



U.S. Wheat and Barley Scab Initiative GDER and PBG Joint Mid-year Meeting

Thursday April 27, 2023 12:00-4:30 PM US Central Time (Virtual)

Zoom Meeting Link: You should have received it when you registered. If you don't have the email confirmation with Zoom link, contact nfo@scabusa.org and the email can be resent.

- **12:00-12:10 PM: Welcome**

- **12:10-1:00 PM: Session 1. Fungal pathogenicity and genomics**

Mara Krone (University of Illinois)

*The effect of quantitative wheat resistance on the aggressiveness of *Fusarium graminearum**

Matthew Helm (USDA-ARS, West Lafayette, IN)

*Identification and functional characterization of a candidate effector protease from *Fusarium graminearum**

Chris Toomajian (Kansas State University)

*Genome-wide association mapping in *Fusarium* populations*

Lisa Vaillancourt (University of Kentucky)

*Genetic crosses to evaluate toxigenicity and pathogenicity factors in *Fusarium graminearum* species complex*

- **1:00-1:40 PM: Session 2. Wheat and barley transformation and gene editing**

Harold N. Trick (Kansas State University)

The centralized wheat transformation/gene editing facility

Alison Dineen (Rutgers, The State University of New Jersey)

Genetic engineering barley to improve FHB resistance

Shengming Yang (USDA-ARS, Fargo, ND)

Genetic engineering to improve FHB resistance in barley

- **1:40-2:00 PM: Break**

- **2:00-2:50 PM: Session 3. Host resistance and susceptibility mechanisms: Targets for enhancing FHB resistance**

Gerit Bethke (University of Minnesota)
Type 2 resistance in barley

Nidhi Rawat (University of Maryland)
Mapping of susceptibility factor Sf-Fhb-7AS from Chinese Spring

Vijay Tiwary (University of Maryland)
Exploring FHB resistance in winter barley through two independent EMS-induced TILLING populations

Md Ashraful Islam (University of North Texas)
Targeting host and fungal genes to mitigate Fusarium head blight

- **2:50-3:30 PM: Session 4. Enabling Technologies and Gene Discovery**

Guixia Hao (USDA-ARS/NCAUR, Peoria, IL)
Progress on endophytic fungal RNAi delivery to control Fusarium head blight and mycotoxin contamination

John McLaughlin (Rutgers, The State University of New Jersey)
Investigation of apoplast and exosome content changes in barley leaves in response to Fusarium graminearum infection

Guihua Bai (USDA-ARS, Manhattan, KS)
Development of Nanoparticle-based gene-editing technology for genetic improvement of wheat FHB resistance

- **3:30-3:40 PM: Break**

- **3:40-4:30 PM: Future Directions**

- **4:30 PM: Adjourn**