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Area of Research: Fungal ecology, plant-microbial interactions, microbiome, soil microbiology

Course/s Taught: Soil Microbiology, Research Methods, Advanced Research techniques, Experimental designs, Biology of Fungi, Mycorrhizal Symbiosis

Appointment: Teaching, Research and Outreach

Publications: Singelton R**, Nanjundaswamy A, Mandyam K, Njiti V. **2017**. Fermentation optimization of macro-fungus *Pleurotus sajor-caju* on soymeal. *Fermentation Technology* 6:2 DOI: 10.4172/2167-7972.1000146

Mandyam, K. and Jumpponen, A. **2015**. Mutualism-parasitism paradigm synthesized from results of root-endophyte model. *Frontiers in Microbiology* doi: 10.3389/fmicb.2014.00776

Mandyam, K. and Jumpponen, A. **2013**. Symbiosis of *Arabidopsis thaliana* and root endophytes: a continuum of interactions controlled by host and fungal genotype. *Fungal Ecology* 117:250-260

Mandyam, K., Fox, C*, Jumpponen, A. **2012**. Septate endophyte colonization and host responses of grasses and forbs native to a tallgrass prairie *Mycorrhiza* DOI: 10.1007/s00572-011-0386-y

Mandyam, K., Loughin, T., and Jumpponen, A. **2010**. Isolation and morphological and metabolic characterization of common endophytes in annually burned tallgrass prairie. *Mycologia* 102: 813-821

Mandyam, K., and Jumpponen, A. **2008**. Seasonal and temporal variation of arbuscular mycorrhizal and dark septate endophytic fungi in a tallgrass prairie ecosystem. *Mycorrhiza* 18: 145-155

Jumpponen, A., Trowbridge, J.L.*, Mandyam, K., and Johnson, L.C. **2005**. Nitrogen enrichment causes minimal changes in AM colonized plants but shifts community composition: evidence from rDNA data. *Biology and Fertility of Soils* 41(4): 217-224

Invited Peer-reviewed Articles

Mandyam, K. and Jumpponen, A. **2005**. Abundance and possible functions of the root-colonising dark septate endophytic fungi. In: Summerbell, R. Currah, R.S. and Sigler, L. (Eds.). The Missing Lineages: Phylogeny and ecology of endophytic and other enigmatic root-associated fungi. *Studies in Mycology* 53: 173-189.

Invited book chapters

Mandyam, K., and Jumpponen, A. **2014**. Unraveling the endophyte functions: Insights from the *Arabidopsis* model. In: Advances in Endophytic Research. Part III. Eds: Verma V., and Gange A Springer-Verlag (Pvt.) Ltd, India. pp 114-151.

Jumpponen, A., and Mandyam, K. **2013**. Adoption and utility of an *Arabidopsis* model to dissect endophyte symbioses. In: Endophytes in plant protection: the state of the art. Ed. Schneider, C., Leifert, C., Feldman, F. Deuthche Phytomedizinische Gesellschaft. Braunschweig, Germany. pp. 244-247.

Jumpponen, A., Kageyama, S.A. and Mandyam, K.G. **2010**. Isolation of fungal root endophytes, molecular screening, and testing of Koch's Postulates. In: Prospects and Applications for Plant-Associated Microbes. A Laboratory Manual, Part B: Fungi. Ed. Pirttilä A.M. and Sorvari, S. BioBien Innovations (BBi), Piikkiö.

Jumpponen, A., Kageyama, S.A. and Mandyam, K.G. **2010**. Identification of root-associated fungal endophytes. In: Prospects and Applications for Plant-Associated Microbes. A Laboratory Manual, Part B: Fungi. Ed. Pirttilä A.M. and Sorvari, S. BioBien Innovations (BBi), Piikkiö.

Kageyama, S.A., Mandyam, K.G., and Jumpponen, A. 2008. Diversity, function and potential applications of the root-associated endophytes. In: Mycorrhiza – State of the art, genetics and molecular biology, eco-function, biotechnology, ecophysiology, structure and systematics. Ed. Varma, A. Springer-Verlag, Berlin. pp. 29-59.