# Assessment of Occupational Exposure to Mycotoxins – Biomonitoring tools relevance

S. Viegas[1, 2], C. Viegas[1, 2], Anne Oppliger
[1] H&TRC- Health & Technology Research Center, ESTeSL- Escola Superior de Tecnologia da Saúde, Instituto Politécnico de Lisboa; 1990-094 Lisbon, Portugal; [2] Centro de Investigação em Saúde Pública, Escola Nacional de Saúde Pública, Universidade NOVA de Lisboa, 1600-560 Lisbon, Portugal;[3]Institute for Work and Health, University of Lausanne, Lausanne CH-1015, Switzerland
Email: susana.viegas@estesl.ipl.pt

As an alternative or as a complement to air monitoring, biomonitoring is another way of assessing exposure to mycotoxins. Biomonitoring can include the detection, in easily accessible body fluids such as blood and urine, of the parent compound (mycotoxin) and its metabolites (De Nijs et al., 2016). However, the use of biomonitoring implies the availability of information related with each mycotoxin toxicokinetics, metabolism, and bioavailability to be able to interpret correctly the results (Escrivá et al., 2017).

Moreover, it is important to note that data on background dietary exposure to mycotoxins is needed to determine the additional burden of respiratory and dermal exposure in the workplace. If this background data are unavailable, a control group of individuals from the general population should be included to exclude the possibility of exposure by diet (Degen, 2008). Additionally, we should consider that the most common exposure scenario in the workplaces is exposure to mycotoxins mixtures (Viegas et al., 2018a, b). It is, therefore, extremely relevant, from an occupational health point of view, to be able to measure several mycotoxins in one sample. Contextual information about the workplace and tasks developed is also very relevant to obtained since levels of exposure can vary greatly between different tasks within the same industry, and characterizing exposure implies recognize which tasks implicate higher exposure. Only with this information is possible to perform a more accurate exposure and risk assessment and, consequently, identify the most suitable risk management measures to apply.

Several data will be presented from past and on-going research projects to demonstrate how biomonitoring was useful and contributes to recognize which occupational settings adds significantly to the exposure resulting from ingestion of mycotoxin-contaminated food. The different variables that promote exposure to mycotoxins in the different settings will also be discussed.

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*References*

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De Nijs M. et al. (2016). World Mycotoxin J; 9: 831–45.
Escrivá L, et al. (2017). Toxins; 9: 251.
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**Main topic (tick the key topic of your presentation) :**

☐ Effects of biological agents on the health of workers exposed: infectiology and toxicology research, epidemiological studies, dose-response relationships, etc.

☒ Methods and strategies for the qualitative and quantitative assessment of biological risks: risk assessment methods, biometrology, methods and strategies for exposure measurement (bioaerosols, liquids, surfaces, real time), research resources (atmosphere generation, modelling), data interpretation, etc.

☐ Exposure to biological agents at the workstation: sectors and biological agents concerned, emission sources and exposure situations, characteristics of exposure (concentration, particle size distribution and biodiversity of bioaerosols, etc.), multi-exposure, biometrology, etc.

☐ Prevention measures: means available for reducing exposure, ventilation, innovative processes, personal protection, new technologies for bioaerosol removal and surface cleaning, etc.

**Preference (tick the preference for presentation):**

☒ Oral*

☐ Poster presentation

☐ No preference

* Authors selected to present oral communications will be asked to provide a short biography (5 lines) to allow the chair person of the session to introduce them.