

ALEXANDRA L. DECANDIA, PH.D.

Assistant Teaching Professor

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PROFESSIONAL APPOINTMENTS

Georgetown University, Department of Biology, Washington, D.C. Aug. 2021-Present
Assistant Teaching Professor

Courses: Principle & Practice in Biology (BIOL 100; Summer); Foundations in Biology II Lab (BIOL 114; Spring); Ecology + Lab (BIOL 180; Fall); Research Tutorial (BIOL 340; Spring); Research Intensive Senior Experience (BIOL 341/342; Fall & Spring); Evolution of Mammalian Diversity (BIOL 408; Fall)

Smithsonian's National Zoo & Conservation Biology Institute, Washington, D.C. Oct. 2021-Present
Research Associate, Center for Conservation Genomics

*Primary Research Areas: epigenetic gene regulation, microbial ecology, and wildlife conservation of black-footed ferrets (*Mustela nigripes*), Channel Island foxes (*Urocyon littoralis*), and island spotted skunks (*Spilogale gracilis amphiala*); environmental microbiome of salt marsh communities under different management regimes*

POSTDOCTORAL RESEARCH

Smithsonian's National Zoo & Conservation Biology Institute, Washington, D.C. Sept. 2020-Aug. 2021
Postdoctoral Research Fellow, Center for Conservation Genomics & Center for Species Survival

Advisors: Klaus-Peter Koepfli, Ph.D. & Jesús Maldonado, Ph.D.

I identified the primary drivers of host-associated microbial diversity in Yellowstone National Park wolves (*Canis lupus*). I additionally studied the roles of epigenetic gene regulation and microbiome diversity on mammalian health and disease in black-footed ferrets (*M. nigripes*) and Channel Island foxes (*U. littoralis*).

EDUCATION

Princeton University, Graduate School, Princeton, NJ Sept. 2015-Aug. 2020
M.A., Ph.D. in Ecology & Evolutionary Biology

Academic Advisor: Bridgett vonHoldt, Ph.D.

Dissertation: "An inclusive understanding of molecular variation in population genetics and wildlife disease ecology"

I argued for a more inclusive understanding of molecular diversity within ecology and evolutionary biology. In *Chapter One*, I summarized literature along the intersection of molecular ecology, disease ecology, and wildlife conservation to highlight the utility of diverse molecular techniques. In subsequent chapters, I applied multiple approaches to address questions within wildlife disease ecology and evolutionary and population genetics. In *Chapters Two* and *Three*, I examined the genetic effects of urban colonization to consider host genetic changes within altered disease landscapes. In *Chapters Four* and *Five*, I characterized changes in the host-associated microbiome associated with mite infection to elucidate novel drivers of disease pathology.

Columbia University, Columbia College, New York, NY Sept. 2011-May 2015
B.A. in Environmental Biology, *Magna Cum Laude*, Phi Beta Kappa, Dean's List

Thesis Advisor: George Amato, Ph.D.

Departmental Thesis: "Method for the noninvasive sex identification of order Carnivora"

2015 Winner of the Dobzhansky Award for Outstanding Thesis in Evolutionary Biology

PREVIOUS RESEARCH

American Museum of Natural History, New York, NY Sept. 2013-Aug. 2015
Undergraduate Research Assistant, Sackler Institute for Comparative Genomics

Advisor: George Amato, Ph.D.

I developed the first noninvasive molecular sexing method applicable to multiple families within mammalian order Carnivora to aid conservation monitoring and management of at-risk species.

The Earth Institute, Columbia University, New York, NY Sept. 2012-Jan. 2013
Undergraduate Research Assistant, Arctic Arthropods Project

Advisor: Natalie Boelman, Ph.D.

I catalogued over 23,000 terrestrial arthropods as part of larger-scale effort to examine ecological succession and altered food web dynamics in the changing Arctic.

MANUSCRIPTS IN REVIEW & PREPARATION (*STUDENT COAUTHORS)

- [16] **DeCandia, A.**, J. Lu*, E. Hamblen, L. Brenner, C. Gagorik, F. Ferrara, J. Schamel, S. Baker, A. Bridges, M. Booker, J. Purnell, C. Carrasco*, T. Coonan, B. vonHoldt, K. Koepfli, and J. Maldonado (*in preparation*) Evolutionary history and mite infection structure the host-associated microbiome of Channel Island foxes (*Urocyon littoralis*) across subspecies.
- [15] Tran, E.*, C. Gagorik, L. Brenner, B. vonHoldt, K. Koepfli, J. Maldonado, and **A. DeCandia** (*in preparation*) Microbial differentiation between Santa Cruz Island's top terrestrial carnivores: Channel Island foxes (*Urocyon littoralis santacruzae*) and island spotted skunks (*Spilogale gracilis amphiala*).
- [14] Tennenbaum, S.*, R. Bortner, C. Lynch, P. Marinari, J. Santiestevan, S. Wisely, B. Pukazhenth, J. Maldonado, K. Koepfli, B. vonHoldt, and **A. DeCandia** (*in preparation*) Epigenetics signatures of male infertility across blood, testes, and sperm in captive-reared black-footed ferrets (*Mustela nigripes*).
- [13] Lu, J.*, E. Hamblen, L. Brenner, B. vonHoldt, and **A. DeCandia** (*submitted*) Ear mite infection restructures otic microbial networks in conservation-reliant Santa Catalina Island foxes (*Urocyon littoralis catalinae*).
- [12] vonHoldt, B., **A. DeCandia**, K. Cassidy, E. Stahler, J. Sinsheimer, D. Smith, and D. Stahler (*submitted*) High retention of genomic variation and fitness-related traits in the effective population of reintroduced wolves in Yellowstone National Park. *bioRxiv preprint*: <https://doi.org/10.1101/2022.02.18.481090>

PEER-REVIEWED PUBLICATIONS (*STUDENT COAUTHORS)

- [11] **DeCandia, A.**, K. Cassidy, D. Stahler, E. Stahler, and B. vonHoldt (2021) Social environment and genetics underlie body site specific microbiomes of Yellowstone National Park gray wolves (*Canis lupus*). *Ecology and Evolution*. 11(14):9472-9488. <https://doi.org/10.1002/ece3.7767>
- [10] **DeCandia, A.**, E. Schrom, E. Brandell, D. Stahler, and B. vonHoldt (2021) Sarcoptic mange severity is associated with reduced genomic variation and evidence of selection in Yellowstone National Park wolves (*Canis lupus*). *Evolutionary Applications* 14(2):429-445. <https://doi.org/10.1111/eva.13127>
- Featured on Evolutionary Applications cover: <https://doi.org/10.1111/eva.13206>
- [9] vonHoldt, B.†, **A. DeCandia**†, E. Heppenheimer, I. Janowitz-Koch, R. Shi, H. Zhou, C. German, K. Brzeski, K. Cassidy, D. Stahler, and J. Sinsheimer (2020) Heritability of inter-pack aggression in a wild pedigreed population of North American gray wolves. *Molecular Ecology* 29(10):1764-1775. <https://doi.org/10.1111/mec.15349> († authors contributed equally)
- Featured on Molecular Ecology cover: <https://doi.org/10.1111/mec.14740>
 - Perspective by C. Schell: <https://doi.org/10.1111/mec.15453>
- [8] **DeCandia, A.**, L. Brenner, J. King, and B. vonHoldt (2020) Ear mite infection is associated with altered microbial communities in genetically depauperate Santa Catalina Island foxes (*Urocyon littoralis catalinae*). *Molecular Ecology* 29(8):1463-1475. <https://doi.org/10.1111/mec.15325> (preprint available: *bioRxiv* 653220)
- Perspective by B. Trevelline, J. Stephenson, and K. Kohl: <https://doi.org/10.1111/mec.15397>
- [7] **DeCandia, A.**, K. Leverett*, and B. vonHoldt (2019) Of microbes and mange: Consistent changes in the skin microbiome of three canid species infected with *Sarcoptes scabiei* mites. *Parasites and Vectors* 12(1):488. <https://doi.org/10.1186/s13071-019-3724-0> (preprint available: *bioRxiv* 709436)
- [6] **DeCandia, A.**, K. Brzeski, E. Heppenheimer, C. Caro*, G. Camenisch, C. Driscoll, and B. vonHoldt (2019) Urban colonization through multiple genetic lenses: The city fox phenomenon revisited. *Ecology and Evolution* 9(4):2046-2060. <https://doi.org/10.1002/ece3.4898>
- [5] **DeCandia, A.**†, C. Henger†, A. Krause*, L. Gormezano, M. Weckel, C. Nagy, J. Munshi-South, and B. vonHoldt (2019) Genetics of urban colonization: Neutral and adaptive variation in coyotes (*Canis latrans*) inhabiting the New York metropolitan area. *Journal of Urban Ecology* 5(1):juz002. <https://doi.org/10.1093/jue/juz002> († authors contributed equally)

- [4] Heppenheimer, E., R. Harrigan, L. Rutledge, K. Koepfli, R. Horwath, **A. DeCandia**, K. Brzeski, J. Benson, T. Wheeldon, B. Patterson, R. Kays, P. Hohenlohe, and B. vonHoldt (2018) Population genomic analysis of North American eastern wolves (*Canis lycaon*) supports their conservation priority status. *Genes* 9(12):606. <https://doi.org/10.3390/genes9120606>
- [3] Heppenheimer, E., K. Brzeski, J. Hinton, B. Patterson, L. Rutledge, **A. DeCandia**, T. Wheeldon, S. Fain, P. Hohenlohe, R. Kays, B. White, M. Chamberlain, and B. vonHoldt (2018) High genomic diversity and candidate genes under selection associated with range expansion in eastern coyote (*Canis latrans*) populations. *Ecology and Evolution* 8(24):12641-12655. <https://doi.org/10.1002/ece3.4688>
- [2] **DeCandia, A.**, A. Dobson, and B. vonHoldt (2018) Toward an integrative molecular approach to wildlife disease. *Conservation Biology* 32(4):798-807. <https://doi.org/10.1111/cobi.13083>
- [1] **DeCandia A.**, S. Gaughran, A. Caragiulo, and G. Amato (2016) A novel molecular method for noninvasive sex identification of order Carnivora. *Conservation Genetics Resources* 8(2):119-121. <https://doi.org/10.1007/s12686-016-0525-z>

GRANTS & FELLOWSHIPS

- 2022: **American Society of Mammalogists Early Career Travel Award**, \$700
- 2021-2022: **Georgetown University Annual Research Grant**, \$10,000
- 2020-2021: **Smithsonian Institution Fellowship Program Postdoctoral Fellowship**, \$54,550
- 2015-2020: **National Science Foundation Graduate Research Fellowship**, \$138,000
- 2020: **Friends of the Island Fox 2020 Research Grant**, \$5,000
- 2019: **American Society of Mammalogists Student Travel Award**, \$500
- 2017: **Center for Health & Wellbeing Health Grand Challenge Research Award**, \$5,000
- 2017: **American Museum of Natural History Theodore Roosevelt Memorial Fund**, \$2,350
- 2017: **American Society of Mammalogists Grants-in-Aid of Research**, \$1,500
- 2016: **Princeton University Women Scientists in Conservation Biology Research Award**, \$7,500
- 2016: **Department of Ecology & Evolutionary Biology First Year Seed Money**, \$2,500
- 2016: **Center for Health & Wellbeing Health Grand Challenge Research Award**, \$2,000
- 2016: **Princeton University Graduate School Professional Development Travel Funds**, \$500

INVITED SEMINARS & GUEST LECTURES

- 2022: **Meet the Scientist, Smithsonian's National Zoo & Conservation Biology Institute**
Guest Lecture for NZCBI Interns and Fellows, "Pursuing a career in wildlife research, conservation, and education"
- 2022: **Science Research Experience (REx), Princeton Day School**
Guest Lecture for High School Students, "Conservation genetics and microbiomes in Yellowstone National Park wolves"
- 2021: **Conservation Biology (BIOL 365), Georgetown University**
Guest Lecture for Undergraduates, "Modern conservation tools: Genetics"
- 2021: **Applied Molecular Ecology (EEB 331), Princeton University**
Guest Lecture for Undergraduates, "Studying the host-associated microbiome in wildlife"
- 2021: **Cross-Center Seminar, Smithsonian Conservation Biology Institute**
Invited Seminar, "Mites, microbes, and tumors: The ear canal microbiome of Santa Catalina Island foxes"
- 2021: **Ecology, Evolution & Conservation Biology Program, University of Hawai'i at Mānoa**
Invited Seminar, "Microbial dysbiosis and its implications for disease in genetically depauperate Santa Catalina Island foxes"
- 2021: **Smithsonian-Mason School of Conservation, George Mason University**
Guest Lecture for Undergraduates, "Black-footed ferrets in research: Using collections to advance conservation science and practice"
- 2021: **Alternative Career Seminar, Department of Ecology & Evolutionary Biology, Princeton University**
Invited Seminar, "Research and conservation at the Smithsonian Conservation Biology Institute"

CONFERENCE PRESENTATIONS

- 2022: **Annual Island Spotted Skunk Working Group Meeting**
Oral Presentation, "Island Spotted Skunk Microbiomes – 2022 Update"

- 2022: **Annual Black-footed Ferret Genomics Working Group Meeting**
Oral Presentation, "Black-footed Ferret Epigenetics and Microbiomes – 2022 Update"
- 2022: **101st Annual Meeting of the American Society of Mammalogists (ASM)**
Oral Presentation, "Host genetics and social environment shape Yellowstone wolf microbiomes"
- 2022: **Annual Island Fox Working Group Meeting**
Oral Presentation, "Channel Island Fox Microbiomes – 2022 Update"
- 2022: **Microbial Ecology and Conservation Symposium (Co-hosted by Smithsonian's National Zoo & Conservation Biology Institute and San Diego Zoo Wildlife Alliance)**
Oral Presentation, "Geography and disease shape the host-associated microbiome of Channel Island foxes"
- 2021: **100th Annual Meeting of the American Society of Mammalogists (ASM)**
Oral Presentation, "Genomics underlie disease severity in Yellowstone National Park wolves"
- 2021: **Annual Island Fox Working Group Meeting**
Oral Presentation, "Channel Island Fox Microbiomes – 2021 Update"
- 2021: **Annual Black-footed Ferret Genomics Working Group Meeting**
Oral Presentation, "Examining epigenetic & microbial variation in captive-managed black-footed ferrets"
- 2020: **The Princeton University Center for Health & Wellbeing Student Research Symposium**
Oral Presentation, "Genomic underpinnings and consequences of sarcoptic mange severity in Yellowstone National Park wolves"
- 2020: **North American Congress for Conservation Biology (NACCB)**
Oral Presentation, "Microbial dysbiosis and its implications for disease in genetically depauperate Santa Catalina Island foxes"
 *Recipient of Student Presentation Award for "Best Full Length Presentation"
- 2020: **Ecological Society of America Annual Meeting (ESA)**
Oral Presentation, "Microbial dysbiosis and its implications for disease in genetically depauperate Santa Catalina Island foxes"
- 2020: **Annual Island Fox Working Group Meeting**
Oral Presentation, "The host-associated microbiome of Santa Catalina Island foxes"
- 2019: **Student Conference on Conservation Science – New York (SCCS-NY)**
Oral Presentation, "Microbial diversity and its implications for disease in an endemic fox population"
- 2019: **99th Annual Meeting of the American Society of Mammalogists (ASM)**
Oral Presentation, "Microbial diversity and its implications for disease in an endemic fox population"
- 2019: **Ecology & Evolution of Infectious Diseases (EEID)**
Poster Presentation, "Microbial diversity and its implications for disease in an endemic fox population"
- 2019: **Northeast Natural History Conference (NENHC)**
Invited Oral Presentation, "Genetics of urban coyote colonization: Neutral and adaptive variation in NYC's newest residents"
- 2019: **Columbia-Rutgers-Princeton-Penn-Yale Student Conference (CRPPY)**
Oral Presentation, "Genetics of urban colonization: Neutral and adaptive variation in urban canids"
- 2017: **Student Conference on Conservation Science – New York (SCCS-NY)**
Oral Presentation, "Genetic underpinnings of disease severity in Yellowstone National Park wolves"
 *Recipient of Award for "Best Full Length Presentation"
- 2017: **The Wildlife Society Annual Meeting (TWS)**
Oral Presentation, "Genetic underpinnings of disease severity in Yellowstone National Park wolves"
- 2017: **The Society for Molecular Biology & Evolution Annual Meeting (SMBE)**
Poster Presentation, "Genetic underpinnings of disease severity in Yellowstone National Park wolves"
- 2016: **The Princeton University Center for Health & Wellbeing Student Research Symposium**
Poster Presentation, "Genetic underpinnings of disease severity in Yellowstone National Park wolves"
- 2016: **Student Conference on Conservation Science – New York (SCCS-NY)**
Oral Presentation, "A novel molecular method for noninvasive sex identification of order Carnivora"

- 2014: **Student Conference on Conservation Science – New York (SCCS-NY)**
Poster Presentation, “A novel molecular method for noninvasive sex identification of order Carnivora”
- 2013: **The Columbia University Earth Institute Student Research Showcase**
Poster Presentation, “Arctic arthropods: seasonal change at the base of the tundra food web”

TEACHING EXPERIENCE

- 2021-Present: **Assistant Teaching Professor, Georgetown University**
 I design and implement courses for undergraduate and graduate students (Ecology; Evolution of Mammalian Diversity), collaboratively teach introductory courses for biology majors (Foundations in Biology II) and first-generation, low-income, underrepresented minority students (Principle & Practice in Biology), and mentor undergraduate researchers (Research Tutorial; Research Intensive Senior Experience; Regents STEM Scholars Program). I additionally train and supervise undergraduate and graduate teaching assistants.
- 2016-2020: **Princeton University McGraw Center for Teaching & Learning, Graduate Teaching Fellow**
 I trained first time science educators in implementing active teaching strategies, creating inclusive classrooms, and leading effective lecture, seminar, and laboratory-based undergraduate courses. I also performed classroom observations to provide real-time feedback to science educators throughout the semester.
- 2016-2020: **Princeton University McGraw Center for Teaching & Learning, Teaching Transcript Recipient**
 I participated in assistant in instruction (AI) orientation, served as an AI for two semesters, attended and led teaching pedagogy workshops, developed a written teaching philosophy, and designed an original syllabus.
- 2019: **Graduate Teaching Assistant for Winter Ecology Field Course (EEB521), Princeton University**
 I guided first year graduate students through design and implementation of short-term research projects in Yellowstone National Park in Wyoming, USA during January 2019.
- 2015-2017: **Graduate Teaching Assistant for Evolution (EEB309), Princeton University** (two semesters)
 I led weekly discussion sections for undergraduates that included critique of primary literature, group activities (*e.g.*, Pokémon phylogeny construction), and Jeopardy-style review to engage students with lecture material. I also implemented a science communication project that challenged students to creatively share science.

MENTORING EXPERIENCE (*STUDENT COAUTHORS ON PEER-REVIEWED PUBLICATIONS & MANUSCRIPTS)

- 2022-2023: **Laura Adeduro**, Georgetown University '23 RISE Student – *Wildlife Microbiomes*
- 2022-2023: **Urooj Ahmed**, Georgetown University '24 RSSP Student Researcher – *Salt Marsh Microbiomes*
- 2022-2023: **Nouran Alim**, Georgetown University '25 RSSP Student Researcher – *Salt Marsh Microbiomes*
- 2022-2023: **Alexandra Bamford**, Georgetown University '23 RISE Student – *Wildlife Microbiomes*
- 2022-2023: **Dawson Hillyer**, Georgetown University '24 RSSP Student Researcher – *Salt Marsh Microbiomes*
- 2022-2023: **Tyler Mensa**, Georgetown University '24 RSSP Student Researcher – *Salt Marsh Microbiomes*
- 2022-2023: **Kevin Moreno**, Georgetown University '24 RSSP Student Researcher – *Salt Marsh Microbiomes*
- 2022-2023: **Mary Nguyen**, Georgetown University '25 RSSP Student Researcher – *Salt Marsh Microbiomes*
- 2022-2023: **Samantha Pasciullo Boychuck**, Georgetown University '23 RISE Student – *Wildlife Microbiomes*
- 2022-2023: **Carly Rauh**, Georgetown University '25 RSSP Student Researcher – *Salt Marsh Microbiomes*
- 2022: **Rachel Gaudreau**, Georgetown University '22 Research Tutorial Student – *Wildlife Microbiomes*
- 2022: **Afua Nyantakyi**, Georgetown University '22 Research Tutorial Student – *Wildlife Microbiomes*
- 2021-2022: **Elton Tran***, Princeton University '22 Senior Thesis Student – *Santa Cruz Island Skunk Microbiome*
- 2021-2022: **Emily Yu***, Princeton University '22 Senior Thesis Student – *Northern Elephant Seal Microbiome*
- 2021: **Cesar Carrasco***, UCSB-Smithsonian Scholars Program Student – *Channel Island Fox Microbiome*
- 2020-2021: **Jasmine Lu***, Princeton University '21 Senior Thesis Student – *Santa Catalina Island Fox Microbiome*
- 2019-2020: **Kennedy Leverett***, Princeton University '20 Senior Thesis Student – *Microbiome of Canid Sarcophagidae*
- 2018-2019: **Mikaela Walkup**, Princeton University '19 Senior Thesis Student – *Santa Catalina Island Fox Epigenetics*
- 2016-2017: **Catherine Caro***, Princeton University '17 Senior Thesis Student – *Red Fox Urbanization Genetics*
- 2016-2017: **Rohan Hylton**, Princeton University '17 Senior Thesis Student – *Santa Catalina Island Fox Genetics*
- 2016-2017: **Quin Pompei**, Princeton University '17 Senior Thesis Student – *Yellowstone National Park Wolf Genetics*
- 2016: **Amelia Krause***, High School Laboratory Learning Student – *Coyote Urbanization Genetics*
- 2015-2016: **Samantha Wu**, Princeton University '16 Senior Thesis Student – *Yellowstone National Park Wolf Genetics*

SCIENCE COMMUNICATION, COMMUNITY OUTREACH, & DIVERSITY INITIATIVES

2021-Present: **The District Church Youth Ministry** (servant leader)
2021-2022: **American Society of Mammalogists One-on-One Mentoring** (mentor for students at conference)
2022: **Smithsonian's National Zoo & Conservation Biology Institute, "Meet the Scientist" Series** (presenter)
2022: **Wolf Park, "Introduction to the Island Fox" Webinar** (presenter)
2022: **Princeton Day School, Science Research Experience Program (Rex)** (presenter)
2020-2021: **Skype a Scientist** (presenter for elementary & middle school students; 12 presentations)
2020-2021: **American Genetic Association** (blog columnist; 2 posts)
2021: **Friends of the Island Fox, "Date with a Fox" Event** (presenter)
2021: **Ozarks Science & Engineering Fair** (senior high division zoology judge)
2018-2020: **Princeton University Ecology & Evolutionary Biology Scholars Program** (mentor & presenter for prospective graduate students from backgrounds historically underrepresented in STEM)
2016-2020: **Princeton Alliance Church Young Adults Ministry** (member)
2015-2020: **Princeton University Women in Science Program (WiSP)** (member)
2020: **Princeton Alliance Church Young Adults Ministry** (servant leader)
2018: **Open Labs Science Café** (presenter for high school students)
2018: **Bring Your Kids to Work Day** (roundtable leader for elementary school students)
2017: **Princeton Alliance Church Middle School Ministry** (servant leader)
2013-2015: **Columbia Science Review** (blog columnist; 8 posts)

ACADEMIC & PROFESSIONAL SERVICE

Invited Peer Reviewer: **Conservation Genetics Resources; Current Zoology; Ecology & Evolution; Frontiers in Ecology & Evolution; Journal of Heredity; Journal of Urban Ecology; Microbiology Spectrum; Molecular Ecology; Parasites and Vectors; PeerJ; PLoS ONE; Scientific Reports**
2022-Present: **American Society of Mammalogists, Education and Graduate Student Committee** (member)
2020-Present: **Black-footed Ferret Genomics Working Group** (member)
2020-Present: **Channel Island Fox Conservation Working Group** (member)
2020-Present: **Channel Island Spotted Skunk Working Group** (member)
2020-2021: **Smithsonian's National Zoo Genomics Journal Club** (member & presenter)
2020-2021: **Smithsonian's National Zoo Microbiome Journal Club** (member & presenter)
2015-2020: **Princeton University Evolution Group** (organizer, member, & presenter)
2015-2020: **Princeton University Disease Group** (member & presenter)
2017-2019: **The Wildlife Society Molecular Ecology Working Group** (student board member)
2013-2015: **Columbia University Environmental Biology Society** (founder & executive board member)

WORKSHOPS

2018: **Bridging Theory & Experiment in Microbial Communities**
2016: **Evolutionary Biology in Guarda, Switzerland**
2016: **Recent Advances in Conservation Genetics (ConGen) in Tihany, Hungary**
2009: **The Green Schools Alliance Student Climate & Conservation Congress (SC3)**

FIELD EXPERIENCE

2019: **Catalina Island Conservancy Fox Trapping, Santa Catalina Island (California, USA)**
I shadowed annual island fox monitoring efforts to observe and aid microbiome sample collection.

2019: **Winter Ecology Field Course, Yellowstone National Park (Wyoming, USA)**
I guided first year graduate students through design and implementation of short-term research projects on patterns of lichen growth and daily animal traffic patterns in different microclimates.

2016: **Tropical Ecology Field Course, Tiptuni Biodiversity Station (Ecuador)**
I designed and implemented a short-term research project on ant-plant mutualisms in "devil's gardens" in the Amazon rainforest.

2015: **Coral Reef Ecology Field Course, Bermuda Institute of Ocean Sciences (Bermuda)**
I learned how to identify local species of coral, fish, and terrestrial vertebrates through classroom, snorkeling, and hiking experiences.

MEDIA COVERAGE

2021: “Fox Foto Friday – This is Island Fox Science” (Friends of the Island Fox)
2021: “Fox Foto Friday – Island Fox Science in Progress” (Friends of the Island Fox)
2021: “Fox Foto Friday – Island Foxes in Washington, D.C.?” (Friends of the Island Fox)
2021: “Yellowstone’s wolves are fighting mange at the genetic level” (Wyoming Public Radio)
2021: “Genetics study shows why some Yellowstone wolves dodge mange” (Billings Gazette)
2021: “Study of mange in Yellowstone wolves could inform conservation efforts, scabies research” (Bozeman Daily Chronicle)
2021: “Mange in Yellowstone wolves reveals insights into human scabies and conservation biology” (Princeton University)
2021: “Fox Foto Friday – Island Foxes Healthy Inside and Out” (Friends of the Island Fox)
2020: “FIF Research Grant to Investigate Diversity of Island Fox Microbiome” (Friends of the Island Fox)
2020: “Mites, microbes, and cancer in Santa Catalina Island foxes” (Friends of the Island Fox)
2020: “Microbes linked to cancer in threatened California foxes, report Princeton researchers” (Princeton University)
2020: “Are coyotes moving into your neighborhood?” (Science News for Students)
2019: “What can the ears of island foxes tell us?” (Forbes)
2019: “The city fox phenomenon” (Ecology and Evolution Blog)
2018: “Montreal turns to coyote hazing after 19 people are bitten” (New York Times)

PROFESSIONAL MEMBERSHIPS

2021-Present: **Association of Minority Zoo & Aquarium Professionals**
2017-Present: **American Genetic Association**
2017-Present: **American Society of Mammalogists**
2017-Present: **Society for Conservation Biology**
2017-2020: **The Wildlife Society**
2017-2018: **Society for the Study of Evolution**
2017: **American Civil Liberties Union**
2017: **American Society of Naturalists**
2017: **Society for Molecular Biology & Evolution**
2015: **Phi Beta Kappa Society**