

## Mycotoxins in Food, High Impact in Consumers' Health: A Review of In Vitro Assays

Background: Mycotoxins are fungal metabolites from *Aspergillus*, *Penicillium*, or *Fusarium*, whose ingestion pose health risks from cultivation to consumption [3] and co-occurrence may exacerbate these effects [2]. Aim: This review aims to provide updated information of the in vitro toxicity studies, reported in the last 10 years (2013-2023). Methods: Databases as Web of Science, PubMed and Google Scholar and "mycotoxins," "in vitro," "cytotoxicity," "cell line," and "oxidative stress" were used as keywords in toxicology journals as Toxicology Letters and Food and Chemical Toxicology. Results: It was real that MTT assay or CCK-8 assay are suitable to study the cytotoxicity of mycotoxins. It is crucial to consider the generation of reactive oxygen species by the H<sub>2</sub>-DCFDA assay, the lipid peroxidation by TBARS assay, the membrane potential by the JC-1 fluorescent probe and apoptosis and necrosis processes; individually and combined in several cell lines. These last three are based on flow cytometry. Conclusion: the toxicity reported was concentration and time dependent highlighting the importance in continuous research, essential to protect consumers health. Acknowledgements: Spanish Ministry of Science and Innovation PID2020-115871RB-100 and Conselleria d'Educació, Universitats i Ocupació from Generalitat Valenciana project CIAICO2022/199.

### Presenting author

Claudia Moyano López, Estudiante del Grado en Farmacia

**Primary author:** MOYANO LÓPEZ, claudia (universidad de valencia)

**Co-author:** JUAN-GARCÍA, Ana (University of Valencia)

**Presenter:** MOYANO LÓPEZ, claudia (universidad de valencia)

**Session Classification:** Poster session

**Track Classification:** Poster session: Posters