

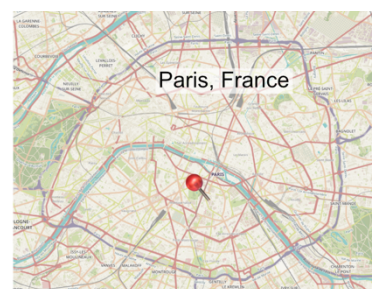
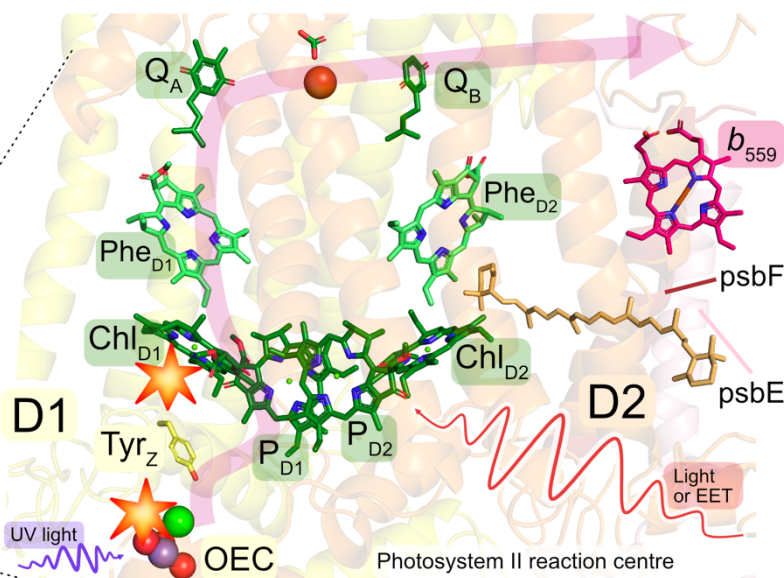
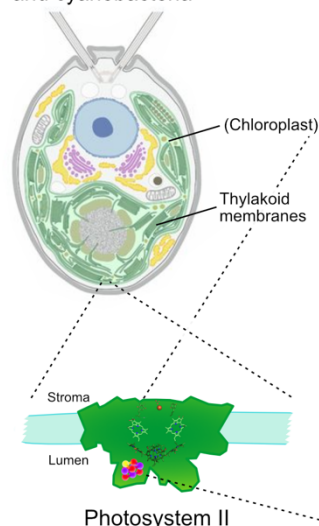
# POSTDOC POSITION AVAILABLE

## An *in vivo* Structure-Function Investigation of Photosystem II Damage

STARTING DATE: MAY 2023

DURATION: UP TO 3 YEARS

Model microalgae  
and cyanobacteria



**PROJECT:** Photoinhibition is a process where light irreversibly damages Photosystem II, the crucial photosynthetic enzyme allowing water oxidation. The initial mechanism of the process is under debate, and the exact location of the damage site(s) is unknown. During the project, we aim to understand the molecular details of photodamage from a number of perspectives: as a function of the light color and intensity, using physiological, structural, and biochemical tools.

To understand the molecular details of photoinhibition, in particular the energy dissipation process occurring upon damage<sup>(1)</sup>, potential role of cytochrome *b*<sub>559</sub> in photoprotection, and locating the side of the initial damage, you will work with internal- and external collaborators. You will be primarily tasked with development of genetic and biochemical tools in *Chlamydomonas reinhardtii* and *Thermosynechococcus vulcanus*, with freedom to explore the nature of energy conversion in these species using functional approaches.

<sup>(1)</sup> Nawrocki, W. J., Liu, X., Raber, B., Hu, C., De Vitry, C., Bennett, D. I., & Croce, R. (2021). Molecular origins of induction and loss of photoinhibition-related energy dissipation q1. *Science advances*, 7(52), eabj0055. doi.org/10.1126/sciadv.abj0055

**CANDIDATE:** You have a PhD in biology, chemistry, physics, or related field, and experience in molecular genetics and/or (membrane) protein purification. We value curiosity and require teamwork within the laboratory given the multidisciplinary nature of the project.

**POSITION:** Salary 2.3 – 3.3 k€ / month (net, depend. on experience) + soc. security and benefits, 1+ up to 2 years.

**LABORATORY:** The UMR 7141 « Chloroplast Biology and Light-sensing in Microalgae » laboratory is located in the heart of Paris, in the Latin Quarter, a lively district with a student environment and firm place in the history of science. Our lab is dedicated to the study of light-driven processes (photosynthesis and photoperception) and chloroplast biology. The UMR 7141 addresses key questions on the biology, evolution and ecology of microalgae by focusing on different model systems and on ecologically-relevant phytoplankton. We put emphasis on a collaborative and interdisciplinary nature of the research, and use approaches of eco-physiology, biophysics, biochemistry, genomics, and genetics.

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