XVI LATIN-AMERICAN CONGRESS ON CHROMATOGRAPHY

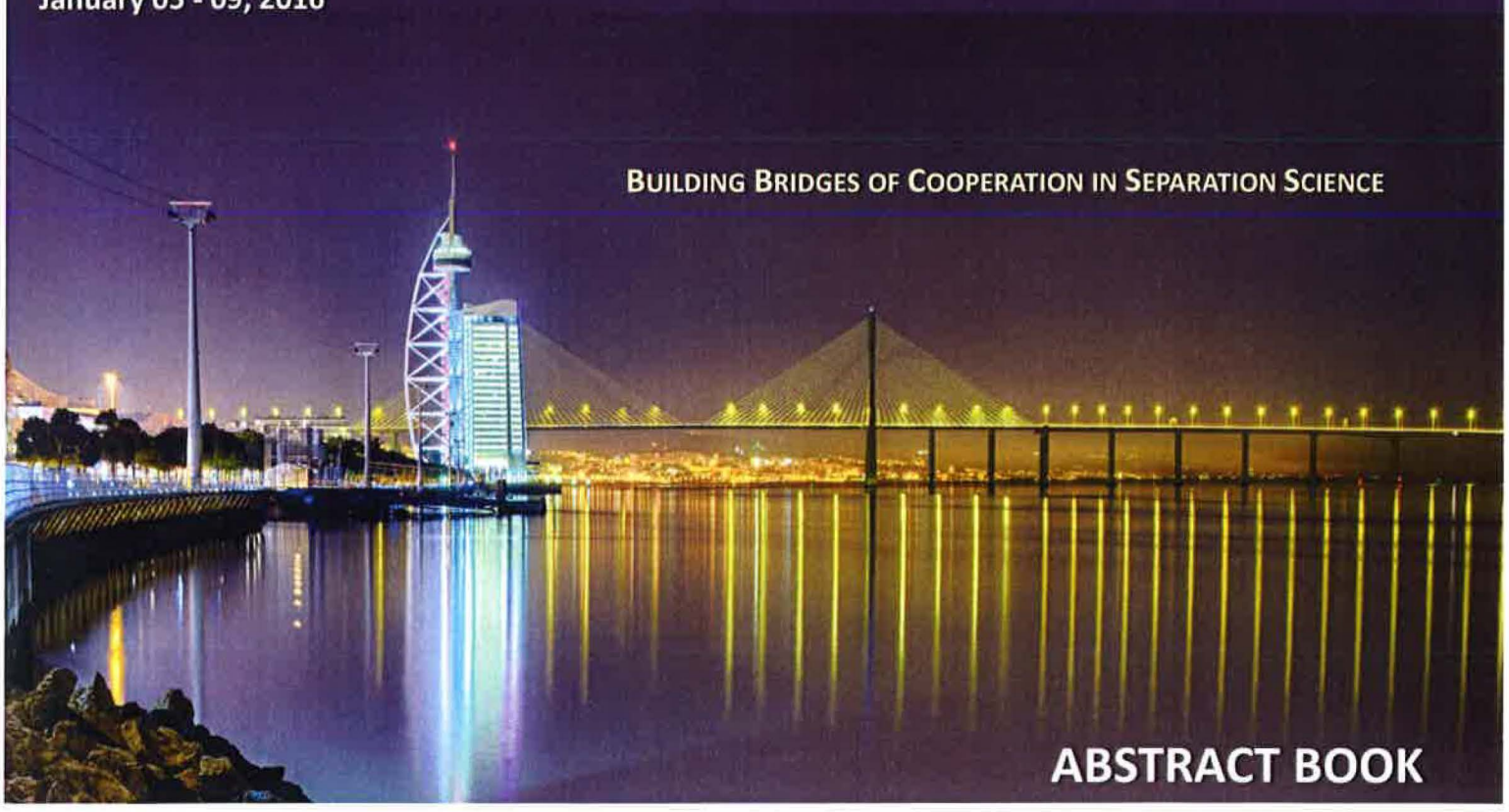
&

9th NATIONAL MEETING ON CHROMATOGRAPHY

FACULTY OF SCIENCES OF THE UNIVERSITY OF LISBON

Lisbon, PORTUGAL

January 05 - 09, 2016



ABSTRACT BOOK

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Edited by: J.M.F. Nogueira (FCUL)

ABSTRACT BOOK

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P-186 BIOACTIVITY AND CHROMATOGRAPHIC ANALYSIS OF NUTRIENTS AND NON-NUTRIENTS OF TWO *LECCINUM* SPECIES

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Nowadays the rising cost of health care and pharmaceutical products, the increase in life expectancy as well as the demand for an improved quality of life, has led to an increased concern about food intake and an emergence of new concepts of nutrition [1]. Mushrooms have been pointed out as an excellent option to include in a healthy diet, due to their nutritional value [2] associated with their bioactive properties [3].

The current study presents the chemical profile of two edible species, *Leccinum molle* (Bon) Bon and *Leccinum vulpinum* Watling, harvested in the outskirts of Bragança (Northeastern Portugal), regarding their content in nutrients and nonnutrients. Individual profiles of sugars and fatty acids were obtained by HPLC-RI and GC-FID, respectively. Tocopherols were analysed by HPLC-fluorescence, and the non-nutrients (*i.e.*, phenolic and other organic acids) by HPLC-PDA. The antioxidant activity of the methanolic extracts obtained from both species was assessed with different assays (e.g. reducing power, radical scavenging activity and lipid peroxidation inhibition) and their hepatotoxicity was evaluated in primary cell cultures obtained from porcine liver, PLP2.

Generally, both *Leccinum* species revealed similar nutrient profiles, with low fat levels, fructose, mannitol and trehalose as the foremost free sugars, and higher percentages of mono- and polyunsaturated fatty acids in comparison with saturated fatty acids. The presence of bioactive compounds was also detected, namely phenolic (*e.g.*, gallic, protocatechuic and *p*-hydroxybenzoic acids) and organic acids (*e.g.*, citric and fumaric acids). Both species presented antioxidant properties, being *L. vulpinum* the species which showed the most promising results (higher contents of total phenolic acids and lower EC_{50} values in all the performed assays). Neither of the extracts presented toxicity against the liver primary cells PLP2, up to maximal concentration tested (GI_{50} > 400 µg/mL).

Acknowledgements:
IPATIMUP integrates the i3S Research Unit, which is partially supported by FCT, the Portuguese Foundation for Science and Technology. Authors also thank FCT for the grant of F.S. Reis (SFRH/BD/111753/2015) and L. Barros (SFRH/BPD/107855/2015).

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