

Studies on the antibacterial and phytochemical activity of *Datura innoxia*

Preeti¹, Mukund Narayan² and Hem Raj Meena³

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ABSTRACT : In order to investigate the pharmacological activity of the aqueous and methanol extract of *Datura innoxia* an experiment was conducted. Extract of different parts of plant, leaves and fruit of *D. innoxia* was tested for their efficacy. Methanol and aqueous extracts were tested against five bacterial strains viz. *E.coli*, *P. putida*, *B.cereus*, *B.subtilus*, and *B.megaterium*. The antibacterial activity was determined by using disc diffusion method. Methanol and aqueous extracts were prepared as a stock solution of 300mg/ml. Methanol extract produced better result as compared to the aqueous extract, and inhibition observed was dose dependent. As concentration increases zone of inhibition also increases. Results of antibacterial activity were further compared with tetracycline. So, in future we can use the plant for making semi-synthetic medicines. As semi-synthetic drugs possess less side effects than synthetic drugs. Phytochemicals present in the plants are secondary metabolites which are produced by the plant and they possess anti-bacterial, anti-fungal and anti-oxidants activity. The phytochemical analysis of fruit, seed and leaves of the plant was done and the result showed that the antibacterial activity of *D. innoxia* sample was due to the presence of phytochemicals like alkaloids, flavonoids, steroids, tannins, saponins, and phenolic compounds.

Key Words : *Datura innoxia*, phytochemical, pharmacological activity, bacterial strains.