

# Christopher J. Fiscus, PhD

**Bioinformatics Scientist**  
San Diego, California

☎ 1-209-613-9384  
✉ fiscuscj@gmail.com  
in fiscuscj  
🌐 cjfiscus

## Summary

R&D Scientist with extensive experience in bioinformatics, computational biology, and data science. Strong track record of leading high-impact research projects within cross-functional teams. Expert communicator with a talent for translating complex technical information to diverse stakeholders, fostering collaboration and driving project success.

## Professional Experience

**Bioinformatics Scientist**  
Exact Sciences Corp.

10/2024 - Present  
San Diego, CA

**Postdoctoral Researcher**  
University of California, Irvine

09/2022 - 09/2024  
Irvine, CA

- Conducted cutting-edge research on wild grape genomics utilizing novel genomics and machine learning algorithms, leading to 4 conference presentations (3 talks, 1 poster) and 2 peer-reviewed publications
- Led a team of 4 in the 2023 Pan-Structural Variation Hackathon in the Cloud, designed an algorithm to characterize copy number variation from next generation sequencing data
- Developed and implemented bioinformatics algorithms for analysis of multi-omics NGS sequencing data in a high-performance computing environment

**Graduate Student Researcher**  
University of California, Riverside

09/2016 - 09/2022  
Riverside, CA

- Contributed to genomics research projects as part of a cross-functional R&D team, leading to 3 peer-reviewed publications and 8 conference presentations (2 talks, 6 posters)
- Developed a novel pipeline utilizing K-mer frequencies from WGS reads to profile genomes, estimate repeat copy number variation, and map genetic basis of CNV using GWAS
- Mentored and managed teams of 1-2 direct reports (5 mentees total), enhancing their technical skills and contributing to successful project outcomes

**Quality Control Laboratory Technician**  
Charles Krug Winery

12/2015 - 08/2016  
St. Helena, CA

- Conducted enology laboratory tests throughout production, ensuring legal compliance and maintaining quality standards across multiple product lines
- Redesigned 5 SOPs for quality control laboratory assays, improving laboratory efficiency by 20% and ensuring consistent, reliable testing procedures
- Collaborated with production teams to identify and resolve product quality issues, enhancing overall product consistency through thorough data analysis and problem-solving

**Harvest Laboratory Technician**  
Charles Krug Winery (via Apex Life Sciences)

08/2015 - 12/2015  
St. Helena, CA

- Conducted enology laboratory tests and data evaluation supporting the production of 1.5 million cases annually

## Skills

- **Data analysis:** inferential statistics, regression, clustering, PCA, machine learning (random forests)
- **Programming:** R (tidyverse, ggplot2), bash, python

- **Bioinformatics:** NGS data analysis, SNP calling, GWAS, bwa, GATK, samtools/bcftools, bedtools, plink
- **Computing:** Unix command line, AWS, SLURM (HPC), conda, git (version control), snakemake (workflow)

## Education

### Ph.D. Genetics, Genomics and Bioinformatics

2022

University of California, Riverside

### B.S. Biotechnology

2015

University of California, Davis

## Certifications

### AWS Cloud Technical Essentials

11/2023

Coursera

## Publications 0000-0001-9569-1809

**Fiscus CJ**, Koenig D. The genetic control of rapid genome content divergence in *Arabidopsis thaliana*. eLife. 2025. doi:10.7554/elife.108238.1

Martin GT, **Fiscus CJ**, Gaut BS. Quantifying the evolution of SNPs that affect RNA secondary structure in *Arabidopsis thaliana* genes. Mol Biol Evol. 2025; msaf126. doi:10.1093/molbev/msaf126

**Fiscus CJ**, Aguirre-Liguori JA, Gaut GRJ, Gaut BS. Mutational load and adaptive variation are shaped by climate and species range dynamics in *Vitis arizonica*. New Phytol. 2025 doi:10.1111/nph.70238

Landis JB, Guercio AM, Brown KE, **Fiscus CJ**, Morrell PL, Koenig D. Natural selection drives emergent genetic homogeneity in a century-scale experiment with barley. Science. 2024;385: eadl0038. doi:10.1126/science.adl0038

Deb SK, Kalra D, Kubica J, Stricker E, Truong VQ, Zeng Q, **Fiscus CJ**, [41 authors], Sedlazeck FJ, Busby B. The fifth international hackathon for developing computational cloud-based tools and resources for pan-structural variation and genomics. F1000Res. 2024;13: 708. doi:10.12688/f1000research.148237.1

**Fiscus CJ**, Herniter IA, Tchamba M, Paliwal R, Muñoz-Amatriaín M, Roberts PA, Abberton M, Alaba O, Close TJ, Oyatomi O, Koenig D. The pattern of genetic variability in a core collection of 2,021 cowpea accessions. G3. 2024. doi:10.1093/g3journal/jkae071

Martinez SE, Conn CE, Guercio AM, Sepulveda C, **Fiscus CJ**, Koenig D, Shabek N, Nelson DC. A KARRIKIN INSENSITIVE2 paralog in lettuce mediates highly sensitive germination responses to karrikinolide. Plant Physiol. 2022. doi:10.1093/plphys/kiac328