

17th International Cereal Rusts and Powdery Mildews Conference

Annual Meeting of the Canadian Phytopathological Society

BGRI Technical Workshop 2025

The University of British Columbia (UBC), Vancouver | June 15-20, 2025

* CPS student Presentation Competition Participant

* ICRPMC student/post-doc Presentation Competition Participant

Sunday, 15 June 2025

12:00 pm	Registration Opens	Gage Lobby
8:00 am	CPS FAC and Outgoing Board Meeting	Gage Ruth Blair D
1:00 pm	CPS Workshop	Gage Multi Purpose Room
6:00 pm	CPS Welcome Reception	University Centre Bistro West

Monday, 16 June 2025

7:00 am	Registration and Breakfast	Forest Sciences Atrium
Plenary Session I Forest Sciences 1221 Chair: Miao Liu		
8:20 am	Welcome Comments Gurcharn Singh Brar	
8:30 am	O1: Stephen Strelkov , University of Alberta, Canada The changing landscape of clubroot in Canada: Virulence shifts and management challenges	
9:15 am	O2: Brian Steffenson , University of Minnesota, USA Pangenomic & virulence analyses of the barley leaf rust pathogen, <i>Puccinia hordei</i>	
10:00 am	Refreshment Break	Forest Sciences Atrium
CPS Session – Genetics, Genomics, and Breeding for Resistance I Forest Sciences 1221 Chair: Skyler Shaw		
10:30 am	O3: Keiko Nabetani , University of Saskatchewan, Canada Development and evaluation of screening methods under a controlled environment for pasmo resistance in flax	
10:50 am	O4: Mohamed Youssef , University of Manitoba, Canada Enhancing canola resistance to verticillium stripe: qPCR-based phenotyping and GWAS reveal genetic markers for breeding applications	
11:10 am	* O5: Xinlong Dong , University of Alberta, Canada Accelerated clubroot resistance breeding in brassica napus using optimized double haploid technology and genetic mapping	
11:30 am	O6: Anuradha De Silva , University of Manitoba, Canada Exploiting susceptibility genes in canola to improve blackleg disease	

11:50 am	CPS Annual Meeting of Members (AMOM)	Forest Sciences 1221
11:50 am	Lunch	Forest Sciences Atrium
1:00 pm	EMCRF Board Meeting	Forest Sciences 4101
CPS Session – Pathogen Surveillance, Disease Diagnostics, and Epidemiology I Forest Sciences 1221 Chair: Rishi Burlakoti, Vinuri Weerasinghe		
1:40 pm	O7: Émilie Tremblay , AAFC Ottawa, Canada Metabarcoding of aeromicrobiomes and insect trap preservative screens for phytopathogenic spores in agricultural fields: building a predictive tool	
2:00 pm	* O8: Sydney Houston , Natural Resources Canada - Victoria, Canada Next-Generation Sequencing of ITS regions for monitoring fungal pathogen infection and fungal community shifts in western redcedar	
2:20 pm	* O9: Alice Li , The University of British Columbia, Canada Genomic detection and monitoring of the Dutch elm disease	
2:40 pm	O10: Longfei Wu , University of Alberta, Canada Isolation, pathogenicity and genetic diversity of <i>Verticillium longisporum</i> causing Verticillium stripe of canola on the Canadian Prairies	
3:00 pm	O11: Reem Aboukhaddour , AAFC Lethbridge, Canada Starships and the evolution of virulence in tan spot (<i>Pyrenophora tritici-repentis</i>) of wheat	
3:20 pm	Refreshment Break	Forest Sciences Atrium
CPS Session – Pathogen Genomics and Biology I Forest Sciences 1221 Chair: Simranjeet Kaur		
3:40 pm	O12: Tika Adhikari , North Carolina State University, USA Unraveling effects of anaerobic soil disinfestation on soil microbiomes and strawberry yield	
4:00 pm	O13: Afsaneh Sedaghatkish , University of Guelph, Canada Advancing <i>Plasmodiophora brassicae</i> genomics: single-cell sequencing reveals a contamination-free de novo assembly	
4:20 pm	* O14: Muhammad Asim Javed , Laval University, Canada Population genomics of clubroot pathogen reveals its diversity dynamics and evolution	
4:40 pm	* O15: Md Al Mamun , North Dakota State University, USA Developing heterologous expression of rust effectors in a necrotrophic fungal pathogen	
6:00 pm	ICRPMC Welcome Reception	University Centre Ideas Lounge

Tuesday, 17 June 2025

7:00 am	Registration and Breakfast	Forest Sciences Atrium
8:30 am – 3:00 pm	Delegates put-up posters	Orchard Common
CPS Session – Pathogen Genomics and Biology II Forest Sciences 1221 Chair: Lamia Aouini		
8:30 am	O16: Jonathan Griffiths , AAFC London, Canada Genomic diversity of Tomato brown rugose fruit virus in Canadian greenhouse production systems	
8:50 am	O17: Sandra M. Velasco-Cuervo , University of Alberta, Canada FROM genome to pathotyping: exploring comparative genomics for <i>Plasmodiophora brassicae</i>	
9:10 am	O18: Wen Chen , AAFC Ottawa, Canada Unraveling microbial defenses: metagenomics-guided discovery of plant growth-promoting bacteria for potato wart suppression	
9:30 am	* O19: Brian Duarte , The University of British Columbia, Canada Cinderella slipper? examining host range expansion and spore specificity in <i>Cronartium ribicola</i> , the causal agent of white pine blister rust	
9:50 am	Refreshment Break	Forest Sciences Atrium
ICRPMC Session – Genetics, Genomics, and Breeding for Resistance I Dempster 301 Chair: Harmeet Chawla		
8:30 am	* O20: Jason Zurn , Kansas State University, USA A protein kinase fusion gene from <i>Aegilops speltoides</i> provides broad resistance against wheat stem rust	
8:50 am	O21: Satinder Kaur , Punjab Agricultural University, India Expanding wheat's genetic horizon: wild germplasm as a source of biotic and abiotic stress resistance	
9:10 am	O22: Shuyu Liu , Texas A & M University, USA Utilization of wheat wild relatives to improve wheat yield and rust resistance	
9:30 am	* O23: Jasneet Singh , University of Alberta, Canada Uncovering yellow rust resistance loci in Watkins wheat landraces via GWAS	
9:50 am	Refreshment Break Atrium	Forest Sciences
CPS Session – Pathogen Genomics and Biology III Forest Sciences 1221 Chair: Meng Li		
10:20 am	* O24: Edward McNab , University of Guelph, Canada Azoles vs. DMIs: A divide in fungicide resistance research terminology	
10:40 am	O25: Imane Laraba , AAFC Ottawa, Canada Outcomes of competitive dynamics of <i>Fusarium graminearum</i> and <i>F. poae</i> on wheat heads	
11:00 am	* O26: Yishan Zhang , The University of British Columbia, Canada	

	Genetic mapping of aggressiveness in <i>Fusarium graminearum</i> , causing Fusarium head blight in durum wheat	
11:20 am	Bag Lunch and Campus Walk (optional)	Forest Sciences Atrium
ICRPMC Session – Pathogen Genomics and Biology Dempster 301 Chair: Jesse MacDonald		
10:20 am	* O27: Samuel Holden , University of Alberta, Canada A stripe rust pan-genome provides evidence for ongoing somatic hybridization in nature	
10:40 am	** O28: Sean Formby , The University of British Columbia, Canada Technical challenges and approaches in constructing nuclei-phased genome assemblies of dikaryotic <i>Puccinia triticina</i> using early noisy long-read datasets	
11:00 am	* O29: Rebecca Spanner , University of Minnesota, USA Haplotype-phased genomes reveal the evolutionary history of race group TKTF, TTRTF and avirulence gene variants associated with severe wheat stem rust epidemics	
11:20 am	Bag Lunch and Campus Walk (optional)	Forest Sciences Atrium
1:20 pm	Group Photo by Totem Pole near Forest Sciences Building	
Plenary Session II Forest Sciences 1005 Chair: Brent McCallum		
1:30 pm	O30: Guus Bakkeren , AAFC Summerland, Canada Wheat leaf rust pathogen genomics	
2:15 pm	O31: Silvia Germán , Instituto Nacional de Investigación Agropecuaria (INIA), Uruguay Over three decades of wheat and barley rust research in Uruguay: a review	
3:00 pm	Refreshment Break	Forest Sciences Atrium
CPS Session – Pathogen Surveillance, Disease Diagnostics, and Epidemiology II Forest Sciences 1221 Chair: Jashanpreet Virhia		
3:30 pm	O32: Sean Walkowiak , Canadian Grain Commission, Canada Trends in Fusarium species on wheat and tools for pathogen identifications in large-scale monitoring programs	
3:50 pm	* O33: Skyler Shaw , Canadian Grain Commission, Canada The largest Canadian population survey and genomic analysis of <i>Claviceps purpurea</i> to date	
4:10 pm	O34: Mark Paul Rivarez , The University of British Columbia, Canada Distribution and diversity of Abaca Bunchy Top Virus and Banana Bunchy Top Virus causing bunchy top of abaca in Caraga, Philippines	
ICRPMC Session – Early-Career Awardees Forest Sciences 1005 Chair: Shuyu Liu		
3:30 pm	O35: Merle Bilstein-Schloemer , University of Cologne, Germany Overlap between virulence and avirulence function of <i>Blumeria hordei</i> AVR _{A13}	
3:50 pm	O36: Lamia Aouini , King Abdullah University of Science and Technology, Saudi Arabia The hidden genetic drivers of leaf rust resistance in wheat: a focus on disease resistance modifiers	

4:10 pm	O37: Karthick Gajendiran , King Abdullah University of Science and Technology, Saudi Arabia Metagenomics-assisted near chromosome level assembly and annotation of <i>Puccinia graminis</i> f. sp. <i>tritici</i> isolate UK01	
4:30 pm-6:30 pm	Poster Session I (odd numbers)	Orchard Common
6:30 pm	BGRI “Leading the Way” Social	Gage Isabel MacInnes
7:00 pm	CPS President’s Reception	University Centre Ideas Lounge
7:00 pm	Student Social	Gage Fort Camp Lounge

Wednesday, 18 June 2025

7:00 am	Registration and Breakfast	Forest Sciences Atrium
CPS Session – Genomics/Molecular Host-Pathogen Interaction Forest Sciences 1221 Chair: Shuanglong Huang		
8:30 am	O38: Rajagopal Subramaniam , AAFC Ottawa, Canada Pattern recognition receptors (PRRs) regulate resistance to Fusarium head blight	
8:50 am	O39: Lone Buchwaldt , AAFC Saskatoon, Canada Gene transformation with syntaxin of plants, lectin receptor kinase or executor1 provides resistance to the necrotroph pathogen, <i>Sclerotinia sclerotiorum</i>	
9:10 am	* O40: Jacqueline Gonzalez-Sacoto , University of Saskatchewan, Canada The dual role of <i>Olpidium brassicae</i> in clubroot disease development in canola	
9:30 am	* O41: Caitlyn Kolb , University of Saskatchewan, Canada Characterizing the ClToxB protein of <i>Colletotrichum lentis</i> through gene knockout via protoplast-mediated transformation	
9:50 am	Refreshment Break	Forest Sciences Atrium
BGRI Session I Dempster 301 Chair: Maricelis Acevedo		
8:30 am	Maricelis Acevedo , Cornell University, USA Welcome note and introductions	
8:50 am	O42: Dave Hodson , CIMMYT, Nepal Current status of wheat disease surveillance and early warning	
9:10 am	O43: Jacob Smith , University of Cambridge, UK Forecasting wheat diseases in Africa and South Asia as part of the Wheat Disease Early Warning and Advisory System	
9:30 am	O44: Jemal Tola Horo , Ambo Agricultural Research Center, Ethiopia Wheat diseases research status in Ethiopia	
9:50 am	Refreshment Break	Forest Sciences Atrium

CPS Session - Genetics, Genomics, and Breeding for Resistance II		
Forest Sciences 1221		
Chair: Jawad Awan		
10:20 am	O45: Marwa Laribi , University of Alberta, Canada Dissecting tan spot resistance in mediterranean durum wheat	
10:40 am	* O46: Valentina Anastasini , University of Saskatchewan, Canada Evaluation of wheat for resistance to bacterial leaf streak	
11:00 am	O47: David Joly , University of Moncton, Canada Screening for (and trying to understand) resistance and loss-of susceptibility to powdery mildew in <i>Cannabis sativa</i>	
11:20 am	O48: Maria Antonia Henriquez , AAFC Morden, Canada Decoding knockout resistance: Insights into a AAC Tenacious TILLING population	
11:40 am	O49: Malini Jayawardana , University of Manitoba, Canada Identifying and genetic mapping of resistance genes in wheat against bacterial leaf streak	
12:00 pm	Lunch	Forest Sciences Atrium
BGRI Session II		
Dempster 301		
Chair: Maricelis Acevedo		
10:20 am	O50: Paula Silva , INIA, Uruguay First detection and genetic characterization of <i>Magnaporthe oryzae</i> pathotype Triticum in Uruguay	
10:40 am	O51: Diane Saunders , John Innes Centre, UK Enhancing our ability to rapidly detect and respond to wheat rust and blast outbreak	
11:00 am	O52: Suraj Baidya , Nepal Agricultural Research Center, Nepal Monitoring of wheat rust diseases and its significance in disease management in Nepal	
11:20 am	O53: Naeela Qureshi , CIMMYT, Mexico Battling wheat rust in Kenya: The rise of PstS16 race and GWAS-based insights into rust resistance in CIMMYT's elite germplasm	
11:40 am	O54: Yoseph Alemayehu , CIMMYT, Ethiopia Harnessing the power of free and open-source software for disease surveillance	
12:00 pm	Lunch	Forest Sciences Atrium
1:00 pm-3:00 pm	Poster Session II (even numbers)	Orchard Common
2:30 pm	Refreshment Break Atrium	Forest Sciences
Plenary Session III		
Forest Sciences 1005		
Chair: Curtis Pozniak		
3:00 pm	O55: Matthew Moscou , USDA-ARS, Minneapolis, USA Genetic architecture of host species specificity in grasses to fungal pathogens	
3:45 pm	O56: James Brown , John Innes Centre, UK Durable and non-durable resistance: Bridging the gulf between academia and agriculture	
5:30 pm	ICRPMC/CPS/BGRI Joint Cocktail Reception	Alumni Centre Wong -Trainor
6:30 pm	ICRPMC/CPS/BGRI Joint Banquet	Alumni Centre

	Jack Poole Hall
Keynote Talk “100 years of Dominion Rust Lab” <i>Dr. Brent McCallum and Dr. Thomas Fetch</i>	
ICRPMC Awards	
CPS Awards	
BGRI Awards	
Entertainment and Dancing - Rangla Punjab Arts Academy	

Thursday, 19 June 2025

7:30 am	Registration and Breakfast	Gage Isabel MacInnes
8:00 am	CPS Incoming Board Meeting	Gage Ruth Blair D
Plenary Session IV Gage Isabel MacInnes Chair: Ana Badea		
8:30 am	O57: Urmil Bansal , University of Sydney, Australia Advances in wheat breeding: Meeting the challenges of rust resistance	
8:45 am	O58: Christina Cowger , USDA-ARS, Raleigh, USA Western hemisphere wheat powdery mildew reveals surprises	
9:30 am	Refreshment Break	Gage Fireplace Lounge
ICRPMC Session – Genetics, Genomics, and Breeding for Resistance II Gage Isabel MacInnes Chair: Santosh Kumar		
10:00 am	O59: Diane Saunders , John Innes Centre, UK Safeguarding wheat yields from cereal fungal invaders	
10:20 am	O60: Jianhui Wu , Northwest A & F University, China Genomic basis of stripe rust resistance in global common wheat: an information-rich landscape	
10:40 am	O61: Roger Wise , USDA-ARS, USA Protein-protein network hubs in host-pathogen interactions: Targets for next generation breeding	
11:00 am	O62: Rajdeep Khangura , University of Wisconsin-Madison, USA Life, the universe, and everything for \$42: WideSeq mapping of mutants	
11:20 am	O63: Eduard Akhunov , Kansas State University, USA Global genomic landscape of wheat-wheat rust interactions	
11:40 am	Lunch	Gage Isabel MacInnes
ICRPMC Session – Genetics, Genomics, and Breeding for Resistance III Gage Isabel MacInnes Chair: Rajdeep Khangura		
1:00 pm	O64: Santosh Kumar , AAFC Brandon, Canada Wheat breeding for durable rust resistance in the Canadian Prairies	
1:20 pm	*O65: Ming Luo , CSIRO, Australia Developing cisgenic resistance gene stacks for improved resistance to wheat stem rust disease	

1:40 pm	O66: Colin Hiebert , AAFC Morden, Canada Genetic interactions that suppress or unlock rust resistance in wheat
2:00 pm	O67: Ana Badea , AAFC Brandon, Canada Development of Canadian barley with inbuilt resistance to stem rust
2:20 pm	*O68: Jian Chen , CSIRO, Australia Effector recognition and activation mechanisms of wheat NLR and kinase-fusion proteins
2:40 pm	Refreshment Break Gage Fireplace Lounge
ICRPMC Session – Pathogen Surveillance and Global Landscape of Cereal Rusts Gage Isabel MacInnes Chair: Paula Silva	
3:10 pm	O69: Mogens Hovmøller , Aarhus University, Denmark The changing landscape
3:30 pm	*O70: Césarée Morier-Gxoyiya , John Innes Centre, UK Re-parameterising wheat stem rust models to explore disease dynamics in a changing climate
3:50 pm	O71: Gurcharn Singh Brar , University of Alberta, Canada Stripe rust in Canada – an overview
ICRPMC Wrap-Up Session Gage Isabel MacInnes Chair: Mogens Hovmøller	
4:10 pm	Proposal for Hosting 18 th ICRPMC
4:30 pm	ICRPMC Student and Post-Doc Presentation Awards
5:00 pm	Adjourn

Friday, 20 June 2025

8:30 am	Meet at the UBC Forestry Parking Lot
9:00 am	Depart for the Field Tour
10:30 am	CBL Wheat Yellow Rust and FHB Screening Nursery Tour
12:00 pm	Lunch on site