Amanda C. Perofsky, Ph.D.

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Education

2018 **PhD** in Ecology, Evolution, and Behavior, The University of Texas at Austin, Austin, TX

2009 **B.Sc.** in Ecology, **B.Sc.** in Biology, University of Georgia, Athens, GA
Summa cum laude with Highest Honors

Research Positions

4/2021 – **Research Scientist,** Brotman Baty Institute for Precision Medicine, University of Washington
Guest Researcher, Fogarty International Center, National Institutes of Health
Supervisor: Dr. Cécile Viboud

9/2018 – 4/2021 **Postdoctoral Research Fellow**, Fogarty International Center, National Institutes of Health
Division of International Epidemiology and Population Studies
Supervisor: Dr. Cécile Viboud

8/2011 – 8/2018 **Doctoral student,** Department of Integrative Biology, University of Texas at Austin
National Science Foundation Graduate Research Fellow
Dissertation: "Ecological, Evolutionary, and Behavioral Determinants of Gut Microbiomes in Malagasy Mammals"
Advisor: Dr. Lauren Ancel Meyers

3/2011 – 1/2012 **Research Assistant**, Fogarty International Center, National Institutes of Health and National Institute for Mathematical and Biological Synthesis
Supervisor: Dr. Juliet R.C. Pulliam

1/2010 – 8/2011 **Post-Baccalaureate IRTA Fellow**, National Institute of Dental and Craniofacial Research, National Institutes of Health
Adeno-Associated Virus Biology Section, Molecular Physiology and Therapeutics Branch
Supervisor: Dr. John A. Chiorini

8/2009 – 12/2009 **Research Assistant**, Odum School of Ecology, University of Georgia
Supervisor: Dr. Andrew Park

1/2007 – 5/2009 **Undergraduate Researcher,** Warnell School of Forestry, University of Georgia
Honors Thesis: "Improving abundance estimation for larval stream plethodontids"
Research Mentor: Dr. John C. Maerz

Manuscripts under review

14. **Perofsky, A.C.**, C. Hansen, R. Burstein, S. Boyle, R. Prentice, C. Marshall, D. Reinhart, B. Capodanno, M. Truong, K. Schwabe-Fry, K. Kuchta, B. Pfau, Z. Acker, J. Lee, T.R. Sibley, E. McDermot, L. Rodriguez-Salas, J. Stone, L. Gamboa, P.D. Han, A. Adler, A. Waghmare, M.L. Jackson, M. Famulare, J. Shendure, T. Bedford, H.Y. Chu, J.A. Englund, L.M. Starita, C. Viboud. Human mobility impacts the transmission of common respiratory viruses: A modeling study of the Seattle metropolitan area. 2023. *medRxiv* 2023.10.31.23297868. https://doi.org/10.1101/2023.10.31.23297868

13. **Perofsky, A.C.,** J. Huddleston, C. Hansen, J.R. Barnes, T. Rowe, X. Xu, R. Kondor, D.E. Wentworth, N. Lewis, L. Whittaker, B. Ermetal, R. Harvey, M. Galiano, R. Stuart Daniels, J.W. McCauley, S. Fujisaki, K. Nakamura, N. Kishida, S. Watanabe, H. Hasegawa, S.G. Sullivan, I.G. Barr, K. Subbarao, F. Krammer, T. Bedford, C. Viboud. Antigenic drift and subtype interference shape A(H3N2) epidemic dynamics in the United States. 2023. *medRxiv* 2023.10.02.23296453. https://doi.org/10.1101/2023.10.02.23296453

12. Paredes, M.I., **A.C. Perofsky**, L. Frisbie, L.H. Moncla, P. Roychoudhury, H. Xie, S.A. Mohamed Bakhash, K. Kong, I. Arnould, T.V. Nguyen, S.T. Wendm, P. Hajian, S. Ellis, P.C. Mathias, A.L. Greninger, L.M. Starita, C.D. Frazar, E. Ryke, W. Zhong, L. Gamboa, M. Threlkeld, J. Lee, J. Stone, E. McDermot, M. Truong, J. Shendure, H.N. Oltean, C. Viboud, H. Chu, N.F. Müller, T. Bedford. Local-scale phylodynamics

reveal differential community impact of SARS-CoV-2 in metropolitan US county. 2022. *medRxiv* 2022.12.15.22283536. https://doi.org/10.1101/2022.12.15.22283536

Publications

11. Hansen, C.L., **A.C. Perofsky,** R. Burstein, M. Famulare, S. Boyle, R. Prentice, C. Marshall, B.J.J. McCormick, D. Reinhart, B. Capodanno, M. Truong, K. Schwabe-Fry, K. Kuchta, B. Pfau, Z. Acker, J. Lee, T.R. Sibley, E. McDermot, L. Rodriguez-Salas, J. Stone, … C. Viboud. Trends in risk factors and symptoms associated with SARS-CoV-2 and Rhinovirus test positivity in King County, Washington: A Test-Negative Design Study of the Greater Seattle Coronavirus Assessment Network. 2022. *JAMA Network Open* 5(12):e2245861. https://doi.org/10.1001/jamanetworkopen.2022.45861
10. **Perofsky**, **A.C.,** S. Tempia, J. Bingham, C. Maslo, M. Toubkin, A. Laubscher, S. Walaza, J.R.C. Pulliam, C. Viboud, C. Cohen. The direct and indirect effects of the COVID-19 pandemic on private healthcare utilization in South Africa, March 2020 – September 2021. 2022. *Clinical Infectious Diseases* 75(1):e1000–1010. https://doi.org/10.1093/cid/ciac055
9. **Perofsky**, **A.C.,** L.A. Meyers., L.A. Abondano, A. Di Fiore, R.J. Lewis. Social groups constrain the spatiotemporal dynamics of wild sifaka gut microbiomes. 2021. *Molecular Ecology* 30:6759–6775. https://doi.org/10.1111/mec.16193
8. McBride, D.S.†, **A.C. Perofsky**†, J.M. Nolting, M.I. Nelson, A.S. Bowman. Tracing the source of influenza A virus zoonoses in interconnected circuits of swine exhibitions. 2021. *Journal of Infectious Diseases* 224(3):458-468. https://doi.org/10.1093/infdis/jiab122 † **Co-first authors**
7. **Perofsky, A.C.** and M.I. Nelson. Seasonal influenza: the challenges of vaccine strain selection. 2020. *eLife* 9:e62955. https://doi.org/10.7554/eLife.62955
6. Nelson, M.I., **A. Perofsky**, D.S. McBride, B.L. Rambo-Martin, M.M. Wilson, J.R. Barnes, H. van Bakel, J.M. Nolting, A.S. Bowman. A heterogenous swine show circuit drives zoonotic transmission of influenza A viruses in the United States. 2020. *Journal of Virology* 94(24):e01453-20. https://doi.org/10.1128/JVI.01453-20
5. Viboud, C., K. Gostic, M.I. Nelson, G.E. Price, **A. Perofsky**, K. Sun, N. Sequeira Trovão, B. Cowling, S. Epstein, D.J. Spiro. Beyond Clinical Trials: Evolutionary and Epidemiological Considerations for Development of a Universal Flu Vaccine. 2020. *PLOS Pathogens* 16(9):e1008583. https://doi.org/10.1371/journal.ppat.1008583
4. **Perofsky**, **A.C.,** R.J. Lewis, L.A. Meyers. Terrestriality and bacterial transfer: A comparative study of gut microbiomes in sympatric Malagasy mammals**.** 2019. *The ISME Journal* 13:50–63. https://doi.org/10.1038/s41396-018-0251-5
3. **Perofsky**, **A.C.,** R.J. Lewis, L.A. Abondano, A. Di Fiore, L.A. Meyers. Hierarchical social networks shape gut microbial composition in wild Verreaux's sifaka. 2017. *Proceedings of the Royal Society B* 284:20172274. https://doi.org/10.1098/rspb.2017.2274
2. Rakotomalala, E.J., F. Rakotondraparany, **A.C. Perofsky**, R.J. Lewis. Characterization of the tree holes used by *Lepilemur ruficaudatus* in the dry, deciduous forest of Kirindy Mitea National Park. 2017. *Folia Primatologica* 88:28-41. https://doi.org/10.1159/000464406
1. Berry, B.S.†, K. Magori†, **A.C. Perofsky,** D. E. Stallknecht, A.W. Park. Wetland cover dynamics drive hemorrhagic disease patterns in white-tailed deer in the United States. 2013. *Journal of Wildlife Diseases* 49(3):501-509. https://doi.org/10.7589/2012-11-283 † Co-first authors

Infectious Disease Forecasting and Operational Support

2022 – Contributor to the CDC FluSight Forecasting Collaboration (NIH-Flu_ARIMA model). Submitted short-term forecasts of weekly influenza hospitalizations in the United States during 2022-2023 and 2023-2024 respiratory virus seasons.

2022 – Contributor to NIH MIDAS Influenza Scenario Modeling Hub (NIH-Flu_TS model). Submitted long-term projections of weekly influenza hospitalizations in the United States during 2022-2023 and 2023-2024 respiratory virus seasons (Rounds 1-4).

2020 – 2022 Developed analysis, drafted the first report, and provided technical support to South Africa's National Institute for Communicable Diseases (NICD) for their COVID-19 Private Consultations Excess Respiratory Encounters Report. Reports were updated on a bi-weekly or monthly basis.

2019 – 2022 Contributor to the US Department of Defense (DoD) Forecasting Collaboration (NIH model). Submitted weekly short-term forecasts of influenza-like illness and COVID-like illness cases on 26 US military bases during 2019-2020, 2020-2021, and 2021-2022 respiratory virus seasons.

Fellowships

2017, 2018 Graduate School Summer Semester Continuing Fellowship, University of Texas at Austin

2014 – 2015 Graduate School Dean's Prestigious Fellowship Supplement, University of Texas at Austin

2013 – 2015 National Science Foundation Graduate Research Fellowship (awarded in 2012)

2011 Integrative Biology Graduate Recruitment Fellowship, University of Texas at Austin

2010 – 2011 National Institutes of Health Post-baccalaureate Intramural Research Training Award

Research Grants

2018 Research Exchange Grant, National Science Foundation IDEAS RCN ($2800)

2015 Dissertation Improvement Grant, Ecology, Evolution, and Behavior Graduate Program, University of Texas at Austin ($8000)

2015 Research Grant, NSF BEACON Center for the Study of Evolution in Action ($16,000); co-PIs: Amanda Perofsky, Lauren Meyers, Rebecca Lewis; project designed by A. Perofsky

2012 Small Research Grant, American Society of Primatologists ($2000)

2012 Small Research Grant, International Primatological Society ($1500)

2011 Startup Grant, Ecology, Evolution, and Behavior Graduate Program, University of Texas at Austin ($2000)

Scholarships and Awards

2020 Young Scientist Award, European Scientific Working group on Influenza (ESWI) Conference

2017 Graduate Student Professional Development Award, College of Natural Sciences, University of Texas at Austin

2009 Center for Undergraduate Research Opportunities (CURO) Scholar, University of Georgia

2008 Elected, Phi Beta Kappa Honors Society

2008 NSF Research Experiences for Undergraduates (REU) Internship, University of Georgia

2005 – 2009 Honors Program Charter Scholarship, University of Georgia

2005 – 2009 National Merit Scholarship, University of Georgia

2005 – 2009 Georgia HOPE Scholarship (full tuition)

2005 – 2009 Georgia Governor's Scholarship (awarded to high school valedictorians)

Conferences

Invited Talks

2023 Keynote speaker, EpiMob Satellite ("Epidemic control: from mobility data to public health"), NetSci International Conference on Network Science, Vienna, Austria

Contributed Talks

2023 Epidemics International Conference on Infectious Disease Dynamics, Bologna, Italy (upcoming)

2022 NIH/FDA COVID-19 Research Workshop (virtual)

2022 Options XI for the Control of Influenza, Belfast, Northern Ireland

2022 NIH Modeling of Infectious Disease Agent Study (MIDAS) Annual Meeting, Bethesda, MD

2021 NIH Modeling of Infectious Disease Agent Study (MIDAS) Annual Meeting (virtual)

2021 NIH Centers of Excellence for Influenza Research and Surveillance (CEIRS) Annual Meeting (virtual)

2020 NIH/FDA COVID-19 Research Workshop (virtual)

2019 Epidemics International Conference on Infectious Disease Dynamics, Charleston, SC

2019 Options X for the Control of Influenza, Singapore

2018 American Association of Physical Anthropologists (AAPA) Conference, Austin, TX

2016 NSF BEACON Annual Congress, Michigan State University, East Lansing, MI

Contributed Posters

2022 Options XI for the Control of Influenza, Belfast, Northern Ireland

2020 European Scientific Working group on Influenza (ESWI) Conference (virtual)

2019 Ecology and Evolution of Infectious Diseases (EEID) Conference, Princeton, NJ

2017 Society of Molecular Biology and Evolution (SMBE) Conference, Austin, TX

2017 Ecology and Evolution of Infectious Diseases (EEID) Conference, Isla Vista, CA

2015 Epidemics International Conference on Infectious Disease Dynamics, Clearwater Beach, FL

Seminar Presentations

2023 Infectious Disease Modeling Call, World Health Organization

2023 Respiratory Virus Interest Group, National Institutes of Health

2023 California Department of Public Health COVID-19 Modeling Team CalCAT Open House

2023 NIH NIAID Centers of Excellence for Influenza Research and Response (CEIRR) Computational Modeling Core Research Seminar

2023 Weekly Infectious Disease Forecasting Call, organized by US CDC and NIH MIDAS

2023 Center for the Ecology of Infectious Diseases (CEID) Research Seminar, University of Georgia

2021 Influenza Research Group, National Animal Disease Center, United States Department of Agriculture

2019 Influenza Interest Group, National Institutes of Health, Bethesda, MD

2018 Fogarty International Center, National Institutes of Health, Bethesda, MD

2017 Bansal Research Group, Georgetown University, Washington, DC

2017 NSF BEACON weekly research seminar (virtual)

2016 NSF BEACON weekly research seminar (virtual)

2016 Kirindy Mitea National Park headquarters, Belo Sur Mer, Madagascar

2015 Department of Integrative Biology, University of Texas at Austin, Austin, TX

2012 Kirindy Mitea National Park headquarters, Morondava, Madagascar

Travel Grants and Course Scholarships

2017 Network Modeling for Epidemics Course Fellowship, University of Washington

2015 Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID) Scholarship and Travel Award, University of Washington

2014 Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID) Scholarship and Travel Award, University of Washington

2011 Meaningful Modeling of Epidemiological Data (MMED) Clinic Scholarship and Travel Award, African Institute for Mathematical Sciences (AIMS)

2011 Ecology and Evolution of Infectious Diseases (EEID) Conference Workshop Scholarship and Travel Award, University of California, Santa Barbara

2010 Ecology and Evolution of Infectious Diseases (EEID) Conference Workshop Scholarship and Travel Award, Cornell University

2007 Honors International Scholarship, University of Georgia (Field ecology course in Costa Rica)

Teaching Experience

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

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

Graduate Teaching Assistant, Scientific Inquiry Across Disciplines (Freshman Signature Course), University of Texas at Austin. Fall 2016 and Fall 2017

Guest Lecture ("Biological Networks and Social Network Analysis"), Introduction to Biological Statistics Course, Center for Computational Biology and Bioinformatics, University of Texas at Austin. November 2015

Guest Lecture ("Introduction to Networks"), Introduction to Biological Statistics Course, Center for Computational Biology and Bioinformatics, University of Texas at Austin. November 2014

Graduate Teaching Assistant, Social Networks and Infectious Diseases (Freshman Signature Course), University of Texas at Austin. Spring 2013

Science Communication, Outreach, and Advocacy

2022	Invited panelist, "Reflections on COVID-19", NIH MIDAS Annual Meeting, Bethesda, MD
2021	"Science Policy for All" blogpost: "Can the United States achieve herd immunity? Vaccine mandates and other policies to increase COVID-19 vaccination"
2020	"Science Policy for All" blogpost: "The Use of COVID-19 Prediction Models in Guiding Policy Decisions"
2020	Poster Judge, NIH Annual Graduate Student Research Symposium, Bethesda, MD
2019 – 2021	Member, NIH Science Policy Discussion Group (SPDG). The NIH SPDG is a fellow-led and run self-governing organization that brings together fellows with a shared passion for understanding the intersection of scientific research and legislative policy.
2018	American Association for the Advancement of Science (AAAS) Classroom Science Days selected speaker, Austin, TX. Outreach lecture ("Meet the Lemurs") to middle school students.
2017	Invited Panelist on STEM Public Engagement, NSF BEACON, Austin, TX
2016	Public Outreach Lecture ("Meet the Lemurs"), Science Under the Stars, Austin, TX. Media coverage: The Daily Texan
2016	NSF BEACON "Researchers at Work" essay: "How lemur social networks shape microbial transmission"
2011 – 2018	Radio DJ and Science Talk Show Host, KVRX 91.7FM, University of Texas at Austin, Austin, TX. Co-organizer and co-host of "They Blinded Me with Science," a weekly educational talk show that interviewed both UT-based and visiting researchers and reviewed current science publications and news. Helped recruit guests, conduct interviews, and produce podcasts.
2011 – 2017	Co-organizer and Volunteer, Science Under the Stars, Austin, TX. Helped coordinate and promote a free monthly lecture series held at UT's field laboratory that provides graduate students an opportunity to communicate ecological research to the greater public.

Editorial Activities

2019 – 2021	Essay editor for "Science Policy for All" (science policy blog with contributors from the Washington, DC area)
2018 –	Peer reviewer for *American Journal of Epidemiology, American Journal of Primatology, Animal Behaviour, BMJ Global Health, Ecology and Evolution, Epidemics, International Journal of Primatology, The ISME Journal, Molecular Ecology, Nature Communications, Nature Physics, PLOS Computational Biology*