

its subfractions, butanol fraction, n-hexane and H₂O fraction, by D-galactosamine induced hepatitis model. We analyzed s-GOT and s-GPT activities. In this experiment, 70% ethanol extract showed the hepatoprotective effect at the dose of from 25 to 200 mg/kg, especially maximum effect was observed at the dose of 50 mg/kg. In addition, acute hepatitis was ameliorated by butanol fraction. However, it was aggravated by hexane fraction. Acute oral toxicity test was also performed with the butanol and hexane subfraction of Jejo. We administrated orally doses of 1.25, 2.5 and 5 g/kg of both fractions in ICR mice. In these experiments, there were no death, clinical changes and abnormal autopsy finding. In acute intraperitoneal toxicity test, we administrated intraperitoneally doses of 0.25, 0.5 and 1.0 g/kg of both subfractions in ICR mice. There were no death and clinical changes. However, hexane fraction showed intraperitoneal adhesion in autopsy finding. In conclusion, these results suggested that ethanol extract of Jejo and butanol subfraction thereof contain the hepatoprotective components and hexane fraction have the toxic components of Jejo.

[PD3-14] [10/19/2000 (Thr) 15:00 - 16:00 / [Hall B]]

Anti-anemic effects of Sa-Mul-Tang (Si-Wu-Tang), a traditional chinese formulation, on phenylhydrazine-induced anemic rats.

Kim TH^o, Kwon YS, Lee JH, Yook CS and Ryu JH

Department of Oriental Pharmaceutical Science, College of Pharmacy, Kyung Hee University

Sa-Mul-Tang (Si-Wu-Tang, SMT), a kind of Chinese medicine, has been used for the hemato-deficient disease for hundreds of years. In this work, investigations on the anti-anemic activity of an aqueous extracts of SMT were undertaken in order to find the pharmacological basis for the ethnomedical use of the formulation. Three kinds of Angelicae species, such as *Angelica gigas*, *Angelica chinensis*, and *Angelica acutiloba*, were used for preparing the water extracts of SMT. Anemic model rats were induced by the treatment of phenylhydrazine (40 mg/kg/day, i.p.) for 4 days. After the treatment of phenylhydrazine, rats were divided into several groups for their different treatment of three kinds of SMT. Oral administration of SMT (1 g/kg/day) for 14 days did not affect any kinds of blood cell types compared with those of phenylhydrazine-treated group. However, the administration of SMT improved the erythrocyte deformability in phenylhydrazine-treated group ($p < 0.01$). Especially, these effect was high in the *Angelica chinensis* group. These results suggest that SMT has an ameliorative effect on blood rheology related to the blood stasis syndrome in oriental diagnostics. [Supported by Kyung Hee University Grant 2000-1U0100010]

[PD3-15] [10/19/2000 (Thr) 15:00 - 16:00 / [Hall B]]

Molecular authentication of Panax ginseng species by RAPD analysis and PCR-RFLP

Um JY, Chung HS, Kim HJ, Lee YM, Kim HM, Kim JJ

Dep. of Oriental Pharmacy, College of Pharmacy, Dep. of Anatomy, College of Medicine, Wonkwang University

In order to develop convenient and reproducible methods for identification of ginseng drugs at a DNA level, RAPD(Randomly amplified polymorphic DNA) and PCR-RFLP(PCR-Restriction fragment length polymorphism) analyses were applied within Panax species. To authenticate Panax ginseng among Chinese and Korean ginseng population RAPD analysis were carried out using 20 mer-random primer. The similarity coefficients among the DNA of ginseng plants analyzed were low, ranging from 0.197 to 0.491. In addition, using PCR-RFLP analysis, very different fingerprints were obtained within Korean ginseng plants. These results suggest that these methods are able to authenticate the concerned Panax species. Broader application of this approach to authenticate