

workshop

Produtos naturais: aplicações (bio)tecnológicas



Livro de Resumos



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Escola Superior Agrária
Instituto Politécnico de Coimbra

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Programa Científico

Workshop | Produtos naturais: aplicações (bio)tecnológicas

- 13:45-14:00** **Registo**
- 14:00-14:15** **Contributo dos polifenóis nas propriedades bioativas e nas aplicações das plantas medicinais**
(Marcelo Catarino, CERNAS-ESA/IPC)
- 14:15-14:30** ***Cytisus multiflorus* e *eriocephalus africanus* como fonte de compostos antioxidantes e anti-inflamatórios**
(Susana Saraiva, CERNAS-ESA/IPC)
- 14:30-14:45** **Subproduto de maçã: potencial antioxidante**
(Carla Ferreira, ESA/IPV)
- 14:45-15:00** **Estudo de óleos essenciais com vista à aplicação na indústria transformadora de carnes**
(Jorge Silva, CERNAS-ESA/IPC)
- 15:00-15:15** **Aplicação do tomilho bela-luz na produção biológica de queijo**
(Filipa Carvalho, ESA/IPC)
- 15:15-15:40** **Estratégias para extração seletiva de compostos bioativos de valor a partir de borras de café com aplicações tecnológicas**
(Cláudia Passos, QOPNA- Dep Química, UA)
- 15:40-16:05** **Sessão de trabalho 1**
- 16:05-16:25** **Pausa para café**
- 16:25-16:45** **Indústria de nutracêuticos e alimentos funcionais – formas de manipulação das plantas medicinais**
(Fernando Padilha, Makepharma)
- 16:45-17:10** **Plantas como fontes naturais de alternativas biológicas de fitofármacos**
(Cristina Galhano, ESA/IPC)
- 17:10-17:35** **Valorização de bebidas alcoólicas com frutos silvestres: aguardentes com zimbro e licor de mirtilo**
(Ofélia Anjos, ESA/IPCB)
- 17:35-18:00** **As diferentes facetas das algas na alimentação humana**
(Leonel Pereira, IMAR-CMA, FCTUC)
- 18:00-18:30** **Sessão de trabalho 2**

***Cytisus multiflorus* and *Eriocephalus africanus* as source of antioxidants and anti-inflammatory compounds**

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Historically, extracts and preparations of plants are the basis of traditional medicine and the starting point for the discovery of new therapeutic agents [1]. *Cytisus multiflorus* and *Eriocephalus africanus* are small shrubs native from Iberian Peninsula and South Africa, respectively, and distributed in Mediterranean region. Despite their common application in folk medicine and claimed health benefits, including antioxidant and anti-inflammatory properties [2, 3, 4], there is still a lack of scientific data supporting this [5, 6].

In this work, phenolic-enriched extracts of *Cytisus multiflorus* and *Eriocephalus africanus* were obtained and evaluated in chemical models for their phenolic content, reducing power capacity, scavenging ability for DPPH radical, nitric oxide and hypochlorous acid, as well as for their ability to inhibit 5-Lipoxygenase activity i.e., a central enzyme in inflammatory process. Overall, the results from the chemical tests indicated that *Cytisus multiflorus* extract was more promising regarding antioxidant and anti-inflammatory properties reason why this extract was then further tested for these activities in biological models.

The present communication will focus on the experimental data obtained so far by our group for the phenolic-enriched extracts of *Cytisus multiflorus* and *Eriocephalus africanus*, as a valid contribution to clarify the mechanisms of action of the claimed antioxidant and anti-inflammatory activities of the two plants.

References

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- [3] Carvalho, A. M.; Plantas y sabiduría popular del Parque Natural de Montesinho. Un estudio etnobotánico en Portugal. Consejo Superior de Investigaciones Científicas. Biblioteca de Ciencias nº 35: Madrid, 2010.
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- [5] Pereira, O. R.; Macias, R. I. R.; Perez, M. J.; Marin, J. J. G.; Cardoso, S. M. (2013). Protective effects of phenolic constituents from *Cytisus multiflorus*, *Lamium album* L. and *Thymus citriodorus* on liver cells. *Journal of Functional Foods*, 5, 1170-1179.
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