

assay. Comet assay has been applied to the detection of DNA damage due to environmental toxic materials. In particular, this assay is a novel method to assess DNA single-strand breaks. In splenic lymphocytes, the administration of the ascorbic acid and combination with melatonin reduced the tail moment in the comets compared with that of the irradiated control group showed the different values according to the administration dose. In cases of two high dose administration groups, TM values showed lower than those of low dose administration ones. Combination administration of ascorbic acid and melatonin was more effective than single administration of ascorbic acid. In blood lymphocytes, TM values showed similar compared with the splenic ones. These results indicate that ascorbic acid have a little protective effects on the radiation induced DNA damage of the mouse splenic and blood lymphocytes when assessed by the Comet assay but this can be showed a little differences of radioprotective effects according to the administration doses and combination with other antioxidant like melatonin.

[PA3-5] [10/18/2002 (Fri) 09:30 - 12:30 / Hall C]

Changes of serum immunoglobulin in the subacute oral administration of Mancozeb

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Mancozeb, a polymeric complex of zinc and manganese salts of ethylene bisdithiocarbamate (EBDC), is used widely in agriculture as fungicides, and herbicides. Mancozeb has been reported to induce teratogenic and carcinogenic effect. But the immunomodulating effects of Mancozeb exposure have not been systemically evaluated. The purpose of this study was to investigate the effects of Mancozeb on immunoglobulin production. Mancozeb at dose of 250, 1000, 1500mg/kg b.w./day with or without OVA-antigen for 30 days were orally administered to female ICR mice. Mice were sacrificed and serum was collected on day 2 following administration of BPA for 30 days. Total IgG1, total IgG2a, total IgE, OVA specific IgG1, and OVA-specific IgG2a were determined and compared with those of non-treated mice. In the groups of Mancozeb with OVA antigen, total IgE, OVA-specific IgG1 and OVA-specific IgG2a were dose-dependently decreased. However, in mice treated with Mancozeb alone, OVA-specific IgG1, OVA-specific IgG2a, total IgG1, IgE, and IgG2a were not much altered. These results demonstrated the Mancozeb modulates the production of immunoglobulin.

[PA3-6] [10/18/2002 (Fri) 09:30 - 12:30 / Hall C]

Report on the trends of the Drug Abuse and the Mortalities related to Intoxication of Drug-Toxic Substances in the Central Area of Korea in 2001

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This presentation reports the trends of the drug abuses (DA) and the mortalities related to drug-toxicants (MDT) in the Central area of Korea in 2001. We surveyed the DA cases and MDT, which were requested to analyze the drug-toxicants in the Central district office of National Institute of Scientific Investigation. The detected drugs on DA cases were methamphetamine, marijuana, opiates, inhalants (toluene, butane, propane), dextromethorphan, carisoprodol, benzodiazepines, nalbuphine, fenfluramine, and miscellaneous in order of cases. Men are more liable to drug abuses than women, and the most common age group was 30s. Surveys of MDT shows that the detected toxicants are paraquat (herbicide), cyanide (rodenticide or insecticide), phosphamidon (insecticide), glyphosate (herbicide), doxylamine (sedative), methomyl (insecticide), dichlorvos (insecticide), benzodiazepines (anxiolytic), and miscellaneous in order of cases. Men's intoxications by the drug-