



Open position for the LSM call of applications

Department/Institute:

Plant Molecular Biology

Subject areas/Research fields:

Genetics, evolutionary biology, microbiology

Keywords:

photosynthesis, synthetic biology, adaptive laboratory evolution

Name of supervisor:

Dario Leister

Funding:

LSM-CSC, third-party funding if at this time available (Funding proposal is in progress)

Project title:

Enhancing photosynthesis by adaptive laboratory evolution

Project description:

In this project, adaptive laboratory evolution will be used to make the photosynthesis of cyanobacterial and green algal species more resilient to stress. The goal is to create strains that are more stress-tolerant without losing efficiency due to wasteful protective mechanisms. Whole genome sequencing will be used to identify mutations, which will then be characterised for their molecular effects and tested for their potential to increase stress tolerance in the same species

and in plants.

References:

Leister D (2023) Enhancing the light reactions of photosynthesis: Strategies, controversies, and perspectives. Mol Plant 16: 4-22. doi: 10.1016/j.molp.2022.08.005.

Hitchcock A,, 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,, 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:

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Research group website:

www.plantmolecularbiology.bio.lmu.de

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