

## In vitro Antioxidant Properties and Phytochemistry of Some Philippine Creeping Medicinal Plants

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**Abstract :** *Hiptage benghalensis*, *Antigonon leptopus*, *Macroptilium atropurpureum*, and *Dioscorea bulbifera* L. are herbal weeds that have been used by traditional healers in rural communities in the Philippines as medicine. In this study, the basic pharmacological components of the crude secondary metabolites extracted from the four herbal weeds and their in vitro antioxidant properties was investigated to provide baseline data for the possible development of these metabolites in pharmaceutical products. Qualitative screening of the secondary metabolites showed that alkaloids, tannins, saponins, steroids, and flavonoids were present in their leaf extracts. All of the plant extracts showed varied antioxidant activity. The greatest DPPH radical scavenging activity was observed in *H. benghalensis* (84.64%), followed by *A. leptopus* (68.21%), *M. atropurpureum* (26.62%), and *D. bulbifera* L. (19.04%). The FRAP assay revealed that *H. benghalensis* had the highest antioxidant activity (8.32 mg/g) while ABTS assay showed that *M. atropurpureum* had the strongest scavenging ability of free radicals (0.0842 mg Trolox/g). The total flavonoid content (TFC) analysis showed that *D. bulbifera* L. had the highest TFC (420.35 mg quercetin per gram-dried material). The total phenolic content (TPC) of the four herbal weeds showed large variations, between  $26.56 \pm 0.160$  and  $55.91 \pm 0.087$  mg GAE/g dried material. The plant leaf extracts arranged in increasing values of TPC are *H. benghalensis* (26.565) < *A. leptopus* (37.29) < *D. bulbifera* L. (46.81) < *M. atropurpureum* (55.91). The obtained results may support their use in herbal medicine and as baseline data for the development of new drugs and standardized phytomedicines.

**Keywords :** antioxidant properties, total flavonoids, total phenolics, creeping herbal weeds

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