



IMBEFI 1

1st Iberian Meeting on Natural Bioactives Entrapment for the Food Industry Challenges and Perspectives, from nanotechnology to bioavailability

May 12-13, 2011

"Lagoa Branca" Auditorium, ISA, Lisbon

Topics:

- Extraction and production of bioactive compounds
- Micro and nano entrapping processes
- Release kinetics and bioavailability
- Characterization of functional products

Objectives:

The industrial production of foods is increasingly using functional ingredients. Typically, these have been used for preserving purposes and/or controlling flavour, colour, and texture. Nowadays more and more ingredients with potential health benefits are also included.

Adding bioactive ingredients to functional foods presents many challenges, particularly with respect to the stability of the bioactive compounds during processing and storage and the need to prevent undesirable interactions with the carrier food system. Moreover, a health benefit also requires actions to ensure the stability of the compounds in the gastrointestinal system and to facilitate controlled release at the appropriate target. The entrapment of bioactive ingredients could help to address some of these problems.

The main objective of **IMBEFI** is to provide a forum for discussion of research results and updated scientific knowledge on the topic of micro-entrapment of bioactive compounds, facilitating personal contacts and promoting synergism and advanced interaction between academia and industry. This event will culminate in a **Brokersage Event**.

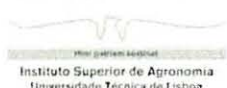
Invited Speakers:

- Dr. Anna Gergely (Steptoe & Johnson LLP, Belgium)
- Prof. Maria José Cocero Alonso (Universidad de Valladolid, Spain)
- Prof Lorenzo Pastrana (Universidad de Vigo, Spain)
- Prof José Maria Lagarón (IATA/CSIC, Universidad de Valencia)

More Information:

- Registration: - Open from March 1 to May 6
- Registration form and more information: www.inovisa.pt
- Poster abstract submission deadline: April 18
- Contacts: Francisco Macieira (INOVISA)
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Organization:



With the support of:

Edible mycorrhizal mushrooms as sources of bioactive phenolic compounds

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Mushrooms are emerging as one of the most appreciated foods on a global basis. Besides their nutritional properties and unique organoleptic characteristics, mushrooms might act as functional foods in view of the medicinal properties of their bioactive compounds [1,2]. Those medicinal properties are often due the antioxidant activity of specific molecules such as phenolic compounds [3].

In the present work, five edible mycorrhizal mushroom species (*Amanita caesarea*, *Cortinarius anomalus*, *Cortinarius violaceus*, *Lactarius volemus* and *Suillus luteus*) from Northeast Portugal were studied for their phenolic compounds profile and composition. The analyses were performed by High Performance Liquid Chromatography coupled to Diode Array detection (HPLC-DAD). Phenolic acids (protocatechuic, *p*-hydroxybenzoic and *p*-coumaric acids) were the major phenolic compounds. *Cortinarius anomalus* presented the highest content in phenolic acids (8.7 ± 0.4 mg/100 g dw), while *Lactarius volemus* revealed the minimal values (0.5 ± 0.1 mg/100 g dw). Nevertheless, the profiles in phenolic acids were somehow similar, since *p*-hydroxybenzoic acid was the main compound in all the assayed species, except *Suillus luteus*, in which protocatechuic acid predominated.

The obtained results suggest mycorrhizal mushrooms as suitable sources of natural healthy products to be included in our diet. This study is integrated in a research project intending to valorise the traditional native mycological flora of Northeast Portugal, of great interest for the economical development of this region.

Acknowledgements

FCT (Portugal) and COMPETE/QREN/UE- research project PTDC/AGR-ALI/110062/2009. J.C.M. Barreira and L. Barros also thank to FCT, POPH-QREN and FSE for their grants (SFRH/BPD/72802/2010 and SFRH/BPD/4609/2008).

References:

- [1] Kalač, P. Food Chem. 2009, 113, 9-16.
- [2] Ferreira, I.C.F.R., Barros, L., Abreu, R.M.V. Cur. Med. Chem. 2009, 16, 1543-1560.
- [3] Ferreira, I.C.F.R., Vaz, J.A., Vasconcelos, M.H., Martins A. Anti-cancer Agents Med. Chem. 2010, 10, 424-436.