

Graduate Schools
Infection Immunity and Cancer, UniGe & UniL: CUS
Biology & Medicine, CMU

Seminar in Microbiology

Monday, July 4, 2016

Salle E07.334.a, CMU

11:30 – 12:30

Jörn Piel

Institute for Microbiology, ETHZ



Metabolically talented bacteria from microbial dark matter

Jörn Piel's research focuses on the origin, ecology, and activity of natural products. Using biological and chemical methods, his research group investigates how organisms such as bacterial communities in marine sponges synthesize these often complex substances. This knowledge is then applied in Synthetic Biology to produce compounds that are difficult to obtain from Nature. Such natural products are of great interest for the development of drugs used in antiinfective or anticancer therapy.

Helfrich EJ, **Piel J.** 2016. Biosynthesis of polyketides by trans-AT polyketide synthases. *Nat Prod Rep.* 33:231-316. Review.

Ueoka et al., 2015. Metabolic and evolutionary origin of actin-binding polyketides from diverse organisms. *Nat Chem Biol.* 11:705-12.

Brachmann et al., 2015 Colibactin biosynthesis and biological activity depend on the rare aminomalonyl polyketide precursor. *Chem Commun (Camb).* 51:13138-41.

Morinaka et al., 2014. Radical S-adenosyl methionine epimerases: regioselective introduction of diverse D-amino acid patterns into peptide natural products. *Angew Chem Int Ed Engl.* 53:8503-7.

Wilson et al., 2014. An environmental bacterial taxon with a large and distinct metabolic repertoire. *Nature* 506:58-62.

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