



PROFILE

- Highly motivated Ph. D. candidate with cross-training in traditional plant breeding, molecular biology, quantitative genetics, genomics, and bioinformatics
- 5+ Years of experience in plant breeding and horticultural sciences research
- Strong knowledge of blueberry genetics, physiological characteristics, and crop management
- Proven ability to collaborate effectively with interdisciplinary groups, including scientists, technicians, and breeders, to achieve project goals
- Demonstrated leader with a track record of managing teams to deliver projects successfully

KEY SKILLS: Experimental design, Data analysis and visualization, MS Office Suite, Programming (R, Unix/BASH), Image analysis (ImageJ), Team and Project management, Scientific communication

EDUCATION

Ph. D. Molecular Plant Breeding

Aug. 2020–Expected May 2024

University of Florida, Gainesville FL

Research focus: Developing molecular breeding tools and strategies for improving blueberry fruit set and yield

B. Sc. Microbiology, Plant Molecular and Cellular Biology

Aug. 2016–Aug. 2020

University of Florida, Gainesville FL

Activities: Undergraduate Research; Minorities in Agriculture, Natural Resources and Related Sciences (MANRRS); Food Science and Human Nutrition Club; Captain of UF Sailing Team

EXPERIENCE

Ph. D. Candidate | Blueberry Breeding and Genomics Laboratory

Aug. 2020–Present

Advisor: Dr. Patricio R. Muñoz, University of Florida

- Evaluation of advanced breeding material for flowering and fruit set related traits
- GWAS, GS, and RNA-Seq for blueberry self-compatibility and parthenocarpy
- Data analysis to inform crosses and selections for the SHB breeding program
- Hiring and coordination of undergraduate students for research projects

Research Assistant | Blueberry Breeding and Genomics Laboratory

Mar. 2018–Aug. 2020

Advisors: Drs. Patricio Muñoz & Ivone de Bem Oliveira, University of Florida

- Evaluation of 22 fruit set and yield component traits in blueberry breeding populations for implementation in multi-trait genomic selection
- Breeding operations activities: pollination, planting, propagation, seed extraction
- Wet lab: Fruit quality analysis, DNA extraction, PCR, gel electrophoresis

Research Assistant | Space Biology Laboratory

Aug. 2017–Aug. 2019

Advisors: Drs. Rob Ferl and Anna-Lisa Paul, University of Florida

- Assessed genotypic and phenotypic effects of exposure to cosmic radiation for food production at the International Space Station

PUBLICATIONS

Cromie, J., Cullen, R., Sawyer, T., Benevenuto, J., Ferrão, L.V.F., Muñoz, P.R. *Identification of candidate genes for blueberry parthenocarpy through genomic and transcriptomic analyses.* (In preparation)

Cullen, R., Cromie, J., Sawyer, T., Benevenuto, J., Muñoz, P. R. *Effects of pollinator restriction on blueberry fruit quality.* (In preparation)

Califar, B., Tucker R., Cromie, J., Sng, N., Schmitz, R. A., Callaham, J. A., Barbazuk, B., Paul, A-L., Ferl, R. J. (2018). *Approaches for Surveying Cosmic Radiation Damage in Large Populations of Arabidopsis thaliana Seeds.* Gravitational and Space Research 6(2): 54-73. DOI: 10.2478/GSR-2018-0010

SELECTED PRESENTATIONS

● Poster ● Oral

- 2023-01 Cromie, J., Cullen, R., Enciso-Rodriguez, F., Benevenuto, J., Muñoz, P.R.. Using multiple haplotype genomes to identify candidate genomic regions associated with parthenocarpic ability in southern highbush blueberry. International Plant and Animal Genome. San Diego, CA. (●)
- 2022-08 Cromie, J., Cullen, R., Benevenuto, J., Ferrão, L.V.F., Muñoz, P. R.. Investigating the Genetic Control of Parthenocarpy for Improving Yield in Southern Highbush Blueberry. American Society of Horticultural Sciences Conference. Chicago, IL. (●)
- 2022-04 Cromie, J. Developing Breeding Strategies for Improved Yield. International Blueberry Meeting. Tampa, FL. (●)
- 2021-08 Cromie, J., Ternest, J., Acker, M., Muñoz, P.R.. Flower and Nectar Phenology of Southern Highbush Blueberry: Implications for Pollination and Fruit Set. American Society of Horticultural Sciences. Denver, CO. (●)
- 2019-08 Cromie, J., de Bem Oliveira, I., Frezer, A. E., Krell, A., Reilly, T. E., Arcanjo, A., Muñoz, P. R. Yield-component trait identification and analysis for Southern Highbush Blueberry (*Vaccinium* spp.). National Association of Plant Breeders Annual Meeting. Pine Mountain, GA. (●)
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GRANTS, AWARDS, AND DISTINCTIONS

- 2023 Bayer ENCOMPASS Scholar
- 2022 UF Plant Breeding Graduate Initiative Grant as Co-Investigator
- 2022 Travel Award American Society of Horticultural Science (\$500)
- 2022 Travel Award UF Graduate School Council (\$350)
- 2022 UF Graduate School Preeminence 4-Year Award (\$70,000)
- 2019 Inaugural Undergraduate Poster Award National Association of Plant Breeders (\$250)
- 2018 First Prize Poster Award American Society of Gravitational and Space Research (\$500)
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RESEARCH SUPERVISION AND ADVISEES

- 2023-Present Tara Hines (Horticultural Sciences Senior Capstone Internship)
- 2022-Present Andrew Komatz (Undergraduate Honor's Thesis)
- 2022-Present Taylor Sawyer (Field/Lab Technician, Bioinformatics Independent Research Project)
- 2020-2021 Mia Acker (Post-Graduate Lab Technician)
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OUTREACH

Florida Blueberry Grower's Association (FBGA) Semi-Annual Meetings. Participation in semi-annual meetings with Florida blueberry grower's to gain industry insights and updates, and connect with growers and trial-site collaborators

2022 Florida Foundation of Seed Producers International Blueberry Meeting. Presented my Ph. D. research projects for global blueberry producers and industry members

ORGANIZATIONAL LEADERSHIP & INVOLVEMENT

- 2020-Present Minorities in Ag, Natural Resources, & Related Sciences (MANRRS), Secretary, 2021-2022 Publicity and Social Media Director
- 2019-Present National Association of Plant Breeders (NAPB), Member
- 2020-Present American Society of Horticultural Sciences (ASHS), Member