



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

Postgraduate Research Associate (Project employment)

Reference code: 16

Extent of employment: 30 Hours per Week
Duration of employment: March 2020, limited to February 2023

Workplace: Vienna

Gross monthly salary and pay grade in terms of collective agreement for university staff (payable 14 times per year): B1, €2.196,80

Dr. Forest is a European project with eight partners, coordinated by Freiburg University (Germany). Here, we advertise for a PhD candidate to advance knowledge on forest diversity - human health relationships. Main supervisor is Prof. Douglas Godbold (BOKU). The project is co-supervised by Ass. Prof. Daniela Haluza (Meduni Vienna). The successful candidate will be mainly based at the Institute of Forest Ecology (www.boku.ac.at/wabo/ife) of BOKU Vienna, but will also be active at the Medical University of Vienna (<https://zph.meduniwien.ac.at/en>).

To elucidate the effects that biodiversity may have for human health, additional research is needed that moves beyond single case studies with loosely defined “biodiversity” aspects to well-designed studies that allow for generalisations and evidence-based recommendations for promoting health co-benefits derived from ecosystems. Central to addressing these critical challenges are the questions of how does biodiversity matter for human health and well-being, and what interventions or policies are required to promote contact with biodiverse environments for human health and well-being. By

- (i) adopting a rigorous experimental design
- (ii) scientifically assessing the relationship between tree/forest biodiversity and various human health risks or benefits
- (iii) compiling evidence-based forest management guidelines for biodiversity conservation and optimal delivery of multiple human health benefits
- (iv) engaging stakeholders on different levels of the political system and
- (v) using various knowledge transfer and communication channels

Dr. FOREST will analyse and suggest solutions for some of the most important and pressing issues related to forest biodiversity and human health.

The Austrian partners in Dr. FOREST will test the hypothesis increasing diversity of canopy structures and trails reduces air pollution by fine particular matter, pollen and ozone, thus reducing the risk for human health. Estimates of PM capture will be assessed in leaf sampling investigations. The levels of PM on leaves of trees of different species with differing leaf traits will be estimated by leaf washing and fractionation and identification of PM. This information will be compared to on-going work assessing the O₃ absorption and UV protection of urban and rural trees. In the tree observatories estimates will be made on the role of canopy structure in absorption of PM, and will be used to estimate the potential role of tree diversity in green spaces. The potential depletion effects of trees will be compared to current knowledge on the levels of pollutants and PM known to induce detrimental health effects, and assessed against other potential impacts such as shading and volatile organic compound (VOC) production.

Responsibilities

The successful candidate will gather and analyse data on the relationship between tree species identity and diversity, and depletion of particulate matter and ozone in both rural and urban. Other ecosystem services provided by tree such as protection against UV will also be investigated. This work will be linked to the subsequent effects on human health, particularly for urban environments. Fieldwork will take place both within the Vienna area and in multiple regions across Europe.

Required skills and qualifications

- MSc. in Bioscience Engineering, Biology, Ecology or equivalent degree in Life Sciences with some background in Ecology

Desirable skills and qualifications

- Enthusiastic and highly motivated
- Team player with good (English) communication skills and motivated to work in a collaborative project with other PhD students
- Good knowledge of both the biotic and abiotic components and processes in temperate forest ecosystems
- Strong interest in ecology and environmental health

Applications can be submitted until: 7th of February 2020

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 incl. CV, transcript of records and a one-page motivation letter 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: 16)**

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

www.boku.ac.at