

# Einladung zum Pflanzenwissenschaftlichen Kolloquium

**Montag, den 7. Oktober 2024, 10 c.t.**

Friedrich-Hirzebruch Allee 5, Hörsaal 3

**– Außerplanmäßiger Vortrag –**

**Referent: Prof. Dr. Saravanan Matheshwaran**

*Indian Institute of Technology Kanpur, India*

**Thema: „Role of SWR1 Chromatin Remodeler in morphogenesis and Virulence of *Ustilago maydis*“**

*Ustilago maydis*, the fungus responsible for smut disease in maize, utilizes secondary metabolites like melanin to enhance its virulence and survival. Our research focuses on SWR1, an ATP-dependent chromatin remodeler, and its role in melanin biosynthesis. We found that SWR1 alters chromatin architecture, affecting DNA activities. Deleting SWR1 increased *U. maydis*' sensitivity to DNA damage, reduced growth, and changed cell morphology. Even under optimal conditions, the loss of SWR1 led to pigment production, highlighting its regulatory role. Mating experiments in maize seedlings showed that the  $\Delta swr1$  mutant had reduced infection rates and caused chlorosis, emphasizing SWR1's importance in virulence. This study highlights the role of chromatin remodeling in fungal adaptation and pathogenicity, offering new insights into combating crop diseases.

**Diskussionsleitung:** Prof. Dr. Armin Djamei, INRES-Pflanzenpathologie, Universität Bonn

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