

# Mallory Harris

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## EDUCATION AND TRAINING

### University of Maryland (College Park, MD)

2024 Aug – current

Post-doctoral fellowship in Biology (PI: Joshua Weitz)

### Stanford University (Palo Alto, CA)

2019 Sep – 2024 Jul

PhD in Biology (Ecology and Evolution)

Dissertation: [Human activity shapes infectious diseases dynamics: Social division, misinformation, and climate change](#) (PI: Erin Mordecai)

### University of Georgia (Athens, GA)

2014 Aug - 2018 May

B.S. Mathematics, B.S. Computational Biology

Interdisciplinary Writing Certificate, Spanish Minor

GPA: 3.93, summa cum laude with Highest Honors

Honors thesis: Early warning signals of malaria elimination in Haiti (PI: John Drake)

## MANUSCRIPTS

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1. Kirk D, Straus S, Childs M, **Harris M**, Couper L, Davies J, Forbes C, Gehman A, Groner M, Harley C, Lafferty K, Skinner E, O'Connor MI, Mordecai EA. [Temperature impacts on dengue incidence are nonlinear and mediated by climatic and socioeconomic factors](#). *PLOS Climate*. 2024 Mar.
2. **Harris MJ**, Murtfeldt R, Wang S, Mordecai EA, West JD. [The role and influence of perceived experts in an anti-vaccine misinformation community](#). *PNAS Nexus*. 2024 Feb.
3. Turner MA, Singleton AL, **Harris MJ**, Harryman I, Lopez CA, Forde R, Muraida C, Jones JH. [Minority-group incubators and majority-group reservoirs for climate change adaptation](#). *Phil Trans B*. 2023 Sep.
4. **Harris MJ**, Cardenas KJ, Mordecai EA. [Social divisions and risk perception can drive divergent epidemic dynamics and large second and third waves](#). *Evol Hum Sci*. 2023 Feb.
5. Holcomb KM, Mathis S, Staples JE, Fischer M, Barker CM, Beard CB, Nett RJ, Keyel AC, Marcantonio M, Childs ML, Gorris ME, Rochlin I, Hamins-Puertolas M, Ray EL, Uelmen JA, DeFelice N, Freedman AS, Hollingsworth BD, Das P, Osthus D, Humphreys JM, Nova N, Mordecai EA, Cohnstaedt LW, Kirk D, Kramer LD, **Harris MJ**, Kain MP, Reed EMX, Johansson MA. [Evaluation of an open forecasting challenge to assess skill of West Nile virus neuroinvasive disease prediction](#). *Parasites Vectors*. 2023 Jan.
6. **Harris MJ**, Tessier-Lavigne E, Mordecai EA. [The interplay of policy, behavior, and socioeconomic conditions in early COVID-19 epidemiology in Georgia](#). *J Ga Public Health Assoc*. 2021 Nov.
7. Childs ML\*, Kain MP\*, **Harris MJ\***, Kirk D, Couper L, Nova N, Delwel I, Ritchie J, Becker AD, Mordecai EA. [The impact of long-term non-pharmaceutical interventions on COVID-19 epidemic dynamics and control: the value and limitations of early models](#). *Proc Royal Soc B*. 2021 Aug. (\*denotes shared first author)
8. Couper LI, Farner JE, Caldwell JM, Childs ML, **Harris MJ**, Kirk D, Nova N, Shocket M, Skinner EB, Uricchio LH, Exposito-Alonso M, Mordecai EA. [How will mosquitoes adapt to climate warming?](#) *eLife*. 2021 Aug.
9. Chande A, Lee S, **Harris MJ**, Nguyen Q, Beckett SJ, Hilley T, Andris C, Weitz JS. [Real-time interactive website for US-county-level COVID-19 event risk assessment](#). *Nat Hum Behav*. 2020 Dec.
10. **Harris MJ**, Hay SI, Drake JM. [Evidence of critical slowing down prior to malaria resurgence in Kericho, Kenya](#). *Biol Lett*. 2020 Mar.
11. **Harris MJ**, Caldwell JM, Mordecai EA. [Climate drives spatial variation in Zika epidemics in Latin America](#). *Proc Royal Soc B*. 2019 Aug.
12. Zhang JY, Lee JH, Gu X, Wei ZZ, **Harris MJ**, Yu SP, Wei L. [Intranasally Delivered Wnt3a Improves Functional Recovery after Traumatic Brain Injury by Modulating Autophagic, Apoptotic, and Regenerative Pathways in the Mouse Brain](#). *J Neurotrauma*. 2018 Mar.

## BOOK CHAPTER

1. Shocket MS, Anderson CB, Caldwell JM, Childs ML, MacDonald AJ, Howard ME, Nova N, Han S, **Harris MJ**, Mordecai EA. [Environmental drivers of vector-borne diseases](#). *Population Biology of Vector-Borne Diseases*. Oxford UP. 2018.

## MANUSCRIPTS IN REVIEW

1. Jalbert, M, **Harris MJ**, Williams L. [Who is perceived to be an expert on COVID-19 vaccines on social media?: Biomedical credentials confer expertise, even among vaccine-hesitant and conservative observers.](#)
2. Childs ML\*, Lyberger KP\*, **Harris MJ**, Burke M, Mordecai EA. [Climate warming is expanding dengue burden in the Americas and Asia.](#)

\* denotes shared first author

## PRESENTATIONS

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### **Cyclone Yaku Drove Peru's Dengue Outbreak in 2023**

- Ecology and Evolution of Infectious Diseases. Stanford University. 2024. Poster.
- Climate-disease group meeting. Princeton University. 2024. *Invited speaker*.
- CrisisReady webinar series ([recording](#)). 2024. *Invited speaker*.

### **The role and influence of perceived experts in an anti-vaccine misinformation community**

- Epidemics. Bologna, Italy. 2023. Presentation.
- Trust and Safety Research Conference. Stanford University. 2023. Lightning talk.
- Sunbelt Social Network Conference. Portland, OR. 2023. Presentation.
- Center for an Informed Public Weekly Meeting. University of Washington. 2023. *Invited speaker*.

### **Social division and vaccine misinformation: Connecting decisions and diseases**

- MIDAS webinar series ([recording](#)). 2023. Presentation.

### **Understanding and countering health misinformation**

- Distinguished Humphrey Fellowship Program: Media and Information. University of Washington. 2023. *Invited speaker*.

### **Estimating the changing burden of dengue per degree of climate warming**

- MIDAS Annual Meeting. Atlanta, Georgia. 2023. Poster.
- Bay Area Ecology and Evolution of Infectious Diseases. San Francisco State University. 2023. Poster.

### **Awareness-based protective behavior in a split population**

- Weitz Lab Presentation. Georgia Institute of Technology. 2022. *Invited Speaker*.
- Annual Meeting of the Ecological Society of America. Palais des congrès de Montréal. 2022. Presentation.
- Ecology and Evolution of Infectious Diseases. Emory University. 2022. Poster.
- Annual Global Health Research Convening. Stanford University. 2022. Poster.
- Bay Area Ecology and Evolution of Infectious Diseases. UC Santa Cruz. 2022. Presentation.
- Ecology and Evolution of Infectious Diseases. Centre National de la Recherche Scientifique. 2021. Poster.

### **The interplay of policy, behavior, and socioeconomic conditions in early COVID-19 epidemiology in Georgia**

- Bay Area Ecology and Evolution of Infectious Diseases. UC Davis. 2021. Presentation.
- Annual Meeting of the Ecological Society of America. 2020. Presentation.

### **Climate drives spatial variation in Zika epidemic characteristics in Latin America.**

- Bay Area Ecology and Evolution of Infectious Diseases. Stanford University. 2019. Poster.
- Population Biology of Vector-Borne Diseases Symposium. University of Georgia. 2018. Poster.

### **Evidence of critical slowing down prior to malaria resurgence in Kericho, Kenya**

- Bay Area Ecology and Evolution of Infectious Diseases. University of California, Berkeley. 2020. Poster.
- Ecology and Evolution of Infectious Diseases. UC Santa Barbara. 2017. Poster.
- Undergraduate Research Conference at the Interface of Biology and Mathematics. NIMBIOS. 2016.

## SERVICE

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### **Ecology and Evolution of Infectious Diseases** (Science Committee Member)

2023– 2024

Assisted with abstract selection and conference logistics for EEID 2024 at Stanford University

### **Workshop on Disease Dynamics and Human Behavior** (Organizer)

2023 – 2024

Helped to propose, select attendees, and develop schedule for workshop at the Brin Mathematics Research Center

## REVIEWS

Scientific Reports, AIDS and Behavior, Theoretical Population Biology, Epidemics, Royal Society Open Science, PLOS One (2), PLOS Computational Biology, Journal of Racial and Ethnic Health Disparities

## COMMUNICATION AND OUTREACH

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### Scientists Speak Up (President)

2021 - 2023

Organized educational panels and workshops to teach students how to effectively communicate and advocate around controversial scientific topics (e.g., climate change, vaccination) and identify scientific misinformation.

#### Invited talks

- Evidence-based democracy vs. science denial and disinformation. Stanford Program in Science, Technology, and Society. 2022. Panelist.
- Scientific integrity and academic accountability. Epidemiology Supper Club. Stanford Epidemiology. 2022.
- Scientific integrity and academic accountability. Current Issues in Genetics. Stanford Genetics. 2021.
- Scientific integrity and academic accountability. Workshop in Biostatistics. Stanford Biomedical Data Science. 2021.

### Social divisions and risk perception drive divergent epidemics and large later waves

Mentored undergraduate researcher developing an [interactive website](#) on awareness-based behavior and diseases.

### The science of herd immunity

Organized a public panel on misconception around herd immunity and new research frontiers in immunology, infectious disease modeling, and human behavior ([recording](#)).

### COVID-19 event risk assessment planning tool

Text and conceptualization for an [interactive map](#) of daily COVID-19 risk by event size and county.

### Potential long-term intervention strategies for COVID-19

Text and conceptualization for an interactive model illustrating potential outcomes of various short and long-term non-pharmaceutical interventions to control COVID-19.

### Girlology and Guyology

2016 – 2018

Managed social media for doctor-led puberty and sex education programs in 22 states nationwide. Selected by Federal Office of Women's Health to lead digital educational initiative on sexually transmitted infections.

## SELECTED MEDIA

For a complete list of media, please visit my [website](#)

- [Dengue fever is surging worldwide. A hotter planet will make it worse.](#) *The Washington Post*. 2024.
- [The power of perceived expertise.](#) *Center for Innovation in Global Health*. 2024.
- [The person who knows.](#) *Against the Rules* with Michael Lewis (podcast). 2022.
- [Tool shows Wisconsin gatherings mean high risk of COVID-19 exposure.](#) *Wisconsin Public Radio*. 2020.

## Opinions

- **Harris MJ.** [“Fauci Files” and Florida’s grand jury investigations fail to deliver.](#) *Science-Based Medicine*. 2024.
- **Harris MJ.** [My breakthrough about vaccines.](#) *Voices for Vaccines*. 2022.
- Mordecai EA, **Harris MJ.** [Will we ever reach herd immunity to Covid-19?](#) *The Guardian*. 2022.
- Mordecai EA, **Harris MJ**, Lipsitch M. [The US may never hit the herd immunity threshold. That’s OK.](#) *New York Times*. 2021.
- Weitz JS, **Harris MJ**, Chande AT, Gussler JW, Rishishwar L, Jordan IK. [Online COVID-19 dashboard calculates how risky reopenings and gatherings.](#) *Scientific American*. 2020.

## TEACHING

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### Representing Infectious Diseases (Instructor)

2022

[A new course examines scientific and cultural representations of disease.](#) *Stanford Report*. 2023 Jan.

### Ecology and Evolution of Infectious Disease in a Changing World (Course Assistant)

2021

### Biology and Global Change (Teaching Assistant)

2021

### Introduction to Research in Ecology and Evolutionary Biology (Teaching Assistant)

2020

### Athens Area Girls Math Team (Lead Instructor)

2015 – 2017

### Barrow Elementary School Math and English Intervention Program (Tutor)

2015 – 2017

### MATHCOUNTS (Curriculum Coordinator, School Coordinator, Head Coach)

2014 – 2017

## GUEST LECTURES

### Developing an early model of COVID-19 under various interventions in Santa Clara County

*Covid-19 Elective Course (PEDS 220), 2023*

### Introduction to Disease Ecology

*Introduction to Ecology (BIO 81), 2022*

## MENTORSHIP

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### Kimberly Cardenas

2022 – 2024

(Biology Summer Undergraduate Research Program, King Center Research Assistant, Human Biology Research Exploration)

### Eva Gorenburg

2022

(Undergraduate Research Assistant)

### Amanda Pohlman

2022

(Rotation Graduate Student)

### Vincent Thai

2022

(bioBUDS Undergraduate Winternship)

### Ann Marie Abraham

2021– 2022

(Biology Summer Undergraduate Research Program and Honors Thesis)

### Ella Tessier-Lavigne

2020

(King Center Summer Undergraduate Research)

## WORKSHOPS AND ACADEMIC ENRICHMENT

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### Mathematics of Malaria Transmission Dynamics

2023

*Presented at weeklong workshop by Brin Mathematics Research Center at University of Maryland*

### Agnology: The New Science of Creating and Preventing Ignorance

2023

*Two-day workshop by Stanford Program in History and Philosophy of Science*

### Visiting Student, Center for an Informed Public

2023

*Academic quarter spent working on projects related to science misinformation*

### Telling Stories as a Leadership Tool for Change

2022

*One-day workshop at Stanford on public narratives and social change*

### Scientific Teaching Institute

2022

*Three-day workshop at Stanford on assessment, active learning, and DEI*

### Pandemic Scenario Modeling and Science Communication Workshop

2022

*Ecology and Evolution of Infectious Diseases Conference*

### Summer Institute in Statistics and Modeling in Infectious Diseases

2020

*Simulation-based Inference for Epidemiological Dynamics, Causal Inference*

### Voting Rights Data Institute

2018

*Metric Geometry and Gerrymandering Group, Tufts University*

## AWARDS AND HONORS

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Kalman Award (\$1,000)

2024

ARCS Scholar Award (\$101,000)

2022 – 2024

Knight-Hennessy Scholarship (\$250,000)

2019 – 2022

University of Georgia Presidential Award of Excellence

2018

Goldwater Scholarship

2017

University of Georgia Foundation Fellowship (\$75,000)

2014 – 2018