

# EINLADUNG

Kolloquium  
Sommersemester 2023

**Prof. Dr. Thomas Backhaus**

Department of Biological & Environmental Sciences, University of Gothenburg

hält am Dienstag, den **23.05.2023**, um 16:15 Uhr, im Biologicum, Max-von-Laue-Str. 13, Campus Riedberg, Hörsaal 1 einen Vortrag über,  
**„It’s complicated...: an overview of approaches to mixture assessment, empirical results and the needs to improve chemical regulation“**

Neither people nor organisms in the environment are ever exposed to single, pure chemicals. Nevertheless, our current method for evaluating chemicals remains predominantly based on assessing individual chemicals. This might not always guarantee adequate protection of human health or the environment. Even low, individually “non-toxic” concentrations might lead to a substantial toxicity, if multiple components co-occur.

In order to account for real-life exposure to complex, multi-component chemical “cocktails”, often comprising dozens or even hundreds of substances, we need to improve chemical risk assessment and management. This has also been acknowledged in the European Chemicals Strategy for Sustainability, which specifically asks to develop better methods for mixture assessment.



In the presentation I will first summarize the scientific state of the art of mixture assessment in toxicology and ecotoxicology. I will then compare this with the current practice of chemical risk assessment, identifying areas in need of improvement. Finally, I will examine some recent proposals on how the protection of human health and the environment against unwanted mixture effects can be improved, including an analysis of stakeholder positions from academia, industry and civil society organizations.

Thomas Backhaus is Professor for environmental sciences at the University of Gothenburg, mainly working on the environmental risk of chemicals of emerging concern with a special focus on combination effects and regulatory ecotoxicology. He is a member of the EU Commission’s Scientific Committee on Health Environmental and Emerging Risks (SCHEER) and the Swedish Toxicological Council (Toxrådet). Additionally, he is a boardmember of two foundations working on the assessment of chemical risks, the Food Packaging Forum (FPF) and the International Panel on Chemical Pollution (IPCP). Thomas also serves as senior editor of ‘Integrated Environmental Assessment and Management’. As per usual, Thomas spends his time teaching, learning (far too little), research (chemical risk assessment, chemical regulation and big data in ecotoxicology), and writing stuff.

Einladender: Prof. Dr. Dr. h. c. Henner Hollert