

# CONFERENCE PROGRAMME

## Mycotoxin control...



## ... the systems approach



Updated 31/10/2014

## MONDAY 10 NOVEMBER 2014

### CONFERENCE OPENING

- 09:00 *Welcome!*  
Prof.dr. Rudolf Krska, Department IFA-Tulln, BOKU Vienna, Austria
- 09:15 *Mycotoxins: the value of intervention strategies from a public health perspective*  
J. David Miller, Carleton University, Canada, on behalf of the World Health Organization (WHO)
- 09:35 *Mycotoxins: a global threat to food security and food safety – FAO's perspectives and activities*  
Dr. Renata Clarke, Food and Agriculture Organization of the United Nations (FAO), Italy
- 09:55 *Significance of mycotoxins in food safety compared to other hazards*  
Dr. Diane Benford, Chair of the Panel on Contaminants in the Food Chain, European Food Safety Authority (EFSA), Italy
- 10:15 **Networking break & exhibition**

### PLENARY MEETING

#### Recent issues – Why did they happen, why couldn't they be prevented?

- Chair: Hans van Egmond, M.Sc., RIKILT Wageningen UR, the Netherlands
- 10:45 *Recent issue in the Balkan related to aflatoxins in maize used for feed, and aflatoxin M1 in milk and milk products*  
Prof.dr. Ferenc Bagi, University of Novi Sad, Serbia
- 11:05 *Did the 2013 growing season create a 'perfect storm' for ochratoxin A?*  
Dr. Stefan Wagener, Canadian Grain Commission, Canada
- 11:30 *Recent Fusarium mycotoxin problems in China*  
Dr. Weiwei Zhang, Department of Public Health, Chengdu Medical College, China
- 11:55 *Fusarium head blight epidemic in wheat during the 2012/2013 harvest season in South America*  
Prof.dr. Sofia Chulze, Universidad Nacional de Rio Cuarto, Argentina
- 12:20 *The recent outbreaks of aflatoxicoses in eastern Africa*  
Dr. Amare Ayalew, Partnership for Aflatoxin Control in Africa (PACA), African Union Commission, Ethiopia
- 12:45 **Lunch break**  
**Workshops & poster viewing**

## MONDAY 10 NOVEMBER 2014

### SESSION 1

#### Tackling human and animal health risks

Chair: Prof.dr. Johanna Fink-Gremmels, Utrecht University, the Netherlands

14:00 *Mycotoxin exposure assessment: pros and cons of existing approaches*  
Dr. Paul Turner, University of Maryland, USA

14:30 *Interaction of co-occurring mycotoxins: what do(n't) we know about toxicity?*  
Dr. Isabelle Oswald, INRA, France

14:55 *Mycotoxin mechanisms of action and health effects: in vitro or in vivo tests, that's the question*  
Prof.dr. Federica Cheli, University of Milan, Italy

15:20 *Food, feed ....and then workers safety!*  
Dr. Danièle Jargot, Institut National de Recherche et de Sécurité (INRS), France

15:45 **Networking break & exhibition**

#### Recent exposure assessment studies

16:15 *Assessing the human mycotoxin exposure in Cameroon and Nigeria through an LC-MS/MS based multiple biomarker approach*  
Dr. Chibundu N. Ezekiel, Babcock University, Nigeria

16:30 *Biomarkers as accurate tool for the assessment of mycotoxin exposure at individual levels in Belgium*  
Dr. Ellen Heyndrickx, Ghent University, Belgium

16:45 *Risk assessment of dietary exposure to the conjugated mycotoxin deoxynivalenol-3- $\beta$ -glucoside in the Dutch population*  
Esmée Janssen M.Sc., National Institute for Public Health and the Environment (RIVM) / Wageningen University, the Netherlands

#### Recent toxicity studies

17:00 *Synergistic toxic effects of zearalenone and ochratoxin A in human cells – protective role of glutathione or selenomethionine*  
Prof.dr. Annie Pfohl-Leszkowicz, University of Toulouse, France

17:15 *New tricks of an old enemy: Fusarium graminearum can also produce a type A trichothecene*  
Dr. Elisabeth Varga, Department IFA-Tulln, BOKU Vienna, Austria

17:30 *In silico/in vitro approaches for mycotoxin metabolism and toxic activity in humans: the case-study of zearalenone and its conjugates*  
Dr. Chiara Dall'Asta, University of Parma, Italy

17:45 **Poster viewing**  
**Wine tasting sponsored by Biomin**

**TUESDAY 11 NOVEMBER 2014**

## **SESSION 2**

### **Update on sampling and analysis**

Chair: Prof.dr. Sarah De Saeger, Ghent University, Belgium

08:45 *Sampling for mycotoxins in food and feed – theoretical simplicity and practical ambiguity*  
Dr. Alexey Solyakov, National Veterinary Institute, Sweden

09:10 *Highlighting new promising developments in analysis*  
Dr. Franz Berthiller, Department IFA-Tulln, BOKU Vienna, Austria

### **Case studies**

09:35 *Aflatoxin contamination in maize: is the sampling procedure fit for purpose?*  
Theo de Rijk, RIKILT Wageningen UR, the Netherlands

09:55 *The lab-on-mobile-device platform for the quantitative detection and tracking of aflatoxins*  
Dr. Donald Cooper, University of Colorado Boulder / Mobile Assay, Inc., USA

10:15 *Potential of front-face fluorescence to assess mycotoxin content in cereals*  
Dr. Pierre Lacotte, Spectralys Innovation, France

10:30 **Networking break & exhibition**

## **SESSION 3**

### **The power of metabolomics in mycotoxin research**

Chair: Prof.dr. Rudolf Krska, Department IFA-Tulln, BOKU Vienna, Austria

11:00 *How does deoxynivalenol effect the wheat metabolome?*  
Dr. Benedikt Warth, Department IFA-Tulln, BOKU Vienna, Austria

11:15 *Using high resolution mass spectrometry and metabolomics to enable discovery and identification of fungal metabolites*  
Dr. José Diana di Mavungu, Ghent University, Belgium

11:30 *Metabolomics as an effective tool for early prediction of deoxynivalenol/masked deoxynivalenol content in on-field barley*  
Prof.dr. Jana Hajšlová, Institute of Chemical Technology, Czech Republic

11:45 *Stable isotopic labelling-assisted untargeted metabolic profiling reveals novel conjugates of mycotoxins in wheat*  
Prof.dr. Rainer Schuhmacher, Department IFA-Tulln, BOKU Vienna, Austria

12:00 *Alternaria jesenskae, a source of valuable secondary metabolites including mycotoxins sensu stricto*  
Dr. Roman Labuda, Romer Labs, Austria

12:15 Discussion / Q&A

12:30 **Lunch break**  
**Workshops & poster viewing**

**TUESDAY 11 NOVEMBER 2014**

**SESSION 4**

**Mycotoxins and EFSA risk assessments – safer food and feed**

Chair: Frans Verstraete, M.Sc., European Commission, Belgium

08:45 *Introduction to the European Food Safety Authority (EFSA)*  
Dr. Johann Steinkellner, EFSA BIOCONTAM Unit, Italy

08:50 *Modelling the influence of climate change on mycotoxin production in European cereal crops*  
Prof.dr. Paola Battilani, Università Cattolica del Sacro Cuore, Italy

09:15 *EFSA CONTAM Panel risk assessments of mycotoxins – recent examples of Fusarium toxins*  
Dr. Johann Steinkellner, EFSA BIOCONTAM Unit, Italy

09:40 *Collation of mycotoxins occurrence data for exposure assessment: focus on deoxynivalenol*  
Fanny Héraud, M.Sc., EFSA DATA Unit, Italy

10:05 *The assessment of feed additives for reduction of the contamination of feed by mycotoxins*  
Dr. Jaume Galobart, EFSA FEED Unit, Italy

10:30 **Networking break & exhibition**

**SESSION 5**

**Mycotoxins – a wide array of effects**

Chair: Dr. Joseph Shebuski, Cargill, USA

11:00 *Mycotoxins in human diets – unpredicted concerns?*  
Prof.dr. Johanna Fink-Gremmels, Utrecht University, the Netherlands

11:20 *The impact of mycotoxins on nutritional behaviour*  
Prof.dr. Jean Denis Troadec, Aix-Marseille University, France

11:40 *Mycotoxins exposure and child growth: the joint effect of aflatoxins and fumonisins*  
Dr. Yun Yun Gong, Queen's University, UK

12:00 *Don't forget the fish: organ damage and hepatic lipid accumulation in carp after feedborne exposure to deoxynivalenol*  
Dr. Constanze Pietsch, University of Basel, Switzerland

12:15 *Risk of mycotoxin contamination of edible mealworms*  
Sarah van Broekhoven M.Sc., Wageningen University, the Netherlands

12.30 **Lunch break**  
**Workshops & poster viewing**

**TUESDAY 11 NOVEMBER 2014**

**SESSION 6**

**Prevention and control of mycotoxins – pre- and postharvest interventions**

Chair: Dr. Deepak Bhatnagar, U.S. Department of Agriculture, USA

13:30 *Breeding healthy cereals: genetic improvement of Fusarium resistance and consequences for mycotoxins*

Prof.dr. Hermann Bürstmayr, Department IFA-Tulln, BOKU Vienna, Austria

13:50 *Unravelling the mysteries of Aspergillus flavus, beyond aflatoxins*

Dr. Deepak Bhatnagar, U.S. Department of Agriculture, USA

14:10 *How to reduce mycotoxin risks through food processing? An ILSI perspective*

Dr. Michele Suman, Barilla, Italy

14:30 *Mycotoxin detoxification by enzymatic biotransformation – present state and future perspectives*

Dr. Wulf-Dieter Moll, Biomin, Austria

14:50 *Mycotoxins in silage: checkpoints for effective management and control*

Prof.dr. Vittorio Dell'Orto, University of Milan, Italy

15:10 Mycotoxin prevention and control measures in China

Prof.dr. Yang Liu, Chinese Academy of Agricultural Sciences, China

15:30 **Networking break & exhibition**

**Case studies**

16:00 *Breeding, marker-assisted selection and RNAi technologies for developing resistance in maize to aflatoxin contamination*

Dr. Robert Brown, U.S. Department of Agriculture, USA

16:15 *Fusarium species dynamics – challenges in the development of a strategy to reduce mycotoxins in oats*

Dr. Ingerd Skow Hofgaard, The Norwegian Institute for Agricultural and Environmental Research (Bioforsk), Norway

16:30 *Fusarium mycotoxins in naturally contaminated wheat mill fractions*

Dr. Ronald Maul, BAM Federal Institute for Materials Research and Testing, Germany

16:45 *Code of practice to minimise sclerotia and ergot alkaloids along the food chain*

Dr. Christine Schwake-Anduschus, Max Rubner-Institut, Germany

17:00 – 18:00 **Poster viewing & drinks**

**TUESDAY 11 NOVEMBER 2014**

**SESSION 7**

**Mycotoxin solutions in the spotlight – industry updates**

Chair: Dr. Lei Bao, AQSIQ, China

13:30 – 15:30

*From 'sample' to 'analysis' – critical points & practical solutions*

Ronald Niemeijer, M.Sc., R-Biopharm, Germany

*New LC-MS/MS multimycotoxin testing concept – implementation of the new method <sup>13</sup>C-MycoSpin in routine testing labs to meet ISO 17025 standards*

Alois Schiessl, Romer Labs, Austria

*Toxicity of type B trichothecenes: beyond deoxynivalenol*

Julia Laurain, M.Sc., Olmix Europe, France

*Tools for monitoring aflatoxin M<sub>1</sub> in the dairy production chain*

Dr. Stephen Powers, Vicam, A Waters Business, USA

*Environmentally-friendly mycotoxin testing using water extraction technology*

Mark Tess, Charm Sciences, USA

*Recent advances in mycotoxin diagnostics*

Mary Gadola, Neogen, USA

*Improving on-site mycotoxin measurements by integrated procedures based on dust sampling*

Mareike Reichel, Eurofins WEJ Contaminants, Germany

*Styrene and methacrylic acid-based ergotamine polymer: effect of pH, temperature, contact time and initial concentration on isothermal sorption properties towards ergot alkaloids*

Dr. Alexandros Yiannikouris, Alltech, USA

*Solid phase extraction clean-up based on molecularly imprinted polymers for single mycotoxin and multimycotoxins analysis*

Dr. Sami Bayouhd, Polyintell, France

*The ToxiMet system – a revolutionary approach to the control of mycotoxins*

Prof. Ray Coker, ToxiMet, UK

*Addition of multiple matrices to EnviroLogix' DON3 and Aflatoxin FREE assays*

Dr. Breck Parker, EnviroLogix, Inc., USA

*Addressing the routine mycotoxin analysis challenges with accurate mass MS/MS*

Dr. Michal Godula, Special Solutions Center, Thermo Scientific, Germany

*Applicability of two new immunoassays to the screening of mycotoxins in feed: biochip-based immunoassay for a multi-analytical approach and ELISA for the detection of aflatoxin B1*

Raymond Devlin, Radox Food Diagnostics, UK

15:30 **Networking break & exhibition**

**SESSION 8**

**Speed presentations**

Chair: Dr. Franz Berthiller, Department IFA-Tulln, BOKU Vienna, Austria

16:00 *Launch 2<sup>nd</sup> EC CEN Mandate to harmonise methods for mycotoxin analysis*

Dr. M. Spanjer, Netherlands Food and Consumer Product Safety Authority (NVWA) and  
M. de Vreeze, Netherlands Standardization Institute (NEN), the Netherlands

16:15 Short presentations by selected poster presenters

17:00 – 18:00 **Poster viewing & drinks**

**WEDNESDAY 12 NOVEMBER 2014**

**SESSION 9**

**Highlights of the 'World Mycotoxin Journal' special issue on rapid methods**

Chair: Dr. Michele Suman, Barilla, Italy

08:45 *Rapid testing and regulating for mycotoxin concerns: a perspective from developing countries*  
Dr. Gordon Shephard, Cape Peninsula University of Technology, South Africa

09:05 *Cross-reactivity in immunochemistry-based methods applied in mycotoxins analysis*  
Dr. Milena Zachariášová, Institute of Chemical Technology, Czech Republic

09:25 *Fluorescence polarisation immunoassay for rapid, accurate and sensitive determination of mycotoxins*  
Dr. Vincenzo Lippolis, Institute of Sciences of Food Production, National Research Council Italy, Italy

09:50 *Near- and mid-infrared spectroscopy as efficient tools for detection of fungal and mycotoxin contamination in agricultural commodities*  
Prof.dr. Tetsuhisa Goto, Shinshu University, Japan

10:10 *Using commercial immunoassay kits for mycotoxins: 'joys and sorrows'*  
Dr. Susie Dai, Texas A&M University, USA

10:30 **Networking break & exhibition**

**SESSION 10**

**Environmental and agricultural issues**

Chair: Dr. Jörg Stroka, Joint Research Centre, Institute for Reference Materials and Measurements, Belgium

08:45 *Mycotoxins: environmental micropollutants of concern?*  
Dr. Felix Wettstein, Agroscope Institute for Sustainability Sciences (ISS), Switzerland

09:10 *Transferring innovation into practical agriculture to manage mycotoxins*  
Dr. Vittorio Rossi, Università Cattolica del Sacro Cuore and Horta Srl., Italy

09:35 *Systems approach to integrate toxin gene expression, growth and fumonisin B<sub>1</sub> and B<sub>2</sub> production by *Fusarium verticillioides* under different environmental factors*  
Dr. Angel Medina, Cranfield University, UK

10:00 *Ice toxin: monitoring the accumulation of ochratoxin A during on-farm storage*  
Prof.dr. Art Schaafsma / Dr. Victor Limay-Rios, University of Guelph, Canada

10:30 **Networking break & exhibition**



WEDNESDAY 12 NOVEMBER 2014

**PLENARY MEETING**  
**The systems approach**

Chair: Dr. Stefan Wagener, Canadian Grain Commission, Canada

11:00 *Mycotoxin control: an industry perspective on the systems approach*  
Dr. Robert Baker, Mars Incorporated, China

11:25 *Integrating public health goals into systems management of staple crops to limit mycotoxin exposure*  
Prof.dr. J. David Miller, Carleton University, Canada

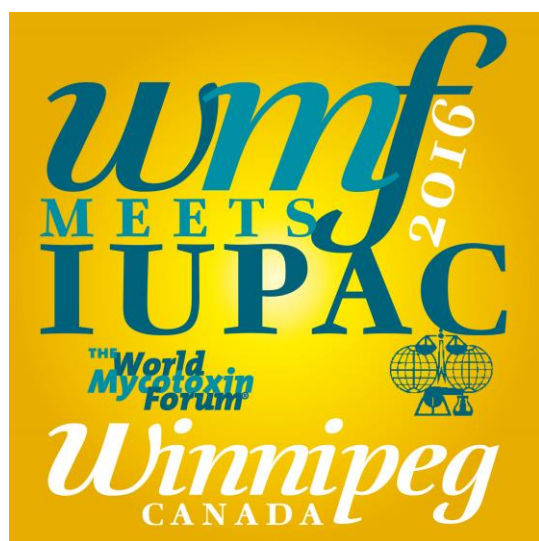
11:50 *Managing food risk communication in the social media era: practical lessons learnt!*  
Adrian Moss, Focus Business Communications, UK

12:15 *Is the systems approach the answer? Top five answers learned at WMF2014!*  
by Prof.dr. Rudolf Krska and Hans van Egmond, M.Sc.

12:40 Poster Award hand out by Prof.dr. Rudolf Krska

12:45 Closing remarks of the 8<sup>th</sup> conference of **The World Mycotoxin Forum®** and looking forward to the **WMFmeetsIUPAC2016** conference by Dr. Stefan Wagener

13:00 Take your packed lunch to eat along the way!



**The World Mycotoxin Forum®** and the **IUPAC International Symposium on Mycotoxins and Phycotoxins** proudly announce that their next joint conference will take place in Winnipeg, Canada, on **6-9 June 2016**.

This unique combined event – **WMFmeetsIUPAC2016** – will build on the success of the previous conference that was held in Rotterdam, the Netherlands in 2012.

For all information, please contact the Secretariat of **WMFmeetsIUPAC** by email:

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