

As German Research Center for Environmental Health, Helmholtz Zentrum München pursues the goal of developing personalized medical approaches for the prevention and therapy of major common diseases such as diabetes mellitus, allergies and lung diseases. To achieve this, it investigates the interaction of genetics, environmental factors and lifestyle.

The Research Unit Environmental Simulation (EUS) is part of the Institute of Biochemical Plant Pathology (BIOP) and operates sophisticated environmental simulation and plant phenotyping platforms, allowing to perform experiments under realistic and reproducible environmental conditions. In exposure chambers, solar simulators and a UV-transparent research greenhouse, long-term multifactorial experiments are performed simulating environmental scenarios (gas composition, climate, air pollutants, etc.) relevant for understanding plant adaptation, plant-microbe and plant-soil interactions under future climate conditions. Globally unique, the sun simulators and exposure chambers allow simulation of irradiation conditions very close to nature, in particular of ultraviolet (UV) irradiation typically for the mid latitudes. The phytotron and phenotyping experiments are mostly conducted in cooperation with interdisciplinary partners coming from national and international universities and research institutes.

The research of EUS focuses on the impact of environmental factors on biosphere-atmosphere exchange of volatile organic compounds (VOCs). Particularly we are interested in understanding the biosynthesis and molecular regulation of the emission of volatile terpenes (i.e. isoprene and monoterpenes) from plants and fungi/microbes and explore their biological and ecosystemic functions.

We are currently looking for a

## **Leader (f/m/d) for the project group "Environmental Simulation and Phenotyping" 2019/0005**

The successful applicant manages and coordinates the project group, including the scientific operation and quality assurance of the environmental simulation and phenotyping facilities.

### **Your scientific tasks include**

- Investigations in the field of plant phenotyping to determine the effects of environmental factors on plant and plant systems
- The development of LED-based lighting systems for the environmental simulation facilities

### **Our Offer**

At the Helmholtz Zentrum München, you can contribute together with leading researchers to the investigation of the development, prevention and treatment of environmental diseases such as diabetes, chronic lung diseases and allergies. In order to further promote your professional development, we offer extensive and targeted research training and career programmes. We support the reconciliation between work and private life with flexible working time models, occupational

including the measurement and simulation of artificial global radiation

- The development of spectroscopic methods for the non-invasive recording of plant characteristics and traits in (high throughput) phenotyping facilities
- The implementation of methods in the field of machine learning and artificial intelligence for predicting results and causal analysis of their effects on plant microbial interactions under the influence of environmental changes
- The analysis and identification of breeding and environmentally relevant plant phenotypic traits

As a general coordination task, you are expected to coordinate experiments carried out in cooperation with internal and external institutions.

Further tasks include the guidance of doctoral students and technical staff, the writing of scientific manuscripts and reports, the representation of the department at international conferences and expert rounds as well as the acquisition of third-party funds (national and international).

### **Your qualification**

- University degree in physics or electrical engineering/information technology with doctorate
- Professional experience in optical and spectroscopic measuring techniques, image analysis and machine learning
- Excellent, documented scientific achievements and publications in high-ranking scientific journal
- Excellent, documented leadership competencies and experiences in the context of (inter)national and interdisciplinary departments/teams
- Excellent written and spoken English skills
- Very high motivation for scientific excellence and pronounced scientific curiosity
- Creative and innovative thinking
- Communicative, respectful and solution-oriented way of acting

health management, day care facility for children, a childcare subsidy, Elder Care, as well as other counseling and support services.

Remuneration and benefits are in accordance with the collective agreement for the public service (EG 14 TV EntgO Bund).

The position is (initially) limited to 3 years.

The activity involves special knowledge and experience specific to own scientific skills.

As a holder of the Total E-Quality Award, we promote equality of opportunity. In order to increase the proportion of women in management positions, we would be pleased to receive corresponding applications. Qualified applicants with physical disabilities will be given preference.

Situated on the foothills of the Alps, Munich is consistently ranked as one of the most vibrant and enjoyable cities in the world, with an exceptionally quality of life. Greater Munich is also home to several world-class universities and research institutes, creating a truly inspiring intellectual atmosphere.

We are looking forward to receiving your comprehensive online application until February 28th 2019.

### Apply now

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The award highlights  
our commitment of  
gender equality.

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