

## Postdoc position in Belgium

### Large scale plant virome survey using HTS technologies and Oxford Nanopore Technology evaluation for plant virus detection

**Scientific context.** The recent developments of high-throughput sequencing (HTS) technologies and bioinformatics have drastically changed the research on viral pathogens and are opening new opportunities for better understanding and control of phytoviruses. They are also raising a growing interest by scientists, regulatory agencies and diagnostic laboratories for their application in virus detection and surveillance.

**General context.** The postdoc will join the plant virus team (9 members) of the Laboratory of Plant Pathology (LPP – 25 members) from Gembloux Agro-Bio Tech (Liège University, Belgium). This international team is currently focusing its research on plant virus diagnostic and surveillance, plant virus ecology, and population genetics. The LPP is currently leading the COST Action FA1407 ([www.cost-divas.eu](http://www.cost-divas.eu)) and has developed a large network of international collaborations. The LPP is also the official virus diagnostic laboratory for the largest germplasm collection of banana held by Bioversity International.

**Research.** The postdoc position (3 years) is focused on two forefront topics in plant virology:

1. Evaluation of Oxford Nanopore Technologies (ONT) as an on-site diagnostic tool for plant viruses and the survey of existing on-site methodologies used by plant protection authorities. This topic is developed in the frame of the Euphresco project VIRFAST coordinated by LPP and including 11 partners. The work includes (i) the laboratory and bioinformatics evaluation of ONT for virus diagnostic in collaboration with the project partners and (ii) the design, diffusion and interpretation of an international survey on on-site diagnostic protocols currently used to support the phytosanitary activities of National Plant Protection Organisations (1/3<sup>rd</sup> of work time).

2. Large scale virome survey of Solanaceae plants in Belgium. *Solanaceae* crops have a key economic importance for food production and for ornamental purposes. The objective of this project is to set the baseline of viruses present in food, ornamental and wild *Solanaceae* in Belgium using HTS technologies. Our innovative approach aims to scan the viruses present in a large sampling of *Solanaceae* plants throughout the country. This project will also start the biological characterization of newly identified viruses to provide relevant information for Pest Risk Assessment (2/3<sup>rd</sup> of work time).

**Skills:** The candidate must hold a PhD in biological sciences and have a strong background in virology, plant pathology and/or molecular biology. Additional expertise in high-throughput sequencing, diagnostics and/or bioinformatics will be appreciated.

We look for scientist with very good communication skills and teamwork ability to interact within and outside the research team. Curiosity, rigor and autonomy are also key assets.

**Techniques used.** RNA extraction, PCR, RT-PCR, Minion sequencing, Illumina sequencing and bioinformatics.

**Location:** Liège University, Gembloux campus in Belgium (35 min by train from Brussels)

**CONTACT:** Please send your CV, two reference letters and a letter of motivation to Prof. Sébastien Massart ([sebastien.massart@uliege.be](mailto:sebastien.massart@uliege.be)) before 25<sup>th</sup> June 2018. Feel free to ask any additional information at the same e-mail address