

Postdoctoral position: “Interactions between cadmium and the production of the deoxynivalenol mycotoxin by *F. graminearum* in durum wheat kernels”

A 2-year post-doctoral position is available, starting February 1st 2017, at the INRA Research Center of Bordeaux Aquitaine with shared activities between the “Atmosphere Plant Soil Interactions” (ISPA) and “Mycology and Food safety” (MycSA) research units. The successful candidate will work within the framework of an ANR-funded collaborative project: The CaDON ¹(Cadmium and DeOxyNivalenol in durum wheat grains: Understanding the co-contamination and the associated toxicity) project.

Main topics of the project will include:

Greenhouse experiments to:

- Characterize the metabolic modifications in grains collected from plants exposed to Cd;
- Analyze the effect of plant Cd exposure on *F. graminearum*-caused disease and mycotoxin production;
- Analyze the effect of plant Cd exposure on the transcriptome of *F. graminearum*;
- Characterize how the grain infection by *Fusarium graminearum* impacts the uptake and the allocation of Cd to durum wheat grains.

In vitro experiments to assess the toxicity of Cd in the fungus and effect on the production of mycotoxin by *F. graminearum*:

- Analysis of the responses of a set of *F. graminearum* strains to Cd;
- Characterization of the Cd-induced oxidative stress in fungal cells;
- Investigation of the mechanisms underlying Cd effect on mycotoxin production (transcriptomic analysis – construction and use of mutant strains).

The position, funded by the French National Research Agency, is available starting February 1st 2017. **We are looking for** a highly motivated postdoctoral researcher with good knowledge in plant physiology and microbiology as well as in standard techniques of biochemistry and molecular biology, and interested in ecotoxicology and agronomy. The INRA Research center of Bordeaux Aquitaine offers an excellent international, dynamic and stimulating scientific campus with more than 400 researchers working in 9 Research Units.

Application: Please send a cover letter by November 20th detailing motivation and research interests, a concise summary of previous research activities, a complete CV and contact information for three referees to Florence Forget-Richard (florence.forget@inra.fr) and Jean-Yves Cornu (jean-yves.cornu@inra.fr).

https://www6.bordeaux-aquitaine.inra.fr/ispa_eng/

https://www6.bordeaux-aquitaine.inra.fr/mycsa_eng/

¹ Information on the CaDON project: <http://www.agence-nationale-recherche.fr/?Projet=ANR-15-CE21-0001>