

# Toxicological Effect of Aqueous Seed Extract of *Datura Stramonium* on Liver of Experimental Rats

Muhammad Abubakar Madungurum

Sharda University Knowledge Park III Greater Noida, Uttar Pradesh, India

---

**Abstract**—*Datura stramonium* which is commonly called Jimsonweed in English originated in the Middle East but has since become a cosmopolitan plant that grows in temperate and tropical countries alike. It is often found growing as a weed between rubble in uncultivated spots and on road-sides. The toxicity of *Datura stramonium* has been locally and internationally reported. This is due to the alkaloids produced in the leaves, seeds, roots, and other parts of the plant which are very poisonous. Their ingestion can result in convulsion, coma, and even death. This research paper aimed at finding the potential liver toxicity of the plant's seed as its abuse among youths of this contemporary society is increasing at an alarming rate. The effect of daily administration of aqueous seed extract of *Datura stramonium* for two weeks on the serum activities of aspartate aminotransferase (AST), alanine aminotransferase (ALT) and alkaline phosphatase (ALP) as well as serum concentration of albumin was studied using laboratory albino rats. The treatment involved oral administration of the extract at concentrations of 150mg/Kg, 300mg/Kg and 600mg/Kg. The control rats were found to have AST, ALT and ALP activities of  $26.00 \pm 2.52$ ,  $19.13 \pm 1.63$  and  $49.17 \pm 11.02$  IU/L respectively and  $3.68 \pm 0.45$  g/dL albumin serum concentration. The serum levels of AST, ALT, ALP and albumin did not significantly increased for 150mg/Kg, 300mg/Kg and 600mg/Kg at  $P = 0.05$ . The result revealed that the aqueous seed extract of *Datura stramonium* did not have significant effect on the serum liver enzymes and albumin. This implies that the plant seed extract does not cause liver damage and therefore is not toxic to the laboratory animal's liver at the doses administered.

**Keywords:** *Datura stramonium*, Toxicity, Liver, AST, ALT, ALP, Albumin.