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GENOTOXICITY STUDY OF SOPHORICOSIDE IN BACTERIAL AND MAMMALIAN CELL SYSTEM

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Sophoricoside was isolated as the inhibitor of IL-5 bioactivity from *Sophora japonica* (Leguminosae). It has been reported to have an anti-inflammatory effect on rat paw edema model. To develop as an anti-allergic drug, genotoxicity of sophoricoside was investigated in bacterial and mammalian cell system such as Ames bacterial test, chromosomal aberration assay and single cell gel electrophoresis (Comet) assay. In Ames test, sophoricoside of 5000 ~ 313 $\mu\text{g}/\text{plate}$ concentrations was not shown significant mutagenic effect in *Salmonella typhimurium* TA98, TA100, TA1535 and TA1537 strains. The cytotoxicity (IC_{80}) of sophoricoside was determined above the concentration of 5000 $\mu\text{g}/\text{ml}$ in Chinese hamster lung (CHL) fibroblast cell and L5178Y mouse lymphoma cell line. At concentrations of 5000, 2500 and 1250 $\mu\text{g}/\text{ml}$, this compound was not induced chromosomal aberration in CHL fibroblast cell in the absence and presence of S-9 metabolic activation system. Also in comet assay, DNA damage was not observed in L5178Y mouse lymphoma cell line. From these results, no genotoxic effects of sophoricoside observed in bacterial and mammalian cell systems used above.