

cyclopropanecarboxylic acid with chrysin in organic solvent, and its structure was identified by NMR, MS, UV, IR etc. We also investigated the physico-chemical properties, anti-diabetic effect and set up the quantitative analytical method of this compound. The correlation coefficient of calibration curve on this compound was approximately 0.9999 by absorption spectrophotometry. And, this study was carried out to investigate the hair-growth effect of chrysin derivative to the black mouse (C57BL/6). When this derivative in ethanol solution was administered to the back of mouse by method of skin paste, this derivative promoted the hair growth of mouse.

[PD4-3] [ 10/19/2000 (Thr) 15:00 - 16:00 / [Hall B] ]

### **Enantiomeric purity test of S-(+)-ketoprofen by <sup>1</sup>H-NMR using (-)-cinchonidine**

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The enantiomeric purity of S-(+)-ketoprofen was determined in a simple and reliable manner by <sup>1</sup>H-NMR spectroscopy. The enantiomeric resonances of ketoprofen were effectively resolved in CDCl<sub>3</sub> solution by the addition of the chiral solvating agent, (-)-cinchonidine. By monitoring the spectral changes of the resonance signals for the enantiomeric α-methyl protons, the experimental condition in terms of chiral solvating agent to substrate molar ratio was optimized. From the integration of the area under the enantiomeric α-methyl proton resonances, the relative concentration of two enantiomers was determined. The analysis of synthetic enantiomeric mixtures of ketoprofen by the proposed NMR method resulted in assay values that agreed closely with the known quantities of each enantiomer in the mixture tested.

[PD4-4] [ 10/19/2000 (Thr) 15:00 - 16:00 / [Hall B] ]

### **Screening of natural products for toxic aromatic amino acids by high performance capillary electrophoresis**

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Many toxic nonprotein amino acids are found in various plants along with protein amino acids in their free forms. Therefore, accurate screening for neurotoxic nonprotein amino acids in plants has become important. An efficient capillary electrophoretic (CE) profiling and screening method was developed for the simultaneous determination of 4 protein amino acids and 22 toxic nonprotein amino acids containing aromatic moiety in free forms. Water extraction combined with solid-phase extraction in cation-exchange mode was employed for the selective isolation of free amino acids from toxic plants. The recovered amino acids were analysed by capillary electrophoretic profiling method using dual CZE and MECC run buffer system. Migration orders of all amino acids on the two run buffers were very different and migration times (t<sub>M</sub>) measured were thus very characteristic of each aromatic amino acid, enabling cross-check for each amino acid. Optimized extraction and analysis condition were applied to natural products including *mimosa pudica* L.. Present dual run buffer CE profiling system appears to be potentially useful in the rapid screening for toxic aromatic nonprotein amino acids in foods and natural products.

[PD4-5] [ 10/19/2000 (Thr) 15:00 - 16:00 / [Hall B] ]