

PHENOLIC COMPOSITION AND ANTI-INFLAMMATORY EFFECT OF *HERTIA CHEIRIFOLIA* LEAF EXTRACT *IN VIVO*.

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Introduction & Objectives:

Hertia cheirifolia is an aromatic medicinal plant belonging to the Asteraceae family. It is commonly used in the Mediterranean region for its various pharmacological properties. The aim of the present study was to analyse the polyphenols composition of methanolic extract from the leaf of *Hertia cheirifolia* and to evaluate its anti-inflammatory potential *in vivo*.

Methodology (Material and methods):

Firstly, methanolic extract from the leaf (HC-L) of *Hertia cheirifolia* was prepared by maceration in absolute methanol. The phenolic composition of this extract was analysed by high performance liquid chromatography-diode array detector (HPLC-DAD) system. Secondly, the anti-inflammatory activity of two doses (200 and 400 mg/Kg) of the HC-L extract was assessed using the croton oil-induced ear edema in mice and the carrageenan-induced paw edema in rats.

Results and Discussion:

The HPLC-DAD analysis of the *Hertia cheirifolia* leaf extract led to the identification of four different phenolic compounds. The chromatogram showed two major peaks (5 and 6) that correspond to two rutin-derived flavonoids, whereas the other two peaks (3 and 4) represent a caffeic acid derivative and rutin respectively. Furthermore, an important anti-inflammatory effect was observed in the ear edema model. The HC-L extract displayed similar potential at 200 mg/Kg ($43.52 \pm 6.08\%$) and at 400 mg/Kg ($40.44 \pm 5.73\%$). In the paw edema model, a significant inflammatory inhibition rates were recorded at the end of the late phase with the two tested doses ; HC-L 200 ($23.67 \pm 1.55\%$) and HC-L 400 ($21.26 \pm 1.83\%$),

Conclusion:

Our results are suggesting that the anti-inflammatory potential exerted by the HC-L extract is probably related to its content of polyphenols and it is supporting the effectiveness of *Hertia cheirifolia* use in traditional medicine.

Keywords: *Hertia cheirifolia*, leaf extract, polyphenols, anti-inflammatory.

References

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