Kiel Plant Center Mini Symposium

25th of April 2019
ZMB – Am Botanischen Garten 11
Seminar room 4th floor

16:30
Welcome: Eva H. Stukenbrock

Session 1
Chair: Janine Haueisen

16:35
Cecile Lorrain (Environmental Genomics, MPI Plön & CAU Kiel)
Transposable elements dynamics in *Zymoseptoria* spp.

In fungal genomes, transposable elements (TEs) are thought to be key drivers of variability among populations in response to environmental stress. TEs proliferation could be either deleterious or beneficial depending on their insertion sites, or neutral if they insert in non-coding nor regulatory regions. We performed an in-depth characterization of the complete TE repertoire of the five known *Zymoseptoria* spp. to gain insights into the impact of repetitive DNA on the evolution of these closely relative species.

16:55
Falk Behrens (Molecular Phytopathology and Biotechnology, CAU Kiel)
The role of microRNAs in regulating plant-fungus interactions

miRNAs play a pivotal role in the regulation of diverse physiological processes including defense responses in plants. In the interaction of oilseed rape (*Brassica napus*) with the soil borne pathogenic fungus *Verticillium longisporum* the expression of miRNAs is extensively reprogrammed. While endogenous R gene targeting miRNAs of plants are usually suppressed during pathogen infections, miR1885, a *Brassica* specific miRNA, was found to be up regulated by *V. longisporum* in oilseed rape. Here we describe the function of miR1885 in the regulation of plant-pathogen interactions and its impact on plant defense in the context of general miRNA directed R gene regulation in plants.

17:15 Coffee break

Session 2
Chair Tanja Rehders

17:45
Karin Schrieber (Institute for Ecosystem Research, Geobotany, CAU Kiel)
The role of inbreeding × herbivory interactions for the success of biological invasions

Inbreeding and herbivory can interactively reduce the performance of flowering plants. Here, we investigated whether the magnitude of plant inbreeding depression increases under herbivory as a result of diminished leaf metabolic responses to herbivory in inbreds, which entails increased herbivore growth and feeding damage. We additionally explored whether genetic differentiation among native and invasive plant populations impacts the magnitude and direction of these inbreeding × herbivory interactions to assess their role in plant invasion success.

18:05
Bahar Razavi (Institute of Plant Nutrition and Soil Science, CAU Kiel)
Plant-Soil microbial interaction: molecular to ecological perspective

Roots are ecosystem engineers and build their environment, shaping the rhizosphere for optimal functioning. The interactions between plants and soil microbes are an important focus of terrestrial ecology. The presentation will show how application of classical and novel in situ imaging approach in combination with stable and radioactive isotopes to trace C and N fluxes sheds light on the crucial role of root exudates on nutrient acquisition in the rhizosphere depending on biotic (e.g. pathogen, plant diversity) and abiotic factors (e.g. drought, temperature and land use).

18:25
End of symposium & goodbye