Amanda C. Perofsky, Ph.D.

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Education

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

Research Positions

2021 – present	**Research Scientist,** Brotman Baty Institute for Precision Medicine, University of Washington **Guest Researcher,** Fogarty International Center, National Institutes of Health Supervisor: Cécile Viboud
2018 – 2021	**Postdoctoral Research Fellow**, Fogarty International Center, National Institutes of Health Division of International Epidemiology and Population Studies Supervisor: Cécile Viboud
2011	**Research Assistant**, Fogarty International Center, National Institutes of Health Supervisor: Juliet R.C. Pulliam
2010 – 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: John A. Chiorini
2009	**Research Assistant**, Odum School of Ecology, University of Georgia Supervisor: Andrew Park

Fellowships

2017, 2018	Graduate School Summer Semester Continuing Fellowship, The University of Texas at Austin
2013 – 2015	Graduate Research Fellowship, National Science Foundation (awarded in 2012)
2011	Integrative Biology Graduate Recruitment Fellowship, The University of Texas at Austin
2010 – 2011	Post-baccalaureate Intramural Research Training Award (IRTA), National Institutes of Health

Manuscripts in review

† Denotes equal contribution

15. Mathis, S.M.†, A.E. Webber†, A. Basu, J.M. Drake, ..., **A.C. Perofsky**, ..., M. Biggerstaff, R.K. Borchering (110 authors). Evaluation of FluSight influenza forecasting in the 2021-22 and 2022-23 seasons with a new target laboratory-confirmed influenza hospitalizations. 2023. *medRxiv* 2023.12.08.23299726. https://doi.org/10.1101/2023.12.08.23299726 (In review at *Nature Communications*)
14. **Perofsky, A.C.**, C.L. Hansen, R. Burstein, S. Boyle, …, M. Famulare, J. Shendure, T. Bedford, H.Y. Chu, J.A. Englund, L.M. Starita, C. Viboud (30 authors). 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 (In review at *Nature Communications*)
13. **Perofsky, A.C.,** J. Huddleston, C.L. Hansen, J.R. Barnes, …, 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 (26 authors). 2023. *medRxiv* 2023.10.02.23296453. https://doi.org/10.1101/2023.10.02.23296453 (In press at *eLife*)
12. Paredes, M.I., **A.C. Perofsky**, L. Frisbie, L.H. Moncla, P. Roychoudhury, …, J. Shendure, H.N. Oltean, C. Viboud, H.Y. Chu, N.F. Müller, T. Bedford (31 authors). Local-scale phylodynamics reveal differential community impact of SARS-CoV-2 in a metropolitan US county. 2022. *medRxiv* 2022.12.15.22283536. https://doi.org/10.1101/2022.12.15.22283536 (In review at *PLOS Pathogens*)

Publications

11. Hansen, C.L., **A.C. Perofsky,** R. Burstein, M. Famulare, …, J Shendure, T. Bedford, H.Y. Chu, L.M. Starita, C. Viboud (30 authors). 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 (30 authors). 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**.** 2018. *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

Research Support

2018 Research Exchange Grant, National Science Foundation IDEAS RCN ($2800)
2015 Dissertation Improvement Grant, Ecology, Evolution, and Behavior Graduate Program, UT-Austin ($8000)
2015 Research Grant, NSF BEACON Center for the Study of Evolution in Action ($16,000)
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, UT-Austin ($2000)

Scholarships and Awards (Post-baccalaureate)

2020 Young Scientist Award, European Scientific Working group on Influenza (ESWI) Conference
2017 Network Modeling for Epidemics Course Fellowship, University of Washington, Seattle, Washington
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, University of Washington, Seattle, Washington

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

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

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

Conferences

Talks

2023 Epidemics[9] International Conference on Infectious Disease Dynamics, Bologna, Italy

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

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

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

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

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

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

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

2019 Epidemics[7] International Conference on Infectious Disease Dynamics, Charleston, South Carolina

2019 Options X for the Control of Influenza, Singapore

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

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

Posters

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

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

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

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

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

2015 Epidemics[5] International Conference on Infectious Disease Dynamics, Clearwater Beach, Florida

Invited Presentations

2023 US CDC Technical Outreach and Assistance to States (TOAST) Office Hours (online), 15 December

2023 Pierre Louis Institute of Epidemiology and Public Health (IPLESP), French National Institute of Health and Medical Research (INSERM)/Sorbonne University, Paris, France, 23 November

2023 Infectious Disease Modeling Working Group, World Health Organization (online), 19 October

2023 Respiratory Virus Interest Group, National Institutes of Health (online), 6 October

2023 California Department of Public Health COVID-19 Modeling Team CalCAT Open House (online), 31 May

2023 NIH NIAID Centers of Excellence for Influenza Research and Response (CEIRR) Computational Modeling Core (online), 12 April

2023 Infectious Disease Forecasting Call, US CDC (online), 7 March

2023 Center for the Ecology of Infectious Diseases, University of Georgia (online), 25 January

2021 Influenza Research Group, National Animal Disease Center, USDA (online), 24 March

2019 Influenza Interest Group, National Institutes of Health, Bethesda, Maryland, 11 January

2018 Fogarty International Center, National Institutes of Health, Bethesda, Maryland, 2 April

2017 NSF BEACON weekly seminar series (online), 17 November

2017 Bansal Research Group, Georgetown University, Washington, DC, 14 June

2016 NSF BEACON weekly seminar series (online), 5 August

2016 Kirindy Mitea National Park headquarters, Belo Sur Mer, Madagascar, 8 July

2012 Kirindy Mitea National Park headquarters, Morondava, Madagascar, 7 August

Professional service

2022 – present Contributor to the CDC FluSight Forecasting Collaboration. Submitted weekly short-term forecasts of influenza hospitalizations in the United States during 2022-23 and 2023-24 seasons.

2022 – present Contributor to the Influenza Scenario Modeling Hub. Submitted long-term projections of influenza hospitalizations in the United States during 2022-23 and 2023-24 seasons.

2022 Invited panelist, "Reflections on COVID-19", NIH MIDAS Annual Meeting, Bethesda, Maryland

2020 – 2022 Developed the 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.

2020 Poster Judge, NIH Annual Graduate Student Research Symposium, Bethesda, Maryland

2019 – 2022 Contributor to the US Department of Defense Forecasting Collaboration. Submitted weekly short-term forecasts of influenza-like illness and COVID-like illness cases on US military bases during the 2019-20, 2020-21, and 2021-22 seasons.

2019 – 2021 Essay editor for "Science Policy for All" (science policy blog with contributors from the Washington, DC area)

2017 Invited Panelist, NSF BEACON Public Engagement Workshop, Austin, Texas

Ad-hoc referee: *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*

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, UT-Austin. 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. November 2015

Guest Lecture ("Introduction to Networks"), Introduction to Biological Statistics Course, Center for Computational Biology and Bioinformatics, UT-Austin. November 2014

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

Science Communication and Outreach

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"

2019 – 2021 Member, NIH Science Policy Discussion Group (SPDG), Bethesda, Maryland. 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, Texas. Outreach lecture ("Meet the Lemurs") to middle school students.

2016 Public outreach lecture ("Meet the Lemurs"), Science Under the Stars, Austin, Texas

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, UT-Austin, Austin, Texas. 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. Recruited guests, conducted interviews, and produced podcasts.
2011 – 2017	Co-organizer and Volunteer, Science Under the Stars, Austin, Texas. 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.