

EXPLORATION OF ANTIMUTAGENIC PROPERTIES OF METHANOLIC EXTRACT OF LEAVES OF *DIPTERACANTHUS PATULUS* (JACQ.) NEES

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ABSTRACT

Mutations are the cause of innate metabolic defects in cellular systems, triggering morbidity and mortality in living organisms. The mutagens are involved in the initiation and promotion of several human diseases, including cancer. Approximately 60% of drugs currently used for cancer treatment have been isolated from natural products. The present study focuses on the investigation of antimutagenic effect of leaves of *Dipteracanthus patulus* (Jacq.) Nees by Ames Assay. The genotypes of the *Salmonella typhimurium* strains TA 98 and TA 1535 was confirmed by Histidine requirement, *rfa* Mutation, *uvrB* Mutation and Presence for R-Factor. The Toxicity Test indicated that the leaves of *Dipteracanthus patulus* were non toxic to *Salmonella typhimurium* strains. The Methanolic extract of Leaves of *Dipteracanthus patulus* was tested for their antimutagenic activity against the sodium azide (NaN₃) induced mutagenicity in the tester strains TA 98 and TA 1535. Methanolic extract of Leaves of *Dipteracanthus patulus* showed decrease in the number of revertants colonies against sodium azide induced mutagenicity by TA 98 and TA1535. The results of the present study indicated that Methanolic extract of leaves of *Dipteracanthus patulus* showed strong antimutagenic activity against the standard mutagen action.

KEYWORDS: *Dipteracanthus patulus*, *Salmonella typhimurium* Strains TA 98 and TA 1535, Antimutagenic Study