

## Curriculum Vitae Mgr. Zuzana Kolaříková, Ph.D.

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### Education and Employment

Since 2007      **Researcher** at the Department of Mycorrhizal Symbioses, Institute of Botany, CAS  
2002 – 2007      **Ph.D. studies** at the Botanical Institute, **University of Basel, Switzerland**  
1996 – 2002      **MSc. studies** in Biology at the Charles University, Prague.

### Research interests

- Utilization and improvement of molecular markers for the detection of arbuscular fungal communities, species and strains, bacterial communities as well as fungal communities in general.
- Study of mycorrhizal, plant-associated and soil fungal diversity in a wide range of target ecosystems including natural (endemic and common plant species in grasslands, mountain forests, freshwater and maritime habitats) or disturbed and man-made habitats (spoil banks, power plant sedimentation ponds) using next generation sequencing (454, Illumina, PacBio, Oxford Nanopore).
- Fungal community dynamics in relation to changes in climate, vegetation, soil development and other environmental factors using next generation sequencing.
- Taxonomy of mycorrhizal fungi: description of new species from different habitats.
- Potential application of mycorrhizal symbiosis: tracing of inoculated mycorrhizal fungal strains in the field using molecular markers. Infectivity of mycorrhizal inoculum after long-term storage.

### Research projects

- **2022-2024:** Towards understanding community assembly in arbuscular mycorrhizal fungi: from structural traits to fundamental and realized niches (Czech Science Foundation; **principal investigator**)
- **2017-2019:** Sequence-based phylogeny of Glomeromycota: from virtual taxa to phylotypes and global ecological and biogeographical patterns (Czech Science Foundation; **principal investigator**)
- **2010-2013:** Tracing of arbuscular mycorrhizal fungi (AMF) isolates inoculated into the field and evaluation of subsequent AMF community structure changes (Czech Science Foundation; **principal investigator**)

### Publication activity (according to Web of Science)

31 articles in international SCI journals, 1 contribution to a monograph, ~25 conference abstracts, H-index: 18, number of citations: 1812

### Selected publications:

- Janoušková, M., Remke, M., Johnson, N. C., Blažková, A., Rydlová, J., **Kolaříková, Z.**, & Bowker, M. A. (2023). Transferred communities of arbuscular mycorrhizal fungal persist in novel climates and soils. *Soil Biol Biochem*, 187, 109190.
- Větrovský, T., **Kolaříková, Z.**, Lepinay, C., Awokunle Hollá, S., Davison, J., Fleyberková, A., Gromyko, A., Jelínková, B., Kolařík, M., Krüger, M., Lejsková, R., Michalčíková, L., Michalová, T., Moora, M., Moravcová, A., Moulíková, Š., Odriozola, I., Öpik, M., Pappová, M., Piché-Choquette, S., Skřivánek, J., Vlk, L., Zobel, M., Baldrian, P. and Kohout, P. (2023), *GlobalAMFungi*: a global database of arbuscular mycorrhizal fungal occurrences from high-throughput sequencing metabarcoding studies. *New Phytol*, 240: 2151-2163.
- in 't Zandt, D., **Kolaříková, Z.**, Cajthaml, T., & Münzbergová, Z. (2023). Plant community stability is associated with a decoupling of prokaryote and fungal soil networks. *Nat Commun*, 14(1), 3736.
- **Kolaříková Z.**, Slavíková R., Krüger C. Krüger M., Kohout P. (2021) PacBio sequencing of Glomeromycota rDNA: a novel amplicon covering all widely used ribosomal barcoding regions and its applicability in taxonomy and ecology of arbuscular mycorrhizal fungi. *New Phytol* 231: 490-499.

- Sudová R., Kohout P., Rydlová J., Čtvrtlíková M., Suda J., Voříšková J., **Kolaříková Z.** (2020) Diverse fungal communities associated with the roots of isoetid plants are structured by host plant identity. *Fun Ecol* 45: 100914.
- Püschel D., **Kolaříková Z.**, Šmilauer P., Rydlová J. (2019) Survival and long-term infectivity of arbuscular mycorrhizal fungi in peatbased substrates stored under different temperature regimes. *Appl Soil Ecol* 140: 98 – 107.
- **Kolaříková, Z.**, Kohout, P., Krüger, C., Janoušková, M., Mrnka, L., Rydlová, J. (2017) Root-associated fungal communities along a primary succession on a mine spoil: Distinct ecological guilds assemble differently. *Soil Biol Biochem*, 113: 143-152.
- Kohout, P., Sudová, R., Janoušková, M., Čtvrtlíková, M., Hejda, M., Pánková, H., Slavíková, R., Štajerová, K., Vosátka, M., **Sýkorová, Z.** (2014) Comparison of commonly used primer sets for evaluating arbuscular mycorrhizal fungal communities: Is there a universal solution? *Soil Biol Biochem* 68: 482-493.
- **Sýkorová, Z.**, Börstler, B., Zvolenská, S., Fehrer, J., Gryndler, M., Vosátka, M., Redecker, D. (2012) Long-term tracing of *Rhizophagus irregularis* isolate BEG140 inoculated on *Phalaris arundinacea* in a coal mine spoil bank, using mitochondrial large subunit rDNA markers. *Mycorrhiza* 22: 69-80.

#### Other activities

- **Teaching:** Charles University, Prague (2008-2018) Ecophysiology of mycorrhizal symbioses
- Member of the local organizing committee for the **9<sup>th</sup> International Conference on Mycorrhiza (ICOM9) 2017**