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SCREENING OF *IN VITRO* INHIBITORY EFFECTS OF 15 HERBAL MEDICINES ON CYP450 ISOFORMS

Shon JH, Kim MJ, Park JY, Yoon YR, Chun BH*, Shin JG

Dept. of Pharmacol. Coll. of Med., Inje Univ. and Clin. Pharmacol.
Center, Pusan Paik Hosp., *Dept. of Pathol., Coll. of Oriental Med.,
Wonkwang Univ., Pusan and * Icksan.

Traditional herbal medicines(HM) are frequently taken in combination with conventional medications in Korea, but few reports have been addressed to herb-drug interaction. We assessed the inhibitory potential of 15 commonly used HMs in Korea on CYP450 isoforms. Upto 1000ug/ml of freeze-dried water extracts of following HMs were tested for the inhibition of phenacetin O-deethylation (CYP1A2), tolbutamide 4-methylhydroxylation (CYP2C9), dextromethorphan O-demethylation (CYP2D6), s-mephenytoin 4-hydroxylation (CYP2C19), midazolam 1-hydroxylation (CYP3A4), and chlorzoxazone 6-hydroxylation (CYP2E1) after incubations in human liver microsomes: *Radix Glycyrrhizae*, *Radix Ginseng*, *Radix Dioscoreae*, *Fructus Lycii*, *Herba Leonuri*, *Radix Salviae Miltiorrhizae*, *Radix Angelicae*, *Semen Persicae*, *Rhizoma Atractylodis*, *Radix Morindae*, *Radix Rehmanniae*, *Tuber Liriopis*, *Herba Epimedii*, *Poria Cocos*, and *Eucommia Ulmoides*.

Several herbal remedies including *Herba Epimedii*, *Radix Glycyrrhizae*, and *Herba Leonuri* showed significant inhibition on one or more CYP450 isoforms. *Herba Epimedii* was the potent inhibitor of most CYP isoforms (IC_{50} -104.8 μ g/ml on CYP2E1, 128.7 μ g/ml on CYP3A4, and 110.9 μ g/ml on CYP2C9) among tested herbal extracts. Even though the concentrations of herb components in plasma are not known well, some herbs are expected to cause significant drug-herb interactions when we consider that the usual dose of herbs are around 2g or more (on the basis of freeze dried extract).