

**NEPHROPROTECTIVE EFFECT OF *Syzygium Cumini* Linn.
AGAINST PARACETAMOL INDUCED TOXICITY IN
ALBINO RATS**

A. Mahalakshmi and G. Prasanna*

Department of Biochemistry, S.T.E.T Women's college. MANNARGUDI - 614 001.

Paracetamol is a commonly used analgesic and antipyretic agents which in high doses, causes liver and kidney necrosis in man and animals. Herbal medicines have recently attracted much attention as alternative medicine for treating or preventing life style related disorder of nephrotoxicity. The aim of this study was to investigate the nephroprotective effect of aqueous seed extract of *syzygium cumini* (200mg / kg /bw) on Paracetamol induced toxicity. Albino rats (150-175 grams) were taken and divided into 4 groups (n=6), group-I-normal control rats, group-II Paracetamol treated rats (35mg/ kg/ bw), group - III Paracetamol (35mg/kg/bw) and plant extract treated rats (200mg/kg/bw), group IV plant extract alone treated rats (200mg/kg/bw). After 14 days biochemical findings were analysed. The result shows that increased level of Urea, Creatinine, Glutamate oxaloacetate transaminase, Glutamate pyruvate transaminase, Acid phosphatase, Alkaline phosphatase, and decreased level of Catalase and Glutathione peroxidase in Paracetamol induced groups. These values are retrieved significantly to normal with treatment of *syzygium cumini* seed extract. These data suggest that the aqueous seed extract of *syzygium cumini* can prevent renal damage from Paracetamol induced toxicity and it may be due to their phytochemical constituents such as Alkaloids, Flavanoids etc.,

INTRODUCTION

The kidneys are organs that filter wastes (such as urea) from the blood and excrete them, along with water, as urine. The medical field that studies the kidneys and diseases of the kidney is called nephrology, the prefix *nephro* meaning kidney is from the Ancient Greek word *nephros* the adjective renal meaning related to the kidney is from latin *renes* meaning kidneys (Peng *et al*, 2005).

Kidneys excrete a variety of waste products produced by metabolism, including the nitrogenous wastes like urea (from protein catabolism) and uric acid (from nucleic acid metabolism) and water (Alexander *et al*, 1977). Kidney is one of the major organ involved in whole body homeostasis and it maintain the Blood Pressure (AH *et al*, 2008). And also Kidney secrete a variety of hormones, including erythropoietin, urodilatin, renin, and vitamin D. In the case of starvation, in the kidneys, an amino group removed from protein and glucose is formed in the process of gluconeogenesis (Cobden *et al.*, 1982).

* Corresponding Author