

KELLY MAYRINK BALMANT
School of Forest Resources and Conservation
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EDUCATION

Ph.D., Plant Molecular and Cellular Biology – University of Florida 2012-2016

Dissertation Title: Redox Proteomics of plant innate immunity in stomatal guard cells.

Advisor: Dr. Sixue Chen

M.S., Genetics and Plant Breeding – Federal University of Viçosa (Brazil) 2009 – 2011

Thesis Title: Identification of a host factor, RPS5A, involved in protein interaction of Geminivirus Movement Protein.

Advisor: Dr. Elizabeth Fontes

B.S., Biology - Federal University of Viçosa (Brazil) 2004-2008 Minor in Genetics and Molecular Biology.

RESEARCH, PROFESSIONAL EXPERIENCE, APPOINTMENTS

2020-Present Research Assistant Professor, School of Forest Resources and Conservation, University of Florida

2016-2020 Postdoctoral Researcher, University of Florida

2012-2016 Doctoral Research Assistant, University of Florida

2011-2012 Research Assistant, University of Florida

2009-2011 Plant Genetics/Breeding Research Assistant, Federal University

PUBLICATIONS

Manuscripts

RIBEIRO, CL; CONDE, D; **BALMANT, KM**; DERVINIS, C; JOHNSON, MG; MCGRATH, AP; SZEWCZYK, P; UNDA, F; FINEGAN, CA; SCHMIDT, HW; MILES, B; DROST, DR; NOVAES, E; GONZALEZ-BENECKE, CA; PETER, GF; BURLEIGH, JG; MARTIN, TA; MANSFIELD, SD; CHANG, G; WICKETT, NJ; KIRST, M. The uncharacterized gene EVE contributes to vessel element dimensions in *Populus*. *Proc Natl Acad Sci U S A*. 2020 Mar 3;117(9):5059-5066.

BALMANT, K; NOBLE, JD; DERVINIS, C; CONDE, D; RESENDE, M; BARBAZUK, WB; DE LOS CAMPOS, G; VARQUES, A; KIRST, M. (2020) Xylem systems genetics analysis reveals a key regulator of lignin biosynthesis in *Populus deltoides*. *Genome Research – Under review*

NOBLE, JD, **BALMANT, KM**, DERVINIS, C; DE LOS CAMPOS, G; RESENDE, M; KIRST, M; BARBAZUK, WB. (2020) The Genetic Regulation of Alternative Splicing in *Populus deltoides*. *Frontiers Plant Science – Under Review*.

BALMANT, K; LAWRENCE, SR; DUONG, BV; ZHU, F; ZHU, N; NICKLAY, J; CHEN, S (2020) Redox proteomics of stomatal immunity reveals role of a lipid transfer protein in plant defense. *Submitted to Plant Physiology*.

YIN, Z; **BALMANT, K**; GENG, S; ZHU, N; ZHANG, T; DUFRESNE, C; DAI, S; CHEN, S (2017) Bicarbonate Induced Redox Proteome Changes in Arabidopsis Suspension Cells. *Front. Plant Sci.*, 8, 58:73. doi: 10.3389/fpls.2017.00058.

HUANG, L; KHUSNUTDINOVA, A; NOCEK, B; BROWN, G; XU, X; CUI, H; PETIT, P; FLICK, R; ZALLOT, R; **BALMANT, K**; ZIEMAK, MJ; SHANKLIN, J; CRÉCY-LAGARD, V; GREGORY III, JF; JOACHIMIAK, A; SAVCHENKO, A; YAKUNIN, AF; HANSON, A (2016) A family of metal-dependent phosphatases implicated in metabolite damage-control. *Nature Chemical Biology* doi:10.1038/nchembio.2108.

MOSTAFA, I; ZHU, N; YOO, MJ; **BALMANT, K**; MISRA, BB; DUFRESNE, C; ABOU- HASHEM, M; CHEN, S; EL-DOMIATY, M (2016) New nodes and edges in the glucosinolate molecular network revealed by proteomics and metabolomics of Arabidopsis myb28/29 and cyp79B2/B3. *Journal of Proteomics* 138, 1:19.

BALMANT, K; ZHANG, T; CHEN, S (2016) Protein phosphorylation and redox modification in stomatal guard cells. *Front Physiol.* 5, 7:26. doi: 10.3389/fphys.2016.00026.

BALMANT, K; PARKER, J; YOO, M; ZHU, N; DUFRESNE, C; CHEN, S (2015) Redox proteomics of tomato in response to *Pseudomonas syringae* infection. *Nature Horticulture Research* 2, 15043; doi:10.1038/hortres.2015.43.

PARKER J, **BALMANT K**, ZHU F, ZHU N, CHEN S (2015) cysTMTRAQ – An Integrative Method for Unbiased Thiol-based Redox Proteomics. *Mol Cell Proteomics*, 14(1):237-42.

Book Chapters

ZHU M, JEONG BW, GENG S, YU Y, **BALMANT K**, CHEN S, ASSMANN SM (2015) Preparation of Epidermal of Peels and Guard Cell Protoplast for Cellular, Electrophysiological, and –Omics assays of Guard Cell Function. In: *Plant Signal Transduction*. Springer New York, Pages 89-121. ISBN: 978- 1-4939-3115-6, 2015.

Annual Reports for Industrial Cooperatives

BALMANT KM, GEZAN S, KIRST M, MUNOZ P, PETER GF, POWELL G, RESENDE, MFR, ZHANG J. Cooperative Forest Genetics Research Program, Fifty-four annual progress report. Gainesville, FL, 2012.

Patents

KIRST, M., RESENDE JR., MFR., NEVES, LG., DERVINIS, C., **BALMANT, KM**. Method for Genome Complexity reduction and Polymorphism Detection, 2001.

RESENDE JR, MF; **BALMANT, KM**; LEACH, K; KIRST, M; DERVINIS, C. Genome editing by pollen-mediated transformation, 2018. Provisional Patent.

AWARDS

- 2018** Travel Award: 42nd New Phytologist Symposium The biology of wood: from cell to trees.
2018 The Best Poster Award: 42nd New Phytologist Symposium The biology of wood: from cell to trees.
2016 Graduate Student Member of Gamma Sigma Delta (GSD), the honor Society of Agriculture.
2015 Outstanding International Student Award –Alec Courtelis Award (University of Florida).
2015 GSC Travel Grant Award – University of Florida.
2014 Travel Award – 2014 Plant Proteomics Workshop in Madison, WI.
2013 4.0 GPA Certificate – Certificate of Outstanding for International Students to achieve high academic standards.

INVITED AND SELECTED PRESENTATIONS

- 2018** XXVI Plant and Animal Genome, San Diego, CA
2018 42nd New Phytologist Symposium The biology of wood: from cell to trees, Lake Tahoe, CA