

## 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  
<https://www.bfr-akademie.de/english/events/nam-omics.html>

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### Organiser:

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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



Bundesinstitut für Risikobewertung

## Monday, 15 November 2021

12:30–1:00 pm Registration

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: Tewes Tralau*

1:20–2:20 pm

#### Recent advances in the field

*Thomas Hartung, JHSPH, USA*

2:20–3:00 pm

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

*Adrian Roth, Roche, Switzerland*

3:00–3:30 pm Coffee break

3:30–4:10 pm

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

*Stefano Monti, Boston University, USA*

4:10–4:50 pm

#### High-throughput screening

*Anton Simeonov, NCATS, NIH, USA*

4:50–5:30 pm

#### NAM-derived data in regulatory environments:

##### Templates, AOPs and ontologies

*Clemens Wittwehr, JRC, Italy*

8:00 pm Get-together

## Tuesday, 16 November 2021

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

*Chair: Albert Braeuning*

8:35–9:05 am

#### Scientific confidence in NAMs

*Nicole Kleinstreuer, NIEHS, USA*

9:05–9:35 am

#### Transcriptomics

*Roland Grafström, Karolinska Institute, Sweden*

9:35–10:05 am

#### High-throughput transcriptomics

*Joshua Harrill, US EPA, USA*

10:05–10:35 am Coffee break

10:35–11:05 am

#### Toxico-epigenomics

*Jörn Walter, Saarland University, Germany*

11:05–11:35 am

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

*Martin von Bergen, UFZ Leipzig, Germany*

11:35 am–12:05 pm

#### Microbiome

*Sandrine Ellero-Simatos, INRA, France*

12:05–1:00 pm Lunch break

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

*Chair: Philip Marx-Stoelting*

1:00–1:30 pm

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

*Mathieu Vinken, Vrije Universiteit Brussel, Belgium*

1:30–2:00 pm

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

*Bob van de Water, Leiden University, The Netherlands*

2:00–2:30 pm

#### Metabolomics as a tool for read-across

*Bennard van Ravenzwaay, BASF, Germany*

2:30–3:00 pm Coffee break

3:00–3:30 pm

#### Improved transcriptome assessment

*Wibke Busch, UFZ Leipzig, Germany*

3:30–4:00 pm

#### Targeted proteomics

*Oliver Poetz, NMI University of Tuebingen, Germany*

5:00 pm Sightseeing tour and joint dinner

## Wednesday, 17 November 2021

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

*Chair: Matthias Herzler*

8:40–9:30 am

#### Short position talks

*ECHA (Tomasz Sobanski), EFSA (TBA), ANSES (Pascal Sanders), RIVM (Mirjam Luijten), DTU (Anne Marie Vinggaard)*

9:30–10:30 am

#### Panel discussion

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

10:30–10:45 am Coffee break

10:45–11:25 am

#### Position talk

*FSCJ (Toru Kawanishi)*

11:25 am–12:05 pm

#### Position talk

*US FDA/EPA (Weida Tong, US FDA; Russell Thomas, US EPA)*

12:05–12:15 pm

#### Concluding remarks and closure

*Professor Dr Dr Andreas Hensel, BfR, Berlin*