derivatization with MSTFA, using 1 ml of serum obtained from volunteers orally taken 50 mg MT. MT showed good resolutions in this conditions and no significant interfering peaks were observed. The detection limit is less than 5 ng/ml. A good linearity (r >0.9996) was obtained in the range of 5-250 ng/ml MT. Intra-day accuracy bias and precision (CV%) were 0.39-8.01% and 2.76-12.56% and inter-day accuracy bias and precision were 0.42-7.99% and 2.29-17.69%, respectively. The developed method was applied on the pharmacokinetic study of MT after oral administration (50 mg MT) to 8 healthy human volunteers. The principal pharmacokinetic parameters resulted in 275.2 ± 126.5 ng.hr/ml of $AUC_{0\rightarrow 24hr}$, 95.9 ± 67.1 ng/ml of C_{max}, 1.13 ± 0.79 hr of T_{max}, 0.164 ± 0.034 hr^{-1} of K_e, and 4.39 ± 0.90 hr of $t_{1/2}$. This data indicate that the method is suitable for the studies of clnical pharmacokinetics of methyltestosterone and its analogues (This work was supported by the Korea Food and Drug Administration Grant, KFDA-03142-EQI-504).

[PE2-10] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Bioequivalence Assessment of Shinpoong "Dompil?" Tablets Containing Domperidone Maleate in Healthy Korean Volunteers

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The bioequivalence of two tablet formulations of 12.72 mg domperidone maleate (Shinpoong "Dompil?" tablets vs. Janssen Korea "Motilium-M?" tablets) was assessed in healthy Korean volunteers after oral administration in a randomized crossover study. Blood samples were collected at specified time intervals, and plasma concentration was measured as the amount of domperidone base using a validated HPLC method. The pharmacokinetic parameters of $AUC_{0\rightarrow 48}$, C_{max}, T_{max} and $t_{1/2}$ were determined from plasma concentration-time profile of two formulations. Any significant statistical differences were not observed between these two formulations. On the evaluation of bioequivalence according to Korea Food and Drug Administration Guideline, 90% confidence limits after logarithmic transformation fell within the acceptable range (log 0.8 ~ log 1.25). Based on these data, it can be concluded that two domperidone maleate tablets showed comparable pharmacokinetic profiles, which means that the Shinpoong "Dompil?" tablet is bioequivalent to the Janssen Korea "Motirium-M?".

[PE2-11] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Bioequivalence of Ersteine™ Capsule to Erdos™ Capsule(Erdosteine 300 mg)

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The purpose of the present study was to evaluate the bioequivalence of two Erdosteine capsules, Erdos™(Dae Woong Pharmaceutical Co., Ltd.) and Ersteine™(Dae Won Pharmaceutical Co., Ltd.), according to the guidelines of Korea Food and Drug Administration (KFDA). Twenty-four normal male volunteers, 23.88 ± 2.89 year in age and 68.50 ± 7.71 kg in body weight, were divided into two groups and a randomized 2×2 cross-over study was employed. After three capsules containing 300 mg of erdosteine per capsule were orally administered, blood was taken at predetermined time intervals and concentrations of erdosteine in plasma were determined using HPLC. Pharmacokinetic parameters such as AUC_t, C_{max} and T_{max} were calculated and ANOVA test was utilized for the 7statistical analysis of the parameters using logarithmically transformed AUC_t, and C_{max}, untransformed T_{max}. There were no sequence effects between two formulations in these parameters. The 90% confidence intervals for the log transformed data were acceptance range of log0.8 to log1.25(e.g., log0.9062~log1.0758 and log0.8918~log1.0938 for AUC_t and C_{max}, respectively). The major parameters, $AUC_t$and C_{max}, met the criteria of KFDA for bioequivalence indicating that Erdos™ capsule is bioequivalent to Ersteine™ capsule.

[PE2-12] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Study on the Protein Binding of Anti-cancer Agent, 2"-O-benzoylcinnamaldehyde, using Ultrafilteration and Flurescence Spectrometry

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The compound of 2"-O-benzoylcinnamaldehyde(CB-ph) is a derivative of 2"-hydroxycinnamaldehyde whcih is a methanol extract of cinnamomum cassia blume. It"s a new anti-cancer agent which has been showed to inhibit the growth of various tumor cells in vitro and in vivo. In order to investigate the effective drug concentration and bio-distribution of CB-ph, the plasma protein binding was studied. In this study, the degree of the binding of Cb-ph to various serum proteins, the binding parameters, the binding site of CB-ph in human serum albumin, and the effect of some extensive protein-binding drugs on the protein binding of CB-ph in human serum albumin were investigated respectively by ultrafilteration and fluorescence spectrometry. From the results, it was found that CB-ph was a highly protein binding drug to human serum albumin, albumin was the major binding protein of CB-ph, and CB-ph bound especially to site I on human serum albumin according to an one-class model. The binding costant (Ka) was 55,377M^{-1} and the number of binding site of CB-ph to HSA was 0.6629 by Scachard plots, respectively. The protein bound fraction of CB-ph in HSA increased with an increase of HSA concentration. However, the binding of CB-ph was independent of incubation temperature. If CB-ph and site-I binding drugs, such as warfarin, were administered together, it was necessary to control the drug dosage regimen because of remarkable increasing of the protein unbound fraction of drug resulted from the protein binding displacement.

[PE2-13] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Pharmacokinetics of eupatilin, an active componets of Stillen?, a new antigastritic agent, in rats

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The pharmacokinetics of eupatilin (an active components of Stillen®, a new antigastritic agent) were investigated using UV-HPLC method. The quantitation limit of eupatilin was 10 ng/ml in plasma. After intravenous administration of eupatiln, 30 mg/kg to rats, the plasma concentrations of unchanged eupatilin declined rapidly with the mean terminal half-life of 0.101 hr. Total body clearance was 121 ml/min/kg, and fractions of dose excreted in urine and feces for 24 hr were only 2.5% and 0.919%, respectively. But hydrolysis of glucuronide conjugated form of eupatilin with β-glucuronidase, the mean terminal half life of eupatilin including glucuronide conjugated form was prolonged with 22hr and the fractions of dose excreted in urine for 24 hr was increased with the value of 15.9%. After oral administration of eupatilin, 30 mg/kg to the rats, the absolute bioavailability was only 3.87% even though including glucuronide conjugated form of eupatilin. GI residual % of dose as an intact drug at 24 hr after oral administration of eupatilin, 30 mg/kg to rats was 68.5%, and that of as including conjugated form was 90.8%. The large parts of eupatilin after oral administration were remained in gastrointestinal tract, an active site of drug.

[PE2-14] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Toxicokinetics of CJ-11555: Gender Difference and Minimum Accumulation

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Purpose: This study evaluated gender differences and extents of accumulation on chronic dose of CJ-11555 using rats. Method: 0, 10, 50 and 200 mg/kg/day of CJ-11555 (0.5% CMC) were orally administered to rats for 28 days and observed toxicokinetic parameters. Plasma concentrations were analyzed by LC-MS/MS Result: Exposure to CJ-11555 increased with the increase in dose level for both sexes. Mean concentrations at 10 and 50 mg/kg/day were generally similar on Days 1 and 28, but were generally higher on Day 28 than on Day 1 at 200 mg/kg/day. C_{max} and AUC_{0-24} values were generally slightly higher in females on both collection days. There were no marked (>2 fold) differences in C_{max} and AUC_{0-24} values on Day 28 compared to Day 1 (except for females administered 10 mg/kg/day). Following the administrations of 10, 50, and 100mg/kg/day, on Day 1, C_{max} and