Contribution ID: **24** Type: **oral**

Pharmaceutical residues in German surface waters

Friday, 16 January 2026 14:50 (20 minutes)

Pharmaceutical residues represent an emerging class of micropollutants in German aquatic systems. With an aging population in Germany, pharmaceutical consumption has also risen in the last few decades. Furthermore, veterinary pharmaceuticals are widely used in agriculture. While human pharmaceuticals, their transformation products, and their metabolites are often not completely removed by wastewater treatment plants, veterinary pharmaceuticals can enter environmental compartments directly.
Therefore, a diverse mixture of pharmaceutical residues can be found in German surface waters, including antibiotics, analgesics, antiepileptics, and endocrine-active compounds. Although these substances typically occur at concentrations below thresholds relevant for human health, studies have shown that many pharmaceuticals are persistent and can lead to adverse effects in non-target aquatic organisms. Moreover, transformation products and metabolites have also been shown to exhibit bioactive properties.
Understanding the environmental fate and transformation pathways of pharmaceuticals is therefore essential for accurate risk assessment and the development of improved mitigation and water treatment strategies in Germany.

Author: VIENKEN, Anna Lena

Presenter: VIENKEN, Anna Lena

Session Classification: Water

Track Classification: Water