

## 4-year PhD position on Plant-Herbivore-Entomopathogen multitrophic interactions for better management of pests.

### Background:

Plants are subject to constant attack by herbivores, so they have developed an arsenal of strategies to reduce their impact. Among them is the ability to recruit a third trophic level, natural enemies, such as predatory insects and parasitoids. However, the impact of plant defences on action of the entomopathogens, microorganisms that are naturally present in the environment and capable of infecting a wide range of insects has not been studied in detail.

The PhD project will study the effects of plant defences diversity on the pathogenic actions of bacterial and viral entomopathogens aiming to identify plant-derived compounds promoting the action of those biological control agents. Obtained results will contribute to the design of most sustainable agricultural practices.

The project will be carried out at the Biotechnological Pest Control group (<http://cbp.uv.es/>) at the University of Valencia ([www.uv.es](http://www.uv.es)) (Spain). The selected candidate will integrate in a very dynamic group with a strong background in insect's pathology, molecular biology and microbiology. The project will be carried out in collaboration with other groups specialized in plant physiology and plant stress defence.

### Specifics for the Ph.D. grant:

The grant funded by the Santiago GRISOLIA Ph.D. grant from the Valencian Government in Spain (<https://links.uv.es/8DFgrHP>). The grant covers 4 years of salary and some initial money to support any costs of moving. The starting date is preferably mid-September 2022, or January 1st, 2023. Please apply as early as possible as there is not much time to evaluate candidates before the position closes.

### Eligibility:

1. Candidate must hold an undergraduate degree in biological sciences from an institution **outside of the EU/Europe** (after January 2017)
2. Master's degree or equivalent to be completed before August 1, 2022 (can be in the EU/Europe).

### How to apply:

Candidate must send their CV with description of their experience and education, contact information from one or two references, and a cover letter (English or Spanish) highlighting their interest in the position and their main research achievements.

Send the application to Salva Herrero ([sherrero@uv.es](mailto:sherrero@uv.es)) or to Cristina Crava ([m.cristina.crava@uv.es](mailto:m.cristina.crava@uv.es)).

### Additional information:

Gasmi, Laila, et al. "Horizontally transmitted parasitoid killing factor shapes insect defense to parasitoids." *Science* 373.6554 (2021): 535-541.

Brütting, Christoph, et al. "Cytokinin transfer by a free-living mirid to *Nicotiana attenuata* recapitulates a strategy of endophytic insects." *Elife* 7 (2018): e36268.