



**MICHIGAN STATE**  
**UNIVERSITY**

**Network, exchange, and training program to understand plant  
resource allocation (*NEXTplant*)  
Joint Symposium with the Heinrich-Heine University  
Düsseldorf, Germany**

June 22-25, 2022

Location: Conference room (1404) of the ISTB building

Hosts: Susanne Hoffmann-Benning (MSU) and Andreas Weber (HHU)



## Symposium Program:

### Wednesday, June 22

- 9:00 – 9:15            Susanne Hoffmann-Benning (MSU)- Welcome
- 9:15 – 9:55            Michael Feldbrügge (HHU)  
*RNA biology in phytopathogenic fungi*
- 9:55 – 10:35        Benjamin Stich & Francesco Cosenza (HHU)  
*The double round robin population of barley - a unique platform for quantitative genetics*
- 10:35 – 11:00        COFFEE BREAK
- 11:00 – 11:40        Jianping Hu (MSU)  
*Understanding the dynamics of plant energy organelles using live-cell imaging bioinformatics, and deep learning*
- 11:40 – 12:20        Nicole Linka (HHU)  
*“Bouncers” of the peroxisomal membrane – transport proteins controlling what goes in and out.*
- 12:20 – 13:30        LUNCH
- 13:30 – 14:10        Petra Bauer (HHU)  
*Healthy plant foods: Regulation of iron homeostasis at different levels*
- 14:10 – 14:50        Josh Vermaas (MSU)  
*Computational Microscopy within Plant Processes, from Photosynthesis to Signaling*
- 14:50 – 15:30        Erich Grotewold (MSU)  
*From Plant Gene Regulatory Networks to Metabolic Engineering, and Back*
- 15:30 – 16:10        COFFEE BREAK
- 16:10 – 16:35        Shizue Matsubara & Ana Carolina Dos Santos Sá (HHU)  
*Natural variation in sink-driven regulation of photosynthesis in Arabidopsis*
- 16:10 – 16:35        Markus Pauly (HHU)  
*Synthetic Biology of Plant cell wall polysaccharides*
- 17:00 – 20:00        Hiking and BBQ at Lake Lansing Park North, Sandhill Shelter

## Thursday, June 23

- 9:00 – 9:40            Andreas Weber (HHU)  
*Natural variation of photosynthetic CO<sub>2</sub> assimilation in land plants*
- 9:40 – 10:05        Vanessa Reichel-Deland (HHU)  
*Unraveling drought signal transduction of the facultative CAM plant *Talinum fruticosum* in orthogonal systems*
- 10:05 – 10:45        Berkley Walker (MSU)  
*Re-thinking photorespiratory fluxes*
- 10:45 – 11:10        COFFEE BREAK
- 11:10 – 11:50        Peter Lundquist (MSU)  
*Understanding the dynamics of plant energy organelles using live-cell imaging bioinformatics, and deep learning*
- 11:50 – 12:00        Oliver Ebenhöh (HHU)  
*Supply-demand regulation of Photosynthesis*
- 12:30 – 13:30        LUNCH
- 13:30 – 14:10        Robert VanBuren (MSU)  
*Healthy plant foods: Regulation of iron homeostasis at different levels*
- 14:10 – 14:50        Vera Göhre (HHU)  
*Computational Microscopy within Plant Processes, from Photosynthesis to Signaling*
- 14:50 – 15:15        Natasha Heßler (HHU)  
*Sugar uptake of the Brassicaceae smut fungus *Thecaphora thlaspeos* during biotrophic interactions*
- 15:15 – 15:30        Trusha Adeshara (HHU)  
*Cross-kingdom RNA communication during smut fungal infection by *Thecaphora thlaspeos**

## HHU Student Presentation (open only to NEXTplant Associates)

- 16:00 – 16:25 Tim Nies: *Modelling Photoinhibition and LIFT experiments*
- 16:25 – 16:50 Isaia Vardanega: *Identification and characterization of CLV receptors and CLE peptides regulating barley shoot meristem maintenance and development*
- 16:25 – 16:50 Chen Deng: *Identification and characterization of a sugar allocation system in Arabidopsis-B. cinerea interaction*
- 16:50 – 17:05 Ghazala Rauf Butt: *Transcriptional Regulation of Plant's Systemic Acquired Resistance (SAR) by the WRKY Transcriptional Factors*
- 17:05 – 17:20 Tim Kaiser: *Artificial Intelligence in RNA and Protein Folding*

Time for a Walk through the Gardens

17:45 pm DINNER at the ISTB Building

**Friday, June 24** HHU Student Presentations

- 9:00 – 9:25 Allegra Corelli Grappadelli: *Dissecting plant response to structural defects of de-acetylated Xylan*
- 9:25 – 9:50 Dibin Baby: *Uncovering BTSL1-IMA1-bHLH protein interaction module for induction of iron deficiency signalling*
- 9:50 – 10:15 Gesa Helmsoring: *HvLWD1 is a candidate gene underlying the early maturity 7 (eam7) locus in barley*
- 10:15 – 10:30 Tianyu Lan: *THE MOLECULAR MECHANISM OF TEMPERATURE-RESPONSIVE INFLORESCENCE DEVELOPMENT IN BARLEY (HORDEUM VULGARE)*
- 10:30 – 11:00 COFFEE BREAK
- 11:00 – 11:15 Katarzyna Kawczyk  
*Understanding the dynamics of plant energy organelles using live-cell imaging bioinformatics, and deep learning*
- 11:15 – 11:30 Jonas Schön: *Gaining quantitative understanding of ethylene signalling network dynamics through synthetic reconstruction and optogenetic control*
- 11:30 – 11:55 Ksenia Trofimov: *Analysis of the subcellular localization of transcription factors for iron uptake regulation*

11:50 – 12:05 Sajjad Ghaffarinasabsharabiani: *A kinetic resource allocation model for cyanobacteria*

12:05 LUNCH

13:30 – 22:00? Excursion to Lake Michigan - PJ Hoffmaster State Park - Beach Picnic/BBQ  
- sunset on Lake Michigan

**Saturday, June 25**

9:30 Excursion to Shiawassee National Wildlife Preserve

18:00 BBQ at Benning's

**Sunday, June 26**

11:30 Pickup and transfer to the Michigan Flyer bus stop