ÖAW
Österreichische Akademie der Wissenschaften

Can we assess soil ecosystem services by metaproteomics?

Katharina M. Keiblinger (1), Ines C. Wilhartitz (2), Thomas Schneider (3), Leo Eberl (3), Kathrin Riedel (4), Sophie Zechmeister-Boltenstern (1)

1 BOKU ÖBG

Universität für Bodenkultur Wien
Department für Wald- und Bodenwissenschaften

2 eawag aquatic research

EAWAG
Department of Environmental Microbiology

3

University of Zurich
Institute of Plant Biology
Department of Microbiology

4

TU Braunschweig
Institute of Microbiology

Ines Wilhartitz

Thomas Schneider

Leo Eberl

Kathrin Riedel

Sophie Zechmeister-Boltenstern

FWF

EUROPEAN SCIENCE FOUNDATION

Can we assess soil ecosystem services by metaproteomics?

Universität für Bodenkultur Wien
Department für Wald- und Boden-
wissenschaften

- **Soils contain the largest microbial community size and diversity of all natural environments.**
- **Soil organisms play principal roles in several ecosystem functions, i.e. promoting plant productivity, regulating nutrient mineralisation, permitting decomposition and greenhouse gas formation and consumption.**
- **Metaproteomics provides a deep insight into the active microbial community and allows to study fluctuations of the microbial community composition, as well as functions of soil microbes.**

Can we assess soil ecosystem services by metaproteomics?

Universität für Bodenkultur Wien
Department für Wald- und Boden-wissenschaften

- **Methodological approach to extract the metaproteome out of two different soil samples**
  - **Forest soil**
  - **Potting soil**
- **Comparison of microbial abundances and functions obtained with different extraction procedures and for soil types.**