

JOB OPENING

PhD researcher in the framework of the project 'Impact of stress on volatile organic compounds exchange between crops and the atmosphere'

The Unit of Biosystem Physics (ULg-GxABT, Prof. M. Aubinet) announces the opening of a position for a full-time PhD researcher for a period of four years (4 renewable 1-year terms) starting from July 1st 2013.

The goal of the position is to realize a PhD thesis in the framework of the CROSTVOC research project funded by the «Fonds National de la Recherche Scientifique », in collaboration with the mass spectrometry group of the Belgian Institute for Space Aeronomy (Dr. C. Amelynck) and the Laboratory of Plant Biology of GxABT-ULg (Dr. P. Delaplace). CROSTVOC aims at studying the exchange of Biogenic Volatile Organic Compounds (BVOCs) between important Belgian ecosystems (crops/grasslands) and the atmosphere, with a focus on BVOC emissions induced by stress conditions. Besides affecting tropospheric chemistry, with implications on air quality and climate, those BVOCs are expected to play a role in plant defence, plant-plant and plant-herbivore communication, amongst others.

In order to reach the objectives of the project, we propose parallel studies, in both natural and controlled conditions (environmental chamber), of constitutive and stress-induced BVOC fluxes, abiotic stress agents (heat, drought, exposure to enhanced ozone concentrations, grazing or harvesting induced mechanical injury) and markers of plant metabolic status. The research will be carried out using state-of-the-art experimental techniques (eddy-covariance, GC-MS, PTR-MS).

Within this project, the candidate will be responsible for :

- performing BVOC flux measurements using dynamic enclosures in controlled growth chamber conditions and in the field ;
- acquiring, storing and analyzing the measurement data ;
- dissemination of the results through scientific communications (scientific papers in peer-reviewed international journals, participation to national/international congresses)

This research should lead to the realization of a PhD thesis.

Profile

- The candidate should hold a Master's degree in Bio-engineering, Science (Physics, Chemistry, Biology) or similar (obtained at most 7 years ago) ;
- Good knowledge of scientific English (oral and written) and communication skills is required. Knowledge of French and/or Dutch is a bonus.
- Good programming skills (Matlab) and experience with statistical data analysis are considered as an asset.
- The candidate should show a strong interest in the analytical and plant physiological aspects of the research project. Acquaintance with mass spectrometry techniques is a plus.
- The candidate should be able to take initiative and to work and solve scientific problems independently, but he/she will also have to actively participate in a multidisciplinary team.
- The candidate should be holder of a driving license.

Work location

The research will be carried out at different locations : the Belgian Institute for Space Aeronomy in Brussels (Uccle), the field sites located at Dorinne and Loncée and the campus of GxABT.

Status

The contract will be of the type « boursier de doctorat ULG » (indicative gross and net salary of 2150€/month and 1965€/month, respectively). The candidate will be subjected to the work regulations of ULg.

Complementary information: Dr. Bernard Heinesch (bernard.heinesch@ulg.ac.be or +32(0)81622492).

How to apply for the job

The candidates are invited to send their CV, their motivation letter and the name of a reference person to Katia Berghmans at the following address: Katia.Berghmans@ulg.ac.be. The vacancy can be filled from July 1st 2013 onwards. Students in their second year Master are encouraged to apply for the job, even if they still have to present their Master thesis (TFE) in August/September. A first selection of candidates will take place on **August 15th**. The job offer remains valid until the vacancy has been filled (contact K. Berghmans by e-mail after August 15th before postulating)