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Antioxidant properties of Algerian medicinal plant *Matricaria pubescens* on CCL4-induced liver toxicity in rats

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The present survey is centered on protective effect of *Matricaria pubescens* against liver injury induced by carbon tetrachloride in rats. In our study, we indicated that these plants treatment have a potent protective effect as revealed by remarkable decrease in MDA content, additionally, methanolic extract could ameliorate acute liver damage to a high degree, as demonstrated by reduction of serum AlT levels.

Introduction: The liver is a target organ for the many chemical products. CCL4 is a classically known compound that causes hepatotoxicity by an acute exposer (Recknagel, 1967). *Matricaria pubescens* plant of family compositea used in algeria for the treatment of hepatic diseases. The main objective of the present work was to evaluate the hepatoprotective and antioxidant activity of *Matricaria pubescens* against liver injury induced by carbon tetrachloride in rats.

Materials and methods:

1. Extraction of methanolic extract: The aerial parts (soft twigs and leaves) of *Matricaria pubescens* is air-dried and extracted with methanol.
2. Determination of free radical scavenging activity: The free radical scavenging activity of the extract was determined by the method described by (Burits and Bucar, 2000).
3. Determination of total phenolic content and flavonoids: Total soluble phenolics in the methanol extract of *Matricaria pubescens* were determined with Prussian bleau according to the method of Price and Butler (1977), with slight modifications of (Graham 1992), using gallic acid as a standard compound.
4. The flavonoids content in the methanol extract of *Matricaria pubescens* was determined by (Boharun et al., 1996) method using quercetin and rutin as a reference compound.

4. Pharmacological essays (Study carry out on rats)

Conclusion: Our investigation provided convincing data that *Matricaria pubescens* have an impressive hepatoprotective effects on acute liver injuries induced by CCL4. The mechanisms underlying hepatoprotection of the methanolic extract of *Matricaria pubescens* may be related to both its radical scavenging properties and indicate effects as a regulator of antioxidative systems, which might be considered to be therapeutic in clinical situations.

Notes: