

Postdoctoral Researcher position at the CBGP (UPM-INIA)

Postdoctoral position in plant-pathogen interactions: Epigenetic regulation of effector genes in fungal plant pathogens

We are seeking for a highly motivated and collaborative postdoctoral researcher to investigate the molecular mechanisms that govern the regulation of effector genes in fungal plant pathogens. The successful candidate will characterize the contribution of chromatin dynamics to virulence and de-repression of effector genes during infection.

The work will be focused on the fungal pathogen *Zymoseptoria tritici*, the most damaging pathogen of wheat in Europe. Recent discoveries have shown that effector genes involved in infection are epigenetically regulated in this pathogen. Effector genes are silenced in axenic conditions and de-repressed during host colonization. We propose a research program that aims at deciphering the mechanisms governing effector gene induction. In particular, we will aim to identify which histone modifications are associated with effector gene expression activation and how is effector gene de-repression triggered.

Type of contract: Temporary contract of 12 months, which can be extended. The estimated starting date will be 01.11.2020. The researcher will join the emerging research team of Dr. Sánchez-Vallet at the Center for Plant Biotechnology and Genomics (CBGP), a joint institute between the Polytechnic University of Madrid (UPM) and the National Institute for Agricultural and Food Research and Technology (INIA) in Madrid. In addition, short-term research stays in the laboratory of our collaborators are envisioned. Career development will be supported in different ways. Salary will be fixed according to the UPM regulations (category of Junior Doctor Researcher).

The tasks to be performed aim to fulfill the objectives defined in the project PID2019-108693RA-I00 (Ministerio de Ciencia e Innovación, Spain) and include chromatin immunoprecipitation, confocal microscopy, RNAseq, fungal transformation, greenhouse experiments, infection assays, cloning, qPCR, bioinformatics, experimental design, data analysis and preparation of manuscripts.

Eligibility criteria: The applicant should hold a doctoral degree in Plant Biology or a related field. We seek candidates with a strong background in plant science, microbiology and/or plant-pathogen interactions with a solid foundation on molecular biology. Preferentially, the candidate should have strong experience in chromatin immunoprecipitation and confocal microscopy. We are looking for an independent and collaborative colleague with excellent communication skills.

Applications: Applications should be sent as a single PDF file and should include a motivation letter, a detailed CV and the contact details of at least two references. Applications should be sent to Andrea Sánchez Vallet before 5th October 2020 (andrea.sanchezv@upm.es).