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a) Education/Training

Institution and Location	Degree	Year(s)	Field of Study
University of Arkansas, Fayetteville, AR	PhD	2005-2008	Plant Breeding and Molecular Biology
University of Arkansas, Fayetteville, AR	MSc	2003-2005	Plant Breeding and Molecular Biology
Zamorano, Pan-American Agricultural School, Honduras	BSc	1998-1999	Crop Protection
Zamorano, Pan-American Agricultural School, Honduras	Associate Degree	1995-1997	Agronomy

b) Positions and Employment

-2020-present. Associate Professor, Department of Horticultural Sciences. Texas A&M AgriLife Research and Extension Center, Weslaco, TX

-2014-2020. Assistant Professor, Department of Horticultural Sciences. Texas A&M AgriLife Research and Extension Center, Weslaco, TX

-2008-2014. Post-Doctoral Research Associate, Dept. of Entomology, U. of Arkansas, Fayetteville, AR.

-2000-2002. New Crops Researcher. National Institute of Agricultural Science and Technology (DICTA), Honduran Department of Agriculture (SAG), Tegucigalpa, Honduras.

c) Professional Experience

-Courses Guest-Lectured: a) Vegetable Crop Production (HORT 325). Topic: Production of vegetables on protected structures. Texas A&M. b) Plant Breeding (HORT 404). Vegetable breeding program in South Texas. Topic: Vegetable Breeding Program at Weslaco-Texas: Breeding, molecular biology, and production systems. Texas A&M, c) Science of Foods for Health (HORT 641). Topic: Plant Breeding for human health. Texas A&M, d) Insect Physiology and Molecular Biology Lab (ENTO 6113). Topic: Primer design and real time quantitative PCR (RT-qPCR). U. of Arkansas, e) Ag Biotech (CPA 4293). Topic: Tomato improvement using conventional and molecular techniques, Zamorano University, Honduras

- Student Advising: a) Serving as a committee member for two Ph.D. and two M.Sc. students at Texas A&M. b) Trained three undergraduate students at at Texas A&M AgriLife, including the South Texas College Step-UP participation program.

-Chair of the American Science for Horticultural Science Vegetable breeding working group for the period 2017-2018.

- Member of the USDA Leafy Vegetable Crop Germplasm Committee (LVCGC)

-Peer reviewer: Frontiers in Plant Science (Review editor), Plant Breeding, Journal of the American Society for Horticultural Science, Arthropods-Plant Interaction, Biological Control, African Journal of Biotechnology, Plant Physiology & Biochemistry Journal, PLOS One, and J. of Insect Science.

d) List of publications

Five most relevant publications:

- Shi, A., G. Bhattarai, H. Xiong, **C.A. Avila**, C. Feng, B Liu, V. Joshi, L. Stein, B. Mou, L. duToit, and J. Correll. 2022. Genome-wide association study and genomic prediction of white rust resistance in USDA GRIN spinach germplasm. *Horticulture Research* 9:uhac069.
- Awika, H. O., J. Solorzano, U.C. Rivera, A. Shi, J. Enciso, and **C.A. Avila***. 2021. Prediction modeling for yield and water-use efficiency in spinach using remote sensing via unmanned aerial system. *Smart Agricultural Technology*. 1:100006.
- Awika, H, Cochran, V. Joshi, R. Bedre, K.K. Mandadi, **C.A. Avila***. 2020. Single-marker and haplotype-based association analysis of anthracnose (*Colletotrichum dematium*) resistance in Spinach (*Spinacia oleracea*). *Plant Breeding* 139:402-418. DOI: 10.1111/pbr.12773
- Awika, H, R. Bedre, J. Yeom, T.G. Marconi, J. Enciso, K.K. Mandadi, J. Jung, **C.A. Avila**. 2019. Developing Growth-Associated Molecular Markers Via High-Throughput Phenotyping in Spinach. *The Plant Genome Journal* 12(3):1-19
- Awika, H.O., T.G. Marconi, R. Bedre, K.K. Mandadi, **C.A. Avila***. 2019. Minor Alleles are Associated with White Rust (*Albugo occidentalis*) Susceptibility in Spinach (*Spinacia oleracea*). *Horticulture Research*. (6):129

Additional Relevant Publications:

- Rueda, D., H.O. Awika, R. Bedre, D.R. Kandel, K.K. Mandadi, K. Crosby, **C.A. Avila**. 2022. Phenotypic diversity and association mapping of spinach content in spinach. *Frontiers in Genetic*. 12:752313. doi: 10.3389/fgene.2021.752313
- Awika, H.O., A.K. Mishra, H. Gill, J. DiPiazza, **C.A. Avila**, and V Joshi. 2021. Selection of Nitrogen Responsive Root Architectural Traits in Spinach Using Machine Learning and Genetic Correlations. *Scientific Reports*. 11:9536
- Chang, A., J. Jung, J. Yeom, M.M. Maeda, J.A. Landivar, J.M. Enciso, **C.A. Avila**, and J.R. Anciso. 2021. Unmanned Aircraft System (UAS) based high throughput phenotyping (HTP) for Tomato Yield Estimation. *Journal of Sensors* 8875606
- Bhattarai, G., A. Shi*, D.R. Kandel, N. Solis-Gracia, J.A. da Silva, and **C.A. Avila**. 2021. Genome-wide simple sequence repeats (SSR) markers discovered from whole-genome sequence comparisons of multiple spinach accessions. *Scientific Reports*. 11:9999.
- Avila, C.A.***, T.G. Marconi, Z. Vilorio, Kurpis, S. del Rio. 2019. *Bactericera cockerelli* resistance in the wild tomato *Solanum habrochaites* is polygenic and influenced by the presence of *Candidatus Liberibacter solanacearum*. *Scientific Reports* 9:14031
- Enciso, J, **C.A. Avila**, J. Jung, S. Farag, A. Chang, J. Yeom, J. Landivar, M. Maeda, J.C. Chavez. 2019. Validation of agronomic UAV and field measurements for tomato varieties. *Computers and Electronics in Agriculture journal* (158)278-283
- **Avila, C.A***, S.C. Irigoyen and K. Mandadi. 2017. Tomato plant responses to biotic and abiotic stress. In Mattoo, A. and A.K. Handa Editors. Achieving sustainable tomato cultivation. Burleigh Dodds Science Publishing Limited, Cambridge, UK.