



UNIVERSITÄT ZU KÖLN

Department für Biologie
Schwerpunkt Ökologie

Zülpicher Str.47b
50674 Köln
Tel.: 0221-4703100
Fax: 0221-4705932

ÖKOLOGISCHES KOLLOQUIUM

des Instituts für Zoologie in Person in Raum 0.024

Wednesday, 20.03.2024, 01:15 pm



Manuel Blouin

Professor at the Institut Agro Dijon, France

Host: Prof. Dr. Bonkowski

Harnessing rhizosphere microbial communities by artificial selection to improve plant phenotype

Plants engage in close interactions with microbial communities, particularly those within the rhizosphere, which play pivotal roles in various plant traits such as mineral and water uptake, resistance to diseases and parasites, resilience against abiotic stress, and overall development. To harness the beneficial functions of these microbial communities, microbiological research has predominantly focused on screening existing microbial diversity to isolate specific strains with diverse skills, including N-fixation, phosphate solubilization, auxin production, and more. An alternative approach involves the artificial selection of the entire microbial community through multiple iterations, aiming to induce interesting modifications in plant phenotype without relying on any preconceived hypotheses about the underlying mechanisms. Although this research in microbiota artificial selection is still in its early stages, it holds significant promise for rapidly modifying the phenotype of macroorganisms, such as plants, animals, and potentially humans, in comparison to traditional plant or animal breeding methods. In this presentation, I will share results from empirical and theoretical studies in this field and discuss the necessary conditions for an efficient microbiota artificial selection.

Gäste sind herzlich willkommen!
Die Mitarbeiter/innen der Ökologie

→ bei Rückfragen: 470-8242 (Niedeggen)