

Ki-Hwan (Shen-Qi-Wan, SKH) have been used for various kinds of deficiency syndromes, such as 'blood', 'qi', and 'yang', respectively. The objects of this study were to determine the effects of water extracts of three different kinds of traditional Chinese medicine, SMT, BJIKT, and SKH, on the anxiolytic and memory activities in the elevated plus-maze test and to clarify the differences among 'blood', 'qi', and 'yang'. The water extracts of SMT, BJIKT, and SKH were orally administered to male rats or mice, at 1.0 g/kg for 10 days. All rats were subjected to behavioral tests for the anxiolytic activity and all mice for the memory test at 10 days. The SMT for the 'blood' had no significant effects on the first time entry to the closed arms and times spent in the open arms at any test times. However, both BJIKT and SKH prolonged the first time entries to the closed arms and also times spent in the open arms ( $p < 0.05$ ). In the memory test, SMT only ameliorated the scopolamine (5 mg/kg)-induced learning deficit in mice. From these findings, it can be speculated that the different anxiolytic and memory effects in the elevated plus-maze test may be come from the meanings of 'qi', 'blood', and 'yang' in oriental diagnostics though the cases are restricted. [Supported by the Kyung Hee University Grant 2000-1U0100010]

Poster Presentations – Field D4. Analytical Chemistry

[PD4-1] [ 04/19/2001 (Thr) 13:30 – 14:40 / Hall 4 ]

**Determination of the metoprolol enantiomers in human urine by gas chromatography/mass spectrometry**

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A method for the stereoselective assay of R- and S-enantiomers of metoprolol in human urine was developed using gas chromatography/mass spectrometry with selected-ion monitoring. The method involved purification by liquid-liquid extraction and derivatization with N-methyl-N-(trimethylsilyl) trifluoroacetamide (MSTFA) to form O-silyl ethers followed by subsequent chiral derivatization with (+)- $\alpha$ -methoxy- $\alpha$ -(trifluoromethyl)phenylacetyl chloride to form diastereomeric amide. The reaction is selective and rapid, and diastereomeric derivatives were separated by gas chromatography. Quantitation was performed by selected-ion monitoring quasi-molecular ions of the diastereomers on the electron impact ionization method. The sensitivity, specificity, accuracy and reproducibility of the method were demonstrated to be satisfactory for application to pharmacokinetic studies of metoprolol enantiomers.

[PD4-2] [ 04/19/2001 (Thr) 13:30 – 14:40 / Hall 4 ]

**Direct enantiomer separation of quinolones including gemifloxacin**

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