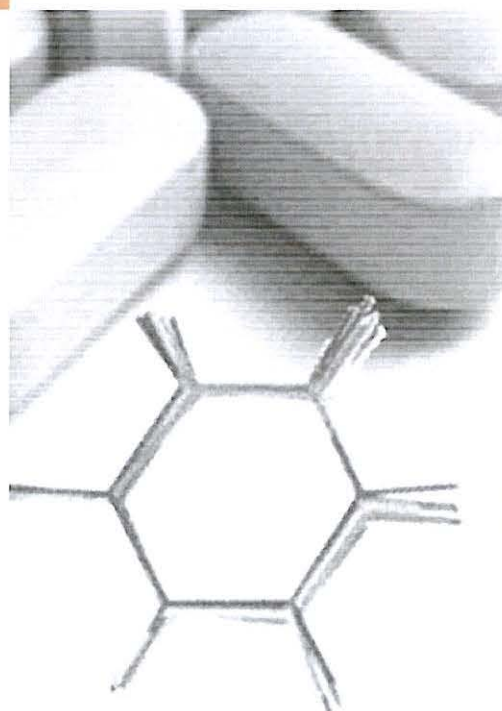


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**Antioxidant potential of three medicinal species of topical traditional use in Northeastern Portugal: *Juglans regia* L., *Malva neglecta* Wallt. and *Scrophulariascorodonia* L.**

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The decoctions of some widespread species from the northeastern Portuguese region are traditionally used for their vulnerary properties and in the treatment of various skin disorders, wounds or burns. *Juglans regia* L. (walnut), *Malva neglecta* Wallt. (mallow) and *Scrophulariascorodonia* L. (balm leaf figwort) are good examples of such species. The leaves of *J. regia* and the aerial parts of *M. neglecta* are used as disinfectants and anti-inflammatory, while the aerial parts of *S. scorodonia* are used as a vulnerary. Furthermore, these plants are often mixed to enhance its action [1].

The present study aimed to evaluate the antioxidant activity of decoctions and methanolic extracts of the mentioned three plants. The antioxidant activity was accessed by five *in vitro* assays: scavenging effects on DPPH (2,2-diphenyl-1-picrylhydrazyl) radicals, reducing power (measured in Folin-Ciocalteu and ferricyanide Prussian blue assays), inhibition of  $\beta$ -carotene bleaching and inhibition of lipid peroxidation in brain cell homogenates by TBARS (thiobarbituric acid reactive substances) assay.

Walnut samples (methanolic extract and decoction) gave the highest antioxidant activity (lowest  $EC_{50}$  values in all the assays), followed by figwort and mallow samples. The observed antioxidant activity is certainly related to the phenolic compounds present in the studied samples and reported in another abstract presented in the same symposium.

#### Acknowledgements

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#### References

[1] Carvalho, A.M. (2010). Plantas y sabiduría popular del Parque Natural de Montesinho. Un estudio etnobotánico en Portugal. Biblioteca de Ciencias 35. Madrid: Consejo Superior de Investigaciones Científicas.