

TU104 Modulatory toxicity effects of metal mixtures on chemosensation and mortality of *C. elegans* [s. moyson](#); G. Baggerman, Systemic Physiological and Ecotoxicological Research, University of Antwerp; R. Blust, University of Antwerp / Systemic Physiological and Ecotoxicological Research Department of Biology; S. Husson, University of Antwerp. The number of anthropogenic sources of heavy metals in soil increased the past several decades. This accumulation creates serious health hazards for diverse animals including humans, hereby remaining a persistent (eco)toxicological concern. While toxic effects of single metals have already been documented under laboratory conditions, very little is known about their interactions and putative additive effects, which occur in the environment. The effects of metals in mixture can be additive, antagonistic or synergistic, and by interacting with each other, metals can severely increase the toxicity. One of the major challenges in ecotoxicology is thus to obtain insights in mixture toxicology to set realistic environmental quality criteria. It is well-recognized that metals can alter neuronal excitability, that they are implicated in neurodegenerative diseases and that they can impair chemosensation. We therefore aim to investigate whether and how metal toxicities modulate the survival rate and (chemo)sensory capacities and how this is translated to the behavioural/organismal level. To do so, we will fully exploit the benefits of *Caenorhabditis elegans* as a unique model for both fundamental neuroscience and (eco)toxicology. Fed adult nematodes will be exposed to copper and cadmium (as single metal and in combination) for 2h, 8h, 24h and 48h to different concentrations.