

Sommersemester / *Summer Term 2015*

BayCEER Kolloquium

Vortragsreihe Ökologie und Umweltforschung
*Lecture series in Ecology and Environmental Research***Donnerstag 25.06.2015, 12:00 Uhr, H6**

Anschließend Postkolloquium mit Mittagsimbiss im Foyer H6

Prof. Angelika Mustroph

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Plant responses to flooding stress

Severe rainfall events not only affect human lives and property, but also plant life by flooding of their habitat. Most wild species as well as crop plants do not tolerate prolonged flooding events, and will either react with severe growth retardation or even plant death. Flooding can either affect the root system only (= waterlogging), or the whole plant (= submergence). The main problem with flooding of whole plants or plant parts is a decrease in the cellular oxygen concentration, since the diffusion of gases such as oxygen is much slower in water than in air. This oxygen deficiency inhibits mitochondrial respiration as well as biosynthetic processes.

Plants respond to flooding events with multiple mechanisms. On one hand, anatomical and morphological modifications to escape from the stress can be observed, such as aerenchyma formation and leaf elongation. On the other hand, biochemical modifications are found, for example the induction of fermentation and glycolysis. Such mechanisms can differ a lot between sensitive and tolerant plant species, but also different survival strategies exist in different tolerant species, for example the “quiescence” and “escape” strategies. In this talk, examples for adaptational mechanisms will be presented, as well as a recently discovered mechanism of plants to measure their internal oxygen concentration, which is the basis for plant responses to this stress.

Do. / Thu. 12 st
Gebäude/Building
GEO
Hörsaal/Lecture hall
H6Die Vortragsreihe
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Plattform zur
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Diskussion für
Studierende,
Forschende und
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sind herzlich
willkommen*The lecture series
serves as an
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and senior
scientists.**Guests
are cordially
invited!*