

ABIOTIC STRESS

- P1** Daily changes in the hydration of leaves or roots and hydraulic conductivity in maize grown under simultaneous exposure to the compact soil and to the soil drought. Stanisław Grzesiak, Maciej Grzesiak
- P2** The relationship between flavonoid metabolism and the drought response of *Phaseolus vulgaris*. Luis E. Peña Barrena, Lili Mats, Hugh Earl, Gale Bozzo
- P3** Which is better? Exploring cuticular wax and trichome responses to heat and drought in bread wheat. Aswini Kuruparan, Eliana Gonzales-Vigil, Raju Soolanayakanahally
- P4** Palmelloid formation alters the organization of the photosystems which enhances photoprotection in the Antarctic psychrophile, *Chlamydomonas priscuii*. Beth Szyszka-Mroz, Victoria Kata, Alexander Ivanov, Charles Trick, Norman Huner
- P5** Feeding our Future: Effects of Elevated CO₂ and Temperature on Wheat. Andrew Cook, Danielle Way, Raju Soolanayakanahally
- P6** Identification of drought-responsive genes by differential splicing analysis of guard cell transcriptomes. Hasna Khan, Anna van Weringh, Nicholas J. Provart
- P7** Differential phosphorylation correlates with activation of the root-specific glutamate decarboxylase-1 (AtGAD1) in phosphate-starved *Arabidopsis*. Lee Marie Raytek, Brittany Menard, Nathan Doner, Maria Rodriguez, Barry Shelp, Glen Uhrig, Rob Mullen, Wayne Snedden, William Plaxton
- P8** Activation of a singlet oxygen signaling pathway by competition cues in *Arabidopsis thaliana*. Nicole Berardi, Sasan Amirsadeghi, Clarence Swanton
- P9** Responses of Balsam Poplar to Extreme Weather Events Simulating Late 21st Century Climate. Laura Jones, Andrew Yu, Oscar Nunez, Katharina Braeutigam
- P10** Investigating the role of EPF signaling peptide in regulating drought stress response in *Arabidopsis thaliana*. Kritika Bharti
- P11** Chlorophyll fluorescence as a tool for tracking photosynthetic phenology in spruce genotypes. Qi Liu, Aravind Harikumar, Siyu Wang, Malaika Gomes, Ingo Ensminger
- P12** Characterizing Real-Time Sensors of Cell Wall Stress in *Arabidopsis thaliana*. Vicky Zhu, Raegan Larson, Lella Erceg, Heather McFarlane
- P13** lncRNA mediated LRR-RLK regulation in *Arabidopsis thaliana*. Robert Yaremko, Hemal Bhasin, Hasna Khan, Adam Mott.

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- P14** Caterpillar detoxification of plant specialized metabolites: Battle of the sexes! Yinting Chen, Ryan J. Smith, Jacqueline C. Bede, Hongliang Su
- P15** Investigation of Flavonoid Synthesis in *M. truncatula* during *S. meliloti* Inoculation Based on Co-Evolutionary History. Mithusha Peragerasingam, Rebecca Batstone
- P16** To eat or not to eat? Surveying resistance to insect herbivores in the wild tomato *Solanum habrochaites*. Andreea Bosorogan, Osmond Hui, Eliana Gonzales-Vigil
- P17** Tomato specialized metabolites can modulate the insect-gut microbiome. Andreea Bosorogan, Eliana Gonzales-Vigil
- P18** Tomato defence hormone responses to the foodborne pathogen *Salmonella* under elevated temperatures. Karen Liu, Eric Marchetta, Sam Snider, Robin Slawson, Joel Weadge, Christian Danve M. Castroverde
- P19** Diverse interactions between *Solanum lycopersicum* and beneficial Canadian soil-borne bacteria regulate increased immunity. Mack Loranger, Miya Tseng-West, Winfield Yim, Wolfgang Moeder, Nadia Morales-Lizcano, Arivin Nickzad, Eric Déziel, Keiko Yoshioka
- P20** Involvement of two cyclic nucleotide-gated ion channel subunits in jasmonic acid-mediated immune signaling. Hyunsuh Lee, Angelica Miraples, Robin Goh, Shingo Maruyama, Andreea Bosorogan, Eliana Gonzales-Vigil, Wolfgang Moeder, Hanae Kaku, Keiko Yoshioka
- P21** Resistance to bacterial brown spot in adzuki bean. Ujomonigho Omoregie, K. Peter Pauls
- P22** Investigation of 13 Immunity-Priming Bacterial Strains from the Canadian Soilborne Bacteria Library with Respect to their Plant Growth Promoting Effects. Matthew Toffoli, Wolfgang Moeder, Eric Déziel, Thomas Berleth, Keiko Yoshioka
- P23** Characterization of Effector Binding Elements present on genes from *Phaseolus vulgaris* L. targets of the Transcription Activator- like Effectors from *Xanthomonas* species. Mylene Corzo-Lopez, Gregory Perry, Weilong Xie, K. Peter Pauls
- P24** Identifying proteins that interact with DIR1 during Systemic Acquired Resistance (SAR) using an estrogen-inducible SAR system and LC-MS/MS-based detection methods. Natalie Belu, Phillip Carella, Garrett Nunn, Rowan Brookman, Robin Cameron
- P25** Genetic Expression of the Tomato CBP60g Gene Family in Response to Bacterial Infection and Elevated Temperature. Vanessa Shrivnauth, Eric Marchetta, Danve Castroverde
- P26** Production of Cannabis (*Cannabis sativa* L.) Synthetic Seeds for In vitro Clonal Mass propagation and Germplasm Conservation. Benjamin Davis, Elham Tavakouli Dinani, Biruk Feyissa, Adel Zarei

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- P28** Investigating downstream regulators in the self-incompatibility pathway of transgenic SI *A. thaliana*. Paula Beronilla, Daphne R. Goring
- P29** Investigating the role of LRR-VIII-2 Receptor-Like Kinase genes in intra- and inter-species pollinations in *Arabidopsis thaliana*. Laura Canales Sanchez, Daphne Goring
- P30** Investigating the role of NAC transcription factors in *Arabidopsis thaliana* seed coat development. Myles Matundan, Sonia Gazzarrini
- P31** Investigating the role of ubiquitination in cell wall signal transduction. Yu Zhu, Una McNally, Heather McFarlane
- P32** Characterizing immunity and physiological phenotypes in temperature-sensitive and -resilient accessions of *Arabidopsis thaliana*. Dhrashti Patel, Christina Rossi, Christian Danve. M Castroverde
- P33** Functional analysis of the N-terminal intrinsically disordered region of an immune kinase. Anamika Rawat, Ruoqi Duo, Katherine Dunning, Melissa Bredow, Kyle Bender, Lauren Grubb, Danielle Ciren, Wayne Snedden, Jacqueline Monaghan
- P34** A cell-based system to study gene expression and protein function: *Arabidopsis* mesophyll protoplasts. Carmen Mei, Oscar Nunez, Stefan Heinen, Katharina Braeutigam
- P35** Investigating the role of subgroup IV calcium-dependent protein kinases (CDPKs) across the plant lineage. Ruoqi Dou, Karima El Mahboubi, Melissa Bredow, Cailun Tanney, Pierre-Marc Delaux, Jacqueline Monaghan
- P36** Investigating the mechanistic role of *Arabidopsis* HSP90.7 in auxin-mediated plant development. Jenan Noureddine, Wai Lam Mok, Rongmin Zhao
- P37** Functional studies of *Arabidopsis* MAPK phosphatases reveal novel regulators of chloroplast biogenesis. Pooja Kaushik, Lahouari Zakaria Brahim, Jianlei Sun, Jin Suk Lee

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- P39** Comparative Analysis of Different Phenotypic and Genotypic Selection Strategies to Increase the Yield Genetic Gain using Nested Association Mapping Population in Dry Bean. Maryam Vazin, K. Peter Pauls
- P40** Diversity, function, and regulation of the immunity-associated CALMODULIN-BINDING PROTEIN 60 (CBP60) family in *Solanum lycopersium* (tomato) under biotic and abiotic stresses. Christian Danve Castroverde, Vanessa Shivnauth, Sonya Pretheepkumar, Keaun Amani
- P41** A Genetic Suppressor Screen to Identify New Alleles and Downstream Targets of SMAX1. Jenna Hountalas
- P42** Importance of the development of a co-dominant marker in the introgression of novel traits through marker-assisted backcrossing. Sajida Noor, Peter K. Pauls
- P43** Facilitating High Throughput Screening of Common Beans (*Phaseolus vulgaris* L.) for Anthracnose Resistance Genes. Marysia Zaleski-Cox

BIOCHEMISTRY AND METABOLISM

- P44** Heterologous expression of non-proteolyzed glutamate decarboxylase-1 (AtGAD1) from *Arabidopsis thaliana*. Brittany S. Menard, Lee-Marie Raytek, Barry J. Shelp, Wayne A. Snedden, William C. Plaxton
- P45** Investigating the function of chloroplast chaperone HSP90C C-terminal extension in abiotic stress resistance. Bona Mu, Tim Jiang, Wei-tse Tseng, Rongmin Zhao
- P46** What is the role of phosphorylation of the cytosolic glucose-6-phosphate dehydrogenase isozyme AtG6PD6 in response to phosphate nutrition of the model plant *Arabidopsis thaliana*? Millie Smith, William Plaxton
- P47** Highlighting the in vitro impact of chalcone isomerase-like on legume-specific chalcone biosynthesis. Brandon Saltzman, Mehran Dastmalchi
- P48** A waxy coat makes poplars popular in Northern Hemisphere. Mahbobeh Zamani Babgohari, Raju Soolanayakanahally, Eliana Gonzales-Vigil
- P49** A combinatorial bioengineering approach aimed at enhancing the accumulation of α -eleostearic acid-containing neutral storage lipids in *Nicotiana benthamiana* leaves. Alyssa Clews, Yang Xu, Nathan M. Doner, Lingling Zhang, Shiyu Lü, Damien Seay, Jay M. Shockey, John M. Dyer, Robert T. Mullen
- P50** Mapping the local proteome of the endoplasmic reticulum and chloroplasts membrane contact sites using biotin proximity labeling. Monika Jesionowska, Alyssa C. Clews, Robert T. Mullen, Yang Xu
- P51** Investigation of the metabolism and biological activity of (+)-tetralone ABA, an ABA analog, in *Arabidopsis*. Christine Nguyen, Dawei Yan, Naveen Diddi, Leon Lai, Suzanne Abrams, Eiji Nambara
- P52** The role of phosphorylation in regulating AROGENATE DEHYDRATASE 2 function in *Arabidopsis thaliana*. Erin N Brownscombe, Emily A Hornung, Emily J Clayton, Sangeeta Dhaubhadel, Susanne E Kohalmi
- P53** Probing interacting regions of lipid biosynthetic enzymes from flax. Katelyn Hockemeyer, Monika Jesionowska, Yang Xu
- P54** Subcellular localization of enzymes in the isoflavonoid pathway. Audrey Cote, Mehran Dastmalchi
- P55** Interaction analysis between chloroplast molecular chaperone HSP90C and subunits of the thylakoid SEC translocase. Adheip Nair, Bona Mu, Rongmin Zhao
- P56** Characterizing the targeting pathway of chloroplast outer membrane protein OEP18. Ceaira Hiemstra, Tianlun Zhou, Simon Chuong, Matthew Smith
- P57** TOC159 Receptors are Targeted to the Chloroplast Outer Membrane Using a Bipartite Targeting Signal at the C-Terminus. Michael Fish, Simon Chuong, Masoud Jelokhani-Niaraki and Matthew Smith