flavonoids such as genistein, kaempferol, daidzein, naringenin, and alkylphenols such as nonylphenol, 4-octylphenol and resveratrol also inhibited TCDD induced CYP1A1 expression like estrogen.
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[PA4-5] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

Toxicity test of new solubilizer for paclitaxel in Beagle dog

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Paclitaxel is currently administered i.v. as a slow infusion of a solution of the drug in an ethanol: cremophor EL: saline admixture. However, poor solubilization and toxicity are associated with this drug therapy. We have tried to develop a new surfactant for paclitaxel to improve efficacy and reduce toxicity of solubilizer. We performed the hemolysis test for chemicals which passed the paclitaxel-stabilizing test and 5 chemicals showing relatively low hemolytic effects were tested for a single dosing toxicity test. And then aceporol 330, which showed the most favorable result, was introduced to the repeated dosing toxicity tests in mouse and beagle dog. According to data based on body weight, mortality, dissection, homological test and biochemical test, Aceporol 330 exhibited much more reduced toxicity than cremophor EL.

[PA4-6] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

Gender-Related Difference in Organophosphate Pesticide Terbufos Neurotoxicity in Rats: More Vulnerability in Female than Male Rats

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An organophosphate pesticide terbufos (S-t-butyl thiomethyl O,O-diethyl phosphorodithioate, TBF) has extensively used as an insecticide. A sexual dimorphism in the cholinergic innervation between both sexes was reported in certain species. However, a sexual dimorphism on TBF neurotoxicity was not reported and remains unclear. Objective of the work is to investigate whether TBF exerts a sexual dimorphism on TBF neurotoxicity. TBF was orally administered to male and female rats, where female rats were received 0, 0.1, 0.4 and 0.8 mg/kg TBF for 2 consecutive days and male rats 0, 0.1, 0.5 and 1 mg/kg TBF for 3 consecutive days. Body weights and mortality were measured. Brain (frontal cortex, cerebellum and entorhinal cortex) and liver tissues were dissected and blood was collected 24 hr after the last dose for measurement of neuropathy target esterase (NTE) and acetylcholinesterase (AChE) activity. Body weight was significantly changed at only 0.8 mg/kg TBF-treated group in female, but not male rats. Mortality was higher in female than male rats. NTE activity was significantly decreased in frontal cortex of female, but not male rats. In other brain regions, NTE activity was not changed in female or male rats. AChE activity was significantly decreased in frontal cortex, entorhinal cortex and liver of female rats given 0.4 and 0.8 mg/kg TBF. For male rats, AChE activity was significantly different from controls in frontal cortex and entorhinal cortex at only high dose (1 mg/kg TBF) group and in cerebellum of 0.5 and 1 mg/kg TBF-treated group. In conclusion, female rats were more vulnerable than male in alteration of body weight, mortality, NTE and AChE activity, suggesting that TBF neurotoxicity is highly related to gender-specific alteration of AChE and NTE activity.

[PA4-7] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]