

Hannah P. Kania

kania.hannah@duke.edu * Biological Sciences Building Room 311, Duke University; Durham, NC 27708

RESEARCH STATEMENT

I apply genetic and genomic tools to understand how micro-scale changes in genes can lead to macroevolutionary changes between species over time. I am focused on speciation genomics and conservation, and I am committed to sharing my research through effective science communication and outreach.

EDUCATION

Doctoral Candidate, Duke University Department of Biology	Durham, NC 2022-2028
B.A. University of California, Berkeley Bachelor of Arts in Molecular and Cell Biology, Developmental Genetics Department Honors and Distinction in Scholarship GPA: 3.796	Berkeley, CA May 14, 2021 May 14, 2021

RESEARCH EXPERIENCE

Integrative Evolutionary Genetics and Conservation Biology Lab of Dr. Anne Yoder <i>Graduate Student; Duke University</i> <ul style="list-style-type: none">Speciation Genomics, Cryptic Species, Conservation Biology, Transposable Elements	Durham, NC 2022-Present
Molecular, Developmental, and Evolutionary Biology Lab of Dr. Patricia Wittkopp <i>NSF Research Intern and Lab Manager; University of Michigan</i> <ul style="list-style-type: none">Evolution of Gene Expression, Yeast Antimicrobial Peptide Production	Ann Arbor, MI 2021-2022
Evolution, Ecology, and Global Change Biology Lab of Dr. Erica Bree Rosenblum <i>Undergraduate Researcher; University of California Berkeley</i> <ul style="list-style-type: none">Conservation-Based Landscape Genetics	Berkeley, CA 2019-2021
Cardiovascular Research Institute (CVRI) Lab of Dr. Guo Huang <i>Undergraduate Researcher; University of California, San Francisco</i> <ul style="list-style-type: none">Cardiomyocyte Regeneration in Mice Models	San Francisco, CA 2018

PROGRAMMING PROFICIENCIES

- Linux, Python, R/Markdown, GitHub, NCBI, FlowJo, SQL
- Systematics Course with Dr. François Lutzoni, *Duke University Biology Department*
 - Mesquite, PAUP, IQ-TREE, Mr. Bayes, FigTree

WORKSHOP ATTENDANCE

Summer Institute in Statistical Genetics, Georgia Tech	June 2024
ComSciCon-Triangle, NC State University	January 2023
Genome Sequencing and Assembly Workshop, UConn Institute for Systems Genomics	Virtual, May 2022
Alignment Workshop, Earth BioGenome Project	Virtual, June 2022

FUNDING

Graduate Research Fellowship, National Science Foundation	2024-2027 (\$138,000)
James B. Duke Fellowship, Duke University	2022-2026 (\$20,000)
University Scholars Fellowship, Duke University	2022 (\$25,500)
Research Experience for Post-Baccalaureate Students, National Science Foundation	2021-2022 (\$45,940)

AWARDS & HONORS

Student Teams Grant, Duke University	2024 (\$5,000)
Duke Biology Grants in Aid of Research	2024 (\$1,000)
Duke Biology Grants in Aid of Research	2023 (\$1,000)

- **Event Financial Support from the Dean, Duke University** 2023 (\$1,000)
- **Professional Development Award, Science Communicators of North Carolina** 2023 (\$1,000)
- **#SciCommMake Project Award, Sigma Xi & Association of Science Communicators** 2022 (\$1,000)

PUBLICATIONS

* Indicates co-first authors

- Byrne, A.Q.*, Rothstein, AP.*, Smith, LL., **Kania, H.P.**, Knapp, RA., Boiano, DM., Briggs, CJ., Backlin, AR., Fisher, RN., & Rosenblum, EB. Revisiting conservation units for the endangered mountain yellow-legged frog species complex (*Rana muscosa*, *Rana sierrae*) using multiple genomic methods. *Conserv Genet* (2023). <https://doi.org/10.1007/s10592-023-01568-5>

ORAL PRESENTATIONS

Transposable Elements

Cold Spring Harbor Laboratory, NY

October 16, 2024

- **Kania, H.P.**, Seifert, S., & Yoder, A.D. *Creation of a unified benchmark strategy for automated transposable element discovery pipelines.* (Poster)

Science Talk

Portland, OR

April 7, 2023

- Currier, R., Gibson, C., & **Kania, H.P.** *The Bloom of Doom: Communicating the Science of the Florida Red Tide to a Young Audience.* (Invited Talk)

Population, Evolutionary, and Quantitative Genetics (PEQG)

Monterey, CA

June 2022

- **Kania, H.P.**, Siddiq, M.A., Brown, N., & Wittkopp, P.J. *Uncovering how three core metabolic enzymes evolved antimicrobial activity in *Saccharomyces cerevisiae*.* (Poster)

MCB Honors Virtual Poster Session

Berkeley, CA

April 2021

- **Kania, H.P.** *An Open-Source Platform for Genotyping *Batrachochytrium dendrobatidis*.* (Poster)

COMMUNICATION & OUTREACH

University Scholars Program

Graduate Consul

Durham, NC

2023-2025

- Facilitate programming for the University Scholars Program at Duke University, a group of dedicated, inter-generational scholars united by interdisciplinary interests.

ComSciCon-Triangle

Organizer, Co-Chair

RTP, NC

2024-2025

- Annual two-day professional development workshop for graduate students to acquire tangible skills in science communication and build networks within the Triangle community.

SciREN-Triangle

Organizer, Social Media Director, Researcher Liaison, Lesson-Plan Contributor

Raleigh, NC

2023-2024

- Networking event for local K-12 educators to meet Triangle researchers and gain lesson plans highlighting current scientific research in the Triangle.

NASW David Perlman Mentorship Program

Participant

Virtual

Summer 2023

- Virtual student mentorship program to network with science journalism professionals. Includes writing a reported news piece for consideration by the NASW student newsroom and partner publications.

The Art of a Scientist

Contributing Artist

Durham, NC

July 2023

- Science and art collaboration to increase Duke research accessibility across the Durham community through a free, public art exhibition at Duke's Smith Warehouse.

Science Video-Making Workshop

Organizer

Durham, NC

August 2023

- Plan and execute a two-day graduate-student workshop focused on demystifying graduate student research through effective short storytelling and videography: *Translating Your Research into Short Video.*

#SciCommMake, Sigma Xi & Association of Science Communicators

Virtual

Funded Participant

2022-2023

- International collaboration between scientists, artists, and science communicators for accessibility of public health research.
- Generated a series of four Instagram Reels highlighting the science behind the red tide algal bloom in Florida.

F.E.M.M.E.S

Ann Arbor, MI

Connect Coordinator and Lead Volunteer

March 26, 2022

- Designed and led a 1-hour scientific workshop for students in grades 6-8 on evolutionary tree-building skills using morphological traits and genetic features.

Advance Coordinator and Lead Volunteer

February 5, 2022

- Designed and led a 30-minute scientific workshop for students in grades 9-12 to explore human evolutionary history using COVID-19 and Neanderthal genomic contributions as a case study.