BIOENGINEERING SEMINAR

“Transcriptional Regulation of Plant Metabolism”

Tuesday – February 7, 2017 – 16h00
EPFL – room SV1717

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host: Prof. Bart Deplancke

Abstract

Regulation of plant development requires intricate communication with both primary and specialized metabolism in order to fuel growth. While transcriptional regulation of metabolism is evident from myriad whole genome-expression analyses, our understanding of which transcriptional regulators are responsible for these changes as well as their underlying mode of action is unclear. I will highlight our efforts on systematic mapping of transcriptional regulators of nitrogen metabolism, the tricarboxylic acid cycle and glucosinolate biosynthesis. Network analyses incorporating protein-DNA interaction data, gene expression and connectivity were used to identify critical regulators, most of which were shown to regulate growth and metabolism in planta. Finally, these analyses have shed light on modularity within these pathways and global perspectives on this additional mode of plant metabolic regulation.

Co-authors

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