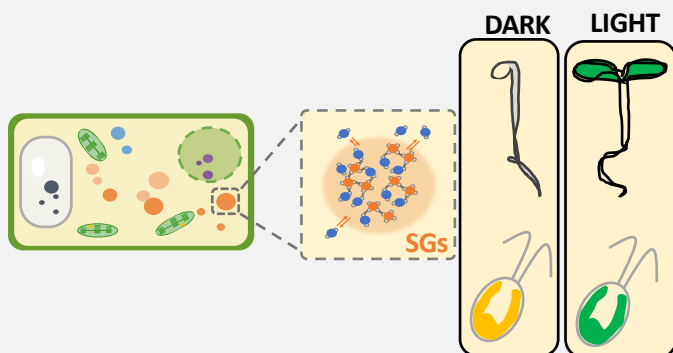


# PhD position

## Study the mechanisms underlying stress granules (SGs) assembly in photosynthetic organisms

**Project:** The research on the SGs lab is focused in to understand the molecular pathways underlying formation of **stress granules (SGs)** in photosynthetic organisms. SGs are biomolecular condensates composed of mRNAs stalled in translation initiation and a diverse repertoire of proteins. Formation of SGs minimizes stress-related damage and promotes cell survival in such evolutionarily distant organisms as mammals and plants. Beyond their fundamental role in the stress response, SGs have emerged as key players for human health. The main goal of this PhD project is to study SGs assembly in response to light, a key environmental cue controlling plant growth and development, and understand their physiological implications in dark, light and dark-to-light plant and microalgae growing regimes. To this end, the candidate will follow a transversal approach that includes cellular biology, transcriptomics, and functional studies in the flowering plant *Arabidopsis thaliana* and the green microalgae *Chlamydomonas reinhardtii*, a well-established dynamic pair of model organisms ideal for comparative biology.

The research work will be carried out at the Institute of Plant Biochemistry and Photosynthesis [IBVF, CSIC-University of Seville (US)]. The **SGslab** is a newly created laboratory that offers a stimulating environment and a dynamic way of working as a team. The laboratory has a highly international character, the result of numerous active international collaborations.



**Time:** 3 years (Funded by the *Junta de Andalucía, Proyectos de Excelencia 2021*)

**Starting date:** the position is immediately available (March-April 2023).

**Qualifications:** We are looking for a highly motivated candidate with a **recent Master degree** in molecular biology, genetics, or biochemistry. Applicants must have a background in (plant) molecular and cellular biology. The candidate is expected to be a team player and enthusiastically drive a research project with creativity and independent thinking.

**SGs lab link:** <http://egutierrez.ibvf.us-csic.es/>

### Related publications:

- Gutierrez-Beltran E. et al. (2022) *JXB*.
- Gutierrez-Beltran E. et al. (2021) *EMBO J*.
- Kosmacz M. et al. (2018) *Plant Physiol*.
- Gutierrez-Beltran E. et al. (2015) *Plant Cell*.
- Ruiz-Sola M.A. et al. (2021) bioRxiv  
DOI: 10.1101/2021.10.23.465040
- Ruiz-Sola M.A. and Petroustos D. (2018)  
*Methods Mol Biol*

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