



Thesis Project start date 10/2021

**Mechanisms of Thermosensing in Arabidopsis-
Structure and Dynamics of Liquid Droplet Formation by
EARLY FLOWERING 3**

We are looking for a highly motivated thesis student (M/F) with experience in biochemistry, structural biology and/or plant biology to study liquid-liquid phase separation (LLPS) using a combination of small angle scattering, fluorescence microscopy and *in vivo* assays. The project will focus on the plant protein EARLY FLOWERING 3 (ELF3), which plays a central role in circadian regulated growth and thermoresponse. We have recently demonstrated that ELF3 undergoes LLPS *in vitro* and *in vivo* and that LLPS is required for thermosensing in Arabidopsis (Jung, et al., *Nature*, 2020). The project will examine the biophysical and molecular mechanisms of temperature induced phase separation of ELF3 with respect to amino acid sequence. This is a joint project between the Laboratoire de Physiologie Cellulaire et Végétale and the European Synchrotron Radiation Facility.

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<https://www.labex-gral.fr/gral-phd-scholarships-2021/>

