

# JENNIFER BLANC

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## EDUCATION

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### University of Chicago

November 2024

*Ph.D. and M.S. in Human Genetics*

- NHGRI F31 Ruth L. Kirschstein Predoctoral Individual National Research Service Award
- Program Award for Outstanding Performance in the General Field of Human Genetics

### University of California, Davis

June 2018

*B.S. in Genetics and Genomics, Minor in Statistics*

- Graduated with highest honors (top 2%)
- Outstanding Senior in Genetics and Genomics Award

## EXPERIENCE

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### Data Science Preceptor

August 2025 - Present

*Data Science Institute, University of Chicago*

Teaching and mentoring data science undergraduates at the University of Chicago and City Colleges of Chicago

### Postdoctoral Scholar

December 2024 - June 2025

*Department of Human Genetics, University of Chicago*

Supervisor: Dr. Jeremy Berg

Developed statistical genetics methods and conducted large-scale data analysis

### Ph.D. Candidate

September 2018 - November 2024

*Department of Human Genetics, University of Chicago*

Supervisor: Dr. Jeremy Berg

Thesis: Testing for differences in polygenic scores in the presence of confounding

### Student Researcher

September 2017 - August 2018

*Department of Evolution and Ecology, University of California, Davis*

Supervisors: Dr. Graham Coop and Dr. Emily Josephs

Thesis: Local adaptation contributes to gene expression divergence in maize

### Summer Undergraduate Research Student

June 2017 - August 2017

*Icahn School of Medicine at Mount Sinai*

Supervisor: Dr. Eimear Kenny

Studied the demographic history of Oceanic populations using identity-by-descent

### Student Researcher

April 2015 - June 2017

*Department of Evolution and Ecology, University of California, Davis*

Supervisor: Dr. Michael Turelli

Lead an independent project mapping the genetic basis of cytoplasmic incompatibility

### High School Intern

April 2015 - June 2015

*Department of Plant Sciences, University of California, Davis*

Supervisor: Dr. Li Tian

Assisted with a project to sequence the genes involved in the first step of a hydrolysable tannin

## TECHNICAL SKILLS

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<b>Programming</b>	R (including tidyverse and base R), Python, Shell scripting
<b>Data Analysis</b>	Snakemake, PLINK, GCTA, SAMtools, GATK
<b>Laboratory</b>	PCR, DNA Extraction/Purification, qPCR, Inverse PCR, Bacterial Cloning, Gel Electrophoresis, <i>Drosophila</i> stock keeping and crossing experiments

## TEACHING EXPERIENCE

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### Course Instructor

**QBio: Quantitative Analysis Bootcamp - Population Genetics Workshop** September 2022  
Taught population genetics workshop to graduate students as part of a coding bootcamp

**Citizen Science at Bard College** January 2022 - February 2022  
Taught a three-week intensive, project-based undergraduate course on scientific literacy and data science

### Teaching Assistant

**Teaching Assistant: Human Variation and Disease** January 2022 - March 2022  
*University of Chicago Graduate Course*

**Teaching Assistant: QBio (Quantitative Analysis Bootcamp)** September 2021  
*University of Chicago Graduate Student Bootcamp*

**Teaching Assistant: Human Genetics 1** September 2020 - December 2020  
*University of Chicago Graduate Course*

**Teaching Assistant: Human Variation and Disease** March 2020 - June 2020  
*University of Chicago Graduate Course*  
Awarded Divisional Teaching Assistantship Award in the Biological Sciences

**Summer Abroad Tutor: Intro to Genes and Gene Expression** August 2016 - September 2016  
*UC Davis Undergraduate Course*

### Workshops

**UC COMBO (UChicago COMputational Biology Outreach)** October 2021 - June 2025  
*Chicago Public Schools*  
Taught computational biology workshops to Chicago area middle and high school students

**Software Carpentry** August 2019 - June 2021  
*University of Chicago Biological Sciences Division*  
Taught multi-day introductory R workshops

## ACADEMIC ACHIEVEMENTS

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Program Award for Outstanding Performance in the General Field of Human Genetics 2024-2025

- Press: Jennifer Grace Blanc Honored with Program Award in Human Genetics

F31 Ruth L. Kirschstein Predoctoral Individual National Research Service Award

Semi-finalist for Provosts Office Dissertation Completion Fellowship 2023-2024

Divisional Teaching Assistantship Award in the Biological Sciences Division 2019-2020

Graduated UC Davis with Highest Honors

- Top 2% of graduating class

Outstanding Senior in Genetics and Genomics 2018

- Given to the top student in each major for academic and research achievement, nominated by Dr. Michael Turelli

Graduated from the UC Davis Honors Program and completed Honors thesis

UC Davis Regents Scholarship

- Top 4% of applicants

## PROFESSIONAL AFFILIATIONS

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Genetics Society of America (GSA)

2022 - Present

American Society of Human Genetics (ASHG)

2021 - Present

## PUBLICATIONS

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**Blanc, Jennifer**, and Jeremy J. Berg. "Testing for differences in polygenic scores in the presence of confounding." *Genetics* 230.2 (2025): iyaf071. <https://doi.org/10.1093/genetics/iyaf071>

**Blanc, Jennifer**, et al. "Ten simple rules for success as a trainee-led outreach organization in computational biology education." *PLOS Computational Biology* 21.7 (2025): e1013281. <https://doi.org/10.1371/journal.pcbi.1013281>

**Blanc, Jennifer** and Jeremy J. Berg. 2020. "Polygenic Scores: How Well Can We Separate Genetics from the Environment?" *eLife* 9: e64948. <https://doi.org/10.7554/eLife.64948>

**Blanc, Jennifer**, Karl AG Kremling, Edward Buckler, and Emily B. Josephs. "Local adaptation contributes to gene expression divergence in maize." *G3* 11, no. 2 (2021): jkab004. <https://doi.org/10.1093/g3journal/jkab004>

## OUTREACH AND SERVICE

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Department of Human Genetics Diversity, Equity, and Inclusion Committee Member 2023 - 2025

- Planned and implemented recruitment and retention initiatives supporting improved diversity, equity, and inclusion in the Human Genetics department at the University of Chicago

UC COMBO Outreach Chair 2022 - 2025

- Founding member of UC COMBO (University of Chicago COMputational Biology Outreach), a group dedicated to teaching coding workshops for middle and high school students
- Press: Unlocking the code for a new generation of scientists

Workshop Developer 2024

- Designed an introduction to the workflow management system Snakemake for the Program in Computational Biology at the University of Chicago

Human Genetics Graduate Program Student Representative 2019 - 2021

- Acted as a liaison between students and faculty, planned community-building and recruitment events, and advocated for students' needs

Software Carpentry Instructor 2019 - 2021

- Organized and taught introductory R and Unix workshops for graduate students, postdocs, and staff in the BSD community

History of Race and Genetics Reading Group Member 2020

- Participated in and wrote reflections for a reading group on the history of race and genetics and helped design the website to publish materials

Computational STEM Lab Instructor	2019 - 2020
<ul style="list-style-type: none"> <li>• Helped design and lead in person and virtual workshops on computational biology in Python for Chicago area high school and middle school age students</li> </ul>	
Graduate Student Tutor	2019 - 2021
<ul style="list-style-type: none"> <li>• HGEN 47400: Introduction to Probability and Statistics for Geneticists</li> <li>• HGEN 47100: Statistical Genetics</li> <li>• ECEV 35600: Population Genetics</li> </ul>	
Chicago Public Schools Volunteer	2019
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## PRESENTATIONS

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### Invited Speaker

<b>Adaptation in Structured Populations</b>	June 2023
<i>Department of Human Genetics the Quantitative Life Sciences Program, McGill University (virtual)</i>	
Testing for differences in polygenic scores in the presence of confounding	
<b>DISCOVER: What you can do with a career in natural or social sciences</b>	April 2023
<i>Saint Norbert's College</i>	
Evolution of Complex Traits	
<b>Find Yourself: Tracing Human Origins Using DNA</b>	April 2021
<i>New York Academy of Sciences course for high school students (virtual)</i>	
Guaranteeing unbiasedness in selection tests based on polygenic scores	

### Conference Oral Presentations

<b>American Society of Human Genetics Annual Meeting</b>	November 2023
Testing for differences in polygenic scores in the presence of confounding	
<b>Probabilistic Modeling in Genomics</b>	March 2023
Analyzing the role of population structure in polygenic score analyses	
<b>Population, Evolutionary, and Quantitative Genetics Conference</b>	June 2022
Guaranteeing unbiasedness in selection tests based on polygenic scores	
<b>Probabilistic Modeling in Genomics</b>	March 2022
Guaranteeing unbiasedness in selection tests based on polygenic scores	
<b>Midwest Population Genetics VII</b>	August 2021
Guaranteeing unbiasedness in selection tests based on polygenic scores	
<b>UC Davis Undergraduate Research Conference</b>	April 2018
Detecting Local adaptation in gene expression in maize	

### Conference Poster Presentations

<b>American Society of Human Genetics Annual Meeting</b>	November 2024
Robust tests for association between polygenic scores and ancestry	
<b>The Allied Genetics Conference: PEQG</b>	March 2024
Testing for differences in polygenic scores in the presence of confounding	
<b>Midwest Population Genetics VIII</b>	August 2023
Testing for differences in polygenic scores in the presence of confounding	

<b>The Mitchell Conference on Human Genetics</b> Testing for differences in polygenic scores in the presence of confounding	May 2023
<b>American Society of Human Genetics Annual Meeting</b> Guaranteeing unbiasedness in selection tests based on polygenic scores	October 2022
<b>American Society of Human Genetics Annual Meeting</b> Guaranteeing unbiasedness in selection tests based on polygenic scores	October 2021
<b>Probabilistic Modeling in Genomics</b> Guaranteeing unbiasedness in tests of polygenic adaptation <i>Reviewer's Choice selected abstract (top 10%)</i>	April 2021
<b>American Society of Human Genetics Annual Meeting</b> Using derived allele status to detect and correct for stratification in GWAS summary statistics	October 2020
<b>Midwest Population Genetics VI</b> Detecting local adaptation in gene expression in maize <i>Winner of best graduate student poster</i>	August 2019
<b>Summer Undergraduate Research Program Symposium (Mount Sinai)</b> Reconstructing the population history of Oceania using identity by descent	August 2017
<b>UC Davis Undergraduate Research Conference</b> Mapping genes controlling the level of cytoplasmic incompatibility in <i>Drosophila melanogaster</i>	April 2016