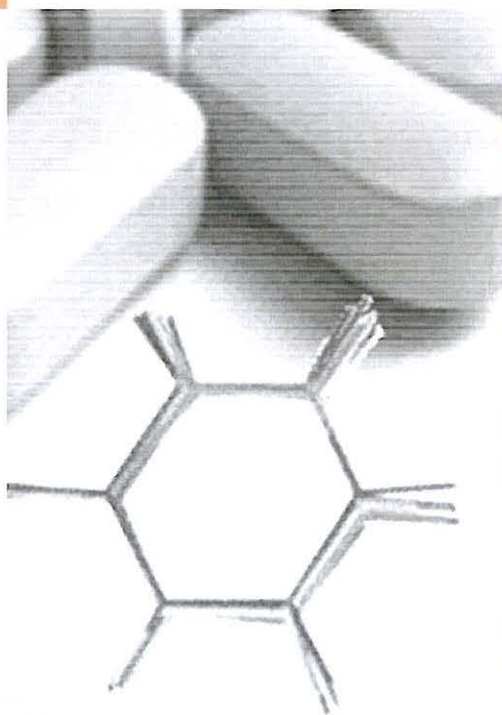


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## Antioxidant activity of *Rubus ulmifolius* Schott and *Trifolium angustifolium* L.

Ana Martins, Lillian Barros, Ângela Fernandes, Ana Maria Carvalho, Isabel C.F.R. Ferreira\*

Centro de Investigação de Montanha (CIMO), ESA, Instituto Politécnico de Bragança, Campus de Santa Apolónia, Apartado 1172, 5301-855 Bragança, Portugal.  
\*iferreira@ipb.pt

*Rubus ulmifolius* Schott (wild blackberry) from Rosaceae and *Trifolium angustifolium* L. (narrowleaf crimson clover) from Fabaceae are widespread medicinal plants from Portuguese wild flora. These species are common in the Iberian Peninsula, growing spontaneously under conditions of Mediterranean climate and being commonly used in folk medicine [1]. In Portugal, local consumers consider that the decoctions of *R. ulmifolius* have anti-inflammatory and analgesic properties and may be administered orally for the treatment of diabetes, diarrhea, and menopause [2]. They are also externally applied to relieve hoarseness, inflamed gums, sores and skin ulcers [2]. *T. angustifolium* is a species known for centuries in folk medicine due to its phytochemical characteristics and biological activity. The decoction of its inflorescences is used to treat stomach affections and to control diarrhea [3]. This work aimed to evaluate the antioxidant properties of methanolic extracts and decoctions of *R. ulmifolius* flower buds and *T. angustifolium* inflorescences. Four *in vitro* assays were performed: scavenging effects on DPPH (2,2-diphenyl-1-picrylhydrazyl) radicals, reducing power, inhibition of  $\beta$ -carotene bleaching and inhibition of lipid peroxidation in brain cell homogenates by TBARS (thiobarbituric acid reactive substances) assay. Methanolic extracts proved to have higher antioxidant activity than the corresponding decoctions. *R. ulmifolius* revealed the highest antioxidant activity in all the assays ( $EC_{50} \leq 70 \mu\text{g/mL}$  for the methanolic extract and  $EC_{50} \leq 200 \mu\text{g/mL}$  for the decoction). The studied medicinal plants have interesting antioxidant properties that are certainly related to the presence of phenolic compounds (reported in another abstract present to this symposium) and could be explored as a source of antioxidants for food preservation or pharmaceutical uses.

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