

Einladung

zum

Botanischen Kolloquium

Freitag, den 26. Januar 2018, 12 c.t.

Nussallee 4, Hörsaal Botanik

Referent: Prof. Dr. Margret Sauter

*Entwicklungsbiologie und Physiologie der Pflanzen, Botanisches Institut,
Universität Kiel*

Thema: „*Root system adaptations to flooding*“

Flooding is a major abiotic stress that results in oxygen shortage and is encountered foremost by plant roots. Roots adapt to reduced oxygen availability at various ways including altered metabolism or aerenchyma formation. Much less is known however about the developmental control of the structure of the root system in response to limited oxygen availability. We found that root growth and development is not simply impaired by limited metabolic constraints but is subject to developmental control which results in major restructuring of the root system architecture upon oxygen shortage. We found that adventitious roots in rice and the primary root of Arabidopsis display an escape response and provide some insight into the regulation of these responses at the molecular level. Furthermore, we studied lateral root development in Arabidopsis. Interestingly, both, primary and lateral root responses in Arabidopsis are controlled by group VII ERF transcription factors that are key components of hypoxia signaling. We show that these ERFs and an ERF-independent hypoxia signaling pathway shape the root system when oxygen becomes limiting.

Diskussionsleitung: Prof. Dr. A. Meyer, INRES, Chemical Signalling

Die Dozenten der Botanischen Institute

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