in urine collected during 8 hrs after the drug administration.
CYP2D6 phenotype was determined from the ratio of dextromethorphan to dextrorphan. GC/MS was used to quantify dextromethorphan and its metabolites. For genotyping, mutant alleles of the CYP2D6 gene were identified.
Twenty-two subgects(37%) were homozygous for CYP2D6*10B, 22 subjects (37%) were heterozygous for this allele, while in 16 subjects(26%) no exone 1 mutation could be found. The frequency of CYP2D6*10B -allele containing the C188 →mutation was 55% of total subjects studied. Animal study showed the level of excreted dextrorphan was higher in female than male, incurring sex differences.

[PA4-11] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

The protective effects of propolis on hepatic injury and its mechanism

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Propolis (PP) is known to have several biological properties such as anticancer, antioxidative, antiinflammatory and antibiotic activities. The purpose of this study is to investigate the protective effects of PP on hepatotoxicity induced by acetaminophen (AA), and the mechanism of its hepatoprotective effect. In rat hepatocyte culture, pretreatment with PP (0.001, 0.01, 0.1, 0.2 and 0.4 mg/ml, 24 hrs) significantly decreased the cytotoxicity by AA (0.5 mM) in a dose-dependent manner. In mice, pretreatment with PP (10 and 25 mg/kg, p.o., 7 days) also decreased the mortality and the incidence and severity of hepatic necrosis induced by AA (400 mg/kg, i.p.). After treatment with PP for 7 days, the hepatic enzyme activities of cytochrome P450 monooxygenases (P450s), UDP-glucuronyltransferase, phenolsulfotransferase (PST), glutathione S-transferase (GST) were measured in both rats and mice. In rats, PP (50 and 100 mg/kg, p.o.) decreased the activities of P4502E1, but significantly increased the activities of GST and PST. In contrast, the activities of P4501A2, 2B1, 3A4 and 2E1 were dramatically inhibited, and activity of PST was significantly enhanced in mice treated with PP (10 and 25 mg/kg, p.o.). However PP had no effect on the activities of antioxidant enzymes in two species. These results suggest that PP has protective effect on hepatic injury, and that its effect may be explained by inhibition on phase I enzymes and induction of phase II enzymes.

[PA4-12] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

Developmental and Neurobehavioral Effects of Mycotoxin Fumonisin B1 in rats

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The objective of this experiment is to investigate neurobehavioral and developmental effects of fumonisin B1 (FB1) after prenatal FB1 administration in rats. FB1 (0.8 or 1.6 mg/kg) was orally exposed to pregnant rats during gestational days 13 to 20, and aqueous solution was administered to control group. Maternal and offspring body weights, physical landmarks of incisor eruption, eye opening, testes descending and vaginal opening, open field activity, running wheel activity, and complex maze performance were included as endpoints for developmental and neurobehavioral measurement. Maternal body weights were not significantly altered after FB1 exposure. Percentage of maternal weight gain difference between control and 1.6 mg/kg FB1 groups was about 4%. Pre- and post-weaning weight of offspring after prenatal exposure to FB1 was not significantly changed, suggesting that FB1 of 0.8 or 1.6 mg/kg doses did not cross the placenta. Significant gender difference in running wheel activity on postnatal days 57 to 63 and complex maze performance on postnatal days 75 to 78 was observed.