

## Challenges in Public Health Protection in the 21<sup>st</sup> Century: New Methods, Omics and Novel Concepts in Toxicology

The upcoming symposium aims to provide an update on major developments in the field of new emerging methods and concepts in toxicology. As a platform for researchers and representatives from academia, industry, and regulatory authorities, the symposium highlights methodological progress (e.g. *in vitro*, *in silico*, omics methods) as well as current and future applications for regulatory risk assessment. Its broader intention is to share and advance ideas on future possibilities and applications in the field.

### Venue:

Langenbeck-Virchow-Haus  
Luisenstraße 58/59  
10117 Berlin  
Germany  
[Directions](#)

### Registration:

Registration free of charge  
Please register online by 08.11.2021  
on the website of the [BfR Academy](#)

### Contact:

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### Organisers:

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GERMAN FEDERAL INSTITUTE FOR RISK ASSESSMENT

## Challenges in Public Health Protection in the 21<sup>st</sup> Century: New Methods, Omics and Novel Concepts in Toxicology

15–17 November 2021, Berlin



**UFZ** HELMHOLTZ  
Centre for Environmental Research

 **BfR**

Bundesinstitut für Risikobewertung

## Monday, 15 November 2021

12:30–1:00 pm Registration

Presenter: Jan-Martin Wiarda

1:00–1:15 pm

### Welcome and introduction

Professor Dr Dr Andreas Hensel,  
President of the German Federal Institute for Risk  
Assessment (BfR), Berlin, Germany

### Session I: Recent advances in the application of NAM

Chair: Dr Tewes Tralau, BfR

1:20–2:20 pm

### Recent advances in the field

Professor Dr Thomas Hartung, Johns Hopkins  
Bloomberg School of Public Health (JHSPH), Balti-  
more, USA

2:20–3:00 pm

### Human organ-on-a-chip models

Professor Dr Adrian Roth, Roche, Basel, Switzerland

3:00–3:30 pm Coffee break

3:30–4:10 pm

### Predictions on chronic endpoints, e.g. carcinogenicity

Professor Dr Stefano Monti, Boston University, Bos-  
ton, USA

4:10–4:50 pm

### High-throughput screening

Dr Anton Simeonov, National Center for Advancing  
Translational Sciences (NCATS), National Institutes  
of Health (NIH), Bethesda, USA

4:50–5:30 pm

### NAM-derived data in regulatory environments: Templates, AOPs and ontologies

Dr Clemens Wittwehr, Joint Research Centre (JRC),  
Ispra, Italy

## Tuesday, 16 November 2021

Presenter: Jan-Martin Wiarda

### Session IIa: Use of omics techniques in experimental toxicology

Chairs: Professor Dr Albert Braeuning, BfR  
Dr Stefan Scholz, Helmholtz Centre for  
Environmental Research (UFZ)

8:35–9:05 am

### Scientific confidence in NAMs

Dr Nicole Kleinstreuer, NTP Interagency Center for  
the Evaluation of Alternative Toxicological Methods  
(NICEATM), National Institute of Environmental  
Health Sciences (NIEHS), Durham, USA

9:05–9:35 am

### Transcriptomics

Professor Dr Roland Grafstroem, Karolinska Institute,  
Solna, Sweden

9:35–10:05 am

### High-throughput transcriptomics

Dr Joshua Harrill, Center for Computational  
Toxicology and Exposure, United States  
Environmental Protection Agency (US EPA), Durham,  
USA

10:05–10:35 am Coffee break

10:35–11:05 am

### Toxico-epigenomics

Professor Dr Joern Walter, Saarland University,  
Saarbruecken, Germany

11:05–11:35 am

### Integration of multi-(meta)omics in cellular and microbiome toxicity

Professor Dr Martin von Bergen, UFZ

11:35 am–12:05 pm

### Microbiome

Dr Sandrine Ellero-Simatos, TOXALIM Research  
Centre in Food Toxicology, Toulouse, France

12:05–1:00 pm Lunch break

## Session IIb: Use of omics techniques in regulatory toxicology

Chair: Dr Philip Marx-Stoelting, BfR

1:00–1:30 pm

### Use of omics for AOP validation and application: liver toxicity as a case study

Professor Dr Mathieu Vinken, Vrije Universiteit  
Brussel (VUB), Brussel, Belgium

1:30–2:00 pm

### EU-ToxRisk, omics data for read-across

Professor Dr Bob van de Water, Leiden University,  
Leiden, The Netherlands

2:00–2:30 pm

### Metabolomics as a tool for read-across

Professor Dr Bennard van Ravenzwaay, BASF,  
Ludwigshafen am Rhein, Germany

2:30–3:00 pm Coffee break

3:00–3:30 pm

### Improved transcriptome assessment

Dr Wibke Busch, UFZ

3:30–4:00 pm

### Targeted proteomics

Dr Oliver Poetz, Natural and Medical Science  
Institute (NMI), University of Tuebingen,  
Tuebingen, Germany

## Wednesday, 17 November 2021

Presenter: Jan-Martin Wiarda

### **Session III: Current applications – a regulatory authority perspective**

*Chair: Dr Matthias Herzler, BfR*

8:40–9:40 am

#### **Short position talks**

*European Chemicals Agency (ECHA)*

*Dr Tomasz Sobanski*

*European Food Safety Authority (EFSA)*

*Professor Dr George Kass*

*The French Agency for Food, Environmental and Occupational Health & Safety (ANSES)*

*Dr Pascal Sanders*

*National Institute for Public Health and the Environment (RIVM)*

*Dr Mirjam Luijten*

*National Food Institute / Technical University of Denmark (DTU)*

*Professor Dr Anne Marie Vinggaard*

*Scientific Committee on Consumer Safety (SCCS)*

*Professor Dr Vera Rogiers*

9:40–10:40 am

#### **Panel discussion**

*ECHA, EFSA, ANSES, RIVM, DTU, SCCS, BfR*

10:40–10:55 am *Coffee break*

10:55–11:35 am

#### **Position talk**

*Food Safety Commission of Japan (FSCJ)*

*Dr Toru Kawanishi*

11:35 am–12:15 pm

#### **Position talk**

*United States Food and Drug Administration (US FDA)*

*Dr Weida Tong*

*United States Environmental Protection Agency (US EPA)*

*Dr Russell Thomas*

12:15–12:25 pm

#### **Concluding remarks and closure**

*Professor Dr Dr Andreas Hensel, BfR*