15th World Congress on

POLYPHENOLS APPLICATIONS

September 28-30, 2022 - Valencia, Spain

INTERNATIONAL SOCIETY OF MICROBIOTA

Congress & Workshop Abstracts

15th World Congress on Polyphenols Applications

September 28 – 30, 2022

Valencia, Spain and Online

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The global abstract book is referenced as Polyphenols Applications 2022 World Congress.

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Welcome to Polyphenols Applications 2022

Dear Colleagues,

It is a great pleasure to welcome all of you to our 15th World Congress on Polyphenols Applications which will be held on September 28-30, 2022 at ADEIT 'Fundación Universitat', Valencia, Spain, & Online.

We wish that the 15th World Congress on Polyphenols Applications will be at least as exciting and as successful as our previous meetings.

Hot topics which are going to be highlighted this year in Valencia include among others:

Microbiota, metabolites, adipose tissue, nervous system, senolytic activity, ageing, endothelial function, radioprotection, oxidative stress, ferroptosis, cancer, atherosclerosis, extracellular vesicles, cannabinoids, cannabinoid receptors, anticancer activity, antiviral activity, anti-dyslipidemic effect, ocular delivery, cosmetic application, polyphenols recovery, extraction, valorization, fermentation, wine polyphenols, sensory aspects, inter-individual variability ...

Cannabis 2022 a new workshop on "Medical Cannabis, Cannabinoids and Derivatives: Recent Advances and Applications" will be held under the direction of **Prof. Jan Frederik Stevens**. Cannabis 2022 aims to cover the cannabis constituents, their isolation, and their application in the medical sector and food industry.

We thank **Prof. Francisco J. Barba** and his team: *Juan Manuel Castagnini, Noelia Pallares and Francisco Juan Marti Quijal* for their great assistance as local organizers.

We would like to thank all speakers for their contribution. Their breadth of knowledge and expertise has helped make this conference as extraordinary as it is:

***Ramaroson Andriantsitohaina**, INSERM, France*
***Luke Busta**, University of Minnesota Duluth, USA*
***Mara Calleja**, University of Valencia, Spain*
***Franck Carbonero**, Washington State University-Spokane, USA*
***Juan Manuel Castagnini,** University of Valencia, Spain*
***Jan Claesen**, Cleveland Clinic, USA*
***Yolanda Diebold**, Universidad de Valladolid, Spain*
***Jennifer Duringer**, Oregon State University, USA*
***Juan Carlos Espín**, Spanish National Research Council, Spain*
***Jan Frank**, University of Hohenheim, Germany*
***Michael Gänzle**, University of Alberta, Canada*
***Pam Maher**, The Salk Institute for Biological Studies, USA*
***Francisco Juan Martí-Quijal**, University of Valencia, Spain*
***Nenad Naumovski**, University of Canberra, Australia*
***Nicole Nemetz**, University of Bonn, Germany*
***Elena Obrador**, University of Valencia, Spain*
***Naomi Osakabe,** Shibaura Institute of Technology, Japan*
***Noelia Pallarés**, University of Valencia, Spain*

Elke Richling, *University of Kaiserslautern, Germany*
Ana Rodriguez-Mateos, *King's College London, United Kingdom*
Sascha Rohn*, Technische Universität Berlin, Germany*
Sonia Sentellas*, University of Barcelona, Spain*
Susana Soares*, Universidade do Porto (FCUP), Portugal*
Jan Frederik Stevens*, Oregon State University, USA*
Yu Sun*, The Chinese Academy of Sciences, China*
Guillermo Velasco*, Instituto de Investigación Sanitaria San Carlos, Spain*
Jean-Paul Vincken*, Wageningen University & Research, The Netherlands*
Fabian Weber*, University of Bonn, Germany*
Qian Wu, *Hubei University of Technology, China*

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We wish to also thank the following companies for supporting Polyphenols Applications 2022: Silvateam, Bioquochem, Extrasynthese, Eldercraft, and MetaSci.

We hope that you will enjoy the Polyphenols 2022 Congress and that your interactions with your colleagues from many countries will stimulate a creative exchange of ideas and challenges.

Prof. Andreas Schieber
President of Polyphenols Applications 2022
University of Bonn, Germany

PHENOLIC PROFILE OF EX-SITU PRODUCED MONTESINHO MUSHROOMS

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Montesinho Natural Park (MNP) represents a mountain area with unique characteristics and mycological diversity. More than 168 edible mushroom species have been identified in MNP and several studies describe them as sources of proteins, dietary fibre, and minerals [1]. Additionally, wild mushrooms are also sources of high added-value compounds for food/nutraceutical/pharmaceutical industries such as phenolics, triterpenoids, sterols, and polysaccharides [4,8–11]. Nevertheless, mushrooms have a seasonal frequency as function of the weather conditions and some appreciated species do not bear fruit in some years due to long drought periods, an issue that has been intensified by climate change.

To overcome these limitations, through the present study, a controlled ex-situ mushroom production is foreseen at laboratorial and industrial levels. An extensive chemical characterization will be performed, giving special attention to the phenolic class, which will be assessed by HPLC/DAD-ESI/MS, to guarantee the quality of the produced species and the maintenance of their original characteristics. The controlled ex-situ mushroom production and the promotion of diverse transdisciplinary activities on mycology included in this work can be seen as an integrated eco-socio-economic strategy to meet the high demand for safe edible mushrooms and regional/national needs, in harmony with the MNP ecosystem and legislation.

References:

1.Pereira, E.; Barros, L.; Martins, A.; Ferreira, I. C. F. R. Towards chemical and nutritional inventory of Portuguese wild edible mushrooms in different habitats. Food Chem. 2012, 130, 394–403