PhD opportunity (65%, TVÖD E13)/ DFG Priority Program "Biodiversity Exploratories" (f/m/x)

You are passionate about microbiomes, metagenomics, and ecosystem functioning? Then join the Environmental Microbiomes Group at Helmholtz Munich for the project
P-NICHE – Phosphorus mobilisation in grassland ecosystems.

Duration: 36 months | Start date: April 1, 2026

The project is part of the **Biodiversity Exploratories** (https://www.biodiversity-exploratories.de/de/), an Infrastructure Priority Programme (SPP 1374) funded by the Deutsche Forschungsgemeinschaft (DFG; German Research Foundation). Within the Biodiversity Exploratories, scientists from different disciplines from all over Germany join forces to address crucial questions of biodiversity and land use intensity and how these are interrelated with ecosystem change.

About Us

At Helmholtz Munich, we develop groundbreaking solutions for a healthier society in a rapidly changing world. We believe that diverse perspectives drive innovation. Through strong partnerships, we accelerate the transfer of new ideas from the lab to real-life applications, improving lives.

At the **Research Unit for Comparative Microbiome Analyses** we identify key microbiota from the environment, which trigger our health, develop strategies to promote the abundance of those microbiota in urban and indoor environments and analyze consequences for our health. The **Environmental Microbiomes Group** (Head: Dr. Stefanie Schulz) investigates how climate- and global change impacts the environmental microbiome and develop mitigation strategies to increase microbial diversity for the prevention of human health using cutting-edge omics technologies and integrative bioinformatics.
Within the DFG-funded project **P-NICHE - Phosphorus mobilisation in grassland ecosystems**, we collaborate with the University of Tübingen and the Technical University of Munich to understand how land-use intensity, parent material, and plant–microbe interactions regulate phosphorus (P) mobilisation in species-rich grasslands.

We are now seeking a highly motivated PhD candidate to join our interdisciplinary team.

Your responsibilities:

- Perform DNA/RNA extractions, qPCR, and prepare short- and long-read sequencing libraries
- Analyse metagenomes and metatranscriptomes (functional + taxonomic annotation)
- Contribute to fieldwork in the Biodiversity Exploratories (grassland plots, LUX experiment)
- Conduct and support isotope-based incubation experiments (33P, 13C)
- Assist in the reconstruction and interpretation of metagenome-assembled genomes (MAGs)
- Integrate microbial, soil, and plant datasets to elucidate P mobilisation strategies

• Collaborate closely with partners in Tübingen and Munich
• Prepare manuscripts and present research at scientific conferences

Your qualifications:

Required qualifications:
• Master's degree in Microbiology, Ecology, Biology, Biochemistry, Environmental Sciences, or a related field
• Background in at least one of the following: microbiome research, molecular biology, soil ecology, bioinformatics, or plant–microbe interactions
• Practical experience in laboratory workflows (e.g., nucleic acid extraction, PCR/qPCR)
• Strong motivation for interdisciplinary field and laboratory work
• Excellent English communication skills (written and spoken)
Desirable qualifications:
• Experience with metagenomics/metatranscriptomics and Linux-based analysis
• Interest in biogeochemical cycling, especially P and nutrient turnover
• Basic proficiency in statistical programming (R or Python)

What we offer you:

- an exciting PhD project within a large interdisciplinary research collaboration
- access to state-of-the-art sequencing technologies (Illumina, Nanopore)
- high-performance computing resources at Helmholtz Munich
- a supportive, collaborative environment with expertise in microbiomes, plant ecology, soil ecology, and bioinformatics
- participation in fieldwork, workshops, and international conferences
- flexible working hours and strong support for work–life balance
- a workplace committed to equal opportunities and diversity
- a structured PhD program
- work-life balance
- flexible working hours & working-time models
- continuous education and training
- 30 days annual leave
- on-site health management service
- home office options
- on-site nursery & holiday care
- elder care
- company pension scheme
- discounted public transport ticket

Munich, with its numerous lakes and its vicinity to the Alps, is considered to be one of the cities with the best quality of life worldwide. With its first-class universities and world-leading research institutions it offers an intellectually stimulating environment. Provided that the prerequisites are fulfilled, a salary level up to E 13 is possible. Social benefits are based on the collective agreement for the federal public service (TVöD). The position is limited to 3 years. To promote diversity, we welcome applications from talented people regardless of gender, cultural background, nationality, ethnicity, sexual identity, physical abilities, religion and age. Qualified applicants with physical disabilities will be given preference. If you have obtained a university degree abroad, we require further documents from you regarding the recognition of the degree. Please request the recognition as early as possible. The PhD student will be further involved in a structured Graduate School Program to improve scientific and soft skills and will confer his/her doctorate at the Technische Universität München.

Your application:

We are looking forward to receiving your comprehensive online application (CV, statement of research interests, contact details of two academic references, academic transcripts) until **February 2nd**, 2026. Applications are reviewed on a rolling basis until the position is filled. Please send your application as a single PDF by email with the subject “PhD PNiche” to Dr. Stefanie Schulz (stefanie.schulz@helmholtz-munich.de). The position starts **1st of April 2026.**