

CA18105



Risk-based meat inspection and  
integrated meat safety assurance

## Training school: Farm and abattoir interventions in a risk-based meat safety assurance system

**RIBMINS WG2/WG3 Virtual Training school (June 20<sup>th</sup> - 22<sup>nd</sup>, 2022)**

### Who, where, when?

Who: 50 selected students from academia, food industry and competent authorities

Where: Virtual time zone: CET

When: June 20<sup>th</sup> to June 22<sup>nd</sup>, 2022

### Aim

The training school will give an introduction to pre-harvest (farm) and harvest (abattoir) interventions and their role in a risk-based meat safety assurance system. Participants will receive a mix of presentations; participate in workshop exercises and group discussions.

We want to challenge you, the participants, to bring your own competence, perspectives and curiosity, to listen and learn from others' perspectives. Furthermore, we hope to give you a unique opportunity to expand your professional network.

### Organisers: RIBMINS WG2/WG3

**Dragan Antic, Diana Meemken, Kurt Houf and Truls Nesbakken**

### Teachers

**Dragan Antic**, University of Liverpool, UK

**Diana Meemken**, University of Berlin, Germany

**Kurt Houf**, Ghent University, Belgium

**Truls Nesbakken**, University of Life Sciences, Norway

**Catherine McCarthy**, DEFRA, UK

**Carla Gomes**, Animal Health, Ireland

**Maria Rodrigues da Costa**, Scotland's Rural College, UK

**Joana Pessoa**, Ghent University, Belgium

**Patrik Buholzer/Marco De Nardi**, SAFOSO, Switzerland

**Sophie Kittler**, Univ. of Vet. Med. Hannover, Germany

**Winy Messens/Michaela Hempten**, EFSA

**Eystein Skjerve**, University of Life Sciences, Norway

**Lis Alban**, University of Copenhagen, Denmark

**Sigrun Hauge**, Animalia, Norway

**Lian Thomas**, University of Liverpool, UK

**Avelino Alvarez-Ordóñez**, University of Leon, Spain

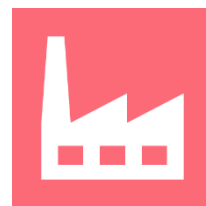
**Kristin Ianssen**, Farmers union, Norway

**Derk Oorburg**, VION, The Netherlands

**Rhea Creve**, Ghent University, Belgium

**Mick Bosilevac**, USDA, USMARC, USA

**Peggy Braun/Thiemo Albert**, Univ. of Leipzig, Germany



CA18105



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**Monday, June 20<sup>th</sup>**

## **Introduction - foodborne hazards & meat safety interventions (pre-harvest and at harvest)**

- 10:00-10:30 Welcome message - WG3 leader **Dragan Antic** and WG2 leader **Diana Meemken**  
Background RIBMINS and WG2 and WG3 - **Dragan Antic** and **Diana Meemken**
- 10:30-11:00 Presentation of students 30 seconds per person, prepare one slide each;  
Name, country, position and a picture of yourself;  
Three keywords about your topics of professional interest
- 11:00-11:15 **Short coffee and biological break**
- 11:15-11:55 EFSA opinions on food/meat decontamination: Role of interventions in meat  
safety assurance systems - **Winy Messens/Michaela Hempen** (including  
questions and discussion (15 min))
- 11:55-12:35 Interventions in the meat chain: The need to integrate causal inference into  
planning of interventions - **Eystein Skjerve** (including questions and discussion  
(15 min))
- 12:35-13:30 Lunch

## **Perspectives of stakeholders regarding future challenges and needs**

- 13:30-14:10 Actual and future challenges and needs from the **farm level** perspective - **Kristin  
Ianssen** (including questions and discussion (15 min))
- 14:10-14:50 Actual and future challenges and needs from the **slaughterhouse level**  
perspective - **Derk Oorburg** (including questions and discussion (15 min))
- 14:50-15:30 Actual and future challenges and needs from the **national** perspective. Progress  
up to date on *Salmonella* controls in the EU - **Carla Gomes** (including questions  
and discussion (15 min))
- 15:30-16:00 Questions, discussions and closing remarks - **Dragan Antic**



CA18105



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**Tuesday, June 21<sup>st</sup>**

### **Separate session on Pre-harvest meat safety interventions**

- 09:00-09:45 Description of farm interventions - **Diana Meemken** (including questions and discussion (15 min))
- 09:45-10:30 Systematic literature review on pre-harvest food safety interventions for broiler (proven efficacy by Randomised Controlled Trials) – **Joana Pessoa** (including questions and discussion (15 min))
- 10:30-10:45 **Short coffee and biological break**
- 10:45-11:30 Systematic literature review on pre-harvest food safety interventions for pigs and cattle (proven efficacy by Randomised Controlled Trials) - **Maria Rodrigues da Costa** (including questions and discussion (15 min))
- 11:30-12:15 Pre-harvest food safety interventions (proven efficacy apart from Randomised Controlled Trials) - **Truls Nesbakken** (including questions and discussion (15 min))
- 12:15-13:00 BioCheck - Measuring biosecurity as a tool for zoonoses control - **Rhea Creve** (including questions and discussion (15 min))
- 13:00-14:00 Lunch

### **Separate session on Meat safety interventions at harvest**

- 09:00-09:45 Physical abattoir interventions (lairage, GHP, thermal treatments) - **Dragan Antic** (including questions and discussion (15 min))
- 09:45-10:15 Chemical abattoir interventions and microbiological validation of interventions - **Kurt Houf** (including questions and discussion (10 min))
- 10:15-10:30 **Short coffee and biological break**



CA18105



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- 10:30-11:15 Results from ongoing WG3 work (interventions in beef, pigs, sheep, poultry) - **Dragan Antic** (including questions and discussion (15 min))
- 11:15-12:00 Hazard-based thermal and chemical interventions for beef and pigs: USA experience - **Mick Bosilevac** (industry and regulatory perspectives) (including questions and discussion (15 min))
- 12:00-12:30 Quantitative MRA models for evaluating the effects of interventions in reducing risks for consumer - **Catherine McCarthy** (including questions and discussion (10 min))
- 12:30-13:00 Abattoir interventions: novel treatments and non-thermal technologies - **Peggy Braun/Thiemo Albert** (including questions and discussion (10 min))
- 13:00-14:00 Lunch

### Separate workshop sessions

- 14:00-17:00 Participants will be split into 10 groups of 5 persons. The groups will have three hours to work on the cases. The work should result in a deliverable for next day morning session: a ppt presentation (max. 15 slides / 15 minutes + 5 minutes for questions) in a predesigned format. Participants will be allocated to the different cases in advance, and they will receive material (literature, data, etc) that they are expected to read in advance. They are also encouraged to seek additional information on their own and bring experience on the respective topic from their work.

### Farm interventions

- Case study 1 Diagnostics, detection of hazards on the farm: direct & indirect detection methods - **Patrik Buholzer & Marco De Nardi**
- Case study 2 Prudent use of antibiotics - **Lis Alban**
- Case study 3 Other pre-harvest interventions: Diet manipulation, probiotics (competitive exclusion), phages; vaccines - **Diana Meemken & Sophie Kittler**



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- Case study 4 Pre-harvest interventions in different European countries: *Campylobacter* and *Salmonella* case (role of competent authorities and science) - **Carla Gomes**
- Case study 5 Preparation of animals for slaughter: clean animal policies in Europe (farm-to-slaughter stage) - **Sigrun Hauge**

### Abattoir interventions

- Case study 1 How to design studies to investigate interventions' performance in abattoir - **Dragan Antic**
- Case study 2 Hazard-based vs GHP-based interventions - how to evaluate the interventions' effectiveness against specific hazards - **Kurt Houf**
- Case study 3 Quantitative risk assessment in evaluating the effects of interventions in reducing risks for consumers - **Catherine McCarthy**
- Case study 4 Economic analysis of abattoir interventions for foodborne parasites - **Lian Thomas**
- Case study 5 Chemical interventions - to chlorine or not to chlorine (EFSA opinions) - **Avelino Alvarez-Ordóñez**

**Wednesday, June 22<sup>nd</sup>**

### Integrated interventions

- 09:00-12:40 Presentations 15 min per group + 5 min questions – and a 20-minute break around 10:40
- 12:40-13:00 Wrap up session: How to proceed in the future
- 13:00 Farewell - **Dragan Antic, Diana Meemken, Kurt Houf, Truls Nesbakken**



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## Why RIBMINS?

Traditional meat inspection systems may not necessarily detect current public health hazards and increase the risk of cross-contamination through physical examination. There is a need to modernise the meat safety systems through a risk-based approach.

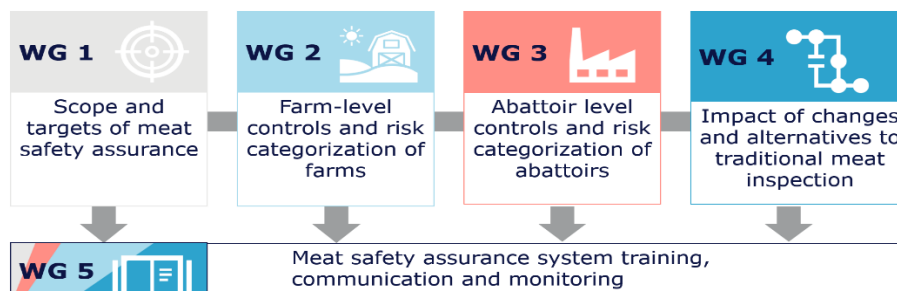
## Aim and Objectives

**Develop a network to combine and strengthen European-wide research efforts on modern meat safety control systems**

- ✓ Coordinate research on risk-based meat inspection and meat safety assurance.
- ✓ Establish effective links between scientists, meat industry and policy makers.
- ✓ Exchange European experiences with overseas countries
- ✓ Develop training platform and train participants in the new system.

## Framework

Participants are working together in five working groups (WG)



## Expected impact

### Technological

- ✓ Development of innovative meat inspection technologies based on food safety risk

### Scientific

- ✓ Filling knowledge-gaps and foster new research networks on risk-based meat inspection.

### Socioeconomic

- ✓ Strengthen public-private partnership and assist policy makers to identify targets and measures for reduction of public health and animal hazards.

## Constantly expanding!

