Latin American Journal of Pharmacy
(formerly *Acta Farmacéutica Bonaerense)*
Lat. Am. J. Pharm. **30** (2): 258-65 (2011)

Original Article
Received: May 11, 2010
Revised version: June 16, 2010
Accepted: June 19, 2010

Evaluation of the *In Vitro* and *In Vivo* Antioxidant Potential of Whole Plant Extracts of *Hedyotis puberula* (G. Don) R. Br. ex Arn.

Jince M. JOSEPH, Kandhasamy SOWNDHARARAJAN & Sellamuthu MANIAN*

Department of Botany, School of Life Sciences, Bharathiar University, Coimbatore – 641 046, Tamil Nadu, India

SUMMARY. **The total phenolic content and *in vitro* and *in vivo* antioxidant activities of the whole plants of *Hedyotis puberula* (G. Don) R.Br. ex Arn. were appraised. The methanol extract of the plant contained higher levels of total phenolics, tannins and flavonoids content than other solvent extracts. Extracts were screened for antioxidant and free radical scavenging activities using various *in vitro* model systems. The methanol extract manifested strongest antioxidant and free radical scavenging activity. The treatment of paracetamol intoxicated wistar rats with methanol extract at the dose of 400 mg/kg, b.wt. attenuated the elevated enzyme level such as glutathione, glutathione S-transferase, glutathione peroxidase, superoxide dismutase and catalase to normal level and significantly reduced the levels of lipid peroxidation. These results showed that the methanol extract of *H. puberula* has significant antioxidant activity both under *in vitro* and *in vivo* conditions.**

KEY WORDS: Antioxidant activity, Flavonoids, *Hedyotis puberula,* Phenolics.

* Author to whom correspondence should be addressed. *E-mail:* sellamuthumanian@yahoo.com

ISSN 0326-2383