



IP Controlling Chemicals' Fate Lecture



Prof. Teppo Hiltunen

University of Turku | University of Helsinki, Finland

Tuesday, 16 April 2019, 13:30

Leipziger KUBUS, Lecture Hall 1CD

Permoserstr. 15, 04318 Leipzig

Eco-evolutionary dynamics in experimental microbial communities

The main focus of Hiltunen's research group is to understand what drives the dynamics in ecological communities. They are especially interested in how contemporary rapid evolution alters ecological dynamics and how ecological dynamics, in turn, feedback to evolutionary processes. Currently, the field moves beyond observations in simple environments and simple few-species settings asking questions about the effect of temporally and spatially varying selection pressures and community complexity. Increasing complexity at any level, however, results in a number of challenges that often can only be tackled using a combination of experimental evolution, mathematical modelling and molecular techniques. Currently their research focus is on testing eco-evolutionary feedbacks in species-rich, multi-trophic microbial communities to see if the findings from simple few-species systems still apply in the presence of more complex species interactions. Another theme they focus on is that to understand how environmental factors, such as sublethal antibiotic concentrations, alter eco-evolutionary dynamics.

Hiltunen is an associated professor at the University of Turku, Department of Physiology and Genetics since 2018. He is the principal investigator of the research group "Experimental Evolution". He is also an academy research fellow in the University of Helsinki, Faculty of Lifesciences since 2016 and the head of HiLIFE grand challenge consortium "Combatting antimicrobial drug resistance". Hiltunen obtained his PhD in the University of Jyväskylä, Finland in Ecology and Evolutionary Biology (2008). He conducted his postdoc research in Cornell University, USA (2008–2011) with Profs. Nelson Hairston and Stephen Ellner, and in the University of Helsinki founded by Academy of Finland, Nessling Foundation and the University of Helsinki (2011–2016). During his postdoctoral research he visited Max Planck Institute for Evolutionary Biology, Germany in 2014. He has numerous international projects and collaborations; Konstanz U., Potsdam U., Utrecht U., Geneva U., ISEM Montpellier and EAWAG are only some examples. His teaching activities are focused on combining the traditions of ecological and evolutionary research with microbiology.

All interested colleagues are kindly invited.