

*The Swedish Society of Toxicology Award  
for best PhD Thesis in Toxicology 2022*

**TOXICITY AND HEALTH EFFECTS OF PARTICLES  
- FROM MECHANISMS TO HUMAN EXPOSURE**

**Hybrid Seminar at 14:30 - 16:30 on September 22, Samuelssonsalen,  
Karolinska Institutet, Tomtebodavägen 6, Solna and Zoom**

Preregistration no required. To join online use this URL <https://ki-se.zoom.us/j/62075161305>.

**Program**

14:00 Coffee and mingle

14:30 Welcome

*Oskar Karlsson, SFT Chair, SciLifeLab, Stockholm University*

14:35 Title: Exploring toxicity and fate of metal-based particles in the lung: from mechanistic screening to lung deposition modelling

*Dr. Sarah McCarrick, Metal and Health, Institute of Environmental Medicine, Karolinska Institute, Sweden*

15:00 Title: Impact of metal-based nanomaterials on genomic stability: Role of shape and intracellular bioavailability

*Professor Dr Andrea Hartwig, Department of Food Chemistry and Toxicology, Karlsruhe Institute of Technology, Germany*

15:25 Leg stretch

15:35 Title: Inhaled nanomaterials and how they may impact human health – metrics that matter

*Professor Dr Flemming Cassee, Department Population Health Sciences, Utrecht University, and the Institute for Risk Assessment Sciences, The Netherlands*

16:00 Title: Assessing population exposures and health impacts of nanoparticle emissions

*Professor Dr Christer Johansson, Department of Environmental Science, Stockholm University*

16:25 Final comments

16.30 Mingle!



Dr. Sarah McCarrick is the winner of SFT's annual award for best PhD thesis in toxicology 2022. Sarah received her MSc in Toxicology from Karolinska Institutet in 2017. She defended her PhD in 2022 at the Institute of Environmental Medicine, Karolinska Institutet under the main supervision of Associate Professor Hanna Karlsson. The motivation from the jury states that Sarah has produced "an excellent thesis focusing on getting a deeper understanding of the toxicity and fate of metal-based nanoparticles in the lung, by using in-vitro assays, and a dosimetry modelling method based on literature data". Read Sarah's thesis "*Exploring toxicity and fate of metal-based particles in the lung: from mechanistic screening to lung deposition modelling*"

here: <https://openarchive.ki.se/xmlui/handle/10616/48027>, More about Dr. McCarrick here:  
<https://staff.ki.se/people/sarah-mccarrick>.



Prof. Dr. Andrea Hartwig is Professor and Chair for Food Chemistry and Toxicology at the Karlsruhe Institute of Technology (KIT). She is an expert in the field of toxicology of metal-based nanomaterials. Her main research focus is on the impact various metal compounds on genomic stability, with special emphasis on DNA damage induction and effects on DNA repair and gene expression. Prof. Hartwig is also actively involved in chemical risk assessment. Among other activities, she is Chair of the German MAK Commission and Co-opted member in the Risk Assessment Committee (RAC) of the European Chemicals Agency (ECHA). More about Prof. Dr. Hartwig here: [https://lmctox.iab.kit.edu/english/Staff\\_122.php](https://lmctox.iab.kit.edu/english/Staff_122.php)



Prof. Dr. Flemming Cassee is chief science officer and senior inhalation toxicologist at RIVM, The Netherlands, as well as Professor of Inhalation Toxicology at Utrecht University. He is one of the international leading researchers in the field of particle toxicology and nanomaterials. Except from research and coordination, he also supports government authorities at all levels, including WHO as well as the European Commission and US EPA. Furthermore, he is Editor-in-Chief of the journal Particle and Fibre Toxicology and a reviewer/editor of a number of other international scientific journals. More about Prof. Dr. Cassee here: <https://www.uu.nl/staff/fricassee> and <https://www.rivm.nl/en/about-rivm/knowledge-and-expertise/experts-and-expertise/prof-f-r-flemming-cassee>



Prof. Dr. Christer Johansson is Professor at the Atmospheric Science unit of the Department of Environmental Science, Stockholm University, and works as air quality expert at the Environment and Health Administration (EHA) of the city of Stockholm. During the past 30 years his research focus has been on urban air pollution and monitoring, atmospheric dispersion modelling, photochemistry, population exposure and health impacts. He has been working closely with epidemiologists, atmospheric scientists as well as urban planners in many national and international research projects. More about Prof. Dr. Johansson here: <https://www.su.se/english/profiles/chjoh-1.181939>