After 4-week treatment with control(23% protein diet) and PCM(5% protein diet)diets, the expression of P-gp in the liver was determined by Western blot.Also hepatic ATP level was measured.The canalicular transport of H^3-daunomycin and H^3-taurocholate measured. The pharmacokinetics of daunomycin,H^3-TBuMA, substrates of P-gp and C^{14}-TEA after intravenous infusion was also measured.
The expression of P-gp in the liver was suppressed(30-40% by Western blot analysis) and the hepatic ATP level was decrease in PCM rats. The kinetic analysis of the transport of H^3-daunomycin into cLPM vesicles revealed that the function of P-gp was decreased. Moreover, the biliary excretion was significantly decreased after intravenous infusion of daunomycin, this imples that hepatic ATP depletion may deteriorates hepatic activity of the P-gp,one of the hepatic ABC transporters.

[PE1-25] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]

Hydrolysis of coprecipitate from Coptidis Rhizoma and Scutellaria Radix by β-Glucuronidase

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Precipitation was formed during the preparation of decoction from the mixture of Coptidis Rhzoma and Scutellariae Radix. Berberin and baicalin were identified in coprecipitated products and these compoments were the active ingredients of two herbal medicine. The coprecipitated products were very slightly soluble in water and sparingly soluble in ethanol. The content of berberin and baicalin in the coprecipitated products were 26.8% and 23.1% but the content of active ingredients in supernatants were 0.3% and 0.7% respectively. For the purpose of hydrolyze the coprecipitate, some kinds of the intestine bacterias and these enzymes were tested and compared the rate of hydrolysis under various conditions. β-Glucuronidase from Escherichia coli hydrolyzed the coprecipitated product to berberin glucuronide and baicalein. The berberin glucuronide was absorbed rapidly in the small intestine of rats and maintained more higher serum level than the coprecipitated products.

[PE1-26] [10/19/2001 (Fri) 09:00 - 12:00 / Hall D]

Transport mechanism of berberine across Caco-2 cell monolayers

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Berberine, a quarternary isoquinoline alkaloid, is frequently utilized in the diarrheal treatment. In previous study, in vitro absorption of berberine across rat colonic segments was non-saturable and equal in both