

Thrombocytosis and Anti-inflammatory Properties, and Toxicological Evaluation of *Carica Papaya* Mature Leaf Concentrate in a Murine Model

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Management of thrombocytopenia is by drugs and blood products, both of which are costly. Conversely, Sri Lankan traditional medicine use mature leaf concentrate of *Carica papaya* to treat this condition. This claim was scientifically validated. Adult Wistar rats (N=6/group) with ***Hydroxyurea-induced thrombocytopenia*** (model established for the first time), were orally administered, once daily on 3 consecutive days with three doses of fresh mature leaf concentrate of *C papaya* (0.18, 0.36 and 0.72 ml/100g), while controls received water. Standard protocols were used to establish their platelet, WBC and RBC counts. Effects of mature leaf concentrate of *C papaya* on carrageenan induced oedema in rats, on rat erythrocyte membrane stabilization, and on acetic acid-induced vascular permeability in mice, as well as acute toxicity studies were conducted using standard methodology. High dose of mature leaf concentrate of *C. papaya in thrombocytopenic rats significantly (P<0.05) increased platelets by 76.5%, WBC by 30.51% and RBCs by 9.08%*, when compared with controls. High dose of mature leaf concentrate of *C papaya* also significantly (P<0.5) inhibited carrageenan induced rat paw oedema and impaired in vivo vascular permeability in mice (by 82%), while ***inducing maximum (10.11%) membrane stabilizing activity*** of rat RBCs at 8mg/ml of mature leaf concentrate of *C papaya*, suggestive of effective anti-inflammatory activity. Administration of high dose of mature leaf concentrate of *C papaya on 3 consecutive days neither provoked overt signs of toxicity nor stress, where hepatotoxicity, renotoxicity, hematotoxicity and neurotoxicity were also ruled out. Thus freshly prepared mature leaf concentrate of C papaya is orally active, effectively increases rat platelet, WBC and RBC counts with no acute toxicity, and possesses potent anti-inflammatory activity, that overly justify claims of traditional medicine.*