



WORKSHOP

WHAT IS ANTIBIOTIC RESISTANCE?

*The Environmental Perspective of a Global Crisis  
and its Relation to Human and Animal Health*

**Vienna, Austria  
March 25<sup>th</sup>, 2019**

[www.ages.at](http://www.ages.at)

## ORGANIZERS

---

- Austrian Agency for Health and Food Safety (AGES), Vienna, Austria
- Technische Universität Wien, Vienna, Austria

## WORKSHOP COORDINATORS

---

- Norbert Kreuzinger, Vienna, Austria
- Markus Wögerbauer, Vienna, Austria

## WORKSHOP OBJECTIVES

---

Foster the exchange of expertise and mutual understanding between environmental scientists and medical and veterinary experts in the area of antibiotic resistance development and dissemination.

Exchanging views, streamlining terminology, prioritizing research needs and identifying knowledge gaps. Compiling baseline information for recommendations and evidence-based guidance on environmental AMR assessment for the risk management.

Collecting views and data for a White Book report.

## CONTACT

---

### **Contact Person [Scientific Programme]**

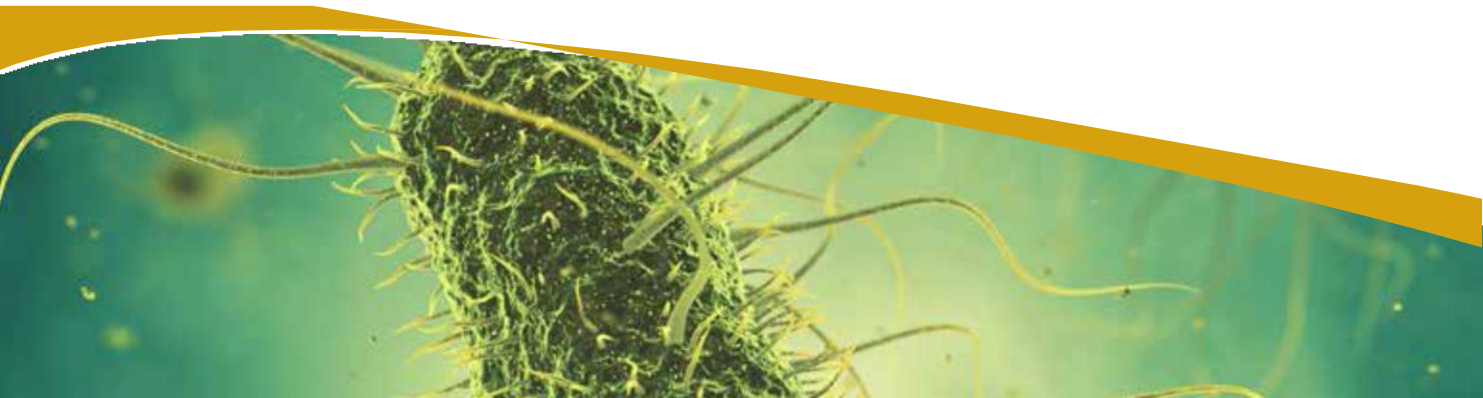
Mag. Dr. Markus Wögerbauer  
Austrian Agency for Health and Food Safety (AGES)  
Division for Integrative Risk Assessment  
Department for Data, Statistics and Risk Assessment  
Spargelfeldstrasse 191  
1220 Vienna Austria

Phone: +43 (0)5 0555-25717  
markus.woegerbauer@ages.at

### **Contact Person [Administrative Secretariat]**

Mag. Christoph Unger  
Austrian Agency for Health and Food Safety (AGES)  
AGES Academy  
Spargelfeldstrasse 191  
1220 Vienna  
Austria

Phone: +43 (0)5 0555-25219  
ages-akademie@ages.at



## WORKSHOP PROGRAMME

---

### Monday, 25th March 2019

08:30 Registration

09:00 Welcome and Setting the Scene  
(Franz Allerberger, Norbert Kreuzinger and Markus Wögerbauer)

#### **SESSION 1: Antimicrobial Resistance at the Nexus of Clinic, Community and Environment**

09:15 Antimicrobial Resistance: The EFSA Perspective on a Global Crisis  
(Ernesto Liebana)

09:25 Assessing the Risk of Antibiotic Resistance Transmission from the Environment to Humans  
(Celia Manaia)

09:35 Human – Animal – Environment Ecosystem Interfaces: Bottlenecks for Antimicrobial Resistance Spread?  
(Thomas Berendonk)

09:45 **Breakout Session** – Working Groups  
What is antimicrobial resistance? Clinic vs. Environment

10:45 Coffee break

11:00 Plenum: Presentation and Discussion of the Results

11:30 Lunch Break

#### **SESSION 2: Selection Pressure and Horizontal Gene Transfer in Natural Environments**

12:30 Detecting Rare Gene Transfer Events in Environmental Bacterial Populations  
(Kaare M. Nielsen)

12:40 Dissemination of Antibiotic Resistance in the Environment: Pathways and Potential Barriers  
(Eddie Cytryn)

12:50 **Breakout Session** – Working Groups  
Main drivers of AMR and HGT in soil, water, sediment, clinical, and community settings

14:00 Plenum: Presentation and Discussion of the Results

14:30 Coffee Break

#### **SESSION 3: Antibiotic Resistance Genes as Environmental Pollutants**

14:45 The Role of Extracellular DNA in the Generation of New Resistance Determinants in the Food/feed Chain  
(Markus Wögerbauer)

14:55 Wastewater Treatment Plants as Sink and Source for Clinically Relevant Antibiotic Resistance Determinants  
(Norbert Kreuzinger)

15:05 **Breakout Session** – Working Groups  
Critical Control Points at ecosystem boundaries, legal aspects, guidance for guidelines and regulations

15:45 Plenum: Presentation and Discussion of the Results

#### **SUMMARY OF THE WORKSHOP**

16.00 Round Table and Plenum Discussion: Main knowledge gaps, future research needs  
Collecting data for a White Book report

16.25 Closing Remarks

## TARGET AUDIENCE

---

Clinicians, veterinarians, medical doctors, infectious disease experts, micro- and molecular biologists, ecologists, environmental scientists and engineers, risk managers and stakeholders interested in reducing the threat of AMR dissemination via environmental routes and sources.

### Faculty Members

**Franz Allerberger**

Prof. Dr., Head of AGES – Public Health, Vienna, Austria

**Thomas Berendonk**

Prof. Dr., Technische Universität Dresden, Dresden, Germany

**Eddie Cytryn**

Dr., Volcani Center, Rischon LeZion, Israel

**Norbert Kreuzinger**

Ass. Prof. Dr., Technische Universität Wien, Vienna, Austria

**Ernesto Liebana**

Dr. BVSc. PhD. FRCPath, EFSA, Head of BIOCONTAM Unit; Parma, Italy

**Celia Manaia**

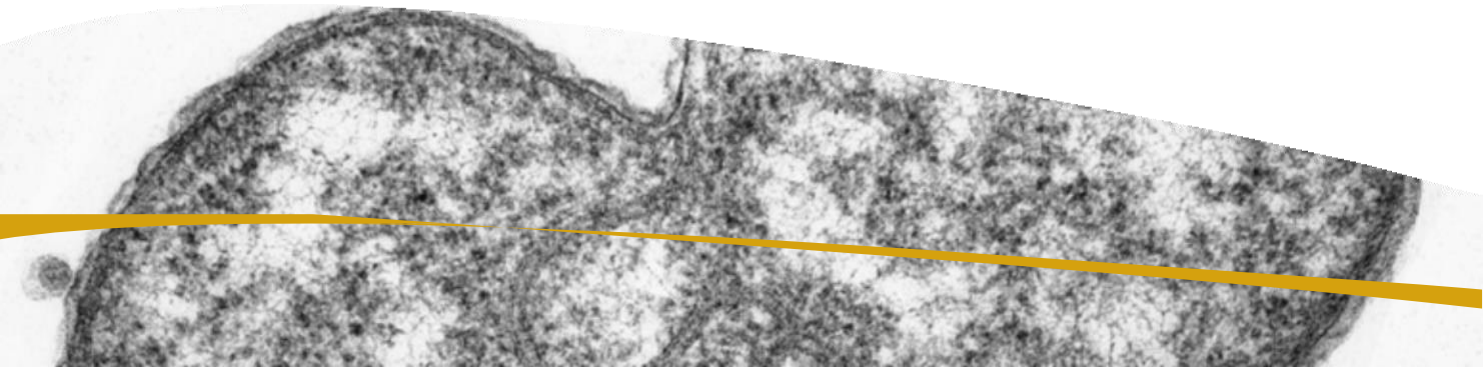
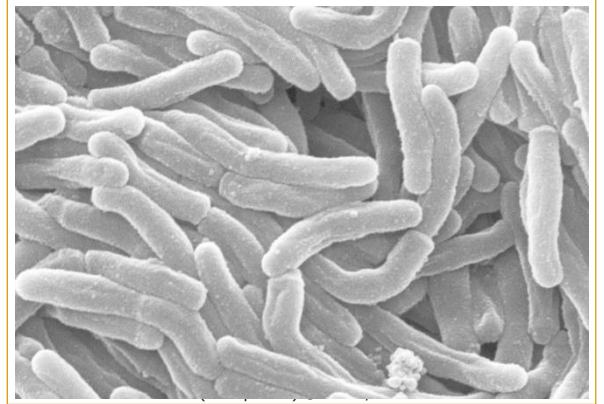
Ass. Prof. Dr., Escola Superior de Biotechnologia, Universidade Catholica Portuguesa, Porto, Portugal

**Kaare M. Nielsen**

Prof. Dr., Head of the Department of Life Sciences and Health, Oslo Metropolitan University, Oslo, Norway

**Markus Wögerbauer**

Dr., AGES – Data, Statistics and Risk Assessment, Vienna, Austria



## ORGANIZATION

---

### Course Venue

AGES Headquarters  
Spargelfeldstrasse 191  
1220 Vienna

Public Transport: Red Subway Line U1 (direction: Leopoldau). At "Kagranner Platz" change to bus line 24A and exit at bus stop "Spargelfeldstrasse".



## REGISTRATION PROCEDURE

---

Please register online on the AGES website at:  
<https://www.ages.at/en/service/ages-academy/event-schedule/>

"25.03.2019 – What is Antibiotic Resistance?"

### Registration deadline

is either March 18<sup>th</sup>, 2019, or the date reaching maximum capacity of the location. Slots are allocated in order of registration.

## REGISTRATION FORM FOR WORKSHOP "What is Antibiotic Resistance?"

---

Please send to [ages-akademie@ages.at](mailto:ages-akademie@ages.at) or register online at:  
<https://www.ages.at/en/service/ages-academy/event-schedule/>

<input type="checkbox"/>	Ms	<input type="checkbox"/>	Mr
<input type="text"/>			
Name			
<input type="text"/>			
First Name			
<input type="text"/>			
Institution/Organization			
<input type="text"/>			
Address Street/No.			
<input type="text"/>			
Address ZIP/City			
<input type="text"/>			
Email			
<input type="text"/>			

## SPONSOR

---

This workshop was partly funded by the Med-Vet-Net Association as a grant to MW (grant No.: 2018\_WS\_3 Wögerbauer: Thinking Out of the Box: What is Antibiotic Resistance? The environmental perspective of a global crisis and its relation to human and animal health).



**Health for Humans,  
Animals and Plants**

**AGES**