

## ABSTRACT

The present study is based on the investigations on ethnopharmacological data of three important Angiosperms (*Pterospermum acerifolium*, *Diospyros malabarica* and *Putranjiva roxburghii*) in comparison with Gymnosperm (*Cycas revoluta*). Extracts of their different parts (fruit, leaf, stem, bark and seed pulp, leaf from *C. revoluta*) were examined for the evaluation of various biological activities such as antimicrobial, antioxidant and anthelmintic. The ultimate comparison proved that Angiosperm trees are having more remarkable medicinal properties in comparison to Gymnosperms.

With the comparative analysis of maximum potency of extracts against microorganisms, chloroform extract of *P.roxburghii* fruit and stem showed significant inhibitory effects against *P. aeruginosa* (Gram-ve), i.e. 86.163mm and *A. parasiticus* (85.80mm). Similarly, *P.acerifolium* bark petroleum ether extract resulted in highest resistance/inhibition against *S. aureus* (85.26mm) and *R.oryzae* (81.80mm), while methanol and petroleum ether extracts of *C.revoluta* leaf were found to be very active against *S.aureus* (86.09mm) and *R.oryzae* (85.45mm). While, the chloroform extract of *D. malabarica* fruit and bark revealed out the highest inhibition against *P.aeruginosa* (Gram-ve), i.e. 80.06 mm and *R.oryzae* (85.66mm) respectively.

Antioxidant assay revealed that petroleum ether extract of *P. acerifolium* bark showed significant DPPH free radical scavenging activity i.e 88.54 % comparable to BHT (77.3%) & Vitamin E (88.1%). Similarly, petroleum ether extract of *D. malabarica* fruit, methanol extract of *P. roxburghii* leaf and methanol extract of *Cycas revoluta* fruit scavenged DPPH free radical by 83.43%, 80.45% and 61.94% respectively.

The overall analysis of total antioxidant assay presented that chloroform extract of fruit and petroleum ether extract of leaf of *P.roxburghii* has maximum antioxidant contents i.e. (0.87±0.002) & (0.793±0.003) comparable to the standards i.e. BHT (0.476±0.013) &  $\alpha$ -tocopherol (0.513±0.05). While, petroleum ether extract of *P.acerifolium* fruit, methanol extract of *D.malabarica* fruit and petroleum ether extract of *C.revoluta* seed pulp showed 0.562±0.04, 0.550±0.009 and 0.485±0.0045 respectively.