

Seminar in Microbiology

Monday, November 14, 2016

Salle de séminaire, E07.3347.a, CMU

11:30 – 12:30

Beat Christen

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Multiplexed transposon sequencing strategies to illuminate complex traits in bacteria

Beat Christen studied Molecular Biology and earned his PhD at the Biocenter, University of Basel. As a Postdoctoral Fellow and Research Associate, he worked together with Lucy Shapiro at Stanford University where he invented novel high-throughput strategies that enable quantitative investigation and deciphering of large-scale networks in prokaryotes. Among these strategies are high-content fluorescence microscopy screening approaches (Christen B, et al. PNAS 2010, Christen M, et al Science 2010), a systems genetics strategy that utilizes hyper-saturated transposon mutagenesis to map essential genetic features with base-pair accuracy on the chromosome (Christen B, et al. Mol. Syst. Biol. 2011), and a methodology to profile transcription factor networks on global scale. In 2013, Beat Christen joined the Institute of Molecular Systems Biology as an Assistant Professor at the Department of Biology, ETH Zürich.

Christen M., et al., 2016. Quantitative Selection Analysis of Bacteriophage ϕ CbK Susceptibility in *Caulobacter crescentus*. *J Mol Biol.* 428:419-30.

Christen M., et al., 2015. Genome Calligrapher: A Web Tool for Refactoring Bacterial Genome Sequences for de Novo DNA Synthesis. *ACS Synth Biol.* 4:927-34.

Young et al., 2015. Transposon Mutagenesis Paired with Deep Sequencing of *Caulobacter crescentus* under Uranium Stress Reveals Genes Essential for Detoxification and Stress Tolerance. *J Bacteriol.* 197:3160-72.

Christen B., et al., The essential genome of a bacterium. *Mol Syst Biol.* 2011 Aug 30;7:528.