



Post-doctoral position

24-months post-doc position in plant epidemiology
INRAE, Bordeaux, France
“Prophylactic measures on the sexual phase of pathogens to redesign the agroecological protection of the vineyard”

The French National Research Institute for Agriculture, Food and Environment (INRAE) is a public research institution employing 12,000 staff members and gathering 268 research laboratories and experimental units located in 18 research centers throughout France. INRAE is one of the world's leading institutions in agricultural, food, plant and animal sciences. Its research aims to build solutions for multi-performance agriculture, food quality and sustainable management of resources and ecosystems.

YOUR MISSION AND ACTIVITIES

■ Reducing the use of pesticides requires the integration of new methods as part of a global strategy of protection against pests and diseases. Prophylactic measures in viticulture have been scarcely mobilized to date because of their partial effectiveness compared to PPPs. In addition, the main methods used to control grapevine diseases essentially target the asexual cycle of pathogens which takes place during the vegetative season (spring/summer). The objective of the project is to work on the reduction of primary inoculum (prophylaxis) by targeting the sexual phase of pathogens responsible of the epidemic initiation of the major grapevine diseases. Practically, the purpose is to extract from the vineyard the biomass hosting the winter conservation forms of the pathogens responsible of the pluriannual maintenance of the inoculum. The post-doctoral researcher will develop mechanical methods of extraction and composting of contaminated plant material to decrease the winter storage forms of grapevine pathogens. Their global efficacy will be compared. The way of integration of these methods into overall strategies of disease management, as well as their impact on vine stock resilience and harvest quality, will also be studied.

You will be located at the Institute of Vine and Wine Sciences of Bordeaux. You will work within a team of plant pathology researchers and plant protection engineers (INRAE, French Wine Institute (IFV) who collaborate within the framework of a Joint Technological Unit (UMT SEVEN).

You will oversee:

- The development of analytical methods to quantify the pathogen inoculum of the soil (sampling, qPCR).
- Field experiments monitoring to assess the effect of prophylaxis on the quantity of inoculum and the initiation of epidemics.
- The valorisation of the results through publications in international scientific journals.

You will have to take an active part in protocols designing, measurement methods and operating procedures, whether in the laboratory or in the vineyard. You will be in charge of the scientific valorisation of the results and be involved in their transfer to extension services.

PROFIL REQUIRED

- We are looking for highly motivated candidates with a PhD in phytopathology or plant epidemiology and experience working with soil-associated pathogens (sampling, analysis, etc).
- Appreciated skills: Knowledge of PCR quantification methods, significant experience working with data analyses
- Aptitudes requested: Excellent communication skills in English (both written and spoken) are required.

↳ Terms and admission conditions

- Unit: SAVE (health and Agroecology of the vineyard) - INRAE Bordeaux, 71 avenue Edouard Bourlaux, 33140 Villenave d'Ornon, France.
- Scientific supervision : François Delmotte (INRAE), Laurent Delière (INRAE), Marc Raynal (IFV)
- duration: 24 months
- Starting date: March 1st of 2021
- Month salary: 2 371 € (1 950 € net month salary). The salary will be adjusted according to the candidate's experience.

↳ How to Apply

- Send a cover letter describing your background and skills related to the project, a CV, and the names and contact details of two referees to Marc Raynal.

▪ e-mail : marc.raynal@vignevin.com

✘ Deadline to apply: January 31, 2021