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Open position for the LSM call of applications

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

Subject areas/Research fields: Genetics, evolutionary biology, microbiology

Keywords: photosynthesis, synthetic biology, adaptive laboratory evolution

Name of supervisor: Prof. Dario Leister

Project title:

Enhancing photosynthesis by synthetic biology and adaptive laboratory evolution

Project description:

In this project, parts of the light reactions of photosynthesis from very different species will be genetically combined in a model cyanobacterium. The aim is to improve photosynthesis with respect to its potential to use light of different wavelengths. In a complementary approach, we will use adaptive laboratory evolution to make photosynthetic organisms more tolerant to different stresses, such as high light or high temperature stress. Mutations will be identified by whole genome sequencing, characterised for their molecular effects and tested for their potential to increase stress tolerance in several species.

References:

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.

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).