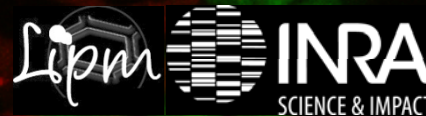


# Effect of climate on plant disease resistance

PhD position in molecular plant-fungus interactions

Open at the Laboratoire des Interactions Plante-Microorganismes (LIPM) Toulouse, France

Funded by LIPM & INRA SPE



## Project description

*Sclerotinia sclerotiorum* is causing dramatic losses on numerous crop species such as rapeseed and sunflower. Plant disease resistance to *S. sclerotiorum* is quantitative ("QDR"), a form of plant immunity frequent in nature, the **genetic bases of which are poorly known** (Roux et al. 2014, Mbengue et al. 2016, Peyraud et al 2016).

**Climatic conditions have a strong impact on *Sclerotinia* epidemics** in fields, and on the activity of QDR genes in laboratory experiments. **The diversity of molecular mechanisms associated with QDR remains largely unexplored**, so is the influence of environment parameters on their activity. The project uses **multidisciplinary** approaches combining genetics, microscopy and **genome-scale transcriptomics** to reveal, in a targeted and a systematic manner, new **molecular mechanisms** underlying QDR under diverse climate conditions.

## The Lab

The Laboratory for Plant-Microbe Interaction studies (LIPM) provides an excellent environment to study plant-microbe interactions, with internationally recognized teams of plant biologists and microbiologists and complementary expertise in symbiotic and pathogenic interactions. It is part of the Federative Institute FR3450 ([www.fraib.fr](http://www.fraib.fr)) and the TULIP labex excellence program ([www.labex-tulip.fr](http://www.labex-tulip.fr)) that includes ~400 researchers working on plant biology, microbiology, ecology and evolution, as well as a state-of-the-art facilities for live cell imaging ([www.trigenotoul.com](http://www.trigenotoul.com)), genomics ([www.get.genotoul.fr](http://www.get.genotoul.fr)) and phenotyping.

**Apply before  
15<sup>th</sup> nov 2018**

## Contact and application

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Applications should include a cover letter, CV, and contact information for two references.

## Qualification requirements

Applicants must hold a Msc degree or equivalent in biology (plant biology, microbiology or closely related field)