

Effects of Mancozeb on splenocyte proliferation and nitric oxide formation in vitro.

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Mancozeb, a polymeric complex of zinc and manganese salts of ethylene bisdithiocarbamate (EBDC), is used widely in agriculture as fungicides, insecticides, and herbicides. Mancozeb has been reported to induce teratogenic and carcinogenic effect. But the immunomodulating effects of Mancozeb exposure have not been systematically evaluated. To initiate investigation of effects on splenocyte proliferation and nitric oxide formation in vitro, we conducted mitogen-induced proliferation of splenocytes and nitric oxide production of peritoneal macrophages from mice in vitro. When peritoneal macrophages from normal mice were activated with LPS and IFN- γ in the presence various concentration of Mancozeb, Mancozeb suppressed nitric oxide production as dose-dependent manner. Also splenocytes proliferation to mitogen (Con A, LPS) was suppressed by Mancozeb with as dose-dependent manner.

[PA3-5] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

Effects of Mancozeb on the immunopathological parameters and plaque forming cells after acute exposure to mice.

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Mancozeb, a polymeric complex of zinc and manganese salts of ethylene bisdithiocarbamate (EBDC), is used widely in agriculture as fungicides, insecticides, and herbicides. The toxicological significance of the EBDC residues in food stems from the metabolite or degradation product ethylenethiourea, known to be carcinogenic and teratogenic in laboratory animals. The purpose of this study was to investigate the effects of Mancozeb on immunopathological parameters and plaque forming cell after acute exposure to mice. single oral administration of Mancozeb (2500, 5000, 10000mg/kg b.w.) to female ICR mice, weights of body and lymphoid organs, hematological parameters and the splenic IgM plaque forming cells (PFC) to SRBC were assayed. Body-, spleen- and thymus-weight were not significantly changed, liver weight was increased, and WBC was decreased by Mancozeb exposure. IgM PFC in splenocytes were slightly decreased, when Mancozeb was administered after SRBC-immunization.

[PA3-6] [04/18/2002 (Thr) 14:00 - 17:00 / Hall E]

Effects of Green Tea Catechins and (-)-Epigallocatechin Gallate on Rabbit Platelet Aggregation and Thromboxane B₂ Formation

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Green tea constituents, especially green tea catechins (GTC), exhibit a range of pharmacologic effects including anticarcinogenic activity and prevention of cardiovascular diseases. In this study, the effects of green tea catechins (GTC) and (-)-epigallocatechin gallate (EGCg), a major compound of GTC, on rabbit platelet aggregation and thromboxane B₂ (TXB₂) formation were investigated. GTC and EGCg significantly inhibited PAF-induced rabbit platelet aggregation. The IC₅₀ values for GTC and EGCg were 1.02 mg/ml and 1.20 mg/ml, respectively. In the PAF-receptor binding assay, neither GTC nor EGCg showed any inhibitory effects on the specific bindings of PAF to its receptor. GTC and EGCg also inhibited collagen-induced TXB₂ formation in human washed platelet.