World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:14, No:12, 2020

In vitro and invivo Antioxidant Studies of Grewia crenata Leaves Extract in Albino Rats

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Abstract : G. crenata is used locally for the treatment of fractured bones, wound healing and inflammatory conditions. In vitro and in vivo antioxidant activity of hydromethanolic extracts of the leaves of G. crenata were assessed. The phytochemical analysis shows the presence of phenols, flavonoids, saponins, cardiac glycosides and tannins. An in vitro quantitative analysis of phenols, flavonoids and tannins respectively were (164±1.20, 199±0.88 and 88.67±0.88 mg/100g FW). In vivo studies of hydromethanolic extract demonstrated a dose dependent increase in hepatic superoxide dismutase (1.14±0.14, 2.13±0.11, 2.55±0.11 U/mg Protein) with improvement in hepatic glutathione (6.98±0.42, 8.91±0.37, 11.07±0.46 µM/mg Protein) and Catalase (4.47±0.05, 6.24±0.02, 7.17±0.04 U/mg Protein) and Total protein (6.18±0.08, 6.69±0.18, 7.27±0.16 mg/ml) respectively at 100-300mg/kg body weight Grewia crenata leaves when compared to the control and standard drug. It can be concluded from the present findings of that G. crenata leaves possess antioxidant potential.

Keywords : Grewia crenata, antioxidant, hydromethanolic extract, in vivo, in vitro
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020