

## TransCon2019

**Monte Verità, Ascona, Switzerland; 28.4.-3.5. 2019**

*Environmental Microbiology (EM)*

Author of report

Michael Thomas Zumstein

Affiliation of author

Cornell University

TransCon2019, an international conference on the biotransformation of anthropogenic chemicals in natural and engineered environments, was co-organized by Kathrin Fenner (Eawag/UZH) and Jörg Drewes (TU Munich). The program featured 5 keynote talks, 36 oral presentations, 2 poster sessions, and 2 afternoon workshops. The focus of the presented research was on linking biotransformation reactions of relevant chemical contaminants to key microorganisms and enzymes. Furthermore, advances in analytical methods and prediction tools, effects of environmental factors on biotransformations, and innovative bioprocesses for (waste)water treatment were presented. The conference site located just above beautiful Lago Maggiore provided an ideal ambiance for the exchange of research ideas among senior and junior researchers working in the fields of environmental chemistry, environmental microbiology, and environmental engineering.

I had the opportunity to present my postdoctoral research on the activity and the specificity of extracellular and intracellular enzymes extracted from wastewater microbial communities. The main part of my presentation was on assessing the biotransformation of selected antibiotics with respect to kinetics, reaction pathways, and enzyme biogeography. Furthermore, I touched on a currently ongoing project in which we explore the specificity of wastewater peptidases. Both of these projects are motivated by the selection of antibiotic resistance genes both during and downstream of biological wastewater treatment.

Lastly, I would like to thank the SSM for the financial support that allowed me to participate at and contribute to this fantastic event.



*How are anthropogenic chemicals transformed during biological wastewater treatment and what enzymes and microorganisms play a key role in this process?*