Antibiotics in the Food Chain

The Max Rubner-Institut is holding a scientific conference on "Antibiotics in the Food Chain" from 8 to 10 October 2012 in Karlsruhe – from the analysis of antibiotics and their degradation products, the status quo on residues in various groups of foodstuffs, microbiological aspects of antibiotic resistances, and the impact on humans to the strategies for addressing the issue.

Antibiotics are a group of pharmaceutical agents that are widely used to treat diseases in humans and in animals caused by bacterial infection. Consequently, increasing amounts of these powerful therapeutic tools have been applied, and only in recent years, suspicion has grown that antibiotic application might induce resistance in bacteria and thus counteract their basic therapeutic intention. Concerns about such antibiotic resistances have now become the subject of intensive public debate, not least in the media and amongst policy-makers.

Specific antibiotic-resistant bacteria, such as MRSA or ESBL, have recently come into focus because of their potential to infect humans, especially in hospitals, and because of the shortage or complete lack of possibilities for treating infected patients effectively.

In animal husbandry antibiotic-resistant bacteria have been detected with increasing frequency worldwide with the concomitant danger of the transfer of antibiotic resistances to humans. The contamination of food with resistant bacteria may have an impact on food quality and has thus become a food safety issue.

In this context, the aim of this year’s Max Rubner Conference is to focus on antibiotics and antibiotic resistances in the food chain and to highlight the latest scientific breakthroughs with special emphasis on:

- Legal framework of antibiotic application
- Recent advances in antibiotic analysis
- Antibiotic residues in the food chain and in different raw materials
- Microbiological aspects of antibiotic resistances
- Human health-related aspects of antibiotic resistances
- Alternatives to antibiotics and minimisation strategies for food-related antibiotic resistances

During a final panel discussion experts will summarise the findings of the conference and elaborate future strategies to enhance food safety.
Monday, October 8, 2012

13:30-14:30 Registration and Coffee

14:30-15:00 Welcome Address
Gerhard Rechkemmer, President Max Rubner-Institut (MRI)

Session 1 Introduction
Chair: Gerhard Rechkemmer, MRI, Germany

15:00-15:45 Legal and Regulatory Aspects of Antibiotics in the Food Chain
Alta von Wright, University of Veterinary Medicine Hannover, Germany

15:45-16:30 Use of Antibiotics in Animal Production
Jörg Hartung, University of Veterinary Medicine Hannover, Germany

16:30-17:00 Coffee Break

Session 2 Novel Developments in Antibiotic Analytics
Chair: Knut Heller, MRI, Kiel, Germany

17:00-17:30 Multi Antibiotic Residue Detection – Status quo and Challenges
Scarlett Baasel, Eurofins, Hamburg, Germany

17:30-18:00 New Approaches for Detection of Antibiotics in Food
Atta von Wright, University of Veterinary Medicine Hannover, Germany

18:00-18:30 Get-Together

Tuesday, October 9, 2012

10:00-10:30 Antibiotic Residues in Fish: Necessity, Cause and Effect of Treatment
Bjørn Tore Lunestad, The National Institute of Nutrition and Seafood Research, Bergen, Norway

10:30-11:00 Uptake of Tetracycline Antibiotics into Cereals
Christine Schwecke-Anduschus, MRI, Detmold, Germany

11:00-11:30 Antibiotic Residues in Vegetables
Manfred Grote, University of Paderborn, Paderborn, Germany

11:30-12:30 Lunch Break

Session 4 Antibiotic Resistance of Microorganisms, Health Related Aspects
Chair: Charles M.A.P. Franz, MRI, Karlsruhe, Germany

12:30-13:00 Transfer of Antibiotic Resistances in a Model Gut System
Leo Meile, ETH Zurich, Zurich, Switzerland

13:00-13:30 Molecular Mechanisms of Antibiotic Resistances
Stefan Schwarz, Friedrich Loeffler-Institut, Neustadt, Germany

13:30-14:00 Antibiotic Effects on Promotion of Antibiotic Resistance
Jesús Blázquez, Centro Nacional de Biotecnologica CSIC, Madrid, Spain

14:00-14:30 Coffee Break

14:30-15:00 Livestock Associated Methicillin Resistant Staphylococcus aureus (LA-MRSA)
Wolfgang Witte, Robert Koch Institut, Wernigerode, Germany

15:00-15:30 Antibiotic Resistance Emerging along the Food Chain, for Example MRSA and ESBL
Herbert Hächler, University of Zurich, Switzerland

15:30-16:00 Antibiotic Resistance in Fermentation Organisms and Probiotics
Geert Huys, Ghent University, Ghent, Belgium

16:00-16:30 Antibiotic Resistance of Contaminants of the Smear Cheese Surface Flora
Wilhelm Bockelmann, MRI, Kiel, Germany

17:00 Departure for Dinner

Wednesday, October 10, 2012

Session 5 Outlook and Prevention Strategies
Chair: Karin Knappstein, MRI, Karlsruhe, Germany

08:30-9:00 Animal Health – Potential Approaches to Reduce Antibiotic Consumption in Food Production
Thomas Blaha, University of Veterinary Medicine Hannover, Bakum, Germany

09:00-09:30 Subtherapeutically Dosed of Natural Substances Modulate Bacterial Virulence Factors
Ron Shapira, The Hebrew University of Jerusalem, Israel

09:30-10:00 Significance and Challenges of Monitoring Programmes for Antimicrobial Resistance - Experiences From DANMAP
Yvonne Agnar, National Food Institute, Kgs. Lyngby, Denmark

10:00-10:30 Role of Probiotics and Prebiotics in Animal Feeding to Reduce Antibiotic Consumption
Lorenzo Nissen, Bologna University, Italy

10:30-11:00 Coffee Break

11:00-13:00 Panel Discussion
Moderation: Gerhard Rechkemmer, MRI, Kiel, Germany

Panel Members:
• MinDr. Bernard Kühle, Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz
• Dr. Helmut Tschiersky-Schöneburg, Bundesamt für Verbraucherschutz und Lebensmittelsicherheit
• Dr. med. vet. Thomas grote Bolage, Bundesforschungszentrum
• Jutta Jaksche, Verbraucherzentrale Bundesverband
• Prof. Dr. Gerhard Rechkemmer, Max Rubner-Institut

Vegetarian meal for lunch                     yes      no
Registration for complimentary dinner                     yes      no
Vegetarian meal for dinner                     yes      no

Signature
Registration is complete upon receipt of payment.

Max Rubner Conference 2012
Federal Research Institute of Nutrition and Food
Haid-und-Neu-Straße 9
76131 Karlsruhe, Germany

Phone: +49 721 6625-611 E-Mail: mrc@mri.bund.de
Fax: +49 721 6625-111 Internet: www.mri.bund.de