World Academy of Science, Engineering and Technology
International Journal of Pharmacological and Pharmaceutical Sciences
Vol:9, No:07, 2015

Antioxidant Activity and Hepatoprotective Potential of Genista quadriflora Munby against Paracetamol-Induced Liver Injury

Authors : Nacera Baali, Zahia Belloum, Souad Ameddah, Fadila Benayache, Samir Benayache, Chantal Wrutniak-Cabello

Abstract : Allurement of herbs as health beneficial foods and as a source material for the development of new drugs, has led to greater furtherance in the study of herbal medicines during recent years. In the present study, in vitro antioxidant, free radical scavenging capacity, and hepatoprotective activity of butanolic extract from Genista quadriflora Munby (G.quadriflora) were evaluated using established in vitro models such as DPPH radical and hydrogen peroxide radical scavenging activities and antilipidperoxidation ability. Interestingly, the extract showed considerable in vitro antioxidant and free radical scavenging activities in a dose-dependent manner when compared to the standard antioxidant which verified the presence of antioxidant compound in extract tested. The hepatoprotective potential of G.quadriflora extract was also evaluated in male Wistar rats against paracetamol (APAP) induced liver damage. Therapy of G.quadriflora showed the liver protective effect on biochemical and histopathological alterations. Moreover, histological studies also supported the biochemical finding, that is, the maximum improvement in the histoarchitecture of the liver. Results revealed that G.quadriflora extract could protect the liver against APAP-induced oxidative damage by possibly increasing the antioxidant protection mechanism in rats. These findings are of great importance in view of the availability of the plant and its observed possible diverse applications in medicine and nutrition.

Keywords : genista quadriflora munby, antioxidant, liver, paracetamol, oxidative stress
Conference Title : ICPPS 2015 : International Conference on Pharmacy and Pharmacological Sciences
Conference Location : Paris, France
Conference Dates : July 20-21, 2015