



Rhizo4Bio-Status Seminar

12 – 13 May 2025

[Leipziger KUBUS](#), Permoserstraße 15, 04318 Leipzig

Programme MONDAY, 12th May 2025

- 13:00 – 13:45 Lunch snack (sandwiches & fruit) & registration
- 13:45 – 14:00 **Welcome session & introduction with opening remarks**
Klaus-Peter Michel (BMBF)
- 14:00 – 16:00 **Highlight Presentations Rhizo4Bio Projects 1-4 (20+10 min)**
- 14:00 – 14:30 **RhizoTraits:** Rhizosphere traits for maize performance under drought
Andreas Wild (University of Bayreuth)
- 14:30 – 15:00 **RhizoWheat:** Healthy Roots, Stable Wheat Yields? Functional Insights into Pre-Crop and Nitrogen Effects
Josephine Bukowiecki (Christian-Albrechts-Universität Kiel)
- 15:00 – 15:30 **CROP:** Effects of a root-contrasted wheat lines mixture on root water uptake, plant-microbe interactions and carbon stabilisation—in silico and in vivo insights
Mona Giraud (FZ Jülich) & Adrian Lattacher (Universität Hohenheim)
- 15:30 – 16:00 **RootWayS:** Deep-rooted intercropping mixtures facilitate access to subsoil resources
Iris Zimmermann (CAU Kiel)
- 16:00 – 16:30 Coffee break
- 16:30 – 18:00 **Postersession & discussions**
- 19:30 **Dinner together (self-pay basis)**
Restaurant L'Osteria
Martin-Luther-Ring 12, 04109 Leipzig
<https://losteria.net/de/restaurants/restaurant/leipzig/>





Posters

- 1 Complementary roles of eDNA and eRNA in characterizing rhizosphere bacterial communities of wheat and barley across seasons
Santiago Quiroga (Justus Liebig University Giessen; Bread and Beer)
- 2 Seed Inoculation with *Hartmannibacter diazotrophicus*: Starch and Protein Properties of Malting Barley grains
Azin Rekowski (Universität Hohenheim; Bread and Beer)
- 3 Multiscale Representation of Plant-Soil Microbe Interactions in Water and Nutrient Dynamics
Mona Giraud (FZ Jülich; CROP)
- 4 Effect of combining root-contrasted phenotypes of wheat on carbon, nitrogen and water fluxes in the plant-soil-microbe system under different N fertilization levels
Adrian Lattacher (Universität Hohenheim; CROP)
- 5 Heat, drought, and compound events: Definitions for their impact on crop yield variability
Jakob Bogenreuther (University of Bayreuth; RhizoTraits)
- 6 Role of Rhizosphere Traits in Plant Drought Resilience
Saniv Gupta (Technical University of Munich; RhizoTraits)
- 7 Root simulations in a biogeochemical model and impacts on nitrogen fluxes
Carolin Boos (KIT-Campus Alpin, Garmisch-Partenkirchen; RhizoTraits)
- 8 Peroxidase Activity of Fresh Apple Root: A Novel Approach of Resorufin-based Micro-zymography
Yijie Shi (Christian Albrechts University Kiel; RootWayS)
- 9 Benefits of Subsoil C Allocation in Deep-rooting Cover Crop Root Channels for Following up Cultivation
Xiao Zhang (Christian Albrechts University Kiel; RootWayS)
- 10 Subsoil nutrient access through functional trait diversity and belowground niche complementarity
Fatema Khatun (Göttingen University; RootWayS)
- 11 Mitigating yield decline in successive wheat rotations
Nikolaos Kaloterakis (FZ Jülich; RhizoWheat)
- 12 Bacillus seed coating mitigates early growth reduction in successive winter wheat without altering rhizosphere bacterial and archaeal communities
Doreen Babin (Julius Kühn Institute; RhizoWheat)
- 13 RhizoWheat: Pre-crop effect on wheat root growth
Dennis Grunwald (Göttingen University; RhizoWheat)
- 14 A SWEET Challenge: Less Sugars for Rhizospheric Microbiome Under the Successive Wheat Rotation
Mehdi Rashtbari (Christian Albrechts University Kiel; RhizoWheat)
- 15 Crop rotational effects on yield formation of winter wheat cultivars: Radiation uptake and radiation use efficiency
Katharina Pronkow (Christian Albrechts University Kiel; RhizoWheat)
- 16 Understanding and mitigating microplastic effects on rhizosphere processes in agricultural soil
Rüdiger Reichel (FZ Jülich; μ plastic)
- 17 Effects of microplastics on rhizosphere bacterial communities
Susanne Kublik (Helmholtz Munich; μ plastic)

Programme TUESDAY, 13th May 2025

08:30 – 10:00 Highlight Presentations Rhizo4Bio Projects 5-7 (20+10 min)

08:30 – 09:00 **μplastic**: Effects of microplastics on soil properties, crop growth, and microbial diversity

Nicolas Brüggemann (FZ Jülich)

09:00 – 09:30 **Bread & Beer**: Effects of seed inoculation with *Hartmannibacter diazotrophicus* on soil bacterial communities and grain quality parameters in wheat and barley

Santiago Quiroga (Justus Liebig University Giessen) & Azin Rekowski (Universität Hohenheim)

09:30 – 10:00 **Root Service Platform**: Root service platform – update

Doris Vetterlein (UFZ Halle)

10:00 – 10:30 Coffee break

10:30 – 11:30 Inspection and discussion of root service platform

11:30 – 13:00 Workshop “Sorting out root traits from WinRhizo for modeling”

Organizers: Doris Vetterlein (UFZ Halle) & Henning Kage (CAU Kiel)

13:00 Lunch snack (sandwiches and fruit to take away in lunch boxes)

Instructions for Authors

Highlight presentations

Each Rhizo4Bio project (i.e. Bread and Beer, RhizoWheat, ...) is asked to give a **20 + 10 minutes** (for discussions) **highlight presentation on new developments since our last Status Seminar**. The content of the presentation and the speakers (one or more persons) are determined by the projects themselves. The important issue is that the exciting results from the past year are shown and can be discussed with the audience.

Please upload your presentations (in English) in PowerPoint or pdf format to Nexctcloud folder <https://nc.ufz.de/s/NwjQkwgcZHsf5Pa>, Password: Rhizo4Bio2025! or bring it on a USB stick.

Posters

In addition to the highlight presentations, posters presenting additional or more detailed results from Rhizo4Bio and BonaRes research are welcome. Poster format is **DIN A0 portrait**. Please bring your posters (in English) to the Status Seminar. Material for putting up the posters will be provided on-site.