P22 Biphenyl dimethyl dicarboxylate (DDB) affects drug metabolizing enzyme, CYP450 in rat liver.

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This study has been undertaken to examine the effect of biphenyl dimethyl dicarboxylate (DDB) on rat liver drug metabolizing enzyme in order to understand the mechanism of DDB on improving hepatic toxicity in rat liver. After DDB was administered into male rats for different periods of time, mRNA level of CYP1A1 and CYP2B1 was measured by polymerase chain reaction (PCR). DDB treatment resulted in increase in CYP2B1 mRNA level whereas there was no change in CYP1A1 mRNA level. This effect of DDB was time dependent reaching maximal level by 2-day treatment. DDB dose response study showed that 50mg/Kg DDB induced CYP2B1 mRNA to maximal level and DDB icreased CYP2B1 gene expression with dose-dependent manner. Based on studies of lipid peroxidation, serum ALT and AST levels and histopathologic examination showed DDB protection on CCl4 induced hepatotoxiccity.