

## ABSTRACT

The present Ethnopharmacological investigation was carried out to explore the phytochemistry, antimicrobial activity, antioxidant potential and anthelmintic abilities of two ethnobotanically important plants, i.e. *Magnolia grandiflora* Linn. of family Magnoliaceae and *Gleditsia triacanthos* Linn. of family Fabaceae. The extraction of different part of plants was carried out by maceration technique and the percentage yield of both plants varied between 0.03% and 10.40%. The phytochemical analysis of the organic and inorganic extracts of *Magnolia grandiflora* and *Gleditsia triacanthos* showed good quantity of flavonoids, saponins, anthraquinones, reducing sugars, terpenoids and cardiac glycosides followed by tannins and alkaloids. The total phenolic content of both the plants varied from 170 to 3347.5 $\mu$ g/ml while the total flavonoid content of both plants vary from 62.73 to 3636.36 $\mu$ g/mL. The value for %bound iron ranged between 52.18 and 95.95 while TEAC value fluctuates from 3.33 to 12.23mMol. The redox properties, responsible for antioxidant activity of the plants allowed them to act as reacting agent, hydrogen donators and oxygen quenchers as well as metal chelating agents potential The maximum value in DPPH assay was found in the stem of *Magnolia grandiflora* and leaf of *Gleditsia triacanthos* and the values varied between 1.1 to 95.6.

As far as the antibacterial activity is concerned, the water macerated stem of *Magnolia grandiflora* and bark of *Gleditsia triacanthos* showed maximum zone of inhibition, i.e. 37.53 and 46.2mm against *B. subtilis*, respectively. The maximum inhibition against *E.coli* was reported in chloroform extract of stem of *Magnolia grandiflora* and water extract of bark of *Gleditsia triacanthos*, i.e. 26.13mm. The highest activity against *K. pneumoniae* was found in water macerated leaf of *Magnolia grandiflora* and bark of *Gleditsia triacanthos*, i.e. 24.20 and 25.47mm, respectively. The water macerated bark of *Magnolia grandiflora* and ethanol extract of leaf of *Gleditsia triacanthos* were proved to be good inhibitors against *S. aureus* with zone of 21.47mm and 37.53mm, respectively.

The studies on the antifungal activities showed that the leaf extract of *Magnolia grandiflora* and chloroform macerated bark of *Gleditsia triacanthos* indicated maximum inhibition for *R. stolonifer*, i.e. 35.33mm and 35.07mm while chloroform extract of leaf of *Magnolia grandiflora* and n-hexane macerated bark of *Gleditsia triacanthos*, i.e. showed maximum inhibition of

34.27mm and 27.17 mm against *T. viridae*. The dose-dependent anthelmintic appraisal showed that bark macerates of *Gleditsia triacanthos* and leaf macerate of *Magnolia grandiflora* was the most effective.