

3rd INTERNATIONAL CONFERENCE ON
FOOD CONTAMINANTS: CHALLENGES
ON RISK ASSESSMENT

ICFC 2019
International Conference on Food Contaminants
Challenges on Risk Assessment



BOOK OF ABSTRACTS



› 26-27 SEPTEMBER
AVEIRO, PORTUGAL



P3 - earlyMYCO project - Early-life exposure to mycotoxins: a neglected issue?

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Recent studies under MYCOMIX project reported that Portuguese children until 3 years old are exposed to multiple mycotoxins through food consumption, constituting a potential health threat. Aflatoxins (carcinogenic toxins) represented the main risk contributors and deoxynivalenol (a non-carcinogenic toxin associated with immunological and gastrointestinal toxic effects) showed the highest daily intake of the studied mycotoxins. These results opened new research perspectives and emphasized the need to accurately assess the prenatal and lactational exposure to mycotoxins in a critical and vulnerable period of life.

Early-life exposure of children occurs during gestation through transfer of toxic substances present in the maternal diet to the fetus and later on, during lactation, through the breast milk. Considering this, the national project earlyMYCO – Early-life exposure to MYCOtoxins and its impact on health aims at assessing the risk of early-life exposure to mycotoxins. earlyMYCO proposes to answer several key questions including what extent are pregnant women and infants until six months exposed to mycotoxins in Portugal? Is this exposure a health threat? With this purpose, earlyMYCO gathered a multidisciplinary team with expertise on medical sciences, public health and toxicology to perform i) an epidemiological study, including the recruitment of pregnant women and infants, food survey and biological sample collection and ii) mycotoxin exposure assessment in pregnant women and infants using biomarkers of exposure. The epidemiological study was approved by INSA's Ethical Committee and will be conducted in the Primary Health Care of Central Lisboa. The biomonitoring study will use advanced analytical methodologies and will provide data to perform the exposure assessment.

Due to the increasing prevalence in food commodities, mycotoxins appear to be important, but often neglected contaminants in terms of health impact on human population especially in vulnerable groups as



children. It is expected that results obtained within earlyMYCO will contribute to understand the impact of mycotoxin early-life exposure.

Acknowledgments: FCT/MCTES through national funds (PTDC/MED-TOX/28762/2017) and co-funded by iMed.Ulisboa (Pest-UID/DTP/04138/2018), CESAM (UID/AMB/50017/2019) and MYTOX-SOUTH, Ghent University, BE.

Keywords: Early-life exposure; mycotoxins; biomarkers, exposure assessment