University of Natural Resources and Life Sciences Vienna – responsibility for Humans and Nature. We work for the sustainable use and protection of natural resources.

BOKU

The Department of Forest and Soil Sciences, Institute of Soil Research is currently seeking a

Postgraduate Research Associate
Project employment / PhD position
(Reference code: 48)

Extent of employment: 30 Hours per Week
Duration of employment: 01st of May 2019, limited to 30th of April 2022

Workplace: 3430 Tulln a.d. Donau, UFT Tulln, Rhizosphere Ecology and Biogeochemistry Group

Gross monthly salary and pay grade in terms of collective agreement for university staff (payable 14 times per year): B1, € 2.148,40

We are seeking a motivated PhD student to work in the EU-funded project "PhytoTrace - Wanted: Micronutrients! Phytosiderophore-mediated acquisition strategies in grass crops" (ERC Starting Grant 801954). Understanding micronutrient (Zn, Cu, Fe) deficiency induced plant responses and related rhizosphere processes is crucial to improve crop yield and micronutrient grain content for high quality food and feed. Phytosiderophores (PS are root exudates released by grass species *(Poaceae)* for the solubilisation of Fe and are implicated to improve Zn and Cu acquisition, particularly under deficient conditions. Moving beyond the traditional segregation of "soil-free" and soil-focused research, the aim of this project is uncover the interplay of PS release, plant genetic responses and rhizosphere processes under natural growth conditions.

Within this framework, the focus of this PhD position lies on investigating the growth performance and PS release of different barley *(Hordeum vulgare)* lines under different experimental conditions and nutrient regimes. Experimental work will include traditional hydroponic systems, innovative soil based approaches as well as LC-MS based PS analysis. Joint experiments with other project partners (including soil microbiologists, plant geneticists, organic and analytical chemists) will provide the opportunity to be part of an interdisciplinary team with the potential to establish highly visible and internationally competitive research. The Institute of Soil Research, Tulln is well connected to public transportation and is fully equipped with state-of-the-art instrumentation required for plant and soil analysis providing an excellent working environment.

Responsibilities

- Apply and compare different plant growth and root exudation sampling techniques using Hordeum vulgare as a model plant
- Analysis of root exudates by LC-MS/MS
- Collaborating with other members of the ERC project
- Writing of scientific publications
- Participating in training courses, workshops and conferences

Required skills and qualifications

- MSc in Agriculture, Biology, Plant Sciences, Soil Science, Chemistry of related fields

Desirable skills and qualifications

- Experience with lab work, chemical analysis (mass spectrometry, liquid chromatography), data processing; knowledge on statistics is welcome
- Very good skills in communication, English language skills
- Ability to work independently in an interdisciplinary team
- Stress resilience, reliability

Applications can be submitted until: 04th of April 2019

University of Natural Resources and Life Sciences Vienna seeks to increase the number of its female faculty and staff members. Therefore qualified women are strongly encouraged to apply. In case of equal qualification, female candidates will be given preference unless reasons specific to an individual male candidate tilt the balance in his favour.

Please send your job application (motivation letter & CV incl. references) to Personnel department, University of Natural Resources and Life Sciences, 1190 Vienna, Peter-Jordan-Straße 70; E-Mail: kerstin.buchmueller@boku.ac.at. **(Reference code: 48)**

Questions relating to the position should be sent to: Dr. Eva Oburger, eva.oburger@boku.ac.at.

We regret that we cannot reimburse applicants travel and lodging expenses incurred as part of the selection and hiring process.

www.boku.ac.at