BIOENGINEERING SEMINAR

“A Modular Receptor Platform to Expand the Sensing Repertoire of Bacteria”

Monday – June 4, 2018 – 12:15 p.m.
EPFL – room SV1717

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host: Prof. Bruno Correia

Abstract

Engineered bacteria promise to revolutionize diagnostics, therapeutics, and environmental remediation. Yet, many applications are precluded by the limited number of detectable signals. We designed a synthetic receptor platform enabling bacteria to respond to novel ligands. These receptors are activated via ligand-induced dimerization of a single-domain antibody fused to monomeric DNA-Binding Domains (split-DBDs). Once dimerized, the transcriptional function of the DBD is restored. We highlight several receptors design principles, show scalability, and downstream signal processing. This modular platform could be deployed into various hosts to detect ligands for which no receptor is found in nature.

Sandwiches will be provided

See current Bioengineering seminar calendar at https://bioengineering.epfl.ch/seminars