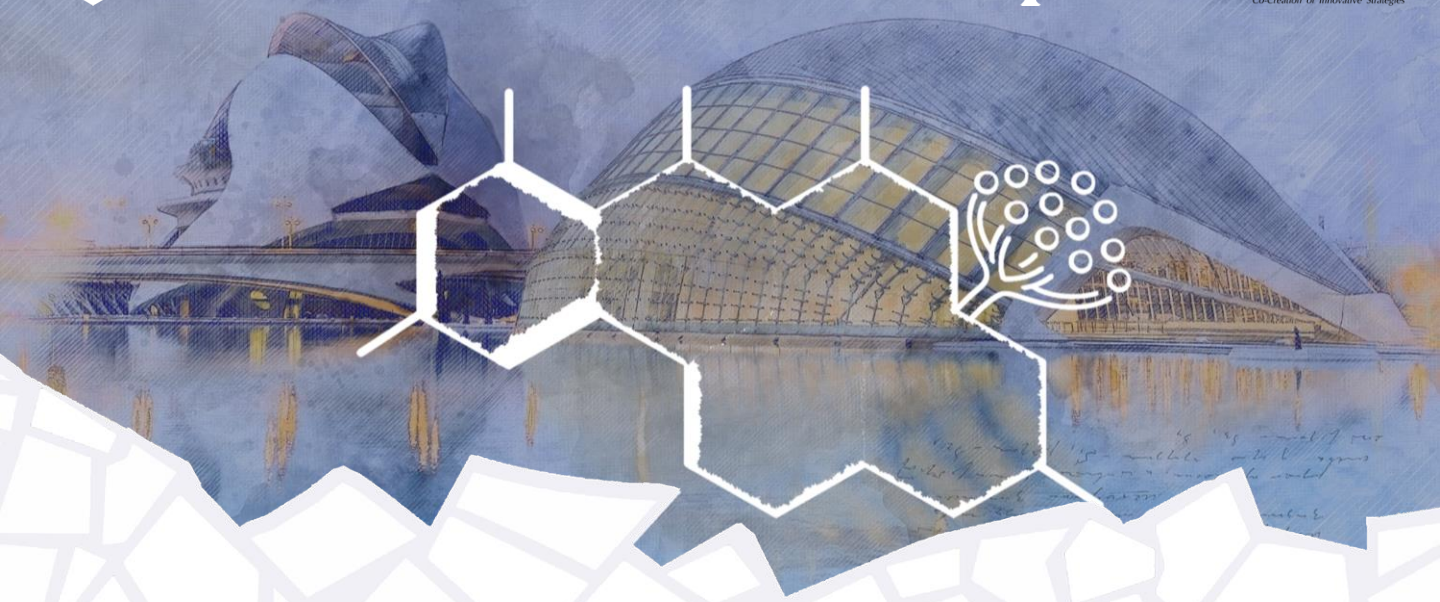
Micofood

MycoTWIN
Worldwide Mycotoxin Management via Co-Creation of Innovative Strategies



Book of abstracts

1st International Workshop of the Spanish network on mycotoxins, toxigenic fungi and their decontamination processes

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MycoTWIN Workshops 5-6

Valencia, June 28 to 30, 2023

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Friday, June 30th

SESSION 3 – Intervention and mitigation of mycotoxins in pre and post -harvest. Chairs: Agustín Ariño Moneva & Misericordia Jiménez Escamilla	
9:30-10:40	**Plenary lectures:** **9:30-10:05 Mitigation of Ochratoxin A in the food chain, from prevention to remediation.** *Venâncio A.* Centro de Engenharia Biológica-IBQM, Universidade do Minho, Campus de Gualtar, Braga, Portugal **10:05-10:40 Innovative approaches to counteract mycotoxins in the food chain.** *Avantaggiato G.* National Research Council of Italy, Institute of Sciences of Food Production, Bari, Italy.
10:45-11:30	**Coffee break**
10:45-11:30	**Oral communications:** **11:30-11:45 Biotechnological application for the development of a bio-preservative ingredient for cheese conservation.** *Meca G.* University of Valencia, Faculty of Pharmacy Laboratory of Food Chemistry and Toxicology. **11:45-12:00 Aflatoxin detoxification by thermal cooking treatment and evaluation of in vitro bioaccessibility from white and brown rice.** *Romero-Sánchez I.* Complutense University of Madrid, Faculty of Chemistry, Department of Analytical Chemistry. **12:00-12:15 The in vitro efficacy of a detoxifying agent to mitigate DON-induced oxidative stress in hepatic cells.** *Riahi I.* BIŌNTE Nutrition S.L. Technical Department.

	12:15-12:30 Deoxynivalenol, HT-2 and T-2 toxins prediction in oat samples by near-infrared hyperspectral imaging as a novel strategy. *Teixido-Orries I.* University of Lleida, Engineering and Science. Department of Food Technology. **12:30-12:45 Carob flour waste revalorization by lactic acid bacteria fermentation for its application as a bread biopreservation ingredient.** *Musto L.* University of Valencia, Faculty of Pharmacy Laboratory of Food Chemistry and Toxicology.
13:00-14:00	**Lunch break**
SESSION 4 – Human and animal health & Toxicology. **Chairs: Natalia Arroyo Manzanares & Antonio Abad-Fuentes**	
14:00-15:10	**Plenary lectures:** **14:00-14:35 Comparative toxicokinetics of mycotoxins in target animal species, and application of biomarkers for in vivo efficacy testing of mitigation strategies.** *Siska C.* Laboratory of Pharmacology and Toxicology, Department of Pathobiology, Pharmacology and Zoological Medicine, Faculty of Veterinary Medicine, Ghent University, Merelbeke, Belgium **14:35: 15:10 The mycotoxins, a part of the dietary exposome: a challenge for toxicologist.** *Oswald I.* INRAE, Toxalim, Research Center in Food Toxicology, Toulouse, France.

15:10-16:10	**Oral communications:** **15:10-15:25 Sub-lethal effects in fish after a short- and long-term exposure to mycotoxins. An in vitro and in vivo approach.** *Valdehita A.* Instituto Nacional de Investigación y Tecnologia Agraria y Alimentaria. Consejo Superior de Investigaciones Cientificas, Madrid. **15:25-15:40 Functional ingredients against mycotoxins damage as an eating strategy.** *Manyes Font L.* University of Valencia, Faculty of Pharmacy Laboratory of Food Chemistry and Toxicology. **15:40-15:55 In vivo genotoxicity evaluation of aflatoxin B1 and sterigmatocystin alone and in combination.** *Vettorazzi A.* University of Navarra, Department of Pharmacology and Toxicology, School of Pharmacy and Nutrition. **15:55-16:10 Urine biomonitoring for toxic exposure: focus on mycotoxins and pesticides.** *Marín-Sáez J.* University of Granada, Faculty of Sciences, Department of Analytical Chemistry.
16:10-16:50	**Coffee break**
16:50-17:20	Round table with companies: Ángel Badía (MCA Algas y Derivados , S.L.) María Cardona (Familia Martínez) Luis M. Gallego (Analiza Calidad & ACOFESAL)
17:20-18:00	Fast pitch of best posters in workshop
18:00-18:30	Closing ceremony

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INVITED SPEAKERS AND ORAL PRESENTATIONS

POSTERS

Posters

Session 1: Biodiversity and pathogenicity of toxigenic fungi

Mycotoxigenic potential of fungi isolated from highly cured Portuguese cheese.

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The cheese industry in Portugal offers a plethora of high-quality products. The São Jorge cheese is an example and has obtained the Protected Designation of Origin (PDO) certification in 1986. This cheese has long ripening periods of up to 36 months, which raises concerns regarding food losses and health risks due to fungal proliferation. In this study, the mycobiota of three São Jorge cheese samples with different ripening periods (five, nine and thirty months) was studied to predict the associated mycotoxigenic risk. From the three cheese samples, 76 fungal isolates were identified through molecular methods (analysis of ITS and/or partial *benA*). *Penicillium* spp. ser. *Camembertiorum*, mainly *P. solitum* and *P. echinulatum*, were present in all the analyzed cheeses. *Scopulariopsis* spp. and some yeasts (predominantly *Saccharomyces cerevisiae*) were also part of the mycobiota of the cheeses. Although none of these species is a common producer of mycotoxins, an analysis of the cheese by mass spectrometry will be carried out. Furthermore, the overall mycobiota will be studied through metabarcoding to uncover the presence of potential mycotoxigenic species that have not been isolated through the culturomics approach.

Keywords: cheese, *Penicillium*, *Scopulariopsis*, *Saccharomyces cerevisiae*

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