

4th BfR-Summer Academy on Risk Assessment and Risk Communication in Food Safety, Berlin, 17th until 28th August 2015

Objectives:

The international BfR-Summer Academy from professionals for professionals aims to enhance the knowledge of food safety.

There is a growing necessity by all global actors to meet the requirements of scientific assessment as well as effective and consumer-orientated communication of food risks in order to reach harmonised standards in food safety. Risk assessment and risk communication are crucial in light of an increasingly speedy globalisation process. Therefore sharing of expertise of well-trained scientists makes our world a little bit safer.

The learning objectives of the BfR-Summer Academy are that participants...

- ◆ are made familiar with the concept of food safety with a focus on Germany and Europe and particularly in regard to risk assessment and risk communication,
- ◆ gain a sound understanding of hazard and exposure assessment within the risk assessment process, and understand the requirements for data generation and data collection,
- ◆ gain practical experience in conducting risk assessment and risk communication,
- ◆ are made capable of interpreting results of exposure calculation, including the assessment of data quality and uncertainty.

Participants will be given theoretical background on risk assessment and risk communication in food safety as well as hands-on exercises where it is possible. The more practice orientated workshops will focus on food hygiene, contaminants, and chemical risk assessments.

Course lectures will be given by senior BfR scientists and external experts, all of whom have a profound and long standing experience in risk assessment and/or regulatory toxicology. All courses will be held in English language.

Requirements to applicants

We aim to have a Summer Academy for professionals. Applicants should:

- ◆ have an academic background in biology, chemistry, medicine, veterinary medicine, toxicology or other relevant disciplines including PhD,
- ◆ work in the field of food safety and have already comprehensive professional experience in risk assessment analysis
- ◆ have a strong interest to extend in risk assessment, their knowledge
- ◆ have a very good command of the English language (equivalent to the Cambridge Certificate in Advanced English (CAE) or TOEFL®),
- ◆ have a working knowledge of standard office software, especially "spread sheet analyses" (e.g. MS Excel, OpenOffice.org Calc),
- ◆ have basic knowledge of statistics (e.g. distribution types, variance).

It is strongly recommended to bring your own laptop to have optimal working conditions. WLAN access will be provided.

Application

Applications for the BfR-Summer Academy will be provided online at the end of March 2015. The number of available places is limited to 34. Participants are chosen based on scientific criteria and will be accepted on a *first come first serve* basis.

Deadline for registration is Friday **22nd May 2015**.

Participants will receive a confirmation and a receipt in early June 2015 as to allow time for visa arrangements if necessary.

Planned Course Programme (!Changes may occur)

1st week

17.08. Monday – Introduction to Risk Assessment and Legal Background of Food Safety

First, you will be welcomed by the BfR at the Seminaris Hotel. There you will listen to a short introduction of the responsibility of the Federal Institute for Risk Assessment, its legal status and its work. The curriculum of the BfR-Summer Academy on Risk Assessment and Risk Communication in the area of food safety will be presented and the individual participants introduce themselves. An introduction to risk assessment will be given. Principles for the implementation of risk assessment in food safety and the associated terminology will be presented in the framework of pertinent standards and guidance documents. The interdisciplinary approach required when dealing with the different elements of risk assessment (hazard identification, hazard characterization, exposure assessment and risk characterization) will be outlined.

Social Event: In the evening there will be a joint dinner.

18.08. Tuesday – Exposure Assessment: Methods and Models

An introduction into the basics and the principal approaches of exposure assessment will be given. This includes the approaches of exposure calculation, data required and interpretation of results, as well as aspects of data quality. This includes exposure scenarios, exposure modelling and exposure parameters, the tiered approach of exposure analysis and the impact of hazard identification (acute and chronic effects) for exposure estimations. Furthermore you will learn about methods used for exposure assessment and different exposure models. On this day you will have some practical exercises on probabilistic methods.

19.08. Wednesday – Principles of Data Generation for Assessments, Exercises

Principles of data generation for exposure assessment and dietary assessment methods are in focus of this day. You will learn requirements of risk assessment to perform a health and nutrition survey. This part covers approaches for collection of data on food contamination (Market control, Food Monitoring, Total Diet Studies). In the afternoon different agents like zoonotic microorganisms and other foodborne pathogens with regard to the severity of human health will be considered within a workshop.

20.08. Thursday – Foodborne Infections, Microbial Aspects

This day will take place at the location of the Federal Institute for Risk Assessment in Marienfelde. First, you will get an introduction to foodborne infections and intoxications. This module covers infections and intoxications as main sources for food borne outbreaks and in single cases. It also includes international definitions and routes of transmission. Different agents like zoonotic microorganisms and other foodborne pathogens with regard to the severity of human health will be considered.

You will be introduced in the principles for Risk Assessment of antimicrobial resistance. Details for monitoring antimicrobial resistance in zoonotic pathogens and indicator bacteria as well as consumption of antibiotic usage in animal husbandary will be discussed. Moreover, information on the nature and possible implications of a new concept in food safety management will be provided. There is an increasing need for global data to monitor infectious epidemics. The vision of a global microbial identifier as global platform to aggregate, share, mine, and use microbiological genomic data will be presented.

21.08. Friday – Risk Communication, Risk Assessment

Risk communication is part of the risk assessment process, as risk assessment results are being communicated to risk managers, consumers and other audiences. The aim of this module is twofold: It presents an overview of scientific results on risk communication and risk perception, and it informs about the communication and public relation activities at the BfR with a focus on actual events and media responses.

22.08. Saturday – Social Event: Sightseeing Tour in Berlin.

2nd week

24.08. Monday – Risk Assessment Workshops on Arsenic in Food

On this day you are a risk assessor and will get information data about hazard assessment and exposure data of arsenic in food. Hands-on training to perform exposure assessment and risk assessment on basis of these data will be given.

The workshop will end with risk communication exercises. Here participants will develop strategies for the communication of the results of the risk assessment workshops arsenic in food for different audiences.

25.08. Tuesday – Risk Assessment Workshop: Chemical Risk Assessment

The day will start with an introduction to the workshop pesticides. Here you will learn about principles of acute and chronic dietary risk assessments for pesticides. In addition, current developments on how to deal with multiple residues and low level metabolites will be integrated in the presentation.

Thereafter you are a risk assessor and will get information data about hazard assessment, and exposure data. Hands-on training to perform exposure assessment and risk assessment on basis of the given literature and data will be given. You will be provided with the results of toxicological and residue studies that were submitted to the authority to support an authorisation of a pesticide. Based on this information, the dose-response characterisation and reference doses need to be derived by the participants. Additionally, the dietary exposure assessment and the risk characterisation will be prepared. Based on this case study, possible problems and pitfalls will be identified and discussed with the participants. The day will end with a summary and discussion of results. **Social Event: Nightseeing Tour in Berlin.**

26.08. Wednesday – Introduction to Hazard Identification and Hazard Characterization

This day will give insights into general principals of hazard assessment like dose-response-relationships, and will cover important study types. Requirements for subchronic studies will be presented and the use of the results discussed. Furthermore you will hear about reproductive toxicity studies in hazard assessment. Their value and limitations will be presented and it will be discussed how to integrate the results into the risk assessment.

27.08. Thursday – Risk Assessment Workshop: Food Contamination by Plasticisers

In this workshop the possibility of food contamination by substances, e.g. plasticisers, from food-contact materials will be discussed. Based (i) on food-monitoring data on the content of plasticisers in different foodstuffs, (ii) on nutrition-survey data on dietary intakes, and (iii) on toxicological data for these plasticisers, the participants prepare a risk assessment report covering the topics on hazard characterization, exposure assessment, and risk characterization.

28.08. Friday – Special Aspects and Discussion

An emerging topic is the risk of endocrine disruptors, and you will hear about substance classes with evidence or potential of endocrine disrupting effects, and the risk assessment of the classes. In the last presentation you will hear about risk characterisation of Food Additives and Flavourings.

We will end our Summer Academy with a discussion about these two weeks and will have a fare-well reception.

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