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EDUCATION

- Ph.D. in Ecology and Evolutionary Biology**, University of Illinois 2005
Program in Ecology and Evolutionary Biology, Urbana-Champaign, Illinois
- B.A. in Biology**, Northwestern University, Evanston, Illinois 1995

PROFESSIONAL EXPERIENCE

- Professor**, Department of Biological Sciences 2023–present
Northern Arizona University, Flagstaff, Arizona
- President**, International Brucellosis Society 2023–2024
- Associate Chair & Director of Graduate Studies**, Department of Biological Sciences 2022–2024
Northern Arizona University, Flagstaff, Arizona
- Associate Professor**, Department of Biological Sciences 2017–2023
Northern Arizona University, Flagstaff, Arizona
- Assistant Professor**, Department of Molecular, Cellular, and Biomedical Sciences 2014–2017
University of New Hampshire, Durham, New Hampshire
- Assistant Research Professor**, Department of Biological Sciences 2009–2014
Northern Arizona University, Flagstaff, Arizona
- Postdoctoral Research Associate**, Center for Microbial Genetics & Genomics 2007–2009
PI: Dr. Paul Keim, Northern Arizona University, Flagstaff, Arizona
- Postdoctoral Researcher**, Center for Conservation & Evolutionary Genetics 2005–2006
PI: Dr. Rob Fleischer, Smithsonian Institution, Washington, DC
- Ornithologist**, Exotic Bird Species Importation Database, USGS-BRD, Hawaii 2000
- Field Biologist**, Endangered Puaiohi Recovery Program, USGS-BRD, Hawaii 1998–2000
- Biological Technician**, Avian Productivity Research, USFWS-King Salmon, Alaska 1998
- Field Technician**, Nightingale Reed-warbler Study, USGS-BRD, Saipan, CNMI 1997–1998
- Biological Technician**, Hawk and Bat Inventory, USFS-Kaibab Nat'l Forest, Arizona 1997
- Field Assistant**, Hawaiian Honeycreeper Research, USGS-BRD, Hakalau, Hawaii 1997
- Biological Technician**, Wildlife Inventory, USFS-Tongass Nat'l Forest, Alaska 1996
- Field Assistant**, Cascades Black-tailed Deer Study, OR Dept. F&W, Oregon 1995–1996
- Field Assistant**, Fisheries Program, USFS-Tongass Nat'l Forest, Alaska 1995

PUBLICATIONS

- Olson, S. H., C. M. Davy, C. L. Lausen, Y. A. Dzal, **J. T. Foster**, W. F. Frick, N. W. Fuller, C. G. Haase, C. R. Hranac, H. E. Kretser, S. Lieberman, C. McCann, M. McClure, C. L. Mormorunni, J. C. Ray, C. Walzer, C. K. R. Willis, and L. P. McGuire. 2025. Facilitating evolutionary rescue from a wildlife health threat with cross-sectoral strategies: a case study on white-nose syndrome. *Ecology and Society* 30(3):14. [doi: 10.5751/ES-16200-300314](https://doi.org/10.5751/ES-16200-300314)
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heterogeneities in wildlife health and conservation priorities. Integrative and Comparative Biology. ica123, [doi: 10.1093/icb/ica123](https://doi.org/10.1093/icb/ica123)

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Kyriazis, C.C., M. Venkatraman, B. Masuda, C.C. Steiner, L. Cassin-Sackett, L.H. Crampton, A.M. Flanagan, **J.T. Foster**, M.L. Houck, A.C. Misuraca, E.H. Paxton, J.A. Robinson, R.C. Fleischer, O.A. Ryder, M.G. Campana, and A.P. Wilder. 2025. Population genomics of recovery and extinction in Hawaiian honeycreepers. Current Biology 35: 1-12. [doi: 10.1016/j.cub.2025.04.078](https://doi.org/10.1016/j.cub.2025.04.078)

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Hoff, S., J. R. Hoyt, K. E. Langwig, L. Johnson, E. Olson, D. O'Dell, C. J. Pendergast, C. J. Herzog, K. L. Parise, **J. T. Foster** and W. C. Turner. 2025. The importance of peripheral populations in the face of novel environmental change. Proceedings of the Royal Society B: Biological Sciences 292:20242331. [doi: 10.1098/rspb.2024.2331](https://doi.org/10.1098/rspb.2024.2331)

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Szentiványi, T., N. Takács, A.D. Sándor, A. Péter, S.A. Boldogh, D. Kováts, **J.T. Foster**, P. Estók, S. Hornok. 2024. Bat-associated ticks as a potential link for vector-borne pathogen transmission between bats and other animals. PLoS Neglected Tropical Diseases 18(10): e0012584 [doi: 10.1371/journal.pntd.0012584](https://doi.org/10.1371/journal.pntd.0012584)

Costantini, M., E. Videvall, **J.T. Foster**, M. Medeiros, J. Gillece, E. Paxton, L. Crampton, H. Mounce, A. Wang, R.C. Fleischer, M. Campana, and F. A. Reed. 2024. The role of geography, diet, and host phylogeny on the gut microbiome in the Hawaiian Honeycreeper radiation. Ecology and Evolution 14(10):e70372. [doi: 10.1002/ece3.70372](https://doi.org/10.1002/ece3.70372)

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- Szentiványi, T., C. McKee, G. Jones, and **J.T. Foster**. 2023. Trends in bacterial pathogens of bats: global distribution and knowledge gaps. *Transboundary and Emerging Diseases* 9285855. [doi: 10.1155/2023/9285855](https://doi.org/10.1155/2023/9285855)
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- Rodrigues Pereira, C., T. d. J. Sousa, A. L. da Silva, R. Gonçalves dos Santos, D. A. Costa Custódio, D. J. J. Pickard, D. O'Callaghan, **J. T. Foster**, S. d. C. Soares, R. T. J. Ramos, A. Góes-Neto, M. M. da Costa, A. P. Lage, V. Azevedo, and E. M. S. Dorneles. 2023. First report and whole-genome sequencing of *Pseudochrobactrum saccharolyticum* in Latin America. *Microbes and Infection* 25: 105018. doi: [10.1016/j.micinf.2022.105018](https://doi.org/10.1016/j.micinf.2022.105018)
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- Foster, J.T.**, T. Pearson, P. Keim. 2023. Genomic microbiology as applied to animal forensics. The Microbiologist 563. Applied Microbiology International [Feature of Forensic Microbiology Issue](#)
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SELECTED FUNDING

Strategic Environmental Research & Development Program (DoD-SERDP) 2025-2028
A predictive model for invasive terrestrial arthropod species in the Indo-Pacific
Role: Co-Investigator, PI: M. Johnson (US Army) & N. Graham (U Hawaii-Hilo), RC25-C1-0201

US Fish & Wildlife Service, C-SWG 2024-2026
Collection of Anianiau from the wild to develop husbandry techniques
Role: Co-Investigator, PI: L. Nietmann (Hawaii DOFAW), F24AS00061

Strategic Environmental Research & Development Program (DoD-SERDP) 2024-2027
Predicting impacts of species loss on ecosystem resilience.
Role: Co-Investigator, PI: J. Sperry (US Army), RC24-4510

US Fish & Wildlife Service 2022-2024
Disease Dynamics of White-Nose Syndrome in the Southwest
Role: PI, F22AS00291

Department of Defense-Defense Threats Reduction Agency 2022-2025
Phylogeography of Brucellosis in Iraq
Role: PI, HDTRA-12210013

Department of Defense-ESTCP 2022-2026
Metabarcoding for monitoring bird species habitat quality on DoD installations
Role: PI, RC22-B5-7440

US Geological Survey-North American Bat Monitoring Program 2021-2024
NABat and One Health: Expanding the North American Bat Monitoring Program to monitor bat health in the COVID era
Role: Co-Investigator, PI: W. Frick (BCI), G21AC10783

Department of Defense-Defense Threats Reduction Agency 2020-2025
Biosurveillance of Brucellosis in Azerbaijan, Georgia, and Turkey
Role: PI, HDTRA1-20-1-0028

Department of Defense-Defense Threats Reduction Agency 2020-2024
A collaborative interdisciplinary approach to an endemic zoonotic disease in Cameroon
Role: Co-Investigator, PI: A. Arenas (Texas A&M)

Pacific Southwest Regional Center of Excellence for Vector-Borne Diseases 2020-2021
Tortoises, Ticks, and Tick-borne Pathogens of the Mojave Desert

Training Grant Program from the U.S. CDC (Agreement 1U01CK000516) Role: PI, Student Fellow: Molly Bechtel (actual lead on award)	
Flinn Foundation and NAU VPR's Office Identifying the geographic link between enzootic cycling of arboviruses and human clinical cases Role: Co-Investigator, PI: C. Hepp (NAU)	2020-2021
US Fish & Wildlife Service, Competitive State Wildlife Grants (C-SWG) Improving rodent control to benefit endangered Puaiohi and other species of greatest conservation need in Hawaii Role: Co-Investigator, PI: L. Berry (Hawaii DOFAW), F19AS00191	2020-2024
National Science Foundation, Ecology & Evolution of Infectious Diseases Lessons from the past: synthesizing drivers of host persistence... Role: Co-Investigator, PI: K. Langwig (Virginia Tech), DEB-1911853	2019-2024
Strategic Environmental Research & Development Program (DoD-SERDP) Predicting impacts of species loss on ecosystem resilience Role: Co-Investigator, PI: J. Sperry (US Army), RC20-C1-1420	2019-2021
US Fish & Wildlife Service Investigating survival mechanisms of remnant northern long-eared bat (<i>Myotis septentrionalis</i>) populations Role: Co-Investigator, PI: W. Turner (SUNY Albany), F18AS00119	2019-2020
US Fish & Wildlife Service Genomics of white-nose syndrome resistance Role: PI, F18AS00119	2019-2020
National Institutes of Health-NCI, Arizona Cancer Evolution Center Evolution of TP53 Functional Homologs in Long-lived Vesper Bats Role: Co-Investigator, PI: M. Tollis (NAU)	2019-2020
National Fish and Wildlife Foundation-Bats for the Future Fund Breaking the transmission cycle: testing approaches for reducing pathogen contamination on hibernaculum substrates Role: Co-Investigator, PI: W. Frick (BCI)	2018-2019
Department of Homeland Security-S&T Directorate Creation of Bacterial Select Agent Repository and Test-Bed for DHS Assays Role: PI, HSHQDC-17-C-B0021	2017-2020
National Science Foundation, Ecology & Evolution of Infectious Diseases Predicting the evolution of vector-borne disease dynamics in a changing world Role: Co-Investigator, PI: D. Fonseca (Rutgers), DEB- 2001213	2017-2022
US Fish & Wildlife Service Demography of a recovery: tracking the rebound of little brown bat populations Role: PI, F17AP00588	2017-2019

US Fish & Wildlife Service Determining survival strategies for multiple bat species affected by WNS Role: Co-Investigator, PI: K. Langwig (Virginia Tech), FWS-R5-ES-XX	2017-2019
US Fish & Wildlife Service Genomics of white-nose syndrome resistance Role: PI, F17AP00589	2017-2018
New England Transportation Consortium Use of Forested Habitat Adjacent to Highways by Northern Long Ear(ed) Bats Role: PI, NETC 15-1	2016-2018
The Nature Conservancy & Bat Conservation International Reducing white-nose syndrome through treatment of the environmental reservoir Role: PI.	2016-2017
US Department of Agriculture-NRCS-NJ-CIG Bats as Tools for the Early Detection of Agricultural Pests Role: Co-Investigator, PI: B. Maslo (Rutgers University)	2016-2018
New Hampshire Agricultural Experiment Station, McIntire-Stennis Novel molecular identification of forest insect pests Role: PI, USDA-NH00080-M, 1006866	2015-2018
US Fish & Wildlife Service Disease dynamics of white-nose syndrome in an endemic region. Role: Co-Investigator, PI: W. Frick (UC Santa Cruz)	2015-2017
US Fish & Wildlife Service Field trial of a probiotic to protect bats from white-nose syndrome. Role: Co-Investigator, PI: M. Kilpatrick (UC Santa Cruz)	2015-2017
Strategic Environmental Research & Development Program (DoD-SERDP) Seed Dispersal Networks and Novel Ecosystem Functioning in Hawaii Role: PI, RC-2434	2014-2018
US Fish & Wildlife Service Genomic differences between <i>Pseudogymnoascus destructans</i> and closely related fungi from bat hibernacula: insights into fungal pathogenicity... Role: PI, #F14AP00644	2014-2016
National Institutes of Health-NIAID Environmental sampling of <i>Leptospira</i> species to link to human leptospirosis cases Role: Co-Investigator, PI: T. Pearson, 1R15AI101913-01A1	2013-2015
National Park Service Comprehensive Assessment of Risk of Caves to WNS in U.S. National Parks Role: Co-Investigator, PI: C. Chambers, P14AC01179	2014-2015

Department of Homeland Security-International S & T Genomic Sequencing and Signatures in <i>Clostridium botulinum</i> Strains from Argentina Role: PI, DHS-2010-ST-108-000019, Add-on funding to prior award	2013
Technology Research Initiative Fund (TRIF): State of Arizona Support for Post-Doctoral Associates (SPA) Program: Genomics of <i>Clostridium botulinum</i> for human health Role: PI	2012-2014
National Institutes of Health-NIAID NIH-R01, The Role of Plasmids in Rickettsia Biology Role: Co-Investigator, PI: U. Munderloh (U Minnesota), 5R01AI081690-03	2010-2014
Department of Interior-National Park Service Genetic Diversity and Population Status of Bats in Northern Arizona Role: Co-Investigator, PI: C. Chambers, Task #P12AC11177	2012
Technology Research Initiative Fund (TRIF): State of Arizona Support for Post-Doctoral Associates (SPA) Program: Bridging the Gap between Renewable Energy & Bat Conservation in Arizona Role: Co-Investigator, PI: C. Chambers	2012-2014
Technology Research Initiative Fund (TRIF): State of Arizona Equipment grant: Acquisition of an Illumina MiSeq for DNA Sequencing Role: Co-Investigator, PI: G. Allan	2012
Bat Conservation International Evaluating Sensitive Molecular Detection of <i>Geomyces destructans</i> Role: PI	2012-2013
US Fish & Wildlife Service Antifungal skin microbes as tools for WNS management Role: Co-Investigator, PI: W. Frick, UC Santa Cruz, FWS-R5-ES-12-001	2012-2014
National Science Foundation- Ecology & Evolution of Infectious Diseases The effect of sociality on transmission and spread of a multi-host pathogen Role: Co-Investigator, PI: M. Kilpatrick, UC Santa Cruz, DEB-1336290	2011-2016
Department of Defense- US Army Medical Research & Materiel Command Telemedicine & Advanced Technology Research Center Next-Generation Sequencing for Clinical Diagnostics Role: PI, W81XWH-11-1-0690	2011-2013
Department of Homeland Security-International S & T Genomic Sequencing and Signatures in <i>Clostridium botulinum</i> Strains from Argentina Role: PI, DHS-2010-ST-108-000019	2011-2013
Department of Homeland Security Statistical confidence in evidentiary material based on bacterial population genetics Population genetics of <i>C. botulinum</i> , plague, tularemia, anthrax and other pathogens.	2011-2013

Role: Co-Investigator, PI: P. Keim, HSHQDC-10-C-00139, Phase II	
Department of Defense- Defense Threats Reduction Agency Genomics, Proteomics, and Biochemical Profiles of <i>Bacillus anthracis</i> and <i>Yersinia pestis</i> Role: NAU PI, Lead PI: H. Kreuzer, PNNL, HDTRA1-08-10-BRCWMD	2011-2013
National Institutes of Health-Institute of Dental & Craniofacial Research Molecular Ecology of Chronic Rhinosinusitis Role: PI, Prior PI: C. Liu, transfer of PI on project, R15DE021194-01	2010-2013
Department of Homeland Security Technology and Data Integration with the Bundeswehr Institute of Microbiology Role: Co-Investigator, PI: D. Wagner, DHS-2010-ST-108-00015	2010-2013
US Fish & Wildlife Service DNA-based detection techniques capable of differentiating <i>Geomyces destructans</i> Role: Co-Investigator, PI: D. Lindner, US Forest Service, FWS-R5-ES-10-049	2010-2013
Department of Homeland Security Standards and analysis tools for next-generation Sequencing Approaches for Detecting Rare Variants in <i>Bacillus anthracis</i> cultures Role: PI of NAU subcontract, PI: P. Keim, TGen, HSHQDC-10-C-00152	2010-2013
Department of Homeland Security Bacterial Population Genetics in a Forensics Context: Phase II, Genetics of plague, brucellosis, tularemia, anthrax and other pathogens. Role: Co-Investigator, PI: P. Keim, HSHQDC-10-C-00139	2010-2012
US Fish & Wildlife Service Fine-scale population structure in <i>Geomyces destructans</i> , Fungal genetics WNS Role: PI, FWS-R5-ES-10-049	2010-2011
Department of Defense Transformational Medical Technologies Initiative Program Dangerous Pathogen Whole Genome Sequencing Role: PI, DOD-81661-001-10	2010
USGS-National Wildlife Health Center Phylogeography of White-Nose Syndrome in Eastern US Bats Role: PI, USGS-10-ERPA-1000	2010
USGS-Colorado Plateau Field Station Blood parasites in Southwestern Willow Flycatchers Role: PI	2010
Department of Homeland Security Design and validation of pathogen and toxin-specific TaqMan PCR assays Role: NAU PI, Lead PI: K. Hill (LANL), HSHQPM-09-X-00015	2009-2010
Department of Homeland Security	2008-2009

Bacterial Population Genetics in a Forensics Context: Phase I Genetics of plague, brucellosis, tularemia, anthrax and other pathogens. Role: Co-Investigator, PI: P. Keim, HSHQDC-08-C-00158	
Department of Homeland Security Population Genetics of Castor Beans (<i>Ricinus communis</i>) Role: Co-Investigator, PI: P. Jackson	2008-2009
Environment Canada, Science & Technology: STAGE Molecular ecology and evolution of <i>Pasteurella multocida</i> from large-scale avian cholera outbreaks across Canada Role: Co-Investigator, PI: C. Soos, Environment Canada	2009
Arizona Bat Conservation Partnership Developing microsatellite markers for spotted bats (<i>Euderma maculatum</i>) Role: Co-Investigator, PI: C. Chambers, Funding cut by State of Arizona	2009
USGS-National Wildlife Health Center Population Genetics of Avian Cholera from Waterfowl Role: PI	2009
Research Funding—Environment Canada, Science & Technology Diagnostic Assays for Avian Cholera in Waterbirds Role: PI	2009
EPA STAR Fellowship—US Environmental Protection Agency, 3 years	2001-2004
Graduate Fellowship—University of Illinois, Fall 2004 tuition and stipend	2004
Budweiser Conservation Scholarship—National Fish & Wildlife Foundation	2004
Graduate College Dissertation Travel Grant—University of Illinois	2004

PROFESSIONAL AFFILIATIONS

American Ornithological Society	The Wildlife Society
American Society for Microbiology	Wildlife Disease Association
International Brucellosis Society	