

### **Vacancy – PhD student at the VIB-PSB Root Development group – Microbiology/nitrification**

The VIB-UGent Center for Plant Systems Biology (PSB) is a world-leading plant science institute, harboring more than 280 people that focus their activities toward cutting edge research. The cornerstone of PSB is curiosity-driven research on basic cellular mechanisms.

An ongoing research topic in the Root Development group (Tom Beeckman's lab) focuses on nitrogen, a major nutrient for plant growth, whose presence is however heavily affected by the microbial nitrogen cycle in soil, including undesired nitrification. This process is not only negative for plant growth, but also results in huge environmental pollution and greenhouse gas emissions. We are investigating original approaches to (biologically) inhibit nitrification and are looking for a PhD student with a strong background in microbiology to join our team. Applied techniques may include bacterial isolation, nitrification and biochemical assays, nitrite and ammonium measurements, greenhouse gas measurements, microbiome assessments (PacBio and Metagenomics), (RT)-qPCR, ribotyping, root exudate metabolomic fingerprinting, plant growth experiments, etc. This project aims on the long term to result in new methods to inhibit nitrification and as such contribute in the combat against climate change.

#### **Profile**

- You hold a relevant Master's degree in the field of microbiology or life sciences (e.g. biotechnology, biochemistry, bioengineering, molecular or functional biology, ...).
- You have a sound background in molecular biology.
- You have hands-on experience with basic microbiological techniques.
- You have experience with molecular techniques (DNA/RNA-extraction, PCR, qPCR,...).
- You have basic knowledge of R/Rstudio.
- Having experience in microbiome analyses is an asset.
- You are interested to work with plants.
- You are eager and motivated to acquire a PhD.
- You have good communication and writing skills (English)
- You are able to work independently, as well as function as part of a team.

#### **We offer**

- A first contract for 2 years, extendable with 2 extra years.
- A competitive salary with various additional benefits (eco vouchers, hospitalization insurance,...).
- Access to cutting-edge technologies (within the department and via the VIB core facilities), personal career assistance, and high-level training courses.

#### **How to apply?**

Apply online via <https://jobso.id/e8s4>. Please make sure your application includes your CV, a cover letter describing your motivation and your qualifications, as well as contact information of 2 references.

Additional information can be given per e-mail request to Hans Motte ([hans.motte@psb.ugent.be](mailto:hans.motte@psb.ugent.be)).

For some scientific context we refer to our recent review paper: Beeckman, F., Motte, H., Beeckman, T., 2018. Nitrification in agricultural soils: impact, actors and mitigation. *Curr. Opin. Biotech.* 50, 166–173.

The position is immediately available. Applications will be accepted until the vacancy has been filled.