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 1H-NMR using (-)-cinchonidine

Park C, Kim JH, Kim KH

College of Pharmacy, Kangwon National University

The enantiomeric purity of S-(+)-ketoprofen was determined in a simple and reiable manner by 1H-NMR spectroscopy. The enantiomeric resonances of ketoprofen were effectively resolved in CDCl3 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

Kim KR, Kim A, La S*, Ahn S, Kim JH*

College of Pharmacy, Sungkyunkwan University *Department of Biotechnology, College of Engineering and Bioproduct

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 (tM) 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]]

Quantitation of Mevilonic acid in human plasma by HPLC

Oh HS, Park DY, Kim YK, Seo SH, Hong SP, Lee KT

College of Pharmacy, Kyung Hee University, Seoul 130-701, Korea

Simple and precise high-performance liquid chromatographic(HPLC) assay developed and validated for the determination of a HMG-Co A reductase inhibitor, lovastatinTM and its active metabolite(Mevinolinic acid) in human plasma. The internal standard and analyte were extracted solid phase extraction using Sep-Pak Catridge. Samples were analyzed by reversed-phase HPLC using Capcell-Pak C18 column with ultraviolet detection at 238 nm. The quantitation limit of mevinolinic acid was 2ng/ml and the calibration curve was linear over range of 0.002-0.05 ㎍/ml (r2>0.99). In human plasma, intra- and inter-assay accuracy ranged from 97.07 to 103.33% and 98.72 to 104.53%, respectively. The average recoveries were similar(80%) for mevinolinic acid and methylmevinolinic acid. The method described has been successfully applied to the quantificatin of mevinolinic acid in about 1000 human plasma samples over six-month period.

[PD4-6] [10/19/2000 (Thr) 15:00 - 16:00 / [Hall B]]

MICROBORE HIGH PERFORMANCE LIQUID CHROMATOGRAPHIC ANALYSIS OF LOVASTATINIC ACID IN HUMAN SERUM WITH COLUMN -SWICHING

Baek SK°, Kim JS, Lee JS, Lee HY, Park EJ, Sohn DH, Lee HS

College of Pharmacy, Medical Resources Research Center, Wonkwang University, Iksan 570-749, Korea

A fully automated semi-microbore high performance liquid chromatographic method using triple column switching was developed for the analysis of lovastatinic acid, an active metabolite of lovastatin from human serum samples obtained after oral administration of lovastatin tablet. Serum samples (120㎕) were directly injected onto a Capcell pak MF ph-1 column (20 x 4.0 mm I.D.) where lovastatinic acid was separated from serum components and lovastatinic acid fraction was transferred into an intermediate column (35 x 2.0 mm I.D.) using 5 % acetonitrile in phosphate buffer (30 mM, pH 6.86) for deproteinization and concentration. The main separation was performed on a semi-microbore C18 column (250 x 1.5 mm I.D.) using linear gradient elution with solvent A (5 % acetonitrile in phosphate buffer (30 mM, pH 6.86)) and solution B (70 % acetonitrile in 0.2 % phosphoric acid). The method showed excellent sensitivity (limit of quantitation : 2 ng/ml) and good precision(C.V. 8.2 %), and shortened total analysis time per serum sample (55 min). The calibration curve was linear (r2 0.999) over the concentration range 2-100 ng/ml. The applicability of the assay method was proved in the bioequivalence test of two commercial lovastatin tablets.

[PD4-7] [10/19/2000 (Thr) 15:00 - 16:00 / [Hall B]]

The Contents of Preservations in Commercial Drugs

Myoung NH°, Chae YZ, Song YM, Hwang IS, Lee GM and Shin JY

Seoul Metropolitan Government Research Institute of Public Health and Environment

This study was performed to analyze the content of preservatives in commercial drugs. 159 of drugs kinds were collected from 1998. 1 to 1999. 12 in Seoul area.
The results were as followes :