

designed at the regions which are highly conserved among known cytochrome P₄₅₀s. One of these domains, close to the C-terminal end of the protein, is involved in binding the cytochrome P₄₅₀ heme group. This domain contains the highly conserved sequence ExxGxxxCxG which may be regarded as a fingerprint for cytochrome P₄₅₀ proteins. PCRs using these primers amplified the core fragment which the presence of two cytochrome P₄₅₀-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 P₄₅₀s 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 P₄₅₀-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*

Kim YoungSup[○], Kim JeoungSeob, Kim SeongKie, Heor Junghee, Lee WooLak, Lee BongHo, Choi ByoungWook, Ryu Geonseek, Park EunKyung, Ryu ShiYong

Korea Research Institute of Chemical Technology:Department of Chemical Technology Hanbat National University

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 be regarded to participate in the transformation of Aβ (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 inhibitors 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 yielded 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.

Jin WenYi[○], Na MinKyun, An RenBo, Lee HyunYong, Bae KiHWan

College of Pharmacy, Chungnam National University, Taejeon 305-764

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-geranylapiogenin (1), 6-geranylroscartocarpetin(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*

Lee JiSuk[○], Ma Chaomei, Hattori Masao, Oh WonKeun, Ahn JongSeog, Kim YongHae, Tanyi MbaforJ., Wandji