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Eawag Seminar Invitation

Environmental chemistry of biomolecules: drugs, enzymes and natural toxins

Speaker **Dr. Elisabeth Janssen,** *Dept. Environmental Chemistry, Eawag*

When **October 22, 16.00 – 17.00**
Where **Online via Zoom, contact seminars@eawag.ch for access details.**

Abstract My research focusses on determining chemical information to evaluate water quality and to protect human health and ecosystem functioning. This information is crucial for public authorities to manage water resources especially as we are facing growing inputs of bioactive chemicals with adverse environmental effects.

My background is in Environmental Engineering and my earlier research focused on toxicokinetics to evaluate sediment remediation with activated carbon. After I then worked 4 year on environmental photochemistry at ETH, I started my tenure process at Eawag in July 2016. Here, my work is rooted in environmental and analytical chemistry of biomolecules. I investigate the environmental behavior of these molecules to define the exposure side of human and ecological risk assessment. Specifically, my research focusses on the occurrence and persistence of these biomolecules (aquatic enzymes, natural toxins, and micropollutants). My group has built an analytical to study site-specific damage of biomolecules of varied complexity. My aim is to elucidate how long-lived these biomolecules are in aquatic systems and which transformation products are formed with a particular focus on photochemical and enzymatic processes. My work combines field measurements with controlled laboratory experiments to establish system-independent parameters that can be applied in predictive models for risk assessment. I successfully finished my tenure in July 2020. In this seminar, I will give you an overview across the biomolecules, analytical techniques and transformation processes that I study.