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Hepatoprotective activity of the ethanolic extract of *C. flammula* against Paracetamol toxicity in mice

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Paracetamol is widely used to treat pain and fever. However, it creates oxidative stress by causing the depletion of glutathione which leads to hepatic lesions and necrosis. *Clematis flammula* is a plant widely used in folklore medicine in Algeria to treat inflammatory diseases. The hepatoprotective activity of this plant extracts were evaluated *in vivo* against paracetamol toxicity by the assessment of MDA levels superoxide dismutase and catalase activities. Histopathological analysis was equally carried out to confirm our results. Results demonstrated an increase in MDA levels (6.61 ± 0.75 nmol/mg prot) and a decrease in the activities of superoxide dismutase (3.557 ± 0.91 U/mg protein), catalase (2.41 ± 0.49 U/mg protein), glutathione (2.45 ± 0.60 μ mol/mg de protéine) in paracetamol (400 mg/kg)-treated group (positive control), compared to negative control. *Clematis flammula* plant extracts, on the other hand, contributed at reducing MDA levels (2.34 ± 0.47) and increasing the activities of superoxide dismutase (6.068 ± 0.85 U/mg protein), glutathione (17.80 ± 2.42 μ mol/mg proteins) and catalase (10.64 ± 2.01 U/mg protein) at 100 mg/kg. Histopathological analysis confirmed the hepatoprotective activity of this plant against paracetamol toxicity.

Biography

Atmani-Kilani Dina has completed her Master's degree from California State University, Los Angeles and her PhD from University of Bejaia in Algeria and Post-doctoral studies from University of Bejaia. She is the Director of a project on the biological activities of *Clematis flammula* and is involved in two other projects on the biological activities of other local plants in Algeria. She has published more than 7 papers in reputed journals and is pursuing her research in order to identify many novel molecules in *C. flammula* with the collaboration of Dr. Tristan Richard in Bordeaux France and José Ignacio Ruiz Sanz in the university of the Basque country in Bilbao.

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