P_{450} heme group. This domain contains the highly conserved sequence ExxGxxxCxG which may be regarded as a fingerprint for cytochrome P_{450} proteins. PCRs using these primers amplified the core fragment which the presence of two cytochrome P_{450}-dependent monooxygenase cDNA fragments M13M4-1 and M13M4-2. Those two cDNA fragments exhibited 79% amino acid identity to each other. Sequence comparison of those cDNA fragments with other cytochrome P_{450}s showed a high level of similarity. Specific amplification of each cDNA fragments by 3'-Rapid Amplification cDNA Ends (RACE) has been carried out to obtain the whole sequences of cytochrome P_{450}-dependent monooxygenase cDNA.

[PD2-30] [10/17/2002 (Thr) 09:30 - 12:30 / Hall C]

A specific butyrylcholinesterase inhibitor from the fruits of Evodia officinalis

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Neuroscience and molecular biology studies show that inappropriate butyrylcholinesterase (BuChE) activity as well as acetylcholinesterase (AChE) activity increases the risk and/or progression of Alzheimer's disease. BuChE may also regarded to participate in the transformation of Abeta (β-amyloid) from an initially benign form to an eventually malignant form associated with neuritic tissue degeneration and clinical dementia.
For the purpose of searching for the new classes of BuChE inhibtors which could be employed as an alternative therapy for the treatment of senile dementia or other neurodegenerative disease, we have recently evaluated the inhibitory effect of plant extracts on the horse serum butyrylcholinesterase (BuChE) over 80 species of Korean medicinal plants.
Among the tested materials, the MeOH extract of Evodiae Fructus, Coptidis Rhizoma, Phellodendri Cortex and of Zedoariae Rhizoma were found to exhibit a significant inhibition upon the BuChE in a dose dependent manner, respectively. The extensive bioassay-guided fractionation process with the MeOH extract of Evodiae Fructus finally yieded an alkaloidal component, evodiamine as a specific BuChE inhibitor together with other alkaloids which demonstrated a significant inhibition upon both on AChE and on BuChE.

[PD2-31] [10/17/2002 (Thr) 09:30 - 12:30 / Hall C]

Antioxidant compounds from the twig of the *Morus alba* L.

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Abstract - The MeOH extract of the twig of *Morus alba* L. (Moraceae) inhibited strong lipid peroxidation activity. Five antioxidative compounds were isolated through activity-guided fractionation, and identified as 6-geranylapigenin (1), 6-geranylnorartocarpetin(2), resveratrol (3), oxyresveratrol (4), quercetin (5) by physicochemical and spectrometric methods. In order to evaluate the antioxidant effect of these compounds, the lipid peroxidation inhibitory activity test were performed. Compounds 1-5 showed greater activity than tocopherol.

[PD2-32] [10/17/2002 (Thr) 09:30 - 12:30 / Hall C]

Inhibition of HIV-1 Protease by isoflavonoids from *Erythrina senegalensis*

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Eight compounds were isolated from the MeOH extracts of *Erythrina senegalensis* for HIV-1 protease inhibitors. Their structures were elucidated as eight isoflavonoids by spectroscopic analysis. These compounds showed dose dependent inhibitory activities on HIV-1 protease with IC_{50} values from 0.5 to 30.0 μM.

[PD2-33] [10/17/2002 (Thr) 09:30 - 12:30 / Hall C]

Xanthorrhizol inhibits pro-inflammatory mediators in mouse macrophage cells

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Prostaglandins (PGs) and nitric oxide (NO) are essential to maintain homeostasis and defense systems in human beings. However, overproduced PGs and NO by inducible cyclooxygenase (COX-2) and inducible nitric oxide synthase (iNOS), respectively, cause tissue damages, chronic inflammation, and carcinogenesis. In this view, the potential COX-2 or iNOS inhibitors have been considered as anti-inflammatory or cancer chemopreventive agents. In this study, we investigated the potential capacities of xanthorrhizol, a sesquiterpenoid isolated from the rhizome of *Curcuma xanthorrhiza*, as anti-inflammatory or cancer chemopreventive agent. Xanthorrhizol exhibited potent inhibitory activities against LPS-induced prostaglandin E_2 production (IC_{50} = 0.9 μM) and nitrite formation (IC_{50} = 4.6 μM) in cultured RAW264.7 cells. Using western blot and RT-PCR analysis, xanthorrhizol showed the suppression of COX-2 and iNOS protein expression, and COX-2 mRNA expression in a dose-dependent manner. In addition, xanthorrhizol also suppressed matrix metalloproteinase-2 (MMP-2) mRNA expression in human fibrosarcoma cells, and possessed growth inhibitory activities in colon cancer cells. These findings suggest that xanthorrhizol might be a potential lead candidate for anti-inflammatory or cancer chemopreventive agent.

[PD2-34] [10/17/2002 (Thr) 09:30 - 12:30 / Hall C]

Antioxidative activity of compounds from cultivated Phellinus linteus

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Phellinus linteus has been used as anti-tumor and immuno stimulating agents in folk remedies. From precipitate of MeOH ex. by activited guided fractionation, 5,8-epidioxy ergosta-6,22-dien-3ol, palmitic acid, linoleic acid, and methyl linolate, 3,4-dihydroxybenzoic acid methylester and 4-(3'4'-Dihydroxyphenyl)-3-butene-2one were isolated. DPPH method was used to examine of antioxidative activity of the isolated compounds. As the result, 3,4-dihydroxybenzoic acid methylester, and phenolic compound, 4-(3'4'-Dihydroxyphenyl) -3-butene-2one were found to be a scavenger of 1,1-diphenyl-2-picrylhydrzyl radical.

[PD2-35] [10/17/2002 (Thr) 09:30 - 12:30 / Hall C]

In vitro antioxidant triterpenoids from *Prunus serrulata* var. *spontanea*

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