plasma. The results of Tail-flick experiment and paw edema test showed that KPEG750 exhibited anlagesic and anti-inflammatory effect for extended period of time, when compared to those of ketoprofen. These results indicate that KPEG750 can be a promising NSAID prodrug with minimal side effect and extended pharmacological effect.

[PE1-8] [ 10/18/2002 (Fri) 13:30 - 16:30 / Hall C ]

## Enhanced Paclitaxel Bioavailability after Oral Administration of Paclitaxel Coadministered with Quercetin in Rats.

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The purpose of this study was to investigate the effect of quercetin on the bioavailability of paclitaxel orally coadministered in rats. Paclitaxel is reported to be metabolized by cytochrome p-450(CYP3A)in both the liver and epithelial cells of small intestine and also absorption of paclitaxel is inhibited by p-glycoprotein efflux pump in the intestinal mucosa. This resulted in poor orall bioavailability of paclitaxel. Area under the plasma concentration-time curve (AUC) of paclitaxel in combination with quercetin were significantly ($p< 0.01$) higher than those of control. AUCs of paclitaxel were increased dose-dependently in the dose range of quercetin. The half-life of paclitaxel with quercetin was prolonged significantly compared to that of control . Peak concentration of paclitaxel (Cmax) with quercetin was significantly increased ($p<0.01$) compared to control. Based on these results, it might be considered that bioavailability of paclitaxel coadministered with quercetin was significantly enhanced due to both inhibition of metabolism (CYP3A) and inhibition of p- glycoprotein efflux pump in the intestinal mucosa.

[PE1-9] [ 10/18/2002 (Fri) 13:30 - 16:30 / Hall C ]

## Iontophreotic delivery of vitamine-C-2-phosphate

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In order to develope an optimum formulation for iontophoretic delivery of vitamine-C-2 phosphate, we have prepared 3 different formulations using hydrophilic polymers, such as poloxamer, carbopol and HPMC and iontophoretic flux through skin from these hydrogel formulations was carried out. The effect of current density, drug concentration and current profile on flux was investigated. In-vitro flux study was performed at 36.5℃, using side-by-side diffusion cell. Full-thickness hairless mouse skin was used for this work. Skin was placed on diffusion cell and hydrogel formulation containing vitamine-C-2 phosphate (donor compartment) was applied on top of skin. The diffusion cell (receptor compartment) was filled with PBS buffer solution (pH 7.4). Cathode and anode were placed in the donor and receptor compartment, respectively. Rod-shaped Ag/AgCl electrode and plate-shaped SnCl2 electrode were used for experiment. Vitamine-C-2-phosphate was analysed by HPLC. Without current (passive), no flux was observed. Application of current increased the flux markedly, and this increase was proportional to the increased in current density. Flux also increased as the concentration of drug increased. Flux from aqueous solution showed higher rate than that from hydrogel formulations. Pulsed application of the current showed lower flux, when the donor compartment was aqueous solution. Further study on various factors affecting the flux is underway and the results will be presented.

[PE1-10] [ 10/18/2002 (Fri) 13:30 - 16:30 / Hall C ]

## THE RELATIONSHIP OF INTESTINAL ABSORPTION CLEARANCE AND PARTITION COEFFICIENT OF NINE BETA-BLOCKERS IN RATS