

Antioxidative Effect of Bauhinia acuminata Water Extract Consumption in Rat

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Abstract : The aim of this present study was to determine the antioxidant effects and its mechanism of aqueous leaves extract of Bauhinia acuminata (BA) in rat. The extract was screened for its phytochemical contents and antioxidant activity in vitro. Moreover, the extract was studied in rats to evaluate its effects in vivo. Rats were orally administered with the extract at the dose of 50, 100 and 200 mg/kg for 28 days. Phytochemical screening of plant extracts showed the presence of saponin, alkaloid, cardiac glycosides, flavonoids, tannin and steroid compounds. The extract contained phenolic compounds 53.36 ± 1.01 mg of gallic acid equivalents per gram BA extract. The free radical scavenging activity assessed by DPPH assay gave IC₅₀ of 44.47 ± 2.83 µg/mL, which is relatively lower than that of BHT with IC₅₀ of 12.34 ± 1.14 µg/mL. In the animals, the extract was well tolerated by the animals throughout the 28 days of study as shown by normal serum levels AST, ALP, ALT, BUN and Cr as well as normal histology of liver and pancreatic and kidney tissue. Significantly, reduction of serum oxidative stress markers malondialdehyde (MDA) was found in rat treated with BA extract compared with control. Taken together, this study provides evidence that Bauhinia acuminata (BA) exhibits direct antioxidant properties and induces cytoprotective enzyme in vivo.

Keywords : Bauhinia acuminata, antioxidant, malondialdehyde (MDA), oxidative marker

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