



Alexander von
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German Centre for Integrative
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Halle-Jena-Leipzig

Dear colleagues,

The Humboldt Foundation is scouting for researchers (postdocs) from underrepresented regions of the globe. For that, they developed a scouting program particularly dedicated to supporting excellent female scientists, and I have the honor to serve as one of their scouts. In this context, I am looking for a scientist with expertise in soil microbial ecology and data analysis/synthesis.

For this round of candidates (2024), the topic is ***Cross-kingdom synthesis of temporal and spatial soil microbial community analyses along grassland diversity gradients***. The project (details below) will take place at the German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig in collaboration with the University of Amsterdam (Anna Heintz-Buschart).

This scholarship will cover up to two years of funding (with children, extensions are possible), and is for excellent (female) scientists that are close to becoming a professor in their home country and have never been to Germany before for scientific work. More information about the funding program can be found here: <https://www.humboldt-foundation.de/en/apply/sponsorship-programmes/henriette-herz-scouting-programme>.

In case of interest, the candidates should send (1) a motivation letter, (2) a one-pager on a potential research topic, and (3) their CV (combined in one PDF) to Svenja Haenzel (svenja.haenzel@idiv.de). Potential questions should also be sent to Svenja Haenzel. There is no strict deadline for applications - we will finalize the process as soon as we have found the ideal candidate.

Please forward this email to potentially interested colleagues.

Nico Eisenhauer

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iDiv is a central facility of Leipzig University within the meaning of Section 92 (1) of the Act on Academic Freedom in Higher Education in Saxony ("Sächsisches Hochschulfreiheitsgesetz, SächsHSFG"). It is run together with the Martin Luther University Halle-Wittenberg and the Friedrich Schiller University Jena, as well as in cooperation with the Helmholtz Centre for Environmental Research - UFZ. The following non-university research institutions are involved as cooperation partners: the Helmholtz Centre for Environmental Research (UFZ), the Max Planck Institute for Biogeochemistry (MPI BGC), the Max Planck Institute for Chemical Ecology (MPI CE), the Max Planck Institute for Evolutionary Anthropology (MPI EVA), the Leibniz Institute DSMZ-German Collection of Microorganisms and Cell Cultures, the Leibniz Institute of Plant Biochemistry (IPB), the Leibniz Institute of Plant Genetics and Crop Plant Research (IPK) and the Leibniz Institute Senckenberg Museum of Natural History Görlitz (SMNG).

About the project:

Experiments manipulating aspects of biodiversity and observing the effects on ecosystem functioning have provided ample evidence for positive diversity-productivity and -stability relationships. Concerns over potential cascading effects are acute, particularly in slow, complex systems like soils. From its inception, the Jena Experiment has had a strong and rather unique focus on belowground effects of plant species and functional group diversity. Its soils were repeatedly monitored for effects on microbial biomass and activity, establishing the importance of both plant (functional) diversity and characterizing dynamics. The Jena Experiment's soil was also among the first plant diversity experiments analyzed in terms of the compositions of various soil microbial communities.

The observed effects of the plant diversity gradient in the Jena Experiment have varied for different microbial sub-communities, over time, and for the sampled soil compartments, including opposing plant-diversity effects in endophytic communities and bulk soil inhabitants. During the last years, we have collected amplicon-based community data for concomitant prokaryotes and several eukaryotic communities. These data span the plant diversity gradient, and include bulk soil, rhizosphere, and root endophyte communities. In addition, field and mesocosm experiments on the effect of common soil and plant history have been analyzed. At this point, it is unclear how the different functional roles of the members of the microbial sub-communities and the relative abundances of different guilds or molecular functions contribute to the observed differences. This dataset offers the exciting opportunity to develop or apply taxonomic multidiversity frameworks, advanced statistical modeling and data fusion methods, as well as functional/trait-based approaches, which include an expansion of existing strategies for functional predictions and trait annotations and by big-data approaches, e.g., mining of fungal genome-trait links. The planned synthesis work is supposed to build on the rich datasets on focal and explanatory variables, and should make use of the multidisciplinary expertise in the research consortium. Thus, we are looking for a team player with strong interest in interdisciplinary work with multiple colleagues.