

Antioxidant activity and inhibitory effect of *L. viridis* extract on Fe²⁺-induced lipid peroxidation in brain homogenates

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- [Congress Abstract](#)

The brain is particularly susceptible to oxidative stress damaging effects due such events as the high consumption of oxygen, limited concentration of antioxidants and a relatively high degree of polyunsaturated fatty acids that are particularly good substrates for peroxidation reactions [1–3]. Oxidative stress could lead to damage biological target molecules, affecting the cellular function and integrity [4]. The ability of natural antioxidants, mainly phenolic compounds, to protect cells from oxidative stress has been previously demonstrated [5]. In this work, the methanol extract from *Lavandula viridis* L'Hér. (Lamiaceae), a xerophytic aromatic shrub endemic to the south-west Iberian Peninsula [6], was investigated for its effect on deoxyribose degradation, its reducing properties, Fe²⁺-chelating ability and total phenol content. The capacity of this extract to prevent Fe²⁺-induced lipid peroxidation in mouse brain (*in vitro*) was also evaluated. *L. viridis* extract showed Fe²⁺ chelating activity, reducing power and the ability to prevent Fe²⁺/H₂O₂-induced decomposition of deoxyribose in a dose-dependent manner. This extract also revealed a high phenol content (893.01±17.09µmol gallic acid equivalents/g extract) evaluated by Folin-Ciocalteu method. Moreover, in brain homogenates, the methanol extract of *L. viridis* caused a high decrease in the MDA production in both the basal and the Fe²⁺-induced lipid peroxidation. The effective protective properties of *L. viridis* could be attributed to its higher phenol content, Fe²⁺ chelating ability, reducing properties and HO· radical scavenging ability. The findings suggest that methanol extract from *L. viridis* could be a potential source of natural antioxidants.

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