

Study Of Biological Activities Of Methanolic Extract From Atriplex Halimus. Leaves

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Abstract : The present work aims to evaluate the anti-inflammatory and hemostatic activities of the methanolic extract AHMeOH of Atriplex halimus's leaves which belongs to the chenopodiaceae family. The preliminary evaluation of the phytochemical composition of the leaves made it possible to highlight the presence of some chemical groups such as polyphenols, flavonoids and alkaloids. This was confirmed by a quantitative analysis based on the determination of total polyphenols and flavonoids. Quantitative determination of total flavonoids reveals that AHMeOH is rich in flavonoids ($16 \pm 0.88 \mu\text{g Q} / \text{mg extract}$) and polyphenols ($20 \pm 0.20 \mu\text{g AG} / \text{mg extract}$). For anti-inflammatory activity, the tests show that AHMeOH has a significant effect ($P \leq 0.05$) of inhibiting hypotonic-induced hemolysis with concentrations (100 and 200 $\mu\text{g} / \text{ml}$) with 77.55 and 90% respectively, and heat-induced hemolysis with percentages 81.75% and 87.44% respectively with significant difference ($P \leq 0.05$). The obtained results with this plant reveal that the inhibition of denaturation of albumin is dose dependent. The concentration of 400 $\mu\text{g} / \text{ml}$ gives denaturation inhibition of $81.00 \pm 17.70\%$ and the concentration 600 $\mu\text{g} / \text{ml}$ gives an effect of $82.95 \pm 17.40\%$. About the haemostatic activity our extract with the doses 10 mg / ml, 20 mg / ml and 30 mg / ml confer a decrease of the plasma recalcification time in the tube, these concentrations could prolong the time of coagulation significantly compared to the control ($P \leq 0.001$). This result is an interesting indication in favor of haemostatic activity of AHMeOH.

Keywords : albumin, atriplex halimus, hemostatic activity, methanolic extract

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