fractions of n-hexane and ethyl acetate induced rGH level up to 3.63±1.28 fold ($p<0.01$) and 1.86±0.23 fold ($p<0.05$) of the basal level, respectively. Unfortunately, most the components used above did not induce the release of rGH in the culture. *In vivo* study, T_{max} was 10 min after administration of 10 μg/kg of rGHRH however T_{max} of GR was 30 min and the peak height not significant. Further studies using other natural products are in progress. (supported by a grant, #PF 002201-01, from Plant Diversity Research Center of 21st Century Frontier Research Program, Korea)

Poster Presentations - Field D4. Analytical Chemistry

[PD4-1] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Simultaneous determination of nalbuphine and methamphetamine in drug abuser's urine

Park MeeJung°, Choi WhaKyung, Choi SangKil, Son HaengJa, Lim MiAe, Chung HeeSun

Dept of Forensic science, National Institute of Scientific Investigation

Because people who take more than two drugs have increases, a simple and sensitive method for the simultaneous analysis of amphetamine, methamphetamine and nalbuphine in urine was developed. After alkalinization of the urine samples with 6 N-NaOH, the analytes were extracted using ethyl acetate, derivatized with MSTFA : TSIM : TMCS (= 100 : 2 : 5) prior to gas chromatography-mass spectrometry(GC-MS) analysis with selected ion monitoring. Ions 116, 131, 191 for amphetamine-TMS, 130, 91, 206 for methamphetamine-TMS and 573, 428, 518 for nalbuphine-TMS were selected respectively. The first of the ions listed for each compound were used for quantification. Methoxyphenamine was used as the internal standard. Recoveries were higher than 90% for three drugs and limits of detection were 5, 10 and 20 ng/ml for amphetamine, methamphetamine and nalbuphine, respectively. The cut-off level were set at 250 ng/ml for amphetamine and methamphetamine, and 50 ng/ml for nalbuphine. The method was linear from 50 ng/ml up to 1 μg/ml for all analytes. All of these data recommend the applicability of the method for simultaneous analysis of methamphetamine and nalbuphine in urine samples.

[PD4-2] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Chiral separation of β-agonists after derivatization with a new chiral derivatization agent, GATC

Min Kyeong Il°, Ko Mi Young, Kim Kyeong Ho

College of Pharmacy, Kangwon National University

Several β-agonists were investigated for the possible separation of the enantiomers by reversed-phase high-performance liquid chromatography after derivatization with a new chiral derivatization agent, GATC. The derivatization proceeded quantitatively within 1 h at room temperature. The corresponding diastereomers were well resolved an ODS column with acetonitrile-acetate buffers a mobile phase and monitored at UV 254nm. The optimization of the

derivatization procedure (concentration of GATC, reaction temperature and time) was investigated.

[PD4-3] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Determination of meloxicam in human plasma by semi-micro high -performance liqiud chromatography.

Park Chang Hun°, Kim Hohyun, Lee Hee Joo, Han Sang Beom

BioCore Co. Ltd.; Seoul Medical Science Institution(SCL)

This study describes a simple and sensitive semi-micro HPLC method with UV detection and direct deproteinization. The plasma protein was precipitated using perchloric acid (60%) and the supernatant was directly injected onto the semi-micro HPLC system. The separation was achieved on a C18 (25 mm X 2.0 mm I.D) analytical column with a mobile phase of sodium acetate buffer (pH 3.5, 50 mmol) - acetonitrile (60:40, V/V). The retention time observed for meloxicam and internal standard (piroxicam) were 4.6 min and 3 min, respectively. The column effluent was monitored by UV detection at 355 nm. The method was linear over the concentration range 20-1500 ng/㎖ with correlation coefficient of 0.999. The lower limit of quantification (at signal-to-noise ratio S/N=10) was 20 ng/mL. This method showed good precision (intra-day CV (%) ≤3.010 , inter-day CV(%) ≤7.329) and accuracy (101.1-109.4%). The present method was successfully applied to the pharmacokinetic study of meloxicam in man.

[PD4-4] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Simultaneous Chiral Discrimination of Nine Non-Steroidal Antiinflammatory Drugs by Cyclodextrin-Modified Capillary Electrophoresis in Normal and Reversed Polarity Modes

Kim Jiyung°2, La Sookie1, Kim JungHan2, Kim KyoungRae1

College of Pharmacy, Sungkyunkwan University, Suwon, Korea1;Department of Biotechnology,Yonsei University, Seoul, Korea2

Simultaneous enantioseparation of nine racemic non-steroidal antiinflammatory drugs (NSAIDs) for their accurate chiral discrimination was achieved by cyclodextrin (CD) modified capillary electrophoresis in the normal polarity (NP) mode and in the reversed polarity (RP) mode. The NP mode employed neutral tri-O-methyl-β-cyclodextrin (TMβCD) as a selector dissolved in MES buffer (pH 6.0). The RP mode used a mixture of neutral TMβCD and slightly charged carboxymethyl-β-CD as the dual selectors dissolved in phosphate buffer (adjusted to pH 3.0 with triethanolamine) containing hexadimethrine bromide. The present NP and RP modes were complements each of the other for the simultaneous enantiomeric purity test of ibuprofen, ketoprofen and flurbiprofen, and also for the chiral separation of ibuprofen and its metabolites in urine.

[PD4-5] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

A GC analytical method of phthalates in plasticized blood component preparations