

## **Study of the in vivo and in vitro Antioxidant Activity of the Methanol Extract from the Roots of the Barks of Zizyphus lotus**

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**Abstract :** Natural extracts is known for their contents of biologically active molecules. In this context, we attempted to evaluate the antioxidant activity of the methanolic extract prepared from the bark of the roots of Zizyphus lotus. The quantitative analysis based on the dosage, phenolic compounds, flavonoids and tannins provided following values:  $0.39 \pm 0.007$  ug EAG/mg of extract for phenolic compounds,  $0.05 \pm 0.02$ ug EQ/mg extract for flavonoids and  $0.0025 \pm 7.071 \text{ E-4}$  ECT ug/mg extract for tannins. The study of the antioxidant activity by the DPPH test in vitro showed a powerful antiradical power with an  $IC_{50} = 8,8$  ug/ml. For the DPPH test in vivo we used two rats lots, one lot with a dose of 200 mg/kg of the methanol extract and a control lot. We found a significant difference in antiradical activity with  $p < 0.05$ .

**Keywords :** Zizyphus lotus, antioxidant activity, DPPH, phenolic compounds, flavonoids, tannins

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