

dehydrogenase (LDH) leakage, gamma-glutamyltransferase (GGT) leakage and reduced glutathione (GSH) content were determined after 24 hours incubation. No toxicity was found with the plant extract alone on HepG2 cells (EC50>3500 µg/mL). Significant reduction (p<0.05) in percentage leakage of LDH and GGT were observed in the cells co-exposed with *A. ceylanica* aqueous extract and acetaminophen compared to the acetaminophen treated cells. Highest reduction of LDH and GGT leakage were observed for *A. ceylanica* at a concentration of 80 µg/mL with values of 64.8% and 68.9% relative to the acetaminophen treated cells respectively. *A. ceylanica* extract restored the reduced glutathione level towards that of untreated cells. *A. ceylanica* extract has hepato-protective activity and capability to reduce oxidative stress in acetaminophen induced HepG2 cell damage.

**Keywords:** *Atalantia ceylanica*, hepatoprotective, oxidative stress, acetaminophen

#### **PP 022: Evaluation of functional activity of *Wrightia antidysenterica*- An endemic plant species**

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The search for novel pharmacological agents for various non-communicable diseases has gained increasing demand with the rising number of illnesses. We evaluated the activity of extracts of *Wrightia antidysenterica* for their antioxidant, antilipidemic and anti-amylase activities. *Wrightia antidysenterica* is an endemic plant species in Sri Lanka. The plant materials were collected from Jaele, Sri Lanka. Finely powered leaves, stem, roots, flowers and the whole plant were subjected to sequential extraction with hexane, dichloromethane and methanol after continuous stirring for 24 hours. Antioxidant activities of these extracts were evaluated using DPPH and FRAP assays while antilipidemic and antidiabetic activities were investigated using lipase and amylase enzymes. We found that the methanol stem extract demonstrated the highest anti-oxidant activity with a mean IC50 value of 0.47 mg/ml. Results were compared to Butylatedhydroxytoluene (+ve control) which showed a mean IC50 value of 0.11 mg/ml. In the antilipidemic assay, several extracts showed activity similar to Orlistat which is a drug used currently to treat obesity (+ve control). Hexane, dichloromethane, methanol extracts obtained from the whole plant, dichloromethane flower extract, and methanol stem extract showed inhibition similar to Orlistat (43%) at 1 mg/ml concentrations as follows respectively 39%, 39%, 39%, 40%, and 38%. The anti-amylase assay did not show activity with any of the *Wrightia antidysenterica* extracts. Hence, the results of the current study illustrate the presence of antioxidant and antilipidemic activity in *Wrightia antidysenterica* extracts. Further activity of these extracts tested using various bio-assays and chemical compounds will be isolated and characterized.

**Keywords:** natural products, antioxidant, antilipidemic