

**Biochemical, hematological and histological effect of malaysian buah naga fruit extract on hepatoprotective activity in paracetamol–induced experimental albino rats.**

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**ABSTRACT**

Preliminary studies on the effects of dietary supplementation with Buah naga or Red pitaya fruit on some biochemical, and haematological parameters and histological examinations of liver, were investigated in albino rats in which liver damage was induced by paracetamol (PAM). Thirty six rats were divided into six groups (including hepatotoxic and non – hepatotoxic), and were fed with 5 and 10% Buah naga fruit extract supplemented diet. Weight changes and parameters including alanine transaminase(ALT), aspartate transaminase(AST), total protein, glucose, total triglyceride(TG), total cholesterol, reduced glutathione(GSH), lipid peroxidation(LPO), packed cell volume(PCV), total and differential leucocyte count were determined using standard methods. The consumption of a Buah naga supplemented diet change the weight of the animals as well as alteration in the levels of glucose, protein, ALT and AST in the hepatotoxic groups towards normalcy. The GSH level was significantly increased ( $p<0.05$ ) while TG was reduced in hepatotoxic group fed extract supplemented diet. Glucose was significantly reduced to near normal ( $p<0.05$ ) in the two treated groups. Similar results were observed in cholesterol and LPO status. WBC, Hb and PCV were significantly reduced in hepatotoxic groups and refurbished in treated animals. The hepatotoxic control had significant reduction in neutrophil count and recuperated to near normal in treated rats. Histological Studies: The necrotic effects of paracetamol seen in the abnormal histological changes are gradually regenerated to its native architecture in the hepatotoxic treated groups. Thus the present study conjectured that Buah naga consumption prevent or treat the PAM induced hepatotoxicity and associated other deleterious effects.