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**Hepatoprotective activity of *Atalantia ceylanica* (Yaki-naran) and *Eriocaulon quinquangulare* (Heen kokmota) against ethanol induced liver toxicity studied using porcine liver slice *in-vitro* model**

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Decoctions prepared from leaves of *Atalantia ceylanica* and the whole plant of *Eriocaulon quinquangulare* are used in traditional medicine in Sri Lanka for the treatment of various liver diseases since ancient times. The current study was conducted to examine the *in-vitro* hepatoprotective potential of the afore mentioned plant extracts.

Hepatoprotective activity was investigated using porcine liver slices. The optimum concentration to induce liver toxicity on liver slices was investigated using ethanol for a 4 hour post incubation period at a concentration range of 1.5 – 5.0 M. The toxic effect caused by ethanol (5 M) after 1 hour and 2 hours of incubation was also examined. Control experiment was carried out for liver slices in Krebs Ringers Hepes buffer (pH 7.4) without addition of ethanol. The hepatoprotective activity was determined by co-exposure of liver slices with different concentrations of extracts of *A. ceylanica* and *E. quinquangulare* with ethanol (5 M) for 2 hours. The hepatoprotective effect of the plant extracts were quantified by the percentage leakage of alanine transaminase (ALT), aspartate transaminase (AST) and lactate dehydrogenase (LDH) to the medium. Thiobarbituric acid reactive substances assay was performed to examine the anti-lipid peroxidation activity caused by these plant extracts. There was a significant increase in ALT (45 – 62%) and AST (53 – 69%) levels ( $P < 0.05$ ) with both 1 hour and 2 hour post incubation periods with 5 M ethanol treated liver slices compared to controls. Both plants *A. ceylanica* and *E. quinquangulare* showed a significant decrease ( $P < 0.05$ ) in ALT, AST and LDH levels and reduced lipid peroxidation in liver slices at a concentration of 2 mg/ml compared to ethanol (5 M) treated slices. The results obtained suggest that both decoctions prepared from *A. ceylanica* and *E. quinquangulare* extracts possess hepatoprotective activity against ethanol induced liver toxicity of porcine liver slices.

Keywords: *Atalantia ceylanica*, *Eriocaulon quinquangulare*, hepatoprotective, liver slices