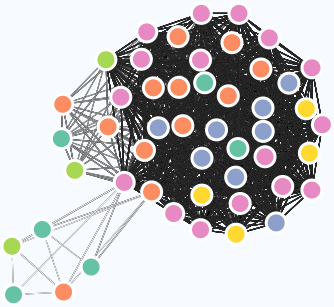
ALEX RAJEWSKI

Cancer genomics core bioinformatician with extensive experience in single-cell sequencing, spatial transcriptomics, epigenetics, genome assembly, and phylogenetics. Also skilled in pipeline development, include Nextflow, Docker, Singularity, and Git. I am an excellent science communicator to both public and professional audiences.



EDUCATION

2020 | 2015
PhD Plant Biology
University of California, Riverside

2015 | 2013
MS Horticulture
University of Georgia

2010 | 2006
BS Biochemistry, Cell, and Molecular Biology
Drake University

WORK EXPERIENCE

current | 2021
Research Bioinformatician II
Cedars-Sinai Genomics Core

- Advanced analysis of single-cell RNA-seq, spatial transcriptomics, WES/WGS, CUT&Tag, ATAC-seq
- Pipeline development with Nextflow, Docker, and Git

2020 | 2015
Research Assistant
University of California, Riverside

- Created and characterized CRISPR mutants for a trait validation project
- Sequenced, assembled, and functionally annotated the genome of *Datura stramonium*

2015 | 2013
Research Assistant
University of Georgia

- NGS and microsatellite analysis of poplation genetic structure

2012 | 2011
Congress-Bundestag Fellow & Research Intern
Universität Rostock

- Vaccine production in transgenic plants
- Developed plant transformation methods in lupine, pea, tobacco, and potato

CONTACT

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github.com/rajewski
rajewski.github.io
in/alexrajewski
Rajewski

LANGUAGE SKILLS

- R
- German
- Docker/Singularity
- Shell
- Nextflow
- Python
- SQL
- 汉语

2011 | 2010

Research Assistant

Pioneer Hi-Bred (Corteva)

- Developed SQL database to integrate phenotypic and genotypic measurements

Aug 2009 | May 2009

NSF Research Intern

North Carolina State University

- Validated viral protein production in novel hosts

PEER-REVIEWED PUBLICATIONS

2022

Multispecies Transcriptomes Reveal Core Fruit Development Genes

Frontiers in Plant Science (Submitted)
Alex Rajewski, Dinusha Maheepala, Jessica Le, Amy Litt

2022

microRNA-16 mediates anti-fibrotic effects of exosomes in rats with heart failure and preserved ejection fraction

Journal of Clinical Investigation (Submitted)
Jae Hyung Cho, **Alex Rajewski**, Catherine Bresee, Myung Yoon Kim, Thassio Mesquita, Xaviar Jones, Isabelle Pellot, Wenxie Liu, Lizbeth Sanchez, Asma Nawaz, Ahmed Ibrahim, Russell Rogers, Eugenio Cingolani, Eduardo Marbán

2022

SOX9 switch orchestrates dynamic Wnt niches and kidney myofibroblast activity

Nature (Submitted)
Z. Wang; S. Aggarwal; **A. Rajewski**; M.K. Bhasin; K. Suresh; M. Yamashita; H. Akiyama; S.A.Karumanchi; S.C. Jordan; P.W. Noble; P.E. Cippà; S. Kumar.

2021

Datura Genome Reveals Duplications of Psychoactive Alkaloid Biosynthetic Genes and High Mutation Rate Following Tissue Culture

BMC Genomics
Alex Rajewski, Derreck Carter-House, Jason Stajich, and Amy Litt

2021

The pulmonary microbiome–angiotensin axis locally reprograms CXCR4hi neutrophils in the lung.

Journal of Experimental Medicine (Submitted)
M. Kim; A.R. Victor; Z. Peng; **A. Rajewski**; D. Cao; G. Leite; S. Saito; C. Liu; E.A. Bernstein; L.C. Veiras; Z. Khan; J.F. Giani; D.M. Underhill; X. Cui; S. You; K.E. Bernstein; D. Okwan-Duodu.

2019

in Vitro Plant Regeneration and *Agrobacterium tumefaciens*-mediated Transformation of *Datura stramonium*

Applications in Plant Science
Alex Rajewski, Kevan Elkins, Ashley Henry, Joyce Van Eck, and Amy Litt

2019

Evolution and Diversification of *FRUITFULL* Genes in Solanaceae

Frontiers in Plant Science
Dinusha Maheepala, Chris Emerling, **Alex Rajewski**, Jenna Macon, Maya Stahl, Natalia Pabón-Mora, and Amy Litt

2018 **Classification and phylogenetic analyses of the Arabidopsis and tomato G-type lectin receptor kinases**
BMC Genomics
Marcella A. Teixeira, **Alex Rajewski**, Jiangman He, Olenka G. Castaneda, Amy Litt, and Isgouhi Kaloshian

TEACHING EXPERIENCE

2019 **Tools for building highly customized figures**
Botany Conference — Tucson, AZ
- Co-taught a workshop using base R graphics for data presentation

2019 **Making Your Work Environment LGBTQ+ Welcoming and Affirming**
Plant Biology Conference — San Jose, CA
- Hosted a panel discussion on LGBTQ+ representation and workplace issues
- Recruited speakers from both academia and industry

2018 **California's Cornucopia (TA)**
UCR Dept of Botany and Plant Science — Riverside, CA
- Led discussion sections for 120 students
- Introductory, non-major course

2016 **Foundations of Plant Biology (TA)**
UCR Dept of Botany and Plant Science — Riverside, CA
- Designed and led lab sections for 80 students
- Broad, upper-division course

OUTREACH

current | 2010 **Extension Master Gardener**
California, Iowa, Kansas, Georgia

current | 2018 **Big Brother**
Big Brothers Big Sisters of the Inland Empire

2020 | 2016 **Community OUTreach Educator**
University of California, Riverside

2020 | 2017 **Mentor**
Planting Science

2018 | 2017 **President**
UCR Queer (LGBT) Graduate Student Association

2018 | 2017 **Academic Affairs Officer**
University of California, Riverside

2018 | 2017
Secretary, Botany Grad Student Assoc.
University of California, Riverside

2018 | 2016
Mentor, Grad Student Mentorship Program
University of California, Riverside

2017 | 2016
Member Services Taskforce
American Society for Horticultural Science (ASHS) Conference

2016 | 2014
Chair, Grad Student Working Group
American Society for Horticultural Science (ASHS) Conference

2015 | 2013
Vice President, Horticulture Grad Student Assoc.
University of Georgia

2010 | 2009
President, Beta Beta Beta
Drake University

ORAL AND POSTER PRESENTATIONS

2020
Multispecies fruit transcriptomes highlight divergence across developmental and evolutionary time
Oral presentation
Botany Conference

2019
Hybrid Origin of Bamboo Population Inferred from Haplotype-Phased Amplicon sequencing
Southern California Evolutionary Genetics and Genomics Meeting
Oral presentation

2019
Identification of Conserved Regulatory Modules in Dry and Fleshy Fruit Development
Oral presentation
Botany Conference

2017
There and Back Again: When Evolution Reverses
Three-Minute Thesis Competition
American Society for Horticultural Science (ASHS) Conference
- 3rd Place Award

2017
Optimizing Tissue Culture Methods in Diverse Nightshade Species
Poster Presentation
ASHS Conference

2017
Developmental Transcriptome of *Nicotiana obtusifolia*
Poster Presentation
UC Riverside CEPCEB Post-Doc Symposium

2016
Optimizing Tissue Culture Methods in Diverse Solanaceae Species
Poster Presentation
Solanaceae Conference

2016 — **Evidence of Interspecific Hybridization or Incomplete Lineage Sorting in River Cane (*Arundinaria gigantea*)**
Oral presentation
ASHS Conference

2016 — **A Family Divided: Evolution of Dry and Fleshy Fruit in Nightshades**
Three-Minute Thesis Competition
ASHS Conference
• 1st Place Award

2016 — **Role of *FRUITFULL* in the Evolution of Fleshy Fruits: Optimizing Solanaceae Tissue Culture to Generate Stable Transgenic Knockout Lines**
Oral presentation
Botany Conference

2015 — ***In Vitro* Comparison of Benzyladenine and *meta*-Topolin on Shoot Proliferation of River Cane, a Candidate for Wetlands Restoration**
Poster Presentation
ASHS Conference

2015 — **Raising Cane: Sustainable Bamboo Restoration in the American Southeast**
Three-Minute Thesis Competition
ASHS Conferencee
University of Georgia
• 1st Place Award at ASHS
• Top 10 at UGA

2015 — **Clonal Structure, Genetic Diversity, and *in vitro* Propagation of River Cane (*Arundinaria gigantea*), a candidate for use in wetlands reclamation**
Oral presentation
Southern Region ASHS Conference

2014 — **Disinfestation and *in vitro* Growth and Development of *Arundinaria***
Oral presentation
UGA Interdisciplinary
Graduate Plant and Soil Symposium
• 1st Place Award (Masters Category)

2014 — **Sterilization and *in vitro* Growth and Development of *Arundinaria***
Poster Presentation
Southern Region of North America
International Plant Propagators Society Conference

2009 — **Comparison of the Symptoms Caused by Three Geminiviruses in a Common Host**
Poster Presentation
NCSU Summer Undergraduate Research Symposium
Drake University Conference on Undergraduate Research in the Sciences