

Research Assistant in molecular biology

Laboratory form plant-microbe interaction studies (LIPM), Toulouse, France

A research assistant position is open for **18 months (renewable)** in the frame of the PROBITY project funded by ANR. The position will be available from **May 11th 2020** in the group of **Sylvain Raffaele** at LIPM, UMR 441 Castanet Tolosan (31320).

Scientific background:

Our lab studies **plant immune responses** to the **fungal pathogen *Sclerotinia sclerotiorum***, responsible for devastating diseases on over 400 plant species. Our major goals include the identification of **molecular bases** for pathogenicity in *Sclerotinia* and disease resistance in its host plants.



More info : www.qiplab.weebly.com - www6.toulouse.inrae.fr/lipm

Objectives :

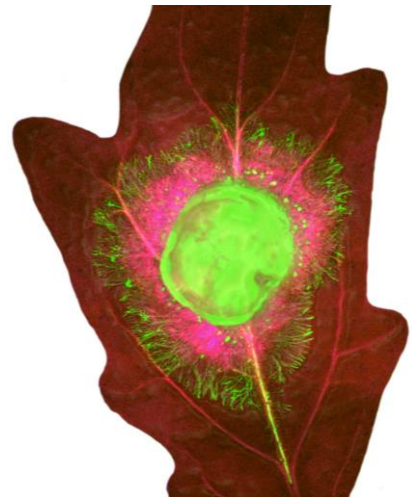
- . Generate reporter strains and multiple mutants using genome editing in *Arabidopsis thaliana*
- . Generate deletion mutants and transgenic strains for the fungus *Sclerotinia sclerotiorum* using protoplast transformation
- . Observations *in vitro* and *in planta* using confocal and fluorescence microscopy
- . Evaluate resistance levels using high-throughput phenotyping, Plant and fungus growth
- . Gene expression profiling by q-RT-PCR and RNAseq
- . Managing seeds and fungal strains collections

Required skills :

- . Design of DNA constructs, cloning methods (GoldenGate, Gateway)
- . Microbiology, growth of fungi and bacteria
- . DNA and RNA extraction
- . *Arabidopsis thaliana* transformation
- . Basic bioinformatics techniques (Blast, alignments, primer design, virtual cloning...)

Some expertise with the following techniques will be an asset:

- . Fungal transformation
- . Confocal microscopy
- . Plant genome editing techniques (CRISPR-Cas9)
- . Plant-pathogen interaction (inoculations, disease quantification)



Applicants must hold a Masters degree in biology or microbiology and have strong background knowledge in molecular genetics. We are looking for well organized rigorous applicants, willing to work in tight collaboration with other scientists in the group and being comfortable with the English language.

To apply:

Please send a reference letter, CV et name and contact details for at least two referees to Dr. Sylvain Raffaele sylvain.raffaele@inrae.fr 06 37 14 09 53
LIPM UMR 441/2294, chemin de borde rouge, Auzeville, 31320 Castanet Tolosan Cedex