

Dr. Mohamed Fathi Abdallah

Gustaaf Callierlaan 127, Gent-9000, Belgium

mfathiabdallah@gmail.com

+32 494 459 218



Current Position

10/2020 - Now **Post-Doctoral Assistant**

Department of Food Technology, Safety and Health, Faculty of Bioscience Engineering, Ghent University, Belgium.

Project: MICRO-TOX project, funded by The Special Research Fund (BOF), Ghent University.

Research Projects and Academic Tasks:

- Unravelling the *in vitro* toxic effects of the cyanobacterial microcystins, and their interactions with co-exposed microplastics (role:-main researcher).
- **AF-CYSTIN-milk:** assessing the incidence of aflatoxin M1 and microcystin-LR in water buffalo milk from Philippines and their potential *in vitro* toxic interaction. VLIRUOS Global Minds Grant 2021 (role:- main researcher).
- Supervision of master thesis students (role:- practical tutor and academic mentor).

Previous Position(s)

04/2020 - 09/2020 **Analytical Scientist/Technologist**

Food Safety Department, Teagasc Food Research Centre, Ashtown, Dublin, Ireland.

Project: Agritox project (an interreg project funded by the EU).

Tasks:-

- Development of accurate and precise methods for the analysis of mycotoxins in food.
- Validation of analytical methods according to best international practice.
- Organization and management of the traceability of Agritox project samples and their results.
- Writing technical reports, project progress reports and peer reviewed publications.
- Effective communication of research to collaborators and stakeholders.
- Interpretation of research findings and preparing scientific and popular press publications.
- Disseminating research findings to a variety of audiences as appropriate.
- Reporting and discussing progress updates with Agritox project team.

University Education

2016 - 2020 **PhD in Pharmaceutical Sciences**

Centre of Excellence in Mycotoxicology and Public Health, Ghent University, Belgium.

PhD thesis: "Pre-and post-harvest innovative tools to reduce toxigenic fungi and mycotoxins".

Research Projects and Academic Tasks:

- Biological control of *Fusarium graminearum* and its mycotoxins in Maize. MYCOKEY project "funded by the Horizon 2020 research and innovation programme" (role:- PhD researcher).
- **MYCOSUGAR:** Investigating the occurrence of mycotoxins and their producing fungi in sugarcane grass and its by-products and the related public health hazard in humans. VLIRUOS Global Minds Grant 2019 (role:- main researcher).
- Supervision of master thesis students (role:- practical tutor and academic mentor).

2013 - 2016 **Master in Pharmaceutical Sciences (MSc, Toxicology).**

Hacettepe University, Turkey.

Subject: Mycotoxin detection in food and feedstuffs.

Master thesis: "Simultaneous multi-mycotoxin detection in maize and animal feed from Egypt using the state-of-the-art methodology LC-MS/MS".

2012 - 2013 **Diploma of Turkish Language Proficiency (TOMER)**

Ankara University, Turkey.

2007 - 2011 **Bachelor of Veterinary Medical Sciences (BVSc)** with distinction.

Assiut University, Egypt.

Research Techniques

- Ghent University**
- *In Vitro* toxicity assays, mitochondrial toxicity assays (bioenergetics) in human cell lines.
 - Un-targeted analysis of fungal secondary toxic metabolites using HRLC-MS/QTOF.
 - Quantitative analysis of mycotoxins using LC-MS/MS.
 - Assessment of different biocontrol agents against toxigenic fungi *in vitro* and *in planta*.
- BOKU University & IfADo Institute**
- Different analytical techniques for detection of mycotoxins and their metabolites in food metrics and human biological fluids (blood and urine) and cell culture medium through HPLC-DAD/FLD and LC-MS/MS.
 - ELISA assays for quantifying aflatoxins M1 in human urine.
- Hacettepe University**
- Detection of different mycotoxins in different food and feed matrices “animal feed, cereals and dairy milk samples” using HPLC-FLD.

Software Knowledge

- Data processing - Progenesis, UNIFI, Masslynx (good).
- Statistics - GraphPad (good) R statistics (good), MATLAB (basic).
- Graphic Design - Inkscape (good).

Scientific Output

Google Scholar link for full publication list <https://scholar.google.com/citations?user=05FfukgAAAAJ&hl=en>
 Research Articles (**selected**)

- 2022
- Chen X, **Abdallah MF**, Grootaert C, Rajkovic A. Bioenergetic status of the intestinal and hepatic cells after short term exposure to fumonisin B1 and aflatoxin B1. *International Journal of Molecular Sciences* 23 (13), 6945.
 - Zhang H, **Abdallah MF**, Zhang J, Yu Y, Zhao Q, Tang C, Qin Y, Zhang J. Comprehensive quantitation of multi-signature peptides originating from casein for the discrimination of milk from eight different animal species using LC-HRMS with stable isotope labeled peptides. *Food Chemistry* 133126.
 - Tian Y, **Abdallah MF**, De Boevre M, Audenaert K, Wang S, De Saeger S, Wu A. Deciphering Alternaria metabolic responses in microbial confrontation via an integrated mass spectrometric targeted and non-targeted strategy. Accepted *Food Chemistry* 2022.
 - Sun F, Tan H, **Abdallah MF**, Li Y, Zhou J, Li Y, Yang S. A novel calibration strategy based on isotopic distribution for high-throughput quantitative analysis of pesticides and veterinary drugs using LC-HRMS. *Journal of Hazardous Materials* 430, 128413.
 - Tan H, Sun F, **Abdallah MF**, Li Y, Yang S. Background ions into exclusion list: a new strategy to enhance the efficiency of DDA data collection for high-throughput screening of chemical contaminations in food. *Food Chemistry*, 132669.
- 2021
- Vanhoutte I, De Tender C, Demeyere K, **Abdallah MF**, Ommeslag S, Vermeir P, De Saeger S, Debode J, Meyer E, Croubels S, Audenaert K, De Gelder L. Bacterial Enrichment Cultures Biotransform the Mycotoxin Deoxynivalenol into a Novel Metabolite Toxic to Plant and Porcine Cells. *Toxins* 2021, 13(8), 552; doi.org/10.3390/toxins13080552.
 - De Colli L, De Ruyck K, **Abdallah MF**, Finnan J, Mullins E, Kildea S, Spink J, Elliott C, Danaher M. Natural co-occurrence of multiple mycotoxins in unprocessed oats grown in Ireland with various production systems. *Toxins* 2021, 13(3), 188; doi.org/10.3390/toxins13030188.
 - **Abdallah MF**, Briend A, Gonzales GB. Aflatoxins and kwashiorkor: a commentary on the association-causation conundrum. *Toxicon* 190 (January), 20-21.
- 2020
- **Abdallah MF**, Audenaert K, Saeger SD, Houbraken J. Revisiting an Aspergillus flavus Strain Isolated from an Egyptian Sugarcane Field in 1930. *Microorganisms* 8 (11), 1633
 - **Abdallah MF**, Audenaert K, Lust L, Landschoot S, Bekaert B, Haesaert G, et al. Risk characterization and quantification of mycotoxins and their producing fungi in sugarcane juice: A neglected problem in a widely-consumed traditional beverage. *Food Control*. 106811.
- 2019
- **Abdallah MF**, Girgin G, Baydar T. Mycotoxin Detection in Maize, Commercial Feed, and Raw Dairy Milk Samples from Assiut City, Egypt. *Veterinary Sciences*. 2019, 6(2), 57.

- 2018 - **Abdallah MF**, De Boevre M, Landschoot S, De Saeger S, Haesaert G, Audenaert K. Fungal Endophytes Control Fusarium graminearum and Reduce Trichothecenes and Zearalenone in Maize. *Toxins* 2018, 10(12), 493.
- **Abdallah MF**, Krska R, Sulyok M. Occurrence of Ochratoxins, Fumonisin B2, Aflatoxins (B1 and B2), and Other Secondary Fungal Metabolites in Dried Date Palm Fruits from Egypt: A Mini-Survey. *J Food Science*; 83(2):559–64.
- 2017 - **Abdallah MF**, Girgin G, Baydar T, Krska R, Sulyok M. Occurrence of multiple mycotoxins and other fungal metabolites in animal feed and maize samples from Egypt using LC-MS/MS. *Journal of the Science of Food and Agriculture*, 2017, doi: 10.1002/jsfa.8293.
- 2016 - **Abdallah MF**, Krska R, Sulyok M. Mycotoxin Contamination in Sugarcane Grass and Juice: First Report on Detection of Multiple Mycotoxins and Exposure Assessment for Aflatoxins B1 and G1 in Humans. *Toxins*, 2016, doi: 10.3390/toxins8110343.

Review Articles and Book Chapters

- 2022 - Tavelli R, Callens M, Grootaert C, **Abdallah MF**, A Rajkovic. Foodborne pathogens in the plastisphere: Can microplastics in the food chain threaten microbial food safety? *Trends in Food Science & Technology*. <https://doi.org/10.1016/j.tifs.2022.08.021>.
- 2021 - **Abdallah MF**, Van Hassel W, Andjelkovic M, Wilmotte A, Rajkovic A. Cyanotoxins and food contamination in the developing countries: Review on their types, toxicity, analysis, occurrence and mitigation strategies. Submitted to *Toxins* 2021.
- 2018 - **Abdallah MF**, Ameye M, De Saeger S, Audenaert K, Haesaert G. Biological control of mycotoxigenic fungi and their toxins: an update for the pre-harvest approach. In *Fungi and Mycotoxins - Their Occurrence, Impact on Health and the Economy as well as Pre- and Postharvest Management Strategies*; IntechOpen.
- 2015 - **Abdallah MF**, Girgin G, Baydar T. Occurrence, Prevention and Limitation of Mycotoxins in Feeds. *Animal Nutrition and Feed Technology Journal*, 2015, 15: 471-490.

Editorial Letters

- 2022 - Gado M, Abdelsadek D, Zahran F, El-Salhey NN, Mehrez O, Abdel-Hay S, Mohamed SM, **Abdallah MF**. Mycotoxin occurrence in Egyptian foods: Highlights on the findings of the past decade. *Egypt Scholars Journal*, 2022:1-3. DOI: 10.52649/egscj21632545.
- 2018 - **Abdallah MF**, De Boevre M, Audenaert K, Haesaert G, De Saeger S. Highlight report: Mycotoxins as food contaminants in Africa: challenges and perspectives. *Archives of Toxicology*, 2018, 92: 2151.

Board Member

- Since 2022 - Editor-in-Chief of *Egypt Scholars Journal*.
- Since 2021 - *Journal Microorganisms* and *Journal Foods* (Reviewer Board Member).

Scientific Reviewer

- 2021 - Fermentation; Toxin Reviews.
- 2020 - *Journal of Hazardous Materials*; *Toxicon*; *Biocontrol Journal*; *Fungi*; *Foods*; *International Journal of Environmental Research and Public Health*.
- 2019 - *Metabolites*; *Microorganisms*; *Forest*; *Journal of the Science of Food and Agriculture*.
- 2018 - *Toxins*; *World Mycotoxins Journal*; *Environmental International*; *Food Chemistry*; *Journal of Food Processing and Preservation*.

Grants, Fellowships and Scientific Awards

Grants

- 2021 - VLIRUOS Global Minds Grant for AF-CYS Milk project (€11,000). Side project in the postdoc phase, Ghent University, Belgium.
- 2019 - VLIRUOS Global Minds Grant for MYCOSUGAR project (€11,000). Side project in the PhD phase. Ghent University, Belgium.
- 2018 - Full Registration Fee Grant to The 3rd International Online Course on Postharvest and Fresh-Cut Technologies, Universidad Politécnica de cartagena, Spain.

Fellowships

- 2020 - Postdoctoral Fellowship-Special Research Fund Ghent University, Ghent University, Belgium. Research grant number BOF20/PDO/032.
- 2020 - Research Leaders 2025 - A Fellowship Programme developing the Next Generation of Agri-Food Research Leaders, Austria/Ireland (granted, but untaken/excused).
- 2016 - PhD Research Fellowship, Ghent University, Belgium.
- 2015 - Erasmus Student Mobility for Studies, Center for Analytical Chemistry, Universität für Bodenkultur Wien, Austria.
- 2014 - Erasmus Student Mobility for Placement, *IfADo* Institute, Dortmund, Germany.
- 2012 - Turkish Government Scholarship, Turkey.
- 2012 - Full Tuition Graduate Teaching and Research Assistantship, Assiut University, Egypt.

Scientific Awards

- 2022 - Best Oral Presentation from Toxins journal (Power of Fungi and Mycotoxins in Climate Change Symposium, Croatia).
- 2019 - Young Scientist Winner (Eurachem Workshop, Estonia).
- 2019 - Outstanding Contribution in reviewing from Food Chemistry Journal.
- 2018 - Best Poster Award from Toxins journal (2nd African Symposium on Mycotoxicology, Kenya).

Research-Related Organization Activities

- 2021 - Regular Member of the European Society of Toxicology in Vitro (ESTIV).
- 2021 - Member of the Belgian society of Toxicology
- 2021 - Member of the European Society of Toxicology
- 2019 - Member of Young NMC network.
- 2019 - Member of Nordic Metabolomics Society.
- 2017 - Member of the International Society of Mycotoxicology.
- 2017 - Co-organizer of 1st MycoKey International Conference, Ghent-Belgium.

Languages

Arabic (Native)	English (Excellent)	French (Basic)	Turkish (Basic)
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References**Postdoc mentor**

Prof. Andreja Rajkovic
Ghent University, Belgium.
andreja.rajkovic@ugent.be
+32-(0)9-264 99 04

PhD project supervisor

Prof. Sarah De Saeger
Ghent University, Belgium.
sarah.desaeger@ugent.be
+32-(0)9-264 81 37

Master thesis supervisor

Dr. Michael Sulyok
University of Natural Resources and Life Sciences (BOKU), Austria
michael.sulyok@boku.ac.at
+43 2272 66280-409