SHANTEL A. MARTINEZ

[w] shantel-martinez.github.io [e] shantel.a.martinez@gmail.com [p] 1-509-846-6276

I am a quantitative crop scientist with a research focus on wheat genetics at Cornell University. I am seeking to continue working on projects with a direct application to the farmers by integrating my interdisciplinary agriculture knowledge, statistical genomics, and passion for data analytics. I believe strongly in being able to communicate science across disciplines and cultivating a collaborative work environment as fundamental career priorities.

EDUCATION

Ph.D.	Molecular Plant Science	Washington State University, Pullman WA	2018
M.S.	Crop	Washington State University, Pullman WA	2013
B.S.	Bioengineering	Washington State University, Pullman WA	2011

PROFESSIONAL EXPERIENCE

Crop Genetics and Prediction Modeling **2018 - Present**
Post-doctoral | Dr. Mark . Sorrells *Cornell University*
Producing genomic prediction models on large-scale wheat genomic and phenotypic datasets to reduce grain sprouting when cool and wet weather conditions occur right before harvest.

Improving Germplasm Resources for the Northwest **2013 - 2018**
PhD | Dr. Camille M. Steber *Washington State University*
Identified 12 new genetic locations that WSU and USDA wheat breeders immediately used to introgress tolerance into their germplasm. Increased grower knowledge on agronomic best practices were also a result of this project.

Director of Professional Development **2016 - 2017**
Graduate and Professional Student Association *Washington State University*
Implemented 30 new professional development events and served over 1,800 attendees while I coordinated and lead 11 graduate student senators and sat on both the PDI and GPSA Executive Boards.

Investigating a PHS Tolerant Wheat **2011 - 2013**
MS | Dr. Kimberly Garland Campbell *Washington State University*
Worked with a basic molecular geneticist and an applied wheat breeder to find an effective solution to PHS susceptibility through mutation genetics and field trials.

SKILLS

CROP SCIENCE: plant breeding, genome-wide association studies, quantitative genetics, genomic prediction, PCA, research-based statistics, data mining, regression and Bayesian modeling, GLM, MLM, large-scale field data collection and coordination, cereal field agronomy

PROGRAMMING:
Daily: R (dplyr, rrblup, bglr, ggplot), SAS, Git, markdown, Jupyter Notebook
Basic: python, unix, HTML, LaTeX, MATLAB

TRANSFERABLE: strong layman communication, technical writing, data visualization, data manipulation and analysis, team management, project management, peer-to-peer communication, professionalism, strong organization, interdisciplinary collaboration, building relationships with top-level leadership

RELEVANT WORKSHOPS / COURSES

Principles of Machine Learning: R Edition	enrolled
Data Carpentry Workshop: R and Git	2017
Software Carpentry Workshop: Unix and Python	2014

COMMUNICATION

INVITED TALKS | TECHNICAL

Genomic Prediction | ASA, CSSA, SSSA International Annual Meeting, San Antonio, TX	[pdf] 2019
Genomic Prediction | Eastern Wheat Quality Council Meeting, Raleigh, NC.	[pdf] 2019
GWAS | Western Wheat Quality Meeting, Portland, OR	[pdf] 2019
QTL Mapping | International Seed Science Society Conference, Monterey, CA	[pdf] 2017
GWAS | ASA, CSSA, SSSA International Annual Meeting, Phoenix, AZ	[pdf] 2016
Seed Biology | Plant and Animal Genome Conference, San Diego, CA	[pdf] 2016

OUTREACH | NON-TECHNICAL

Twitter @s_amealia | Audience: Breeders, **Graduate Students, Data Scientists**	-
Instagram @s_amealia | Audience: **Public, Families, Students**	-
SciComm Workshop: training on communicating science to the general audiences	2019
Small Grains Field Days | Audience: **Farmers, Breeders, Pathologists**	2018
Grow NYC Variety Showcase | Audience: Chefs, Public**, Fresh Market Buyers**	2018
WSU Extension Wheat Academy Workshop | Audience: **Producers**, **Farmers**	2017

MENTORING

Katherine Roberts, Project Award: 1st Place Plant Science	2019
Samantha Beck, Project Award: 1st Place Molecular Biology	2017
Dustin Cwuick, Project Award: 2nd Place Molecular Biology	2016

PROFESSIONAL/DEPARTMENTAL SERVICES | SELECTED

Journal Peer Reviewer**:** Agronomy, Molecular Breeding, Plants, TAG	2018-2019
Corteva Plant Breeding Symposium: Host speakers, implementation of symposium	2019
WSU Upward Bound Internship Program: Recruiter, volunteer, mentor	2009-2015

AWARDS AND FUNDING | SELECTED

NIFA-AFRI Education and Literacy Initiative Grant	2018-2020
Research Assistantship - AFRI-NIFA Plant Breeding Grant	2016-2017
GPSA Senator Excellence Award	2015-2016
GPSA Research Expo - Agriculture & Natural Science 1st place	2016
Teaching Assistantship for Plant Breeding	2015

PUBLICATIONS

1. **Martinez, S.A.**, O. Shorinola, S. Conselman, D. See, D.Z. Skinner, C. Uauy, and C.M. Steber. (2019). Exome sequencing of bulked segregants identified a novel *TaMKK3-A* allele linked to the wheat *ERA8* ABA-hypersensitive germination phenotype. bioRxiv Preprint 784652. *Accepted: TAG*

2. **Martinez, S.A.**, Godoy J., Huang M., Zhang Z., Carter A.H., Garland Campbell, K.A., and Steber, C.M. (2018a). Genome-Wide Association Mapping for Tolerance to Preharvest Sprouting and Low Falling Numbers in Wheat. Frontiers in Plant Science. 9, 1-16.
3. **Martinez, S.A.**, Thompson A.L., Wen N., Murphy L., Sanquinet K.A., M., Steber, C.M., and Garland Campbell, K. (2018b). Registration of the Louise/Alpowa Wheat Recombinant Inbred Line Mapping Population. Journal of Plant Registrations.
4. **Martinez, S.A.**, Tuttle, K., Takebayashi, Y., Seo, M., Garland Campbell, K., and Steber, C.M. (2016). The Wheat ABA Hypersensitive ERA8 Mutant is Associated with Increased Preharvest Sprouting Tolerance and Altered Hormone Accumulation. Euphytica. 212, 229-245.
5. Tuttle, K.M., **Martinez, S.A.**, Schramm, E.C., Takebayashi, Y., Seo, M., and Steber, C.M. (2015). Grain dormancy loss is associated with changes in ABA and GA sensitivity and hormone accumulation in bread wheat, Triticum aestivum (L.). Seed Science Research 1–15.
6. **Martinez, S.A.**, Schramm, E.C., Harris, T.J., Kidwell, K.K., Garland-Campbell, K., and Steber, C.M. (2014). Registration of Zak Soft White Spring Wheat Germplasm with Enhanced Response to ABA and Increased Seed Dormancy. Journal of Plant Registrations 8, 217-220.

REFERENCES

Dr. Mark E. Sorrells Professor of Plant Breeding and Genetics
Cornell University: Plant Breeding and Genetics Section
Phone: 1-607-255-1665 mes12@cornell.edu

Dr. Camille M. Steber Molecular Geneticist
USDA - Agricultural Research Services: Wheat Health, Genetics, and Quality Research Unit
Phone: 1-509-335-2887 csteber@wsu.edu

Dr. Kimberly A. Garland Campbell Research Geneticist and Club Wheat Breeder
USDA - Agricultural Research Services: Wheat Health, Genetics, and Quality Research Unit
Phone: 1-509-335-0582 kgcamp@wsu.edu

Dr. Arron H. Carter Associate Professor and O.A. Vogel Endowed Chair of Wheat Breeding
Washington State University: Department of Crop and Soil Sciences
Phone: 1-509-335-6198 ahcarter@wsu.edu

Dr. Lesley A. Murphy Product Assessment Scientist
Bayer Crop Science
Phone: 1-314-526-1278 dr.lesley.murphy@gmail.com