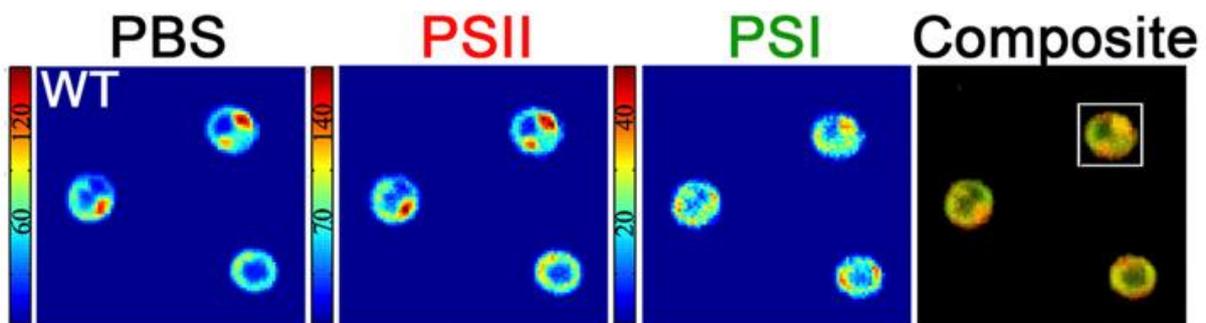


## Heterogeneity in the thylakoid membrane of cyanobacteria

Imaging cyanobacteria at the Laboratory of Biophysics, as part of a BSc/MSc in the programs of Molecular Life Sciences, Biology, Plant Sciences and Biotechnology.

Cyanobacteria comprise a very diverse group of photosynthetic micro-organisms, which have potential applications in biofuel and biomass production. Little is known about the organization of the photosynthetic thylakoid membranes of these organisms. The aim of this project is to visualize the location of the phycobilisome light-harvesting complex (PBS), photosystem I (PSI) and photosystem II (PSII) in cyanobacteria with confocal microscopy and fluorescence lifetime imaging. When successful the effect of different light treatments on this organization will be investigated.



*Fluorescence image of cyanobacteria showing the contribution of PBS, PSII and PSI in the cells. The images are 10 x 10  $\mu\text{m}$ , taken from Collins, Plant Physiology, 2012.*

### You will learn:

- Culturing cyanobacteria
- Using a confocal microscope
- Analysis of (time-resolved) microscopy data
- About acclimation mechanisms in cyanobacteria
- Literature research and data interpretation

### BSc or MSc-thesis project:

- Imaging the heterogeneity of the cyanobacterial thylakoid membrane



Further information:

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