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HEPATOPROTECTIVE ACTIVITY OF *Aegle marmelos* ON RIFAMPICIN INDUCED HEPATIC DAMAGE IN ALBINO RATS

G. Ramya., and P. Kanimozhi
P.G. Department of Biochemistry, Sengamalathayaar Educational Trust Women's college, Sundararakkottai, **MANNARGUDI-**614 001.

The hepatoprotective activity of the aqueous extract of *Aegle marmelos* investigated against Rifampicin induced liver damage in rats. At the dose of 500mg/kg , Rifampicin induced liver damage in rat as manifested by statistically significant increase in serum Alanine Amino Transferase (ALT), Aspartate amino Transferase (AST) and Alkaline Phosphatase(ALP). Pretreatment of rats with the aqueous extract of *Aegle marmelos* prior to Rifampicin dosing at 250mg/kg statistically lowered serum liver enzymes activities. Silymarin was given as reference standard. The present finding suggest that the hepatoprotective effect of *Aegle marmelos* in Rifampicin induced oxidative damage may be related to its anti oxidant and free radicals scavenging activity.

INTRODUCTION

The liver is the largest glandular organ in the body. It involves in several vital functions such as secretion, storage and metabolism of foreign compounds entering the body. Furthermore detoxification of a variety of drugs and xenobiotics occur in liver (Rajesh *et al.,* 2004). An injury to it or impairment of its function may lead to many complications in one's health. About 20,000 deaths occur every year due to liver disease (Laurence *et al.,* 1992).

Damage or injury to the liver caused by exposure to Rifampicin antibiotics. Antibiotics are relatively common cause of liver damage. The result of the biochemical tests revealed the elevation of serum enzyme level in Rifampicin treated rats compared to control group indicating that Rifampicin induced liver damage (Jain *et al.,* 2005).

Rifampicin causes cholestasis at both the sinunosids, and canaliculi of the liver because of defect in uptake by hepatocytes and defect in excretion, respectively (Haddad, 2003). Rifampicin may produce liver dysfunction, hepatitis occur in 1% or less of patient and usually in the patients with pre existing liver disease.

Rifampicin is used as a hepatotoxic agent. Rifampicin is a major drug used for treatment of tuberculosis but its chronic use is known to cause hepato toxicity. The mechanism of hepatotoxicity induced by Rifampicin is that competence with bilirubin for transport across the liver cell and conjugated or unconjugated hyper bilirubinaemia can often occur in chronic hepatitis induced by Rifampicin.

* Corresponding Author