

PhD position in Microbial Ecology at the University of Vienna (Vienna, Austria)



PhD project title: The effects of biological nitrification inhibitors on terrestrial nitrogen cycling

Areas of expertise: Soil science, Microbial physiology, Microbial ecology

Work location: Centre for Microbiology and Ecosystems Science, University of Vienna

Application deadline: Open until filled, priority before November 1st 2020

We are seeking a highly motivated PhD candidate to join our recently funded interdisciplinary project (playNICE) investigating the effects of plant derived nitrification inhibitors on nitrifying microorganisms, soil biogeochemical processes, microbial communities, and plant nitrogen use efficiency. This project aims to identify, characterize, and evaluate previously unknown biological nitrification inhibitors (BNIs) produced from commercially important agricultural crops. The goal of the project is to identify novel BNIs that 1) allow ammonium to be retained in soil longer, 2) increase crop nitrogen use efficiency, and 3) do not significantly alter other soil microbial communities or processes. The successful PhD candidate will have a broad interest in microbial ecology, microbial physiology, and soil science. They will utilize state-of-the-art techniques in these fields such as metagenomics, micro-scale measurements with sensors and optodes, stable isotope probing, and chemical imaging to identify, characterize, and evaluate the impacts of newly identified BNIs.

The playNICE project is an interdisciplinary collaboration between six Post-Doctoral researchers from both the University of Natural Resources and Life Sciences, Vienna (BOKU, IFA-Tulln) and the University of Vienna. Although this PhD position will be carried out within the Centre for Microbiology and Ecosystems Science at the University of Vienna, the successful PhD candidate will closely collaborate with the playNICE team members located at the BOKU in Tulln. This PhD position is fully financed for three years and the candidate will be enrolled as a PhD student at the University of Vienna. Moreover, the candidate will be fully integrated in the research group Prof. Dr. Holger Daims, who will act as the PhD supervisor.

We are looking for an ambitious, result-driven scientist, with the following qualifications:

- Master's degree in the field of microbiology or soil sciences
- Education in microbial ecology/physiology, molecular biology, biogeochemistry, and soil sciences
- Experience with microbial cultivation and molecular biology
- Experience with R or other programming languages are advantageous
- Excellent English writing and verbal communication skills are essential

Please provide the following documents with your application:

- Curriculum vitae (CV), including contact details, education, and relevant work experience
- Official academic record of the courses & grades for Bachelor and Master studies
- A letter of motivation (1-page limit)
- Contact details of two referees

The position will be available starting January 2021 and will remain open until filled. Please send all materials as a single PDF file to positions.dome@univie.ac.at, with the subject line: "Application playNICE".

For more information on the playNICE team and project, please contact us at playnice.fwf@gmail.com or visit us at <http://dome.csb.univie.ac.at/research/interplay-between-biological-nitrification-inhibitors-nitrogen-cycling-and-agronomic-nitrogen-use-efficiency>.