Open position for the LSM call of applications

Department/Institute: LMU Faculty of Biology, Plant Molecular Biology

Subject areas/Research fields:

Genetics, cell biology, physiology, evolutionary biology, microbiology

Keywords:

photosynthesis, genetic screen, protein biochemistry, synthetic biology, adaptive laboratory evolution

Name of supervisor:

Dario Leister

Project title:

Regulation and enhancing of photosynthesis

Project description:

Our aim is to understand the regulation and complexity of photosynthesis. One line of research is to identify the components, mechanisms and regulation of cyclic electron flow in the flowering plant *Arabidopsis thaliana*, including genetic (suppressor) screens and mutant characterisation, as well as protein-level characterisation. Another line of research is to enhance photosynthesis through synthetic biology and adaptive laboratory evolution in cyanobacteria, green algae and simple model plants. Depending on the applicants' backgrounds, qualifications and interests, the source of funding and definition of specific PhD projects in these two main research directions is flexible.

References:

Penzler JF, Naranjo B, Walz S, Marino G, Kleine T, Leister D (2024) A pgr5 suppressor screen uncovers two distinct suppression mechanisms and links cytochrome b_6f

complex stability to PGR5. Plant Cell. koae098. doi: 10.1093/plcell/koae098

Leister D (2023) Enhancing the light reactions of photosynthesis: Strategies, controversies, and perspectives. Mol Plant 16: 4-22.

Hitchcock A, Hunter CN, Sobotka R, Komenda J, Dann M, Leister D (2022) Redesigning the photosynthetic light reactions to enhance photosynthesis - the PhotoRedesign consortium. Plant J. 109: 23-34. doi: 10.1111/tpj.15552.

Dann M, Ortiz EM, Thomas M, Guljamow A, Lehmann M, Schaefer H, Leister D (2021) Enhancing photosynthesis at high light levels by adaptive laboratory evolution. Nat Plants 7: 681-695. doi: 10.1038/s41477-021-00904-2.

For further information, please contact:

Dario Leister, leister@lmu.de

Reseach group website:

www.plantmolecularbiology.bio.lmu.de

Apply: Please send your application through the online portal of the Graduate School Life Science Munich (LSM)