



P11. Aqueous extracts of *Origanum vulgare* and *Thymus* spp. from Alentejo: Anti-inflammatory and Antioxidant Screening

PIÇARRA, A.^{1,2*}, ARANTES, S., M.^{2,3}, RACU, A.¹, CANDEIAS, M., F.^{1,3}, GOMES, C., P.³, CALDEIRA, A., T.^{1,2} & MARTINS, M., R.^{1,2**}

¹Department of Chemistry, ECT, University of Évora, Portugal; ²Laboratório HERCULES, University of Évora, Portugal; ³ICAAM, University of Évora, Portugal
* d37098@alunos.uevora.pt, ** mrm@uevora.pt

ABSTRACT

Mediterranean diet, intangible cultural heritage of Humanity, is a fundamental pillar for sustainable development of populations. Alentejo is rich in indigenous aromatic plants in Montado cork oak forests, many of them used in traditional Medicine as well as food flavours in Mediterranean diet. Moreover, medicinal, aromatic and flavouring plants (MAPs) and their extracts are rich in phenolic compounds and play an important role in prevention of pathologies related with oxidative stress, such as neurodegenerative, cardiovascular and cancer diseases.

For this study, three autochthonous flavouring herbs from *Lamiaceae* family, widely distributed throughout Iberian Peninsula and used in Mediterranean cuisine, have been selected: *Origanum vulgare* L., *Thymus capitellatus* Hoffmanns & Linkand and *Thymus mastichina* L.

Freeze-drying decoction water extracts were prepared to evaluate their chemical composition, antioxidant and anti-inflammatory potential. These proprieties were evaluated by several mechanisms including DPPH radical, reducing power and β -carotene/linoleic acid methods, as well as the ability to inhibit catalase activity in hepatic homogenates and to inhibit lipoxigenase activity.

Aqueous extracts presented high contents of phenolic and flavonoid compounds. They exhibited high antioxidant proprieties, with ability to act as radical scavengers, ferric reducing agents as well as protectors of lipid substrates and inhibit catalase activity. Moreover, extracts showed anti-inflammatory potential, able to inhibit LOX activity. Results of *Artemia salina* lethality assay point out their very low toxicity.