

Phytochemical investigation of *Galactites elegans* (All.) Nyman ex Soldano

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Introduction & Objectifs:

Galactites is a genus of flowering plants belonging to Asteraceae family. This genus is mainly represented by the *Galactites elegans* (All.) [1] Nyman ex Soldano, the milky thistle, a plant of Mediterranean origin. *Galactites elegans* is consumed as a monofloral boar thistle honey.

This work focuses on the isolation and determination of phenolic compounds from *Galactites elegans*. Different types of extraction and extractants were used to isolate these bioactive compounds.

Methodologie (Material and methodes):

The impact of the extraction type and the kind of solvent on the efficiency of antioxidant isolation from *Galactites elegans* [2] was determined. Two types of extraction and three different solvents with different polarity were used to isolate antioxidants, including phenolic compounds. Chromatography separation of CHCl₃ extracts of aerial parts of *G. elegans* led to isolation of four pure compounds. Their structures were elucidated by 1D- and 2D-NMR spectroscopy and confirmed by mass spectrometry analysis.

Results and Discussion:

8 α -hydroxypinoresinol, 9 α -hydroxypinoresinol, pinoresinol, 4-ketopinoresinol. The majority of isolated compounds displayed a significant antioxidant potential *in vitro* test (DPPH). The ability of compounds to reduce the level of peroxides in control and BHP-treated Jurkat cells was studied [3]. The lignan derivatives were also able to reduce at 50 μ M the basal level of peroxides in Jurkat cells as well as counteract peroxide increase induced by BHP treatment. Particularly 8 α -hydroxypinoresinol was the most active showing 70% of peroxide level inhibition.

Conclusion: This work focuses on the isolation and determination of the secondary metabolites contained in the chloroformic phase of the hydromethanolic extract of the *Galactites elegans* plant which has not been the subject of previous phytochemical studies

Keywords: *Galactites elegans*, lignane, phenolic compounds, Jurkat cells,, Antioxidant.

References

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