

## ABSTRACT

The methanolic extract of *Bergia ammannioides* was dissolved in distilled water and then partitioned with *n*-hexane, chloroform, ethyl acetate and *n*-butanol sequentially. Phytochemical analysis of all these plant fractions revealed the presence of Reducing sugar, Terpenoids, Flavonoids, Saponins, Tannins, Cardiac glycosides and Phenolics. The antioxidant potential of all these plant fractions and remaining aqueous fraction was determined by four methods: 1,1-Diphenyl-2-picrylhydrazyl (DPPH) free radical scavenging activity, total antioxidant activity, Ferric reducing antioxidant power (FRAP) assay and ferric thiocyanate assay along with evaluation of their total phenolic content. Polar fractions showed notable antioxidant potential. The results revealed that ethyl acetate soluble fraction showed highest value of % inhibition of DPPH radical ( $81.16 \pm 0.86\%$ ) at a concentration of  $120 \mu\text{g/mL}$ . The  $IC_{50}$  of this fraction was  $26.65 \pm 1.8 \mu\text{g/mL}$ , relative to ascorbic acid, a reference standard, having  $IC_{50} 58.8 \pm 0.89 \mu\text{g/mL}$ . It also showed highest total antioxidant activity i.e.,  $1.142 \pm 0.08$ , highest FRAP value ( $378.5 \pm 0.4 \text{ TE } \mu\text{M/mL}$ ) as well as highest total phenolic contents i.e  $226.109 \pm 0.3 \text{ GAE mg/g}$  and highest value of percent inhibition of lipid peroxidation ( $54.23 \pm 0.57\%$ ) as compared to the studied fractions.