

***In-vitro* protective effect of extracts of *Premna integrifolia* root against hydrogen peroxide induced oxidative damage**

Prashant Y. Mali¹, Souravh S. Bais², Ajit R. Wankhede³ and Ashish Pandey⁴

¹Radharaman College of Pharmacy, India

²Rayat College of Pharmacy, India

³Sandip Institute of Pharmaceutical Sciences, India

⁴Gurukul Kangri University, India

The aim of present study was to evaluate *in-vitro* protective effect of extracts of *P. integrifolia* root on human leucocytes and erythrocytes against hydrogen peroxide induced oxidative damage. Chloroform: methanol (1:1) and aqueous extract of *P. integrifolia* roots were used to accessed catalase, superoxide dismutase, glutathione peroxidase, glutathione and lipid peroxidation levels in hydrogen peroxide induced oxidative damage. Results of these studies demonstrated that, there was an increase in the catalase, superoxide dismutase, glutathione peroxidase and reduction of the glutathione and lipid peroxidation levels in hydrogen peroxide group compared with control. *P. integrifolia* root extract treated groups showed that the reduction of catalase, superoxide dismutase, glutathione peroxidase and increased in the glutathione and lipid peroxidation levels as compared with hydrogen peroxide group. Chloroform: methanol (1:1) extract of *P. integrifolia* was found to be more effective than aqueous. It can be concluded that, the extracts of *P. integrifolia* root possessed *in-vitro* protective effect on human leucocytes and erythrocytes against hydrogen peroxide induced oxidative damage which has substantiated their use in ethnomedicine as an antioxidant. Observed effect attributed due to the flavonoid and phenol contents in the plant.

pymali2008@rediffmail.com