



Beneficial Effects of *Aristolochialonga* and *Aquilariamalaccensis* on Lead-Induced liver, kidney and Hematological Alterations in Rats

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ABSTRACT

The current studies evaluated whether powder *A. longa* and *A. malaccensis* (widely used in Algerian traditional medicine) has the ability to protect against lead induced liver, renal and haematological changes in rats. Twenty five female rats (Wistar albino) equally divided into five groups; control and four treated groups, received either Pb, Pb + *Aristolochia* (Ar), Pb+ *Aquilaria* (Aq) and Pb+Ar+Aq. lead acetate (100mg / kg bw) is exposed for 75 days and the duration of treatment with plants (1% of diet) is 15 days. some biochemical and hematological parameters are analysed. Phytochemical screening results revealed that *A. longa* and *A. Malaccensis* aqueous extract contained various bioactive compounds, including polyphenols, saponins, terpenoids, glycosides and flavonoids. Lead acetate exposure caused a significant decrease in the red blood cell count, hemoglobin concentration, granulocytes count and liver and kidney GSH level, GST and transaminases activities and a significant augmentation in the liver and kidney MDA and, CAT level and serum GOT and GPT activities in rats. Our results revealed that treatment with *Aquilaria* and *aristolochia* causes a partial correction of all of this parameters. The histological observations confirmed the beneficial effect of plants results by the biochemical parameters. In Conclusion, Results confirmed the beneficial effects of *A. longa* and *A. malaccensis* treatment in Pb-induced oxidative stress in liver and kidney and suggest that *Aristolochia longa* could therefore be considered a promising source of novel treatments for liver and hematological alteration.

Keywords: *A. longa*; *A. malaccensis*; liver; kidney; Lead; Oxidative stress.