



Institut für Physik  
Institut für Chemie und Biotechnik



## INSTITUTSKOLLOQUIUM

Gemeinsames Kolloquium der Physik und Chemie

Am Dienstag, dem 17. Januar 2023, spricht um 17:15 Uhr im  
Faraday-Hörsaal,

Prof. Dr. Philipp Franken

*Institut für Mikrobiologie, FSU Jena*

*Forschungsstelle für gartenbauliche Kulturpflanzen, FH Erfurt*

zum Thema:

### **“Application of arbuscular mycorrhizal fungi in plant production: problems and approaches”**

Abstract:

Arbuscular mycorrhizal (AM) fungi colonize the roots of most plants, including many agricultural and horticultural crops. They support plant nutrition and increase plant resistance and tolerance to biotic and abiotic stresses. Therefore, they can represent integral parts of sustainable strategies for crop production systems. However, the outcome of mycorrhizal interactions varies between parasitism and mutualism and is difficult to predict. The genotype of the plant, the conditions for application and the characters of the fungal strain play important roles for the plant-fungus balance in mycorrhizal interactions.

Molecular and genetic approaches have been followed to identify genes in the model plant petunia that are associated with mycorrhiza responsiveness under different environmental conditions. Such genes could be used as markers for breeding new cultivars with positive responses to inoculation with AM fungi. For production of improved inocula, an AM fungal strain has been acclimatized to high phosphate fertilization conditions, one of the major problems for their application.

Wir laden Sie zu diesem Kolloquium herzlich ein!

Die Hochschullehrer der Institute für Physik und Chemie