

Amanda C. Perofsky, Ph.D.

Brotman Baty Institute for Precision Medicine, University of Washington, Seattle, Washington
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Research interests

My research focuses on the ecological, evolutionary, and behavioral drivers of respiratory virus infections, with aims to improve infectious disease surveillance and better understand and predict recurring and emerging outbreaks. I apply statistical and computational approaches to characterize respiratory virus transmission patterns and epidemiology, with a particular focus on influenza and SARS-CoV-2. I also produce operational forecasts and scenario projections of respiratory virus outbreaks.

Education

2018 **PhD** in Ecology, Evolution, and Behavior, The University of Texas at Austin, Austin, Texas
2009 **B.Sc.** in Ecology, **B.Sc.** in Biology, University of Georgia, Athens, Georgia
 Summa cum laude with Highest Honors

Research experience

2021 – **Epidemiological Data Scientist (Research Scientist/Engineer 3)**, Brotman Baty Institute for Precision Medicine, University of Washington (UW)
 Guest Researcher, Fogarty International Center, National Institutes of Health (NIH)
 Division of International Epidemiology and Population Studies
 Supervisor: Cécile Viboud
2018 – 2021 **Postdoctoral Research Fellow**, Fogarty International Center, NIH
 Division of International Epidemiology and Population Studies
 Supervisor: Cécile Viboud
2011 – 2018 **Doctoral Student**, Department of Integrative Biology, The University of Texas at Austin (UT-Austin)
 Dissertation: *Ecological, Evolutionary, and Behavioral Determinants of Gut Microbiomes in Malagasy Mammals*
 Advisor: Lauren Ancel Meyers
2010 – 2011 **Postbaccalaureate IRTA Fellow**, National Institute of Dental and Craniofacial Research (NIDCR), NIH
 Adeno-Associated Virus Biology Section, Molecular Physiology and Therapeutics Branch
 Supervisor: John Chiorini
2009 **Research Assistant**, Odum School of Ecology, University of Georgia (UGA)
 Supervisor: Andrew Park
2007 – 2009 **Honors Independent Research**, Odum School of Ecology, UGA
 Honors thesis: *Improving abundance estimation for larval stream plethodontids*
 Thesis advisor: John Maerz (Warnell School of Forestry)

Fellowships and awards

2023 Director's Individual Merit Award, *For excellence in scientific research in epidemiological modeling with a focus on influenza antigenic evolution and the role of human mobility in COVID-19 disease dynamics*, Fogarty International Center, NIH
2020, 2021 Director's Group Merit Award, *For outstanding modeling work to support the COVID-19 pandemic response domestically and internationally*, Fogarty International Center, NIH
2020 Young Scientist Award, European Scientific Working group on Influenza (ESWI) Conference
2019 Director's Individual Merit Award, *For outstanding efforts to forecast weekly influenza-like illness activity in 27 U.S. military facilities in collaboration with DoD*, Fogarty International Center, NIH
2017, 2018 Graduate School Summer Semester Continuing Fellowship, UT-Austin
2017 Network Modeling for Epidemics Course Fellowship, UW, Seattle, WA

2017	Graduate Student Professional Development Award, College of Natural Sciences, UT-Austin
2014, 2015	Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID) Scholarship and Travel Award, UW, Seattle, WA
2012 – 2017	National Science Foundation (NSF) Graduate Research Fellowship
2011 – 2012	Department of Integrative Biology Graduate Recruitment Fellowship, UT-Austin
2011	Meaningful Modeling of Epidemiological Data (MMED) Clinic Scholarship and Travel Award, African Institute for Mathematical Sciences, Cape Town, South Africa
2010, 2011	Ecology and Evolution of Infectious Diseases (EEID) Conference Workshop Scholarship and Travel Award, Cornell University (2010) and University of California, Santa Barbara (2011)
2010 – 2011	NIH Postbaccalaureate Intramural Research Training Award (IRTA) Fellowship
2009	Center for Undergraduate Research (CURO) Scholar distinction, UGA
2008	Elected, Phi Beta Kappa Honors Society
2007	Honors International Scholarship, UGA Honors Program
2005 – 2009	Charter Scholarship, UGA Honors Program
2005 – 2009	National Merit Scholarship, UGA
2005 – 2009	Georgia HOPE Scholarship (full tuition)

Preprints (†denotes co-first authorship)

- 2024 Srinivas Duddu, A.†, Elgamal, I.†, Camacho-Mateu, J.†, Holubowska, O.†, Rella, S. A.†, Bents, S. J., Viboud, C., Hansen, C. L., Pullano, G., & **Perofsky, A. C.** Modeling the effects of COVID-19 mobility disruptions on RSV transmission in Seattle, Washington. *medRxiv*, 2024.09.13.24313667. [DOI](#)
- 2024 Kostandova, N., Corgel, R., Bansal, S., Bérubé, S., Cleary, E., Hansen, C., Hitchings, M. D. T., García-Carreras, B., Gardner, L., Kraemer, M. U. G., Lai, S., Li, Y., **Perofsky, A. C.**, Pullano, G., Read, J. M., Ribeiro dos Santos, G., Salje, H., Takahashi, S., Viboud, C., Wang, J., Cummings, D. A. T., & Wesolowski, A. Data and model needs for generalizable inferences linking human mobility and infectious disease transmission. [OSF Preprint](#)
- 2024 Tran-Kiem, C., Paredes, M. I., **Perofsky, A. C.**, . . . Viboud, C., & Bedford, T. Fine-scale spatial and social patterns of SARS-CoV-2 transmission from identical pathogen sequences. *medRxiv*, 2024.05.24.24307811. [DOI](#)

Publications (†denotes co-first authorship)

- 2024 **Perofsky, A. C.**, Huddleston, J., Hansen, C., . . . Kondor, R., Wentworth, D. E., Lewis, N., . . . Sullivan, S. G., Barr, I. G., Subbarao, K., Krammer, F., Bedford, T., & Viboud, C. Antigenic drift and subtype interference shape A(H3N2) epidemic dynamics in the United States. *Elife*, 13, RP91849. [DOI](#)
- 2024 Mathis, S. M.†, Webber, A. E.†, León, T. M., . . . **Perofsky, A. C.**, . . . Biggerstaff, M., & Borchering, R. K. Evaluation of FluSight influenza forecasting in the 2021-22 and 2022-23 seasons with a new target laboratory-confirmed influenza hospitalizations. *Nature Communications*, 15, 6289. [DOI](#)
- 2024 **Perofsky, A. C.**, Hansen, C., Burstein, R., . . . Famulare, M., Shendure, J., Bedford, T., Chu, H. Y., Englund, J. A., Starita, L. M., & Viboud, C. Impacts of human mobility on the citywide transmission dynamics of 18 respiratory viruses in pre- and post-COVID-19 pandemic years. *Nature Communications*, 15, 4164. [DOI](#)
- 2024 Paredes, M. I., **Perofsky, A. C.**, Frisbie, L., . . . Müller, N. F., & Bedford, T. Local-scale phylodynamics reveal differential community impact of SARS-CoV-2 in a metropolitan U.S. county. *PLOS Pathogens*, 20(3), e1012117. [DOI](#)
- 2022 **Perofsky, A. C.**, Tempia, S., Bingham, J., Maslo, C., Toubkin, M., Laubscher, A., Walaza, S., Pulliam, J. R. C., Viboud, C., & Cohen, C. Direct and Indirect Effects of the Coronavirus Disease 2019 Pandemic on Private Healthcare Utilization in South Africa, March 2020-September 2021. *Clinical Infectious Diseases*, 75(1), e1000-e1010. [DOI](#)
- 2022 Hansen, C., **Perofsky, A. C.**, Burstein, R., Famulare, M., . . . Englund, J. A., Shendure, J., Bedford, T., Chu, H. Y., Starita, L. M., & Viboud, C. Trends in Risk Factors and Symptoms Associated With SARS-CoV-2 and Rhinovirus Test Positivity in King County, Washington, June 2020 to July 2022. *JAMA Network Open*, 5(12), e2245861. [DOI](#)
- 2021 **Perofsky, A. C.**, Meyers, L. A., Abondano, L. A., Di Fiore, A., & Lewis, R. J. Social groups constrain the spatiotemporal dynamics of wild sifaka gut microbiomes. *Molecular Ecology*, 30(24), 6759-6775. [DOI](#)
- 2021 McBride, D. S.†, **Perofsky, A. C.**†, Nolting, J. M., Nelson, M. I., & Bowman, A. S. Tracing the Source of Influenza A Virus Zoonoses in Interconnected Circuits of Swine Exhibitions. *Journal of Infectious Diseases*, 224(3), 458-468. [DOI](#)

- 2020 **Perofsky, A. C.**, & Nelson, M. I. Seasonal influenza: The challenges of vaccine strain selection. *Elife*, 9, e62955. DOI
- 2020 Viboud, C., Gostic, K., Nelson, M. I., Price, G. E., **Perofsky, A.**, Sun, K., Sequeira Trovao, N., Cowling, B. J., Epstein, S. L., & Spiro, D. J. Beyond clinical trials: Evolutionary and epidemiological considerations for development of a universal influenza vaccine. *PLOS Pathogens*, 16(9), e1008583. DOI
- 2020 Nelson, M. I., **Perofsky, A.**, McBride, D. S., Rambo-Martin, B. L., Wilson, M. M., Barnes, J. R., van Bakel, H., Khan, Z., Dutta, J., Nolting, J. M., & Bowman, A. S. A Heterogeneous Swine Show Circuit Drives Zoonotic Transmission of Influenza A Viruses in the United States. *Journal of Virology*, 94(24). DOI
- 2019 **Perofsky, A. C.**, Lewis, R. J., & Meyers, L. A. Terrestriality and bacterial transfer: a comparative study of gut microbiomes in sympatric Malagasy mammals. *The ISME Journal*, 13(1), 50-63. DOI
- 2017 Rakotomalala, E. J., Rakotondraparany, F., **Perofsky, A. C.**, & Lewis, R. J. Characterization of the Tree Holes Used by *Lepilemur ruficaudatus* in the Dry, Deciduous Forest of Kirindy Mitea National Park. *Folia Primatologica*, 88(1), 28-41. DOI
- 2017 **Perofsky, A. C.**, Lewis, R. J., Abondano, L. A., Di Fiore, A., & Meyers, L. A. Hierarchical social networks shape gut microbial composition in wild Verreaux's sifaka. *Proceedings of the Royal Society B: Biological Sciences*, 284(1868). DOI
- 2013 Berry, B. S.†, Magori, K.†, **Perofsky, A. C.**, Stallknecht, D. E., & Park, A. W. Wetland cover dynamics drive hemorrhagic disease patterns in white-tailed deer in the United States. *Journal of Wildlife Diseases*, 49(3), 501-509. DOI

Conference presentations

Talks

- 2024 NetSci International Conference on Network Science, Québec City, Canada. *Impacts of human mobility on the citywide transmission dynamics of respiratory viruses in pre- and post-COVID-19 pandemic years.*
- 2023 Epidemics⁹ International Conference on Infectious Disease Dynamics, Bologna, Italy. *Are changes in population mobility predictive of respiratory virus transmission? Insights from high resolution mobile phone data in the pre- and post-COVID-19 pandemic periods in Seattle, Washington.*
- 2023 EpiMob Satellite ("Epidemic control: from mobility data to public health"), NetSci International Conference on Network Science, Vienna, Austria. *Are changes in population mobility predictive of respiratory virus transmission? Insights from high resolution mobile phone data in the pre- and post-COVID-19 pandemic periods in Seattle, Washington.* * Invited keynote speaker
- 2022 Options XI for the Control of Influenza, Belfast, Northern Ireland. *Impact of antigenic drift on influenza A/H3N2 vaccine effectiveness in the United States.*
- 2022 NIH/FDA COVID-19 Research Workshop (Virtual). *The impact of COVID-19 restrictions and mobility behavior on respiratory pathogen transmission in Seattle, Washington.*
- 2022 NIH Modeling of Infectious Disease Agent Study (MIDAS) Annual Meeting, Bethesda, MD. *The impact of social distancing on respiratory pathogen transmission in Seattle, Washington.*
- 2021 NIH Modeling of Infectious Disease Agent Study (MIDAS) Annual Meeting (Virtual). *Impact of antigenic drift on influenza A/H3N2 vaccine effectiveness in the United States.*
- 2021 NIH NIAID Centers of Excellence for Influenza Research and Surveillance (CEIRS) Annual Meeting (Virtual). *Impact of antigenic drift on influenza A/H3N2 vaccine effectiveness in the United States.*
- 2020 NIH/FDA COVID-19 Research Workshop (Virtual). *Utilizing Respiratory Syndromic Surveillance Data to Monitor COVID-19 Activity in South Africa.*
- 2019 Epidemics⁷ International Conference on Infectious Disease Dynamics, Charleston, SC. *Impact of influenza antigenic evolution on disease dynamics in the United States.*
- 2019 Options X for the Control of Influenza, Singapore. *Impact of influenza antigenic evolution on disease dynamics in the United States.*
- 2018 American Association of Physical Anthropologists (AAPA) Conference, Austin, TX. *Gut microbiome diversity across sympatric mammal populations of Madagascar reflects diet, substrate use, and host phylogeny.*
- 2016 NSF BEACON Annual Congress, Michigan State University, East Lansing, MI. *Social network structure shapes gut microbial communities in wild Verreaux's sifaka.*

Posters

- 2020 European Scientific Working group on Influenza (ESWI) Conference (Virtual). *Impact of influenza antigenic evolution on disease dynamics in the United States.*

- 2019 Ecology and Evolution of Infectious Diseases (EEID) Conference, Princeton, NJ. *Impact of influenza antigenic evolution on disease dynamics in the United States.*
- 2017 Society of Molecular Biology and Evolution (SMBE) Conference, Austin, TX. *Hierarchical social networks shape gut microbial composition in wild Verreaux's sifaka.*
- 2017 Ecology and Evolution of Infectious Diseases (EEID) Conference, Isla Vista, CA. *Hierarchical social networks shape gut microbial composition in wild Verreaux's sifaka.*
- 2015 Epidemics⁵ International Conference on Infectious Disease Dynamics, Clearwater Beach, FL. *Social network structure shapes gut microbial communities in wild Verreaux's sifaka.*

Seminar presentations

Invited talks

- 2024 Yale School of Public Health, New Haven, CT. *Impacts of human mobility on the citywide transmission dynamics of respiratory viruses: Insights from the Seattle Flu Study and high-resolution mobile phone data.*
- 2024 Network Science Institute, Northeastern University, Boston, MA. *Impacts of human mobility on the citywide transmission dynamics of respiratory viruses in pre- and post-COVID-19 pandemic years.*
- 2023 U.S. CDC Technical Outreach and Assistance to States (TOAST) Office Hours (Virtual). *Are changes in population mobility predictive of respiratory virus transmission? Insights from high resolution mobile phone data in the pre- and post-COVID-19 pandemic periods in Seattle, Washington.*
- 2023 Pierre Louis Institute of Epidemiology and Public Health, French National Institute of Health and Medical Research (INSERM), Paris, France. *Are changes in population mobility predictive of respiratory virus transmission? Insights from high resolution mobile phone data in the pre- and post-COVID-19 pandemic periods in Seattle, Washington.*
- 2023 Infectious Disease Modeling Working Group, World Health Organization (Virtual). *Antigenic drift and subtype interference shape A/H3N2 epidemic dynamics in the United States.*
- 2023 California Department of Public Health COVID-19 Modeling Team Open House (Virtual). *A time series approach for short-term forecasts and long-term scenario projections of influenza hospitalizations.*
- 2023 NIH NIAID Centers of Excellence for Influenza Research and Response (CEIRR) Computational Modeling Core (Virtual). *Antigenic drift and subtype interference shape A/H3N2 epidemic dynamics in the United States.*
- 2023 Infectious Disease Forecasting Call, organized by U.S. CDC and NIH MIDAS (Virtual). *Impact of influenza antigenic evolution on A/H3N2 epidemics and vaccine effectiveness in the United States.*
- 2023 Center for the Ecology of Infectious Diseases, University of Georgia (Virtual). *The impact of physical distancing on respiratory pathogen transmission in Seattle, Washington.*
- 2021 Influenza Research Group, National Animal Disease Center, U.S. Department of Agriculture (Virtual). *Impact of influenza antigenic evolution on A/H3N2 vaccine effectiveness in the United States.*
- 2018 Fogarty International Center, National Institutes of Health, Bethesda, MD. *Drivers of gut microbial composition and transmission within and among wild lemur populations.*
- 2016 Kirindy Mitea National Park headquarters, Belo Sur Mer, Madagascar. *Bacteria transmission dynamics among wildlife in Kirindy Mitea National Park.*
- 2012 Kirindy Mitea National Park headquarters, Morondava, Madagascar. *Infectious disease transmission in a wild lemur population.*

Internal seminars

- 2023 Respiratory Virus Interest Group, National Institutes of Health (Virtual). *The impact of influenza antigenic drift on A/H3N2 vaccine effectiveness in the United States.*
- 2019 Influenza Interest Group, National Institutes of Health, Bethesda, MD. *Impact of influenza antigenic evolution on disease dynamics in the United States.*
- 2017 NSF BEACON weekly seminar, University of Texas at Austin, Austin, TX. *Gut microbiome diversity across sympatric mammal populations of Madagascar reflects diet, substrate use, and host phylogeny.*
- 2016 NSF BEACON weekly seminar, University of Texas at Austin, Austin, TX. *Social networks shape the gut microbial communities of wild Verreaux's sifaka.*
- 2015 Department of Integrative Biology, University of Texas at Austin, Austin, TX. *Social networks shape the gut microbial communities of wild Verreaux's sifaka.*

Operational involvement in the COVID-19 pandemic response and disease predictions

- 2023 – [Dashboard of SARS-CoV-2 variant forecasts for Washington and other U.S. states](#), Seattle Flu Alliance (In collaboration with [Nextstrain](#) team)
- 2022 – Contributor to [U.S. CDC FluSight](#) Forecasting Collaboration. Submitted weekly short-term forecasts of influenza hospitalizations during the 2022-23, 2023-24, and 2024-25 seasons.
- 2022 – Contributor to [U.S. Influenza Scenario Modeling Hub](#). Submitted long-term scenario projections of influenza hospitalizations during the 2022-23, 2023-24, and 2024-25 seasons.
- 2020 – 2022 Developed the analysis, drafted the first report, and provided technical support to South Africa's National Institute for Communicable Diseases for their [COVID-19 Private Consultations Excess Respiratory Encounters Report](#). Biweekly and monthly reports tracked excess respiratory encounters at hospitals, emergency departments, and primary care providers across age groups and provinces.
- 2019 – 2022 Contributor to the U.S. Department of Defense Forecasting Collaboration. Submitted weekly short-term forecasts of influenza-like illness and COVID-like illness cases on U.S. military bases during the 2019-20, 2020-21, and 2021-22 seasons.

Research support

- 2018 Research Exchange Grant, NSF Infectious Disease Evolution Across Scales Research Coordination Network, *How does influenza evolution impact the epidemiology of annual epidemics?* \$2800
- 2015 DBI-0939454, NSF BEACON Center for the Study of Evolution in Action, *Factors that influence gut microbiota diversity and intestinal bacteria transmission dynamics in wild lemurs* \$16,000 Co-PI, with Lauren Ancel Meyers and Rebecca Lewis
- 2015 Ecology, Evolution, and Behavior Dissertation Improvement Grant, UT-Austin \$8000
- 2012 Small Research Grant, American Society of Primatologists \$2000
- 2012 Small Research Grant, International Primatological Society \$1500
- 2011 Ecology, Evolution, and Behavior Startup Grant, UT-Austin \$2000
- 2008 NSF Research Experiences for Undergraduates (REU) Internship, NSF Coweeta Long Term Ecological Research Program, Otto, NC

Professional activities

Co-organizer, [EpiMob Satellite](#) (*Epidemic control: from mobility data to public health*), NetSci International Conference on Network Science, Québec City, Canada. June 2024.

Working group on the use of human mobility data in infectious disease modeling, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD. Feb 2023.

Abstract reviewer, NIH Modeling of Infectious Disease Agent Study (MIDAS) Annual Meeting. 2022, 2023, 2024.

Coordinated and led monthly Seattle Flu Alliance Data Analysis meetings. Nov 2022 – Aug 2024.

Invited panelist, *Reflections on COVID-19*, NIH MIDAS Annual Meeting, Bethesda, MD. Sep 2022.

Poster Judge, NIH Annual Graduate Student Research Symposium, Bethesda, MD. Feb 2020.

Essay editor, [Science Policy for All](#) (policy blog with contributors from the Washington, DC area). Oct 2019 – Jul 2021.

Invited Panelist, NSF BEACON Public Engagement Workshop, Austin, TX. Feb 2017.

Peer review: American Journal of Epidemiology, American Journal of Primatology, Animal Behaviour, BMJ Global Health, Ecology and Evolution, Epidemics, The ISME Journal, Molecular Ecology, Nature Communications, Nature Physics, PLOS Computational Biology, PNAS Nexus

Teaching and mentoring experience

Tutor, [Complexity 72h: Interdisciplinary workshop for young researchers in complex systems](#), Carlos III University of Madrid, Spain. Led and mentored a team of 5 graduate students in carrying out a research project within 3 days (i.e., 72h). Project title: "Impacts of COVID-19 restrictions on mobility networks and the spread of endemic respiratory viruses." Jun 2024.

Completed 9-week NIH pedagogy course *Scientists Teaching Science* on best practices for teaching and learning in STEM subjects at the undergraduate level. Mar - May 2020.

Co-Instructor, *Fogarty International Center-DIVERGE Training Workshop on RSV Genomics and Evolution*, National Institutes of Health, Bethesda, MD. Sep 2019.

Co-Instructor, *Fogarty International Center-NICD Training Workshop on Infectious Disease Dynamics and Evolution*, National Institutes of Communicable Diseases, Johannesburg, South Africa. Dec 2018.

Master's student mentoring, Department of Animal Biology, University of Antananarivo. Trained Safidy Rasolonjatovo in field research techniques, data collection, and specimen preservation. Guided an independent project on sifaka scent marking behavior in Kirindy Mitea National Park, Madagascar. Jun – Jul 2016.

Graduate Teaching Assistant, *Scientific Inquiry Across Disciplines*, UT-Austin, Austin, TX. Fall 2016, Fall 2017.

Guest Lecture, *Biological Networks and Social Network Analysis*, Introduction to Biological Statistics Course, Center for Computational Biology and Bioinformatics, UT-Austin, Austin, TX. Nov 2015.

Guest Lecture, *Introduction to Networks*, Introduction to Biological Statistics Course, Center for Computational Biology and Bioinformatics, UT-Austin, Austin, TX. Nov 2014.

Graduate Teaching Assistant, *Social Networks and Infectious Diseases*, UT-Austin, Austin, TX. Spring 2013.

Master's student mentoring, Department of Animal Biology, University of Antananarivo. Trained Elvis Rakotomalala in field research techniques, data collection, and specimen preservation. Guided an independent project on [Lepilemur tree hole characteristics](#) in Kirindy Mitea National Park, Madagascar. Jun – Aug 2012.

Science communication and outreach

Elife podcast interview, [Flu virus evolution: Combining antibody responses and genetic data can help gauge the threats posed by evolving flu strains](#). Apr 2024.

Science Policy for All blogpost, [Can the United States achieve herd immunity? Vaccine mandates and other policies to increase COVID-19 vaccination](#). Jun 2021.

Science Policy for All blogpost, [The Use of COVID-19 Prediction Models in Guiding Policy Decisions](#). May 2020.

Member, [NIH Science Policy Discussion Group](#), Bethesda, MD. Biweekly seminar series for early-career scientists focused on the intersection of scientific research and legislative policy. Delivered science policy presentations, invited two guest speakers, and wrote and edited articles for the "Science Policy for All" blog. Oct 2019 – Jul 2021.

Selected speaker, American Association for the Advancement of Science (AAAS) Classroom Science Days, Austin, TX. Outreach lecture (*Meet the Lemurs*) to middle school students. Feb 2018. [AAAS article](#)

Public outreach lecture (*Meet the Lemurs*), Science Under the Stars, Austin, TX. Nov 2016. [Daily Texan article](#)

NSF BEACON "Researchers at Work" essay, [How lemur social networks shape microbial transmission](#). Mar 2016.

Radio DJ and Science Talk Show Co-host, [They Blinded Me with Science](#), KVRX 91.7FM, UT-Austin, Austin, TX. Co-hosted a weekly educational talk show that interviewed UT-based and visiting researchers and reviewed science publications and news. Recruited guests, conducted interviews, and produced podcasts. Jan 2011 – May 2018.

Co-organizer and Volunteer, [Science Under the Stars](#), Austin, TX. Monthly public outreach lecture series founded and organized by graduate students in the Department of Integrative Biology. Jan 2011 – May 2017.

References

1. Cécile Viboud, Senior Staff Scientist
Fogarty International Center, National Institutes of Health
Division of International Epidemiology and Population Studies
Email: viboudc@mail.nih.gov
2. David Spiro, Division Director
Fogarty International Center, National Institutes of Health
Division of International Epidemiology and Population Studies
Email: david.spiro@nih.gov
3. Trevor Bedford, Professor
Fred Hutchinson Cancer Center
Vaccine and Infectious Disease, Human Biology, and Public Health Sciences Divisions
Email: trevor@bedford.io