#### 6<sup>th</sup> International Plant Proteomics Organization Conference May 15 to 18, 2025 Banff Springs Hotel, Banff, AB, Canada

#### **AGENDA**

| Thursday, May 15, 2025 |  |
|------------------------|--|
| 13:00                  | REGISTRATION OPENS - Riverview Lounge  |
|                        | All Posters are to be mounted – New Brunswick Room                           |
|                        | All Sessions will take place in Alberta Room                                 |
| 16:00                  | WELCOME  |
|                        | Conference Chairs: Jennifer Geddes-McAlister, R. Glen Uhrig                  |
| 16:15 – 18:30          | Session 1 – Proteomics for Climate Resiliency                                |
|                        | Chair: Devang Mehta, KU Leuven   |
|                        | Co-Chair: Boyan Liu, University of Guelph                                    |
| 16:15                  | KEYNOTE  |
|                        | Harvey Millar, The University of Western Australia, AUS                      |
|                        | Proteomics for Climate Resiliency: Developing and adapting proteomic data    |
|                        | for wider decision making in a changing world                                |
| 16:45                  | Christoph Rampitsch, Agriculture and Agrifood Canada, CAN                    |
|                        | Peptidomics in Rusted Wheat. Endogenous rust peptides identified from short  |
|                        | open reading frames by de novo sequencing                                    |
| 17:05                  | Devang Mehta, KU Leuven, BEL   |
|                        | Closing gaps in plant chronobiology: from genome to proteome and from        |
|                        | molecules to future geographies.   |
| 17:25                  | Natalia Bykova, Agriculture and Agrifood Canada, CAN                         |
|                        | Crosstalk between the cellular redox state, NO, ROS, and phytohormones       |
|                        | integrates major physiological processes upon abiotic stress impact on seed  |
|                        | dormancy control in wheat  |
| 17:40                  | Lauren Grubb, University of Alberta, CAN                                     |
|                        | Defining a role for REVEILLE genes in the plant response to drought and salt |
| 47.55                  | stress using quantitative proteomics   |
| 17:55                  | Myah Crosby, University of Guelph, CAN                                       |
| 40.45 20.00            | Starch Phosphorylases Regulated by Glutathionylation                         |
| 18:15 – 20:00          | WELCOME RECEPTION  |
|                        | New Brunswick Room with Exhibitors & Posters                                 |

| Friday,       | May 16, 2025   |
|---------------|--|
| 07:30         | LATE REGISTRATION – Riverview Lounge   |
|               | BREAKFAST - New Brunswick Room with Exhibits & Posters                               |
| 08:30 - 10:00 | Session 2 - Artificial Intelligence in Plant Proteomics                              |
|               | Chair: Jennifer Geddes-McAlister, University of Guelph                               |
|               | Co-Chair: Lauren Grubb, University of Alberta  |
| 08:30         | KEYNOTE  |
| 00.00         | 1  |
|               | Sachin Rustgi, Clemson University, USA   |
|               | Screening Wheat and Peanut Genotypes with Reduced Immunogenicity Using               |
| 00.00         | Protein Profiling  |
| 09:00         | Marie Brunet, University of Sherbrooke, CAN  |
| 00.00         | Learning translation: deep-learning guided proteomics in plants                      |
| 09:20         | Mathieu Lavallée-Adam, University of Ottawa, CAN                                     |
|               | Enhancing mass spectrometry-based proteomics data acquisition using                  |
|               | artificial intelligence  |
| 09:40         | Zhiyong Wang, Carnegie Institution for Science, USA                                  |
|               | Crosstalk between phosphorylation and O-glycosylation regulates                      |
|               | metabolism, growth, and immunity   |
| 10:00-10:30   | COFFEE BREAK Sponsored   |
|               | New Brunswick Room with Exhibits & Posters  By                                       |
| 10:30 – 12:30 | Session 3 – Proteomics in Unconventional Plants                                      |
|               | Chair: Ting-Ying Wu, Academia Sinica   |
|               | Co-Chair: Qiaomu Li, University of Alberta   |
| 10:30         | KEYNOTE  |
|               | Michelle Colgrave, Edith Cowan University, AUS                                       |
|               | Novel foods, the science behind evaluating health attributes, allergenicity          |
|               | and food safety  |
| 11:00         | Ting-Ying Wu, Academia Sinica, TW  |
|               | The Landscape of Protein Phosphorylation Dynamics under Heat Stress in               |
|               | Marchantia   |
| 11:20         | Ramesh Katam, Florida A & M University, USA  |
|               | Root proteomics and protein interaction studies showed shift in biosynthetic         |
|               | pathways to different salt stress levels in Pistachio                                |
| 11:35         | Niels Maywald, University of Guelph, CAN   |
|               | Next-Generation Intercropping: Synergistic Nitrogen Fixation for Sustainable         |
|               | Agriculture  |
|               | Haleema Tariq, McGill University, CAN  |
| 11:50         |  |
| 11:50         | Paenibacillus polymyxa alters the metabolic and proteomic profile of                 |
| 11:50         | Paenibacillus polymyxa alters the metabolic and proteomic profile of Cannabis sativa |
| 12:05         |  |
|               | Cannabis sativa  |

| Friday,       | May 16, 2025, cont.   |
|---------------|---|
| 12:30-13:45   | LUNCH BREAK   |
|               | 12:30 TO 13:30 SEMINAR – THERMO FISHER PRESENTATION   |
|               | Alberta Room  |
| 13:45 – 15:30 | Session 4 – Advancing Proteomics Technologies in Plants   |
|               | Chair: R. Glen Uhrig, University of Alberta   |
| 13:45         | Co-Chair: Mohana Talasila, University of Alberta  |
| 15.45         | KEYNOTE   |
|               | Aleksandra Skirycz, Michigan State University, USA  |
|               | From interaction to function, what can we learn about metabolites from  |
| 14.15         | knowing their protein partners?   |
| 14:15         | Sixue Chen, The University of Mississippi, USA  |
| 14:35         | Systems biology of C3 to CAM Transition, toward Improving Crop WUE  Bryan Hau, The University of Western Australia, AUS           |
| 14.55         | Identification and characterisation of the molecular drivers of malting   |
|               | performance in Hordeum vulgare  |
| 14:50         | Vibha Srivastava, University of Arkansas, Division of Agriculture, USA  |
|               | Phosphoproteomics for unraveling novel targets of SnRK1 kinase in rice  |
| 15:05         | Monique van Schie, Wageningen University, NL  |
|               | Location, location, location: exploration of the subcellular proteome of plants   |
| 15:30 – 16:00 | COFFEE BREAK  |
|               | New Brunswick Room with Exhibits & Posters  Sponsored By  |
| 16.00         | LICHTNING TALKS   |
| 16:00         | LIGHTNING TALKS  Poster 111 Suiani Pathnavako University of Guelah  |
|               | <ul> <li>Poster 111 - Sujani Rathnayake, University of Guelph</li> <li>Poster 104 – Utpal Bose, Edith Cowan University</li> </ul> |
|               | - Poster 104 – Otpai Bose, Editi Cowaii Offiversity - Poster 105 – Mohana Talasila, University of Alberta                         |
|               | - Poster 100 – Qiaomu Li, University of Alberta   |
|               | - Poster 109 – Boyan Liu, University of Guelph  |
|               | - Poster 121 – Genc Haljiti, Bavarian Centre for Biomolecular Mass  |
|               | Spectrometry  |
|               | - Poster 122 – Francis Bourassa, University of Sherbrooke   |
|               | - Poster 123 – Ankita Sehrawat, University of Delhi   |
| 16:30         | POSTER SESSION  |
|               | Presenters of even-numbered posters should be at their posters between 16:30 – 17:30 and  |
|               | presenters of odd-numbered posters should be at their posters between 17:30 – 18:30 pm  |
| 18:30         | FREE TIME   |

| Saturday, May 17, 2025 |  |  |
|------------------------|--|--|
| 07:30 - 09:00          | BREAKFAST & InPPO General Meeting (All Welcome)                                |  |
|                        | Host: Chrisoph Rampitsch   |  |
|                        | Alberta Room   |  |
| 09:00 - 10:30          | Session 5 – Agricultural Proteomics (Session I)                                |  |
|                        | Chair: Justin Walley, Iowa State University                                    |  |
|                        | Co-Chair Jiaxi Lu, University of Guelph  |  |
| 09:00                  | KEYNOTE  |  |
|                        | Georgia Tanou, Hellenic Agricultural Organization – DIMRA, GRC                 |  |
|                        | Deciphering the Molecular Basis of Cold Stress Response in Kiwifruit: A Multi- |  |
|                        | Omics Perspective  |  |
| 09:30                  | Olivia Wilkins, University of Manitoba, CAN                                    |  |
|                        | A single nucleus atlas of development altering stress                          |  |
| 09:50                  | Nasim Alijanimamaghani, University of Guelph, CAN                              |  |
|                        | Impact of 15ADON and 15ADON/3NX Fusarium graminearum Chemotypes                |  |
|                        | on Wheat and Corn Proteomes in Ontario, Canada                                 |  |
| 10:05                  | Guido Giordano, Technical University of Munich, DE                             |  |
|                        | Progress on the Crop Proteome Atlas (Year 3): a focus on barley germination    |  |
|                        | and malting  |  |
| 10:30-11:00            | COFFEE BREAK   |  |
|                        | New Brunswick Room, with Exhibits & Posters                                    |  |
| 11:00                  | Session 5 – Agricultural Proteomics (Session II)                               |  |
|                        | Chair: Justin Walley, Iowa State University                                    |  |
|                        | Co-Chair Jiaxi Lu, University of Guelph  |  |
| 11:00                  | Justin Walley, Iowa State University, USA                                      |  |
|                        | Regulatory architecture of disease resistance in maize revealed by multi-omic  |  |
|                        | systems genetics   |  |
| 11:20                  | Industry Sponsored   |  |
|                        | Jennifer Geddes-McAlister, University of Guelph, CAN                           |  |
|                        | Temporal wheat proteome remodeling by deoxynivalenol reveals novel             |  |
|                        | detoxification signatures and strategies across cultivar                       |  |
| 11:40                  | Hui Cao, The University of Western Australia, AUS                              |  |
|                        | Dissecting 70 years of wheat breeding through proteome-wide association        |  |
|                        | study  |  |
| 11:55                  | Nora Foroud, Agriculture and Agri-Food Canada, CAN                             |  |
|                        | Characterization of the Brachypodium mitogen-activated protein kinase          |  |
|                        | MKK4/5-MPK3/6 pathway  |  |

| Saturday, May 17, 2025, cont. |  |  |
|-------------------------------|--|--|
| 12:15 – 13:30                 | LUNCH BREAK – Early Career Researcher Session (All Welcome & Lunch Provided) Chair: Guido Giordano, Technical University Munich Alberta Room |  |
| 13:30                         | FREE TIME  |  |
| 18:30                         | RECEPTION Mt. Stephen Hall   |  |
| 19:00                         | DINNER & DANCING, Award Presentation Mt. Stephen Hall  |  |



| Sunday        | , May 18, 2025   |
|---------------|--|
| 07:30 - 08:30 | BREAKFAST  |
| 07.00 00.00   | New Brunswick Room with Exhibits & Posters                                   |
| 08:30 - 10:15 | Session 6 - The Modified Plant Proteome                                      |
| 00.00 10.13   | Chair: Christoph Rampitsch, Agriculture and Agrifood Canada                  |
|               | Co-Chair: Sujani Rathnayake, University of Guelph                            |
| 08:30         | KEYNOTE  |
|               | Ive de Smet, VIB-UGENT, Centre for Plant Systems Biology, BE                 |
|               | Leveraging temperature-mediated phosphoproteomes to identify conserved       |
|               | signaling modules in plants  |
| 09:00         | Pitter Huesgen, University of Freiburg, DE                                   |
|               | Tracing protease activities in plant immunity                                |
| 09:20         | Juergen Eirich, University of Muenster, DE                                   |
|               | Posttranslational Modifications and Their Role in Plant Acclimation to Light |
| 09:40         | Tagnon Missihoun, University of Québec Trois-Rivières, CAN                   |
|               | Abscisic acid and Aldehyde dehydrogenases influence protein carbonylation    |
|               | in Arabidopsis thaliana  |
| 09:55         | Mark Roosjen, Wageningen University, NL                                      |
|               | Pushing the limits - fast signaling in plants                                |
| 10:10         | Chris White-Gloria, University of Calgary                                    |
|               | Phospho-proteomics uncovers vast range of substrates for chloroplastic       |
|               | protein phosphatase SLP1   |
| 10:25 – 10:50 | COFFEE BREAK   |
|               | New Brunswick Room, with Exhibitors & Posters                                |
| 10:50 - 12:30 | Session 7 – Plant Interactomes   |
|               | Chair: Shouling Xu, Carnegie Institution at Stanford                         |
|               | Co-Chair: Niels Maywald, University of Guelph                                |
| 10:50         | KEYNOTE  |
|               | Pengcheng Wang, Institute of Advanced Biotechnology, CN                      |
|               | Chloroplast phosphonetworks in Arabidopsis                                   |
| 11:20         | Shouling Xu, Carnegie Institution at Stanford, USA                           |
|               | Mapping Architecture of Protein complexes in Arabidopsis using XL-MS         |
| 11:40         | Kishor Ingole, University of Cambridge, UK                                   |
|               | Unravelling the Cell-type specific SUMOylome of Arabidopsis roots by mass    |
|               | spectrometry (MS)  |
| 12:00         | Kyle Bender, University of Zurich, CH  |
|               | Quantitative proteomics of plant receptor kinase signaling                   |
| 12:15         | Linfei Guo, Wageningen University, NL  |
|               | Proteomic analysis of growth-stress interaction                              |
| 12:30         | WRAP-UP & CLOSING  |
|               | Conference Chairs: Jennifer Geddes-McAlister, R. Glen Uhrig                  |