

Protein Working Group

- Co-chairs – Chris Ament (Eurofins) and Tao Geng (Bayer)
- Working group meetings were conducted yesterday
- Five ongoing workstreams

Multiplex Validation

- Kristen Kouba (Corteva)
- Simone Cummings (Syngenta)

Mass Spec for Protein Quantification

- Mark Bednarcik (Syngenta)
- Yanfei Wang (Bayer)

Allergen Analysis

- Tao Geng (Bayer)
- Norma Houston (Corteva)

Extraction Efficiency

- Hector Serrano (BASF)

Intractable Proteins/ Characterization

- John Zhang (Corteva)
- Rong Wang (Bayer)

Allergen Analysis Workstream

- 12 members, meets monthly
- WS is working on an *in vitro* gastric (pepsin) digestion manuscript
- Progress:
 - Manuscript draft outline is almost complete
 - Adds further standardization of the method
 - Includes recommended method parameters and rationale
- ISO standard discussion have been paused

Multiplex Protein Method Validation Workstream

- 7 members, meet monthly
- Goal: publish guidelines for standardized validation parameters and acceptance criteria for single-plex and multiplex protein analysis methods (antibody based and Mass Spec)
- Progress: team members are writing first draft, intended to have draft completed by end of 2022, will need first half of 2023 for draft completion

Extraction Efficiency Workstream

- 8 members, meet monthly
- Goal: Discuss methodologies for establishing Extraction Efficiency, write a manuscript on the various EE methodologies and publish in a peer reviewed journal
- Progress:
 - Identified similarities across all 4 methods for soluble and insoluble extractions and Western blot analysis by densitometry.
 - All methods are scientifically sound and can be applied to determine the overall EE
 - Writing draft manuscript, plan to have the first draft Q4 of 2022 & submission in 2023



Intractable Protein/Characterization Workstream

- Established in early 2021
- Meet monthly, currently 15 members
- **Goal:** review protein characterization, production and quantification methods and address technical challenges associated particularly with intractable proteins. Standardize methods and harmonize endpoints and publish scientific papers and communication documents when necessary
- **Project and progress:** drafted manuscript, most content in place, additional polishing before company review



Mass Spec for Protein Quantitation Workstream

- 11 members, meet monthly and work as small groups as needed
- Goal: publish a scientific paper reviewing and summarizing evidence supporting both ELISA and LC/MS/MS as valid analytical techniques to assess protein concentrations in plant tissues
- Progress:
 - Draft Round 3 v.4 is in process and in finalizing stage
 - 7 new revisions since Apr 2022
 - Target to send out for company review by Nov.

Additional Protein Working Group Activities

- Ambiguous results for protein methods
 - Standalone ambiguous workstream?
 - Or ambiguous results incorporated into workstream?
- Call to help update the Website FAQs for the Protein Methods