Nicolas Jimenez

CONTACT

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LinkedIn

EDUCATION

Ph.D. in Agronomy
University of California, Davis
09/2019-07/2024
Davis, CA

M.S. in Plant Physiology and Production
Pontificia Universidad Católica de Chile
03/2014-02/2016
Santiago, Chile

B.S. in Agronomy
Pontificia Universidad Católica de Chile
03/2007-12/2013
Santiago, Chile

TECHNICAL SKILLS

Genome-Wide Analysis
GWAS, QTL Mapping, Genomic Selection

Molecular Marker Development
Variant Calling, Primer Assay Design, PCR

Bioinformatics and Transcriptomic Data Analysis
R, Bash, RNA-seq pipelines, qPCR

SOFT SKILLS

Highly motivated and curious, with fast learning pace. Quick to grasp complex concepts and acquire technical skills independently. Thrive in collaborative interdisciplinary teams. Able to translate scientific data into actionable breeding applications.

WORK EXPERIENCE AND PROJECTS

Research Associate
Blueberry & Cranberry Breeding Program, Rutgers University
02/2026-Present / New Jersey, U.S.A

Postdoctoral Research
Blueberry & Cranberry Breeding Program, Rutgers University
09/2024-02/2026 / New Jersey, U.S.A

- Studied **genetic diversity** and demographic history in **wild cranberry** populations to inform **pre-breeding strategies**.
- Researched **genetic architecture** and **genomic prediction strategies** for fruit quality traits in **blueberry and cranberry**.
- Studied **genetic resources** and **genome-wide methods** to enhance **flavonol in cranberry fruit** (Jiménez et al., 2025).
- **Awarded the 2025 Specialty Crop Grant Program** to explore **leaf flavonoids for dual-purpose and early selection** of resilient and health-promoting cranberry cultivars.
- Participated in **annual meetings** of the American **cranberry growers'** association.
- **Mentored graduate students** from the Plant Biology Graduate Program.

Ph.D. Student

Genetic Architecture of Firmness in Strawberry (Jiménez et al., 2024)

- Detected a **historical locus** for strawberry **firmness,** where a highly expressed polygalacturonase gene was co-localized with lead SNPs.
- Discovered **DNA variants** strongly associated with the firmness locus and **additional loci** involved in fruit softening in strawberry.

Phytophthora Resistance in Strawberry (Jiménez et al., 2023)

- Explored strawberry resistance to **Phytophthora crown rot** through **genomic selection** and a key **locus** for breeding.
- Leveraged **gene bank resources** to improve Phytophthora crown rot resistance.

Fruit Quality and Shelf-Life in Strawberry

- Analyzed **crossbreeding long-shelf-life cultivars and heirlooms** to enhance **consumer preference-related traits.**
- Demonstrated **self-life fruit quality traits** can be reliably **predicted at harvest.**
- Found **new loci** for firmness, sugar, acids, and anthocyanin content harbored **within families.**
- Explored **genomic prediction strategies** to improve strawberry fruit quality.

Research Assistant
Instituto de Investigación Agropecuaria (INIA)
12/2015-12/2017 / Santiago, Chile

- Led **phenotyping of fruit quality traits** in table grape breeding program.
- Detected **stable QTLs** associated with the complex nature of the **seedless trait** in table grape (Ocarez et al., 2020).