ISM
International Society for Mycotoxicology
research on mycotoxin and toxigenic fungi

e-newsletter of the International Society of Mycotoxicology 01/2024

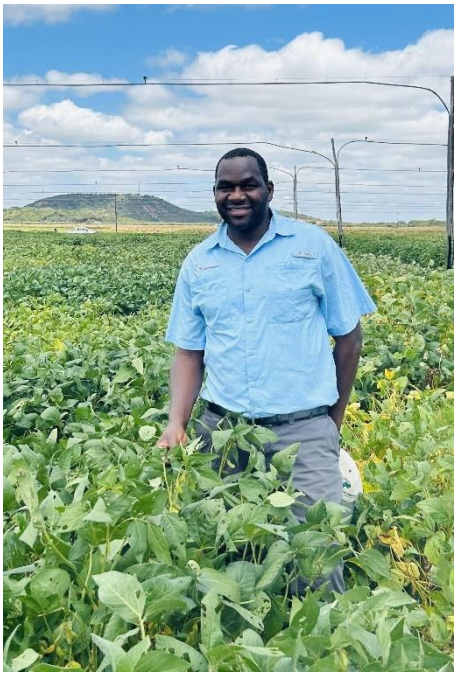
Foreword by the ISM president:

Dear ISM-member,

I hope you are all doing well.

As 2024 ended, I would like to inform you on the ISM activities that took place in this final year of my presidency. The main focus was on the establishment and organization of the Naresh Magan Lecture Awards.

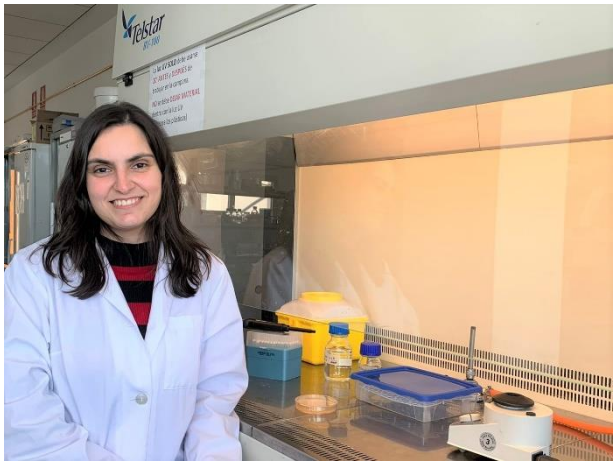
The **British Mycological Society (BMS) and International Society for Mycotoxicology (ISM) together established the Naresh Magan Lecture Award** in honour of the late Professor Magan's major contributions to the fields of fungal ecology, fungal physiology, plant pathology and mycotoxin research. The award of up to 1250 Euros, given annually, supports an early-career researcher to give an oral presentation at an international conference, on a topic in the fields of fungal ecology, fungal physiology, plant pathogens or mycotoxins.



The **first award winner for the BMS – ISM Naresh Magan Lecture Award** was selected by the BMS – ISM selection committee and sponsored by the BMS. We congratulate **Dr. Harun Muthuri Murithi**. Dr Murithi is a postdoctoral researcher at the Agricultural Research Service, US Department of Agriculture, through the Oak Ridge Institute for Science and Education. He is also a visiting scientist at IITA, Nairobi, Kenya. His presentation entitled 'KNOW YOUR ENEMY': STRATEGIES TO MANAGE SOYBEAN RUST FUNGUS IN SMALLHOLDER FARMS IN AFRICA was presented **at the 12th International Mycological Conference on August 11-15, 2024**, in Maastricht, the Netherlands. His current research involves screening soybean for resistance to Red Leaf Blotch (*Coniothyrium glycines*), a fungal pathogen of soybean that is native to Africa. Dr Murithi is also Soybean Innovation Lab Pest and Disease Management Program

Coordinator, training field extension officers and farmers in the identification, characterisation and management of soybean diseases and pests across Africa. He is also coordinating efforts for managing Soybean Rust through development of an early warning system. He currently hosts a WhatsApp page with more than 700 members from more than 50 countries across Africa: the group members share images of diseased plants and Harun provides the diagnosis and management options. His practical approach, reaching a broad network of farmers with timely information and real-time monitoring of rust cases, makes his research impactful while enhancing food security in the region.

The **second award winner for the BMS – ISM Naresh Magan Lecture Award** was selected by the BMS – ISM selection committee. We congratulate **Dr. Micaela Alvarez from the Complutense University of Madrid, Spain**. The title of her abstract is PROTEOMIC ANALYSIS AS A TOOL TO UNVEIL EFFECTS OF CONTROL AGENTS ON TOXIGENIC GNOMONIOSIS SMITHOGILVYI, THE MAJOR CHESTNUT PATHOGEN. She will present her presentation **at the 15th World Mycotoxin Conference on April 7-9, 2025, in Salzburg, Austria**. This travel award is sponsored by Bionte, one of the ISM sponsors. Dr. Alvarez is a lecturer at the Department of Nutrition and Food Science in the Veterinary Science Faculty of the Complutense University of Madrid (Spain) and a member of the Research Group "Fungi of agrifood interest". The main objective of her research has been linked to the control of the presence of ochratoxin A (OTA) in dry-cured meat products by using different biocontrol agents of microbial and plant origin instead of synthetic antifungals. Furthermore, she uses proteomics to study foodborne toxigenic and plant pathogenic moulds and how biocontrol agents impact these moulds to elucidate the underlying antifungal mechanisms. These results have contributed to effective natural strategies against undesirable moulds.



It is also with great pleasure that I can announce that Dr. Lien Phan will join the **Extended ISM board. Dr. Lien Phan is the president of the Ho Chi Minh City Sub-Society of Mycotoxicology in Vietnam**. This organization belongs to Vietnam Association of Food Science and Technology (VAFOST) (https://vafost.org.vn/) and is therefore the first Mycotoxicology Society in Vietnam. This new Society will promote studies in Vietnam on mycotoxins including evaluating mycotoxin occurrence in food and feed and mitigation strategies; increase awareness about the risks of mycotoxin contamination in food and feed for stakeholders (farmers, processors, and consumers); collaborate with government agencies to develop and implement policies and standards for controlling mycotoxins; collaborate with international organizations and academic institutions to exchange expertise and best practices in Mycotoxicology; train scientists, industry professionals, and regulators in advanced methods for detecting and managing mycotoxins.

Finally, as ISM is present on **social media** on Facebook, LinkedIn, Instagram (International Society for Mycotoxicology) and Twitter (ISM_Society), please do not hesitate to follow us.

Dear colleagues and friends, I wish you all a healthy, happy and successful 2025!

Prof. Sarah De Saeger

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Annex:

Conference news

Project news

Sponsors

CONFERENCE NEWS

Chairs of mycotoxin conferences and workshops are invited to inform us on upcoming conferences to be presented in the next ISM newsletter

The **15th World Mycotoxin Forum** will take place on 7-9 April in Salzburg, Austria. The World Mycotoxin Forum® is the leading international meeting series on mycotoxins dedicated to assembling the world's best minds across the spectrum of integrated strategies ensuring the safety and security of the food and feed supply chain. The World Mycotoxin Forum® brings together a holistic conference programme covering the latest issues in mycotoxin management and is targeted at everyone working in the mycotoxin space – researchers, food and feed industry, laboratories, policy makers, and enforcement agencies from around the world. General conference chairs are Prof. Rudi Krska and Prof. Chris Elliott. During this conference the second Naresh Magan Lecture Award will be presented (see above in this newsletter). https://worldmycotoxinforum.org/

Gesellschaft für Mykotoxinforschung e. V.
Society for Mycotoxin Research

The **46th Mycotoxin Workshop** will take place on 25-28 May in Martina Franca, Italy. The Workshop is organized by **Antonio Moretti**, Institute of Sciences of Food Production of Research National Council of Italy, CNR-ISPA, Bari; **Paola Battilani,** Faculty of Agriculture, Food and Environment, Università Cattolica del Sacro Cuore of Piacenza; and **Chiara Dall'Asta,** Department of Food and Drug, University of Parma, on behalf of the **Society for Mycotoxin Research** and supported by the **International Society for Mycotoxicology**. The Conference will take place on **May 25-28, 2025** in **Martina Franca, Apulia, Italy, in the fantastic Scenario of Valle d'Itria**.

Important dates: February, 28, 2025 will be the last day of registration for scientific contributions and abstract submission (lectures and posters); May, 10, will be the last day of registration. For more information, please go to: https://www.mycotoxin-workshop.eu/.

Gordon Research Conferences

Frontiers of Science

The **Mycotoxins and Phycotoxins Gordon Research Conference** will take place on 15-20 June, 2025 in Stonehill College in Easton, Massachusetts, United States. Subtitle of this conference is: Global Impacts of Biotoxins on the Safety and Sustainability of Food and Water. More information can be found on https://www.grc.org/mycotoxins-and-phycotoxins-conference/2025/

fusarium

laboratory workshop

The **24th *Fusarium* Laboratory Workshop** will be held in India in November**, 2025**. The workshop covers a broad range of topics including morphology, phylogeny, plant pathology, genetics and mycotoxicology. The Workshop will be taught by a group of instructors from industry and academics in seven different countries. Limited financial assistance is available for students and scientists from less-developed countries.

The **IVth Argentinean Mycology Meeting and the IXth Latin American Congress on Mycotoxicology** will take place from **October 21-24, 2025** at San Carlos de Bariloche, Río Negro Province, Argentina. This joint event is being organized by the Carlos Spegazzini Mycological Association (AMCS) and the Latin American Society of Mycotoxicology (SLAM). The conferences will bring together leading specialists in fields as diverse as fungal biodiversity, mycotoxicology, economics, ecology, medicine, biotechnology, mycoforestry, food safety, and more. This joint event offers a unique platform to explore the latest breakthroughs in fungal and mycotoxin research with national and international experts. This will be the first-ever joint meeting between these two associations, and it is also the first time the event will be hosted in Patagonia, a region known for its breathtaking landscapes and rich biodiversity.

The **18th Conference and Workshop of the Mycotoxicology Society of Nigeria (MSN)** will take place on **21-24 October, 2025 in Abuja, Nigeria**. Details will follow later.

The **17th European Fusarium Seminar** will be held in October 21-24 2025, in Bordeaux (France). Subtitled "Fusarium in a world of interactions », this edition will welcome the participation of all scientists from all fields related to "*Fusarium*" research at large. More information here: https://efs17.colloque.inrae.fr/

The **7th International Conference of Mycotoxicology and Food Security (ICM, 2025)** will be held at Hangzhou, Zhejiang Province, China on **November 17-20, 2025**. This conference, hosted by the Xianghu Laboratory and organized jointly by the Oil Crops Research Institute of the Chinese Academy of Agricultural Sciences (OCRI-CAAS), and the State Key Laboratory for Managing Biotic and Chemical Threats to the Quality and Safety of Agro-products (SKLQSAP), will involve a wide range of mycotoxin management topics covering the whole food and feed chain. The main theme of this conference on global mycotoxin challenges 2025 is: ***Risk Assessment and Advanced, Sustainable, and Intelligent Solutions for Mycotoxin Management Along Food/Feed Chain***. This conference will be held under the auspices of the International Society for Mycotoxicology, Thai Society of Mycotoxicology and Japanese Society of Mycotoxicology. Website: icm2025.cn (http://www.icm2025.cn)

Moreover, for **2026**, the **4th African Society of Mycotoxicology Symposium** is expected to take place. More information to come soon!

PROJECT NEWS

Coordinators of mycotoxin-related project are invited to inform us on ongoing projects to be presented in the next ISM newsletter

MYCOTOX-PALOP Multi-actor partnership for the risk assessment of mycotoxins along the food chain in African Portuguese-speaking countries (PALOP) is a three-year project (2022-2025) financed by the Foundation for Science and Technology (FCT, Portugal) and the Aga Khan Development Network (AKDN), and builds on the scientific, technical and field expertise of a joint task force including four partners from three Portuguese-speaking countries: the project coordinator Centro de Investigação de Montanha/Instituto Politécnico de Bragança (CIMO/IPB, Portugal), Universidade Eduardo Mondlane (UEM, Mozambique), Centro de Engenharia Biológica/Universidade do Minho (CEB/UMinho, Portugal), and Instituto Superior Politécnico do Cuanza Sul (ISPKS, Angola).
The economic and health impacts of fungi development and mycotoxin exposure are grossly underreported in Angola (AN) and Mozambique (MZ), due to the lack of coordinated monitoring and medical surveillance, and their control is inadequately addressed. Due to inherent climatic, agricultural and political conditions, these countries are subjected to major food security issues, which could be partially mitigated by increasing the awareness to crop losses due to fungal and mycotoxin contamination. The objectives of the project are to: 1) gather knowledge on fungal losses and mycotoxin contamination of crops in these two African countries; 2) set mycotoxin risk assessment programmes; 3) establish intervention strategies to reduce human exposure to mycotoxins and their negative impacts, by means of safe and efficient intervention strategies; 4) promote access, training and extension actions at the scientific, technical and community levels to build human and technical capacity, bridging the gap between research and the various stakeholders, including farmers, retailers, trading companies, and regulatory agencies. Due to its strong training and dissemination tasks, this project finally aims at contributing to long-term benefits for citizens, economy and society, as it meets important Development Goals set by the UN 2030 Agenda for Sustainable Development, in particular Goal 2 “End hunger, achieve food security and improved nutrition, and promote sustainable agriculture”.

For further information and updates on the project, please visit the website http://mycotox-palop.esa.ipb.pt/ (Portuguese and English versions).

A consortium of 14 international partners have successfully applied for the HORIZON-CL6-2023-FARM2FORK-01-20 food safety topic and the project will take place in the period 2024-2027. The consortium is coordinated by Prof. Sarah De Saeger and Prof. Siska Croubels (Ghent University). The granted project is called **"EU-AU Partnership for Resilient, Inclusive and Safe Food Systems for Everyone" or in short "UP-RISE"**

The UP-RISE EU-African Union (AU) partnership tackles food safety challenges in the AU associated with mycotoxin contamination from farm to fork and provides tangible tools and strategies to enhance inclusive participation in the improved African Food Safety System (AFSS). UP-RISE activities are aligned with the AU Food Safety Strategy for Africa 2022-2036, focusing on 5 target AU member states (Benin, Côte d'Ivoire, Nigeria, Kenya, and South-Africa) belonging to 3 regions of the AU (West, East and South). UP-RISE assembles 5 building blocks for knowledge generation and implementation: 1) Roadmaps for a shared quality culture and possible integration of the informal sector in the AFSS; 2) Strengthening the food safety regulatory framework in both formal and informal sectors with focus on mycotoxins; 3) Early warning to prevent mycotoxin contamination and adapt to climate change; 4) Prevention of food losses and improving food safety by providing innovative microbiome-based solutions for mycotoxin reduction and nutritious food and 5) Co-creation, training and mentoring. UP-RISE co-created solutions will be demonstrated on 5 representative fermented food product value chains based on maize, millet, sorghum or milk and will be implemented in 10 business cases of SMEs in the target AU member states. UP-RISE builds on strong ties between consortium members combining social sciences with technological approaches and an outstanding network, which has been complemented with the Accelerator Platform comprising a.o. competent food safety authorities, farmers, consumers and trade organizations. Sustainability will be guaranteed through the creation of Training Hubs in each target member state, an AU-EU Microbial Biobank Network, early warning systems and a food safety regulatory model.

PHOTONFOOD

PHOTONFOOD is a four-year research and innovation project funded by the EU's Horizon 2020 programme. European Union's Horizon 2020 research and innovation programme under grant agreement No 101016444 and is part of the Photonics Public Private Partnership (www.photonics21.org, @Photonics21). The project is a collaboration between 13 partner organisations in 8 European countries, and is coordinated by the Norwegian University of Life Sciences (NMBU), Norway NMBU. Scientists from eight European countries have been collaborating since summer 2021 to create two new devices to ensure that your food is free

from contaminations detrimental to your health. One of the devices will be handheld and allow daily monitoring from the farm to the fork, the other device will be portable and for reference analysis, developed for use at every step in the food production chain. The new, yet to be developed devices will use innovations in mid-infrared sensing and advanced data analysis. The device will detect both microbial contamination and harmful chemical compounds.

Not only will the handheld and portable food safety scanner and analyser make it easier to find fungi, mycotoxins, pesticides and antibiotics in food and food ingredients – it will also bring down the cost of testing. Visit the PHOTONFOOD web site, photonfood.eu for news, updates and more information.

MYTOX SOUTH

MYTOX-SOUTH® aims to empower the expertise and infrastructure available at Ghent University to strengthen the **capacity of Southern partners** in relation to the mycotoxin issue and the associated risks on food safety and food security. **The main achievements of MYTOX-SOUTH® in 2023-2024 are described below:**

- The highlight of 2024 was the successful acquisition of the **Horizon Europe UP-RISE grant**, coordinated by Ghent University (UGent). The UP-RISE project, funded under Horizon Europe (2024-2027), aims to enhance the African Food Safety System by collaborating with local operators from value chains of fermented foods in five African countries. The MYTOX-SOUTH® initiative gained significant visibility, which played a key role in securing this external funding. Since 2017, MYTOX-SOUTH® has been a collaborative effort between partners such as the University of Johannesburg (UJ), Federal University of Technology Minna (FUTMIN), University of Nairobi (UoN), and Consiglio Nazionale delle Ricerche (CNR), all of whom are also partners to the UP-RISE project.

- Moreover, in May 2024, we were pleased to welcome **Oluwasola Adelusi from the University of Johannesburg** (UJ), South Africa, for a three-month stay (funded by Global Minds Short Research Stays). During this time, he brought food samples to our lab for mycotoxin analysis, more specifically pre- and post-harvest maize consumed in Gauteng, South Africa. A publication on the results of this work is currently being prepared and a Joint PhD is under consideration.

- In October 2022, MYTOX-SOUTH® started a collaboration with **Academics for Development (AFD)**, where students are encouraged to enrich themselves and have a durable social impact, by means of social entrepreneurship. Six students from different UGent faculties (Bioscience Engineering, Economics, Political Sciences) were recruited and introduced to the vision of MYTOX-SOUTH®. The AFD project aims to find holistic solutions in agrofood in Malawi and help in mycotoxin mitigation, in collaboration with **prof. Limbikani Matumba, LUANAR**. IN 2023-2024 a collaboration could be established with the **World Food Programme (WFP)** and the students among others

conducted a situational analysis (SITAN) on the WFP's School Feeding Programme (SFP), the Integrated Resilience Programme (IRP) and nutrition initiatives. The students were hosted by Prof Matumba and WFP in July and August 2024. Close contacts were kept as well with the Flemish Representative in Malawi.

- MYTOX-SOUTH® acknowledges the role of established collaborations with industrial partners. To this end, a **promising partnership has been initiated with Patent Co©**, offering limited mycotoxin analyses for MYTOX-SOUTH® partners. This partnership has facilitated the analysis of various food samples, including tigernuts, dates, and sorghum from Trinity University, Yaba, Nigeria; rice samples from the Federal University of Technology Minna Niger State, Nigeria, and Ho Chi Minh City University of Food Industry; tigernut samples from the Federal University of Agriculture, Abeokuta, Nigeria; maize samples from the Forestry and Agricultural Biotechnology Institute, University of Pretoria; and red pepper powder from the Center for Food Science and Nutrition, Addis Ababa University were analysed. This collaboration not only underscores the commitment of MYTOX-SOUTH® to advance research in mycotoxin analysis but also signifies the strength of partnerships in achieving collective goals within food safety.

The **FoodSafeR project**, coordinated by Prof. Martin Wagner and Prof. Rudolf Krska from FFoQSI, focuses on advancing innovations to address emerging microbial and chemical food safety hazards and associated contaminant risks. Funded by the European Commission, the project emphasizes cutting-edge science to design, develop, and test the components of a proactive, holistic food safety management system with a strong focus on emerging risks.

FoodSafeR integrates methods for identifying, assessing, and managing food safety risks through future-oriented frameworks, tools, strategies, models, guidance, and training materials. These resources are made widely accessible through a digital hub, serving as a central platform for the project's outputs. Bringing together a consortium of 18 world-class organizations across 14 European countries, FoodSafeR unites experts from science, industry, SMEs, and policymakers.

The project leverages advanced mathematical tools for forecasting in food chain network modeling, supported by classical predictive modeling, stochastic algorithms, molecular analysis, and food system data. Microbiological case studies examine food processing and distribution impacts within the supply chain. For chemical hazards, FoodSafeR focuses on advancing early warning and monitoring technologies for emerging biotoxins, utilizing satellite imagery, machine learning, on-site testing approaches, and big data management.

FoodSafeR enhances the integrated immunodiagnostic-based "food smartphone" technology, building on the success of the H2020 FoodSmartphone ITN project. The project also conducts

horizon scanning for emerging (toxic) secondary metabolites and agrochemicals through both targeted and untargeted analyses, employing tandem mass spectrometry and high-resolution mass spectrometry-based metabolomics.

A significant goal of FoodSafeR is the creation of a holistic, proactive framework that integrates real-time data and multiple criteria for risk management. This framework enables real-time detection of food safety hazards and associated risks, ensuring a forward-looking approach to food safety management.

This e-newsletter is supported by: