

Post-doc Position Available

Comparative Physiology of Acclimation of Photosynthesis to the Environment in 3 Model Organisms: *Chlamydomonas*, *Synechococcus* and *Arabidopsis*

In the team of Xenie Johnson, Photosynthesis and Environment Team, BiAM, Cadarache (Provence, France)

Applications are invited for a postdoc position to compare and characterize light acclimation mechanisms in model plants, algae and cyanobacteria. Our group has a strong interest in the photosynthetic mechanisms that are conserved in all phototrophic organisms for photo-protection and energy production (see <https://www.cite-des-energies.fr/biam/recherche/pe/> for more information on our group and research). The project will apply our knowledge of photosynthetic regulatory mechanisms to study their acclimation response to high light in different mutants that have been isolated in our lab: *ape1*, *tlp15.2* and their interactions with *pgr5* (see references). This will extend what we know of the coupling between light capture and CO₂ fixation with the ultimate aim of making photosynthesis more robust and productive for agriculture and biotechnologies.

We are looking for a talented and creative new team member. The successful candidate is highly motivated and has a strong interest in the molecular physiology of plants and/or unicellular organisms. Previous substantial and demonstrated experience with photosynthetic organisms is essential; experience with photosynthetic measurements, biochemistry and/or molecular biology would be a plus. Good communication skills, ability to work in a team environment and fluency in spoken English and/or French and written English are required.

If you are interested in joining our team to study light acclimation mechanisms in phototrophic organisms, please send your application document (incl. letter of motivation, C.V., copies of your degrees, and names of 2-3 references) as a single .pdf file to Xenie Johnson (xenie.johnson@cea.fr). Postdoctoral candidates should have published at least one first author paper in a major international journal.

Review of applications will begin immediately and applications will be accepted until the position is filled. Starting date is flexible and upon agreement.

Project related references

Saint-Sorny M, et al., (2022) *Interactions between carbon metabolism and photosynthetic electron transport in a mutant without CO₂ fixation by RuBisCO*. *Frontiers in Plant Science* 13.

Chazaux M, et al., (2020) *Acclimation of Photosynthesis to the Environment 1 (APE1) is required to maintain PSII activity in high light in *Chlamydomonas reinhardtii**. *bioRxiv* 2020.02.26.966580; doi: <https://doi.org/10.1101/2020.02.26.966580>

Alric J, Johnson X. (2017) *Alternative electron transport pathways in photosynthesis: a confluence of regulation*. *Curr Opin Plant Biol.* Jun;37:78-86.

Johnson X, et al., (2014) *PGR5- mediated cyclic electron flow under ATP- or redox-limited conditions: A study of Δ ATPase *pgr5* and Δ rbcl *pgr5* mutants in *Chlamydomonas reinhardtii**. *Plant Physiol.*, 165,438-452.