



UNIVERSITÄT **BONN**

Die Pflanzenwissenschaftlichen
Institute

Einladung

zum

Pflanzenwissenschaftlichen Kolloquium

Freitag, den 24. April 2026, 12 c.t.

Nussallee 9, Hörsaal X

Referent: Prof. Amey Redkar

Head of Max Planck Partner Group, Root Microbiology Lab; National Centre for Biological Sciences (NCBS), Tata Institute of Fundamental Research, Bangalore, India

Thema: „Deciphering the compatibility regulatory mechanisms of fungal pathogenesis in systemic infections“

Fungal interactions with plant roots, either beneficial or detrimental, have a crucial impact on agriculture and ecosystems. The cosmopolitan plant pathogen *Fusarium oxysporum* (Fo) provokes vascular-wilt disease in more than a hundred different crops. On angiosperms (flowering plants), Fo exhibits exquisite adaptation to the plant xylem niche as well as host-specific pathogenicity in form of wilting, both of which are conferred by effectors secreted in xylem (SIX) and encoded on lineage-specific genomic regions. However, such isolates also can colonize the roots of other plants asymptotically as endophytes or even protect them against pathogenic strains. The molecular determinants of endophytic multi-host compatibility are largely unknown. Moreover, the strategies that enable these pathogens to exploit deeper tissues such as xylem and what led to the emergence of such systemic infections in plants remains elusive. Also, to date, the origin of accessory regions and how these different genomic compartments orchestrate an infection process remains unresolved.

In this talk I will introduce our work on how multi-host compatibility is established in vascular wilts, how the infection process is co-ordinated to lead to diverse interaction outcomes – such as pathogenic and endophytic; and our recent initiatives to define the compatibility regulatory mechanisms both in- and ex-planta to understand these complex interactions of hidden beneath.

Diskussionsleitung: Prof. Dr. Armin Djamei, INRES – Pflanzenpathologie

Zu diesem Vortrag und zu einer evtl. Nachsitzung sind Sie herzlich eingeladen