

**BOKU**  
**University of Natural Resources and Applied**  
**Life Sciences**  
Vienna 2014

*Reference Materials  
and Method Validation  
in Food Safety Assurance*

*Dr. Roland Ernest Poms*

*Cordinator of MoniQA, [www.moniqua.org](http://www.moniqua.org)  
ICC Secretary General/CEO, [www.icc.or.at](http://www.icc.or.at)  
Vienna, Austria*



Universität für Bodenkultur Wien  
Department für Lebensmittelwissen-  
schaften und Lebensmitteltechnologie



ICC-International Association  
for Cereal Science and Technology

**MoniQA**

International Association:  
Monitoring and Quality Assurance  
in the Total Food Supply Chain

# Introduction: Dr. Roland Ernest Poms



Nationality: **Austria**

Education: **MSc** Food Technology and Biotechnology, BOKU, Vienna, Austria, and University of Minnesota, St. Paul, USA

**PhD**, Food Technology and Biotechnology, BOKU, Vienna, Austria

**Post Doc** in Food Safety, JRC, European Commission, Ispra, Italy

**Prof.**, Honorary Professor in Food Safety Assessment, BOKU, Vienna, Austria

Areas:

**Food Microbiology**

**GMOs and Molecular Biology**

**Food Allergens and Immunochemistry**

**Cereal Science and Technology**



# Aim of the Workshop/Lecture

The aim of the lecture/workshop on „Reference materials and method validation in food safety assurance” is to describe the problems and challenges involved in the international comparability and validity of analytical results in the **assurance of food safety and quality**. On the basis of practical examples the focus will be on current hot topics, such as **mycotoxins, food allergens, pathogenic micro-organisms, GMOs, etc.**, the analytical possibilities (including rapid methods), and the corresponding regulations. Additionally, an overview of international standardization bodies and examples of **international validation studies** will be given.

# Content of the Workshop/Lecture (1)



- Introduction
- Current hot topics in food safety in the EU and globally – legal and economical background
- From risk assessment to risk management – the European example
- Trend towards rapid methods – involved challenges
- Test kits and other “rapid” analytical technologies
  - ELISA, Dipstick Assay/Lateral Flow Device (LFD)
  - Fluorescence Polarisation
  - Biosensors/Lab on a chip
  - PCR + gel electrophoresis
  - PCR-ELISA
  - Real-Time PCR



# Content of the Workshop/Lecture (2)



- Global trade and the need for validated methods
- Requirements for reference methods and reference materials
- Validation of analytical methods and required parameters
- International Standards and Standardisation/Validation Bodies
- Case studies
  - ISO/AOAC/IUPAC harmonised protocol
  - validation study of peanut allergen ELISA
  - production of reference materials for food allergen analysis
- Other international efforts
  - EU projects in the food safety area
  - CEN working groups
  - IAM (Inter Agency Meeting)



# Organisation (1)

- Lectures will be blocked (17-21 March 2014)
- Power Point Presentations plus some demonstration material
- Powerpoints are available at BOKUonline.
- Printed booklets can be purchased for €15.-
- Excursion and invited speakers from industry and research
  - BioPure
  - RomerLabs
  - IFA Tulln
  - Quantas
- 3 ECTS from BOKU for registered students after an oral exam after completion of the lectures

# Organisation (2)



## Location:

BOKU – University of Natural Resources and Applied Life Sciences Vienna  
Department of Food Science and Technology, Muthgasse 18, A-1190 Vienna

## Dates:

17 March 2014 (Monday)	14:00-18:00	Food safety in a global context
17 March 2014 (Tuesday)	14:00-18:00	Analytical challenges in food safety
17 March 2014 (Wednesday)	13:00-18:00	<u>Excursion:</u> IFA-Tulln, Christian Doppler Laboratory, Romer Labs, Biopure, Quantas
17 March 2014 (Thursday)	14:00-18:00	Towards reference materials for food allergens, method validation criteria
17 March 2014 (Friday)	14:00-18:00	Terms and definitions, AOAC harmonized protocol

# Organisation (3)



## Excursion:

IFA-Tulln, Center for Analytical Chemistry, Department for Agrobiotechnology,  
Konrad Lorenz Strasse 20, A-3430 Tulln, Austria

- 14:00 -14:30      Antibody development - Sabine Baumgartner
- 14:30 -15:00      Food Allergens and analytical methods - Lukas Frank
- 15:00 -15:30      Mycotoxins and GMOs - analytical methods (PCR, LFD, HPLC, LCMSMS) - Vera Traar
- 15:30 - 16:00      Reference Materials - Georg Häubl
- 16:00-17:00      Visit to the laboratories and demonstration of test kits





In cooperation with MoniQA Association



# Monitoring and **MoniQA** Quality Assurance

**Monitoring and Quality Assurance in the Food Supply Chain**  
“Working for safer foods by harmonising worldwide food quality and safety monitoring and control strategies.”

**Contract N0. FOOD-CT-2006-36337**

# MoniQA Association



## MoniQA Global Food Safety Network

*...providing expertise and services for effective food safety management..*

*...for food manufacturers, food retailers, international trade, food analytical laboratories, food control and regulatory bodies*

- Non profit-distributing association
- Established in July 2011
- Membership based
- Secretariat at ICC HQ in Vienna, Austria

Research

Industry

Consumers

Policy  
Makers



## Organisation (3)

	BOKU				26.03.2007
<b>Reference Materials and Method Validation in Food Safety Assurance</b>					
	Dr. Roland Ernest Poms				
<b>No</b>	<b>Name</b>	<b>First name</b>	<b>Course</b>	<b>Semester</b>	<b>Email address</b>
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					



MoniQA

# Any questions?

[www.icc.or.at](http://www.icc.or.at)  
[www.moniqa.org](http://www.moniqa.org)

[Roland.poms@icc.or.at](mailto:Roland.poms@icc.or.at)

International Association for Cereal Science and Technology