PhD position in Laboratory of Plant Physiology,

University of Neuchâtel, Switzerland

"Regulation of translocon assembly and protein import into chloroplasts"

The Kessler Lab (University of Neuchâtel, Switzerland) invites applications for a PhD student position PhD project to contribute to its research on protein import into chloroplast.

Project offer

The project aims to identify and characterize the mechanisms controlling the assembly of the TOC-TIC translocon machinery and protein import in response to environmental cues in early plant development[1,2,3]. The student will apply microscopy techniques, as well as molecular and biochemical approaches using the plant model Arabidopsis thaliana. The project will be carried out in Neuchâtel (https://www.unine.ch/physiologievegetale/LPV) and at other collaborating groups in Switzerland, under the direction of Prof. Felix Kessler. The student will have opportunity to participate in the training programs proposed by the Interuniversity Doctoral Program in Organismal Biology (http://www.unine.ch/dp-biol/home.html) and the CUSO. Participation in the teaching of practical sessions at the Bachelor level is expected.

Requirements

Candidate should be a highly motivated student holding a Master Degree in Biology (or related discipline), with a good theoretical and practical background in cellular and molecular biology. Previous experience in Plant Biology is not a prerequisite. The ideal candidate is proactive, has good communication and team skills, but also works independently. Good skills in the spoken and written English language are expected, spoken and written French are a plus but not required.

Start: From 1st December 2024, flexible

Inquiries and Applications (including CV, cover letter, and name - address of at least two referees) should be sent to: felix.kessler@unine.ch. Review of applications will begin immediately and new applications will be accepted until the position is filled.

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[1]Shanmugabalaji, V., Chahtane, H., Accossato, S., Rahire, M., Gouzerh, G., Lopez-Molina, L., and Kessler, F. (2018) Chloroplast biogenesis controlled by DELLA-TOC159 interaction in early plant development. **Curr. Biol**. 28, 1-8.

[2]Accossato, S., Kessler F and Shanmugabalaji, V. (2020). SUMOylation contributes to proteostasis of the chloroplast protein import receptor TOC159 during early development. **Elife**. 22;9:e60968.

[3]Ballabani, G., Forough, M., Kessler, F., and Shanmugabalaji, V. (2023). The journey of preproteins across the chloroplast membrane systems. **Front. Physiol**. 14:1213866.