James S. Adelman

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EDUCATION

Ph.D., Ecology and Evolutionary Biology 2010
Princeton University, Princeton, NJ
Dissertation title: "Population differences in the acute phase immune response of the song sparrow (*Melospiza melodia*): moving from geographical patterns to molecular mechanisms"
Advisor: Dr. Michaela Hau

B.S., Biology, 1999
Duke University, Durham, NC
Honors in Biology, *summa cum laude*, Phi Beta Kappa, minors in Music and Chemistry

RESEARCH INTERESTS

I am a disease ecologist and ecoimmunologist who integrates comparative and molecular methods to uncover the evolutionary patterns, immune mechanisms, and epidemiological consequences of individual variation in responses to infection.

PROFESSIONAL EMPLOYMENT

Assistant Professor 2019-present
Department of Biological Sciences, University of Memphis, Memphis, TN
Supervisor: Dr. David Freeman
Duties: My appointment is 50% research, 40% teaching, and 10% service. I conduct research in disease ecology and ecoimmunology, teach at both graduate and undergraduate levels, and provide service to the department, university, and broader profession.

Assistant Professor 2015–2019
Department of Natural Resource Ecology and Management, Iowa State University, Ames, IA
Interdepartmental Graduate Program in Ecology and Evolutionary Biology (EEB)
Supervisor: Dr. Sue Blodgett
Duties: My appointment was 60% research, 30% teaching/advising, and 10% service. I conducted research in wildlife ecology and physiology, taught in the Animal Ecology and EEB programs, and provided service to the department, university, and broader profession.

Postdoctoral Associate 2011–2014
Department of Biological Sciences, Virginia Tech, Blacksburg, VA,
Supervisor: Dr. Dana Hawley
Duties: I designed and performed research on how individual variation in immune responses and behavior altered the severity and spread of infectious disease in wild birds. I also helped mentor both graduate and undergraduate students.

Postdoctoral Fellow 2011
Migratory Bird Center, Smithsonian Institution, Washington, DC
Supervisor: Dr. Peter Marra
Duties: I designed and conducted sampling of river-associated songbirds to assess the impacts of dams on nutrient acquisition.

Postdoctoral Research Associate and Lecturer 2010–2011
Migration and Immuno-Ecology, Max Planck Institute for Ornithology, Radolfzell, Germany
Department of Ecology and Evolutionary Biology, Princeton University, Princeton, NJ
Supervisors: Dr. Michaela Hau (MPI), Dr. Daniel Rubenstein (PU), Dr. Andrea Graham (PU)

Duties: I conducted research on the role of immune signaling molecules in North American and European songbirds and served as instructor for a course entitled "Ecology and Evolution of Immune Systems."

Graduate Research and Teaching Assistant 2004–2010
Department of Ecology and Evolutionary Biology, Princeton University, Princeton, NJ
Supervisor: Dr. Michaela Hau

Duties: I designed and carried out research on population differences in immune responses in a wild songbird and served as a teaching assistant for Introductory Biology and Animal Behavior.

Professional Research Assistant 2000–2004
Department of Pathology, University of Colorado Health Sciences Center, Denver, CO
Supervisor: Dr. Dean Edwards

Duties: I performed cell culture and molecular biology assays to help determine the mechanisms of action of the progesterone receptor in mammalian cells.

RESEARCH

Peer-Reviewed Articles and Chapters (57)

(*undergraduate student, **graduate student or postdoc)

1) Henschen, A.E.**, M. Vinkler, M. Langager**, A. Rowley**, R.A. Dalloul, D.M. Hawley, and **J.S. Adelman**. 2023. Rapid adaptation to a novel pathogen through disease tolerance in a wild songbird. PLoS Pathogens 19: e1011408, doi.org/10.1371/journal.ppat.1011408
2) Tillman, F.A.** and J**.S. Adelman**. 2023. Searching while sick: How does disease affect foraging decisions and contact rates? Functional Ecology 37: 838-844, doi.org/10.1111/1365-2435.14207
3) Ruden, R.M.** and **J.S. Adelman**. 2023. Modulating disease phenotype in a songbird: A role for inflammation in disease tolerance? Journal of Experimental Zoology, Part A 339: 83-91, doi.org/10.1002/jez.2655
4) Hawley, D.M., C. Thomason, M. Aberle**, R. Brown, and **J.S. Adelman**. 2023. Pathogen virulence is associated with load-independent spreadability in a songbird-bacterial system. Royal Society Open Science 10: 220975, doi.org/10.1098/rsos.220975
5) Grant, T.J.**, K.E. Fisher**, N. Krishnan**, A.M. Mullins**, R.L. Hellmich, T.W. Sappington, **J.S. Adelman**, J.R. Coats, R.G. Hartzler, J.M. Pleasants, S.P. Bradbury. 2022. Monarch butterfly ecology, behavior, and vulnerabilities in North Central USA agricultural landscapes. Bioscience 72: 1176–1203, doi.org/10.1093/biosci/biac094 **[Cover]**
6) Stephenson, J.F. and **J.S. Adelman**. 2022. The behavior of infected hosts: behavioral tolerance, behavioral resilience, and their implications for behavioral competence. *In* Animal Behavior and Parasitism, (V.O. Ezenwa, S.M. Altizer, and R. Hall, eds.), doi.org/10.1093/oso/9780192895561.003.0017
7) **Adelman, J.S.**, R.E. Tokarz**, A.E. Euken*, E.N. Field**, M.C. Russell**, and R.C. Smith. 2022. Relative influence of land use, mosquito abundance, and bird communities in defining West Nile virus infection rates in *Culex* mosquito populations. Insects 13:758, doi.org/10.3390/insects13090758
8) Ruden, R.M.** and **J.S. Adelman**. 2021. Disease tolerance alters host competence in a wild songbird. Biology Letters 17: 20210362, doi.org/10.1098/rsbl.2021.0362
9) Ruden, R.M.**, D.C. Adams, and **J.S. Adelman**. 2021. Using multivariate analyses to explore temporal patterns in disease pathology. Journal of Wildlife Diseases 57: 525–533, doi.org/10.7589/JWD-D-20-00123
10) Mullins, A.M.**, T.W. Sappington, S.P. Bradbury, and **J.S. Adelman**. 2021. Oviposition response of monarch butterfly (Lepidoptera: Nymphalidae) to imidacloprid-treated milkweed. Environmental Entomology 50: 541–549, doi.org/10.1093/ee/nvab024

Peer-Reviewed Articles and Chapters (continued)

11) Wucher, B.**, M. Elsayed, **J.S. Adelman**, D. Kadouri and C. Nadell. 2021. Bacterial predation transforms the landscape and community assembly of biofilms. Current Biology 31: 2643–2651, doi.org/10.1016/j.cub.2021.03.036
12) Vaziri, G.J.**, M. Jusino, J. Palmer, M. Brewer, and **J.S. Adelman**. 2021. Anthelminthic drugs modulate the acute phase immune response but not the microbiota in wild song sparrows. Ornithology (Previously "The Auk") 138: ukaa066, doi.org/10.1093/ornithology/ukaa066
13) Fisher, K.E.**, P.M. Dixon, G. Han, **J.S. Adelman**, and S.P. Bradbury. 2021. Locating large insects using automated VHF radio telemetry with a multi-antennae array. Methods in Ecology and Evolution 12: 494-506, doi.org/10.1111/2041-210X.13529 **[cover]**
14) Aberle, M.**, K. Langwig, **J.S. Adelman**, and D.M. Hawley. 2020. Effects of bird feeder density on the foraging behaviors of a backyard songbird subject to seasonal disease outbreaks. Canadian Journal of Zoology 98: 611-621, doi.org/10.1139/cjz-2019-0282
15) Fisher, K.E.**, **J.S. Adelman**, and S.P. Bradbury. 2020. Employing very high frequency (VHF) radio telemetry to recreate monarch butterfly (*Danaus plexippus*) flight paths. Environmental Entomology 49: 312-323, doi.org/10.1093/ee/nvaa019
16) Field, E.N.**, E.J. Gehrke*, R.M. Ruden**, **J.S. Adelman**, and R.C. Smith. 2020. An improved multiplex PCR assay for the identification of mosquito (Diptera: Culicidae) blood meals. Journal of Medical Entomology 57: 557–562, doi.org/10.1093/jme/tjz182
17) Henschen, A.E.** and **J.S. Adelman**. 2019. What does tolerance mean for animal disease dynamics when pathology enhances transmission? Integrative and Comparative Biology 59: 1220-1230, doi.org/10.1093/icb/icz065
18) Vaziri, G.J.**, M.J. Johny**, P.C. Caragea, and **J.S. Adelman**. 2019. Social context affects thermoregulation but not activity level after immune challenge in a social passerine. Behavioral Ecology 30: 383-392, doi.org/10.1093/beheco/ary177
19) Vaziri, G.J.**, S.A. Muñoz, E.S. Martinsen, and **J.S. Adelman**. 2019. Gut parasite levels predict responses to simulated bacterial infection in a wild songbird. Journal of Wildlife Diseases 55: 64-74, doi.org/10.7589/2017-07-176
20) Hawley, D.M., S.C. Moyers**, J. Caceres*, C. Youngbar*, and **J.S. Adelman**. 2018. Characterization of unilateral conjunctival inoculation with *Mycoplasma gallisepticum* in house finches. Avian Pathology 47: 526-530, doi.org/10.1080/03079457.2018.1495312
21) Moyers, S.C. **, **J.S. Adelman**, D.R. Farine, I.T. Moore, and D.M. Hawley. 2018. Exploratory behavior is linked to stress physiology and social network centrality in free-living house finches (*Haemorhous mexicanus*). Hormones and Behavior 102: 105-113, doi.org/10.1016/j.yhbeh.2018.05.005
22) Moyers, S.C. **, **J.S. Adelman**, D.R. Farine, C.A. Thomason**, and D.M. Hawley. 2018. Feeder density enhances house finch disease transmission in experimental epidemics. Philosophical Transactions of the Royal Society, Series B 373: 20170090, doi.org/10.1098/rstb.2017.0090
23) Houston, D.D.**, S. Azeem**, C. Lundy, Y. Sato, B. Guo, J.A. Blanchong, P.C. Gauger K.J. Yoon, and **J.S. Adelman**. 2017. No evidence for a role of wild songbirds or rodents in spreading avian influenza virus across an agricultural landscape. PeerJ 5: e4060, doi.org/ 10.7717/peerj.4060
24) **Adelman, J.S.**, and D.M. Hawley. 2017. Tolerance of infection: a role for animal behavior, potential immune mechanisms, and consequences for parasite transmission. Hormones and Behavior 88: 79-86, doi.org/10.1016/j.yhbeh.2016.10.013
25) **Adelman, J.S.**, C. Mayer*, and D.M. Hawley. 2017. Infection reduces anti-predator behaviors in house finches. Journal of Avian Biology 48: 519-528, doi.org/10.1111/jav.01058
26) Brace, A.J. **, M.J. Lajeunesse, D.R. Ardia, D.M. Hawley, **J.S. Adelman**, K.L. Buchanan, J.M. Fair, J.L. Grindstaff, K.D. Matson, and L.B. Martin. 2017. Costs of immune responses are related to host body size and lifespan. Journal of Experimental Zoology, Part A 327*:* 254-261, doi.org/10.1002/jez.2084
27) Nuñez, C., **J.S. Adelman**, H. Carr*, C. Knight, and D. Rubenstein. 2017. Lingering effects of contraception management on the birth rates and social behaviors in feral mares (*Equus caballus*). Conservation Physiology 5*:* cox018, doi.org/10.1093/conphys/cox018

Peer-Reviewed Articles and Chapters (continued)

28) Park, M**., S. Kim, **J.S. Adelman**, A.E. Leon**, D.M. Hawley, R.A. Dalloul. 2017. Identification and functional characterization of the house finch interleukin-1β. Developmental and Comparative Immunology 69: 41-50, doi.org/10.1016/j.dci.2016.12.004
29) Kim, S., M. Park**, A.E. Leon**, **J.S. Adelman**, D.M. Hawley, and R.A. Dalloul. 2017. Development and validation of a house finch interleukin-1β (HfIL-1β) ELISA system. BMC Veterinary Research 13:276, doi.org/10.1186/s12917-017-1199-9
30) Martin, L., S. Burgan*, **J.S. Adelman**, and S. Gervasi. 2016. Host competence: an organismal trait to integrate immunology and epidemiology. Integrative and Comparative Biology 56: 1225-1237, doi.org/10.1093/icb/icw064
31) Love, A.C.*, S.L. Foltz**, **J.S. Adelman**, I.T. Moore, and D.M. Hawley. 2016. Changes in corticosterone concentrations and behavior during *Mycoplasma gallisepticum* infection in house finches (*Haemorhous mexicanus*). General and Comparative Endocrinology 235: 70-77, doi.org/10.1016/j.ygcen.2016.06.008
32) **Adelman, J.S.**, S.C. Moyers**, D.R. Farine, and D.M. Hawley. 2015. Feeder use predicts both acquisition and transmission of a contagious pathogen in a North American songbird. Proceedings of the Royal Society, Series B 282: 20151429, doi.org/10.1098/rspb.2015.1429
33) Moyers, S.C. **, K.B. Kosarski*, **J.S. Adelman**, and D.M. Hawley. 2015. Interactions between social behavior and the acute phase immune response in house finches. Behaviour 152: 2039-2058, doi.org/10.1163/1568539X-00003312
34) **Adelman, J.S.**, I.T. Moore, and D.M. Hawley. 2015. House finch responses to *Mycoplasma gallisepticum* do not vary with experimentally increased aggression. Journal of Experimental Zoology, Part A 323: 39-51, doi.org/10.1002/jez.1894
35) **Adelman, J.S.** 2015. Immune systems: linking organisms, populations, and evolution through disease. *In* Integrative Organismal Biology, (L.B. Martin, C.K. Ghalambor and H.A. Woods, eds.). pp. 169-185. Wiley Blackwell, Hoboken, doi.org/10.1002/9781118398814
36) Nuñez, C.M.V, **J.S. Adelman**, and D.I. Rubenstein. 2015. Sociality increases juvenile survival after a catastrophic event in the feral horse (*Equus caballus*). Behavioral Ecology 26: 138-147, doi.org/10.1093/beheco/aru163
37) Hau, M., M.F. Haussmann, T.J. Greives, C. Matlack, D. Costantini, M. Quetting, **J.S. Adelman**, A.C. Miranda, and J. Partecke. 2015. Repeated stressors in adulthood increase the rate of biological ageing. Frontiers in Zoology 12:4, doi.org/10.1186/s12983-015-0095-z
38) **Adelman, J.S.**, S.C. Moyers**, and D.M. Hawley. 2014. Using remote biomonitoring to understand heterogeneity in immune-responses and disease-dynamics in small, free-living animals. Integrative and Comparative Biology 54: 377-386, doi.org/10.1093/icb/icu088
39) Downs, C.J., **J.S. Adelman**, and G.E. Demas. 2014. Mechanisms and methods in ecoimmunology: integrating within-organism and between-organism processes. Integrative and Comparative Biology 54: 340-352, doi.org/10.1093/icb/icu082
40) Nuñez, C.M.V, **J.S. Adelman**, J. Smith*, L.R. Gesquiere, and D.I. Rubenstein. 2014. Linking social environment and stress physiology in feral mares (*Equus caballus*): group transfers elevate fecal cortisol levels. General and Comparative Endocrinology 196: 26-33, doi.org/10.1016/j.ygcen.2013.11.012
41) **Adelman, J.S.**, L. Kirkpatrick, J.L. Grodio, and D.M. Hawley. 2013. House finch populations differ in early inflammatory signaling and pathogen tolerance at the peak of *Mycoplasma gallisepticum* infection. The American Naturalist 181: 674-689, doi.org/10.1086/670024
42) **Adelman, J.S.**, A.W. Carter*, W.A. Hopkins, and D.M. Hawley. 2013. Deposition of pathogenic *Mycoplasma gallisepticum* onto bird feeders: host pathology is more important than temperature-driven increases in food intake. Biology Letters 9: 20130594, doi.org/10.1098/rsbl.2013.0594
43) Nuñez, C.M.V, **J.S. Adelman**, and D.I. Rubenstein. 2013. A free-ranging, feral mare (*Equus caballus*) affords similar maternal care to her genetic and adopted offspring. The American Naturalist 182: 674-681, doi.org/10.1086/673214
44) Lopes, P.C., **J.S. Adelman**, J.C. Wingfield, and G.E. Bentley. 2012. Social context modulates sickness behavior. Behavioral Ecology and Sociobiology 66: 1421-1428, doi.org/10.1007/s00265-012-1397-1
45) Hawley, D.M., S.E. DuRant, A. Wilson, **J.S. Adelman**, and W.A. Hopkins. 2012. Additive metabolic costs of thermoregulation and pathogen infection. Functional Ecology 26: 701-710, doi.org/10.1111/j.1365-2435.2012.01978.x

Peer-Reviewed Articles and Chapters (continued)

46) Bisson, I.A., L. K. Butler, P. Kelley, **J.S. Adelman**, T.J. Hayden, L.M. Romero, and M. Wikelski. 2011. Energetic response to human disturbance in an endangered songbird. Animal Conservation 14: 484-491, doi.org/10.1111/j.1469-1795.2011.00447.x
47) **Adelman, J.S.**, G.E. Bentley, J.C. Wingfield, L.B. Martin, and M. Hau. 2010. Population differences in fever and sickness behaviors in a wild passerine: a role for cytokines. Journal of Experimental Biology 213: 4099-4109, doi.org/10.1242/jeb.049528
48) **Adelman, J.S.**, S. Córdoba-Córdoba, K. Spoelstra, M. Wikelski, and M. Hau. 2010. Radiotelemetry reveals variation in fever and sickness behaviours with latitude in a free-living passerine. Functional Ecology 24: 813-823, doi.org/10.1111/j.1365-2435.2010.01702.x
49) Nuñez, C.M.V, **J.S. Adelman**, and D.I. Rubenstein. 2010. Immunocontraception in wild horses (*Equus caballus*) extends reproductive cycling beyond the normal breeding season. PLoS One 5: e1365, doi.org/10.1371/journal.pone.0013635
50) **Adelman, J.S.** and L.B. Martin. 2009. Vertebrate sickness behaviors: adaptive and integrated neuroendocrine immune responses. Integrative and Comparative Biology 49: 202-214, doi.org/10.1093/icb/icp028
51) Nuñez, C.M.V, **J.S. Adelman**, C. Mason, and D.I. Rubenstein. 2009. Immunocontraception decreases group fidelity in a feral horse population during the non-breeding season. Applied Animal Behaviour Science 117: 74-83, doi.org/10.1016/j.applanim.2008.12.001
52) Safran, R.J., **J.S. Adelman**, K.J. McGraw, and M. Hau. 2008. Sexual signal exaggeration affects physiological state in male barn swallows. Current Biology 18: r461-462, doi.org/10.1016/j.cub.2008.03.031
53) Roemer, S.C., **J.S. Adelman**, M.E.A. Churchill, and D.P. Edwards. 2008. Mechanism of high-mobility group protein B enhancement of progesterone receptor sequence-specific DNA binding. Nucleic Acids Research 36: 3655-3666, doi.org/10.1093/nar/gkn249
54) Vitousek, M.N., **J.S. Adelman**, N.C. Gregory, and J.J.H. St Clair. 2007. Heterospecific alarm call recognition in a non-vocal reptile. Biology Letters 3: 632-634, doi.org/10.1098/rsbl.2007.0443
55) Wikelski, M., D. Moskowitz, **J.S. Adelman**, J. Cochran, D.S. Wilcove, and M.L. May. 2006. Simple rules guide dragonfly migration. Biology Letters 2: 325-329, doi.org/10.1098/rsbl.2006.0487
56) Melvin, V.S., C. Harrell, **J.S. Adelman**, W.L. Kraus, M. Churchill, and D.P. Edwards. 2004. The role of the C-terminal extension (CTE) of the estrogen receptor alpha and beta DNA binding domain in DNA binding and interaction with HMGB. Journal of Biological Chemistry 279: 14763-71, doi.org/10.1074/jbc.M313335200
57) Wardell, S.E., V. Boonyaratanakornkit, **J.S. Adelman**, A. Aronheim, and D.P. Edwards. 2002. Jun dimerization protein 2 functions as a progesterone receptor n-terminal domain coactivator. Molecular and Cellular Biology 22: 5451-5466, doi.org/10.1128/MCB.22.15.5451-5466.2002

Other Book Chapters (4)

1) Henschen, A.E.** and **J.S. Adelman**. 2021. Ecoimmunology. *In* Infectious Disease Ecology of Wild Birds, (J. Owen, D.M. Hawley, and K. Huyvaert, eds). Oxford Univ. Press, Oxford, doi.org/10.1093/oso/9780198746249.003.0003
2) Owen, J.C., **J.S. Adelman**, and A.E. Henschen**. 2021. The nature of host-pathogen interactions. *In* Infectious Disease Ecology of Wild Birds, (J. Owen, D.M. Hawley, and K. Huyvaert, eds). Oxford Univ. Press, Oxford, doi.org/10.1093/oso/9780198746249.003.0002
3) Vinkler, M.**, J.S. Adelman**, and D.R. Ardia. 2021. Evolutionary and Ecological Immunology. *In* Avian Immunology, (K.A. Schat, B. Kaspers, and P. Kaiser, eds), 3rd edition. Elsevier, Amsterdam, doi.org/10.1016/B978-0-12-818708-1.00008-7
    a. 2nd edition: **Adelman, J.S.**, D.R. Ardia, and K.A. Schat. 2013. Ecoimmunology. *In* Avian Immunology 2nd edition. doi.org/10.1016/B978-0-12-396965-1.00022-4
4) **Adelman, J.S.** and L.B. Martin. 2019. Immune systems and sickness behavior. *In* Encyclopedia of Animal Behavior (M. Breed and J. Moore, eds), 2nd edition, pp. 635-640. Elsevier, Amsterdam, doi.org/10.1016/B978-0-12-809633-8.20811-X
    a. 1st edition: **Adelman, J.S.** and L.B. Martin. 2010. Immune systems and sickness behavior. *In* Encyclopedia of Animal Behavior. doi.org/10.1016/B978-0-08-045337-8.00263-1

Miscellaneous / Popular Press (2)

1) Adelman, J.S. *2024, available for pre-order*. What birds can teach us about the impending zombie apocalypse. *In* How to win friends and influence fungi, (C. Balakrishnan and M. Wasowski, eds.). St. Martin's Press, New York.
2) Nuñez, C.M.V., **J.S. Adelman**, and D.I. Rubenstein. 2015. Wild horse contraception not without unintended consequences. Op-ed, The Salt Lake Tribune.

Manuscripts in Review (3)

1) Coleman, S.M.*, **J.S. Adelman**, and F.E. Tillman**. Is leg brightness an indicator of physical condition in house finches?
2) Langager, M.**, **J.S. Adelman**, and D.M Hawley. Let's stick together: infection enhances preferences for social settings in a songbird species.
3) Leon, A.E.**, A. Fleming-Davies, **J.S. Adelman**, and D.M. Hawley. Host exposure history alters pathogen transmission and virulence selection in a wild songbird.

Research Presentations (70)

Invited Talks (24) (*undergraduate student, **graduate student or postdoc)

1) Henschen, A.E.**, R.A. Dalloul, M. Vinkler, D.M. Hawley, and **J.S. Adelman**. 2021. Potential mechanisms underlying disease tolerance to a recently emerged songbird pathogen. European Society for Evolutionary Biology (ESEB) Online Satellite Symposium.
2) **Adelman, J.S.** 2021. Consequences of behavioral tolerance for pathogen transmission. Research frontiers in animal behavior and parasitism symposium, University of Georgia, online.
3) **Adelman, J.S.** 2021. Behavioral tolerance of infection. Down with the Sickness: the behavior of infected animals Symposium, Annual Meeting of the Animal Behavior Society, online.
4) **Adelman, J.S.** 2020. Tolerance of infection and its consequences for pathogen transmission. University of Nevada, Reno. Ecology, Evolution and Conservation Biology Colloquium, Reno, NV.
5) **Adelman, J.S.** 2019. What birds can teach us about the impending zombie apocalypse. Nerd Nite, Memphis, TN. (Public Lecture)
6) **Adelman, J.S.** 2019. Linking immunological mechanisms and transmission consequences of tolerance in a songbird host. Scale of Sickness Symposium, Annual meeting of the Society for Integrative and Comparative Biology, Tampa, FL.
7) **Adelman, J.S.** 2019. Causes and consequences of infection tolerance in a wild songbird. Tulane University, Department of Ecology and Evolutionary Biology, New Orleans, LA.
8) **Adelman, J.S.** 2018. Causes and consequences of infection tolerance in a wild songbird. University of Memphis, Department of Biology, Memphis, TN.
9) **Adelman, J.S**. 2018. Heterogeneous responses to infection: potential mechanisms and transmission consequences in wild songbirds. University of South Dakota, Department of Biology, Vermillion, SD.
10) Houston, D.D.**, S. Azeem, C. Lundy, Y. Sato, B. Guo, J.A. Blanchong, P.C. Gauger K.J. Yoon, and **J.S. Adelman**. 2017. No evidence for a role of wild songbirds or rodents in spreading avian influenza virus across an agricultural landscape. Midwest Fish and Wildlife Health Meeting, Bellevue, IA.
11) **Adelman, J.S.** 2016. Bacteria and backyard bird feeders. ISU Women's Club, Nature Group. Ames, IA. (Public Lecture)
12) **Adelman, J.S.** 2016. Animal physiology, behavior, and disease at the wild-domestic interface. Iowa Department of Natural Resources, Wildlife Research Section, Ames, IA.
13) Hawley, D.M., **Adelman, J.S.**, Ariel Leon, A., and S.C. Moyers. 2016. Transmission hubs or immunizers? The opposing roles of bird feeders in a naturally occurring disease system. Resource Provisioning and Wildlife–Pathogen Interactions in Human-Altered Landscapes Symposium, Annual Meeting of the Ecological Society of America, Ft. Lauderdale, FL.

Invited Talks (continued)

14) **Adelman, J.S.** 2016. Heterogeneous responses to infection: potential mechanisms and transmission consequences in a wild songbird. University of Minnesota, Department of Ecology and Evolutionary Biology, St. Paul, MN.
15) **Adelman, J.S.** 2015. Heterogeneous responses to infection in songbirds: recent findings and future directions. Iowa State University, Graduate Student Organization Seminar, Department of Natural Resource Ecology and Management and Seminar in Ecology and Evolutionary Biology, Ames, IA.
16) **Adelman, J.S.**, S.C. Moyers, and D.M. Hawley. 2014. Behavioral risk factors of Mycoplasmal conjunctivitis in house finches: are super-receivers also super-spreaders? Ecological Principles of Emerging Infectious Diseases in Birds Symposium, Annual Meeting of the American Ornithologists' Union, Estes Park, CO.
17) **Adelman, J.S.** 2014. How radio telemetry and radio frequency identification can help link individual immune responses and disease dynamics in wild animals. Methods and Mechanisms in Ecoimmunology Symposium, Annual Meeting of the Society for Integrative and Comparative Biology, Austin, TX.
18) **Adelman, J.S.** 2013. Heterogeneous responses to infection: potential mechanisms and transmission consequences in wild birds. College of William & Mary, Department of Biology.
19) **Adelman, J.S.** 2012. What birds have to say about the impending zombie apocalypse. Nerd Nite, Washington, DC. (Public Lecture)
20) **Adelman, J.S.**, A.F. Wilson, W.A Hopkins, and D.M. Hawley. 2012. Heterogeneous responses to infection among house finches: toward transmission consequences. Disease Ecology Symposium, 5th North American Ornithological Conference, Vancouver, BC.
21) **Adelman, J.S.** 2010. What is 'pathogen pressure' and can it help us understand variation in host defenses? Virginia Tech, Department of Biological Sciences.
22) **Adelman, J.S.** 2009. Population differences in immune function: from patterns to mechanisms. University of South Florida, Department of Biology.
23) **Adelman, J.S.** 2009. Immunology in the wild: studies with song sparrows. The Stony Brook-Millstone Watershed Association, Pennington, NJ. (Public Lecture)
24) **Adelman, J.S.**, M.C. Wikelski, and M. Hau. 2009. Sickness behavior and fever vary among free-living sparrows along a life history gradient: only some like it hot. Psychoneuroimmunology meets Integrative Biology Symposium—Related Session, Annual Meeting of the Society for Integrative and Comparative Biology, Boston, MA.

Contributed Talks and Posters (46)

1) **Adelman, J.S.**, A.E. Henschen, M. Vinkler, M. Langager, A. Rowley, R.A. Dalloul, D.M. Hawley. 2023. Evolutionary patterns, molecular mechanisms, and transmission consequences of tolerance. Annual Ecology and Evolution of Infectious Disease meeting, State College, Pennsylvania.
2) Henschen, A.E.**, M. Vinkler, M. Langager**, A.A. Rowley,R.A. Dalloul, D.M. Hawley, and **J.S. Adelman**. 2023. Gene expression associated with disease tolerance depends on host tissue and pathogen virulence. Annual meeting of the Society for Integrative and Comparative Biology, Austin, TX.
3) Zhang, Y., A.E. Henschen**, E. Thomas**, and **J.S. Adelman**. 2023. Effects of acute and long-term *Mycoplasma gallisepticum* infection on mitochondrial function in house finches. Annual meeting of the Society for Integrative and Comparative Biology, Austin, TX.
4) Brenkus, S.L.**, C.M.V. Nuñez, R.W. Klaver, and **J.S. Adelman**. 2022. Bighorn Sheep Respiratory Disease via Animal Behavior and Community Science. Annual conference of the Montana Chapter, the Wildlife Society, Helena, MT.
5) Brenkus, S.L.**, C.M.V. Nuñez, R.W. Klaver, and **J.S. Adelman**. 2022. Bighorn Sheep Respiratory Disease via Animal Behavior and Community Science. Annual conference of the Wildlife Society, Spokane, WA.
6) Henschen, A.E.**, D.M. Hawley, and **J.S. Adelman**. 2022. Tolerance and the transmission of a recently emerged songbird pathogen. Annual meeting of the Society for Integrative and Comparative Biology, Online.
7) Brenkus, S.L.**, C.M.V. Nuñez, R.W. Klaver, and **J.S. Adelman**. 2022. Bighorn sheep respiratory disease surveillance via animal behavior and community science. 23rd Biennial Symposium Northern Wild Sheep and Goat Council, Jackson, WY.

Contributed Talks and Posters (continued)

8) Brenkus, S.L.**, C.M.V. Nuñez, R.W. Klaver, and **J.S. Adelman**. 2022. Developing a behavioral protocol for bighorn sheep respiratory disease surveillance. Annual meeting of the Society for Integrative and Comparative Biology, Online. (Poster)
9) Tillman, F.E.** and **J.S. Adelman**. 2022. How does infection alter foraging decisions in a common songbird? Annual meeting of the Society for Integrative and Comparative Biology, Online. (Poster)
10) Ruden, R.M., A.E. Henschen**, D.M. Hawley, and **J.S. Adelman**. 2021. Using multivariate analyses to explore evolutionary patterns in disease pathology. Annual Meeting of the Wildlife Disease Association, Online.
11) Leon, A.E., A.E. Fleming-Davies, **J.S. Adelman**, D.M. Hawley. 2021. Host exposure history alters pathogen transmission and virulence in a wild songbird. Annual Meeting of the Wildlife Disease Association, Online.
12) Henschen, A.E.**, D.M. Hawley, R.A. Dalloul, and **J.S. Adelman**. 2021. Potential mechanisms underlying disease tolerance across house finch populations. Metabolism, Immunity, and Inflammation of the Mid-South, Inaugural Conference, Online.
13) Henschen, A.E.**, D.M. Hawley, R.A. Dalloul, and **J.S. Adelman**. 2021. Differential gene expression among house finch populations that differ in tolerance to *Mycoplasma gallisepticum*. Annual meeting of the Society for Integrative and Comparative Biology, Online.
14) **Adelman, J.S.**, Henschen, A.E.**, R.A. Dalloul, and D.M. Hawley. 2020.Tolerance of infection in a wild songbird: population-level patterns and potential mechanisms. Wild and Comparative Immunology Conference, Online.
15) Henschen, A.E.**, D.M. Hawley, and **J.S. Adelman**. 2020. Investigating the evolution of tolerance in a wild songbird. Talk. Annual Three Minute Research Talks. Department of Biological Sciences, University of Memphis, Memphis, Tennessee.
16) Henschen, A.E.**, D.M. Hawley, and **J.S. Adelman**. 2020. Oxidative damage resistance as a potential mechanism of disease tolerance in a wild host. Annual meeting of the Society for Integrative and Comparative Biology, Austin, TX.
17) Rowley, A.A.**, **J.S. Adelman**, R.A. Dalloul, M. Vinkler, A.E. Henschen**, and D.M. Hawley. 2020. Are there broader immunological effects of evolved disease tolerance in house finches? Annual meeting of the Society for Integrative and Comparative Biology, Austin, TX.
18) Henschen, A.E.**, Dana M. Hawley, and **J.S. Adelman**. 2019. Investigating the evolution of tolerance in a wild songbird. Annual Ecology and Evolution of Infectious Disease meeting, Princeton, New Jersey. (Poster)
19) Henschen, A.E.**, D.M. Hawley, and **J.S. Adelman**. 2019. Investigating the evolution of tolerance in a wild songbird. Annual meeting of the Society for Integrative and Comparative Biology, Tampa, FL.
20) Henschen, A.E.**, D.M. Hawley, and **J.S. Adelman**. 2019. Investigating the evolution of tolerance in a wild songbird. Iowa State University, Ecology and Evolutionary Biology Annual Symposium, Ames, IA.
21) Ruden, R.M**. and **J.S. Adelman**. 2018. Shape analysis: a new frontier in wildlife disease ecology. Annual Meeting of the Wildlife Disease Association, St. Augustine, FL. (Poster)
22) White, L.A., **J.S. Adelman**, D.M. Hawley, and M.E. Craft. 2018. Using dynamic network models to reveal how heterogeneity in behavioral and immune competence impact disease dynamics in an emerging wildlife disease. Annual Ecology and Evolution of Infectious Diseases Conference, Glasgow, Scotland.
23) Fisher, K.E.**, **J.S. Adelman**, and S. Bradbury. 2018. Landscape scale movement: Adapting radio telemetry technology to track monarch butterflies. Annual meeting of the North-Central Branch of the Entomological Society of North America, Middleton, WI.
24) Ruden, R.M.** and **J.S. Adelman**. 2018. Modulating disease phenotype in a wild songbird: a role for inflammation in tolerance and infectiousness. Annual meeting of the Society for Integrative and Comparative Biology, San Francisco, CA.
25) Vaziri, G.J.** and **J.S. Adelman**. 2018. Host-Parasite Interactions and the acute phase immune response in a songbird. Annual meeting of the Society for Integrative and Comparative Biology, San Francisco, CA.

Contributed Talks and Posters (continued)

26) Nuñez, C.M.V., **J.S. Adelman**, H.A. Carr, M.M. Jones**. 2018. Social behavior and ecology may interact to shape the gut microbiome in feral horses (*Equus caballus*). Annual meeting of the Society for Integrative and Comparative Biology, San Francisco, CA.
27) Fisher, K.E.**, S.P. Bradbury, and **J.S. Adelman**. 2017. Estimating perceptional range of the monarch butterfly (*Danaus plexippus*) with an automated radio telemetry system. Annual meeting of the Entomological Society of America, Denver, CO. (Poster)
28) Ruden, R.M.** and **J.S. Adelman**. 2017. Modulating disease phenotype in a wild songbird: a role for inflammation in tolerance and infectiousness. Iowa One Health Conference, Iowa City, IA. (Poster)
29) Ruden, R.M.** and **J.S. Adelman**. 2017. Suppressed inflammation: a potential mechanism underlying disease tolerance in a wild songbird. Annual Ecology and Evolution of Infectious Diseases Conference, Santa Barbara, CA. (Poster)
30) Vaziri, G.J.** and **J.S. Adelman**. 2017. Immunomodulatory roles of helminths in a free-living wild songbird. Annual Ecology and Evolution of Infectious Diseases Conference, Santa Barbara, CA. (Poster)
31) Vaziri, G.J.** and **J.S. Adelman**. 2017. Sickness behaviors in house sparrow flocks with different prevalences of simulated infection. Annual Meeting of the Society for Integrative and Comparative Biology, New Orleans, LA. (Poster)
32) Houston, D.D.**, S. Azeem, C. Lundy, Y. Sato, B. Guo, J.A. Blanchong, P.C. Gauger K.J. Yoon, and **J.S. Adelman**. 2017. No evidence for a role of wild songbirds or rodents in spreading avian influenza virus across an agricultural landscape. Annual Meeting of the Society for Integrative and Comparative Biology, New Orleans, LA.
33) Nuñez, C.M.V, **J.S. Adelman**, H.A. Carr, C. Knight, and D.I. Rubenstein. 2017. Prolonged effects of contraception management on feral horse (*Equus caballus*) reproductive physiology and behavior. Annual Meeting of the Society for Integrative and Comparative Biology, New Orleans, LA.
34) Moyers, S.C., **Adelman, J.S.**, and D.M. Hawley. 2016. Intraspecific competition for food influences pathogen transmission in house finches *Haemorhous mexicanus*. North American Ornithological Conference, Washington, DC.
35) **Adelman, J.S.**, Mayer, C.*, and D.M. Hawley. 2016. *Mycoplasma gallisepticum* infection reduces anti-predator behaviors in house finches. Annual Meeting of the Society for Integrative and Comparative Biology, Portland, OR.
36) Moyers, S.C., **Adelman, J.S.**, and D.M. Hawley. 2016. Intraspecific competition for food influences pathogen transmission in house finches *Haemorhous mexicanus*. Annual Meeting of the Society for Integrative and Comparative Biology, Portland, OR.
37) Nuñez, C.M.V, **J.S. Adelman**, J. Smith, L.R. Gesquiere, and D.I. Rubenstein. 2016. Linking social behavior and stress physiology in feral mares (*Equus caballus*): Group transfers elevate fecal cortisol levels. Annual Meeting of the Society for Integrative and Comparative Biology, Portland, OR.
38) Moyers, S.C., **J.S. Adelman**, D.R. Farine, and D.M. Hawley. 2015. Feeder use predicts both acquisition and transmission of a contagious pathogen in a North American songbird. Annual Ecology and Evolution of Infectious Diseases Conference, Athens, GA. (Poster)
39) **Adelman, J.S.**, A.F. Wilson, W.A Hopkins, and D.M. Hawley. 2013. Pathology is more important than temperature-induced increases in food intake for *Mycoplasma gallisepticum* deposition on bird feeders. Annual Ecology and Evolution of Infectious Diseases Conference, State College, PA. (Poster)
40) **Adelman, J.S.**, A.F. Wilson, W.A Hopkins, and D.M. Hawley. 2013. Temperature-induced feeding increases do not augment pathogen deposition on bird feeders: potential consequences for climate-disease relationships. Annual Meeting of the Society for Integrative and Comparative Biology, San Francisco, CA.
41) **Adelman, J.S.**, L. Kirkpatrick, J.L. Grodio, and D.M. Hawley. 2012. Can early immune responses predict tolerance to an emerging infectious disease? Annual Ecology and Evolution of Infectious Diseases Conference, and Annual Workshop for Refining and Diversifying Ecoimmunology. Ann Arbor, MI. (Poster)
42) **Adelman, J.S.**, L. Kirkpatrick, and D.M. Hawley. 2012. Variation in immune responsiveness and tolerance of *Mycoplasma* infection between house finch populations. Annual Meeting of the Society for Integrative and Comparative Biology, Charleston, SC.

Contributed Talks and Posters (continued)

43) **Adelman, J.S.** and S.A. Muñoz. 2011. Could helminths drive geographic patterns in vertebrate eco-immunology? Annual Meeting of the Society for Integrative and Comparative Biology, Salt Lake City, UT.
44) **Adelman, J.S.**, S.A. Muñoz, M. Wikelski, and M. Hau. 2010. Can latitudinal differences in immune responses predict parasite burdens? Annual Ecology and Evolution of Infectious Disease Conference, Ithaca, NY. (Poster)
45) **Adelman, J.S.** and M. Wikelski, M. Hau. 2010. Latitudinal differences in sickness behaviors and fever: from patterns to mechanisms. Annual Meeting of the Society for Integrative and Comparative Biology, Seattle, WA.
46) **Adelman, J.S.**, M. Wikelski, and M. Hau. 2008. Acute phase immune responses along a life history gradient. Annual Meeting of the Society for Integrative and Comparative Biology, San Antonio, TX.

External Funding ($3,495,473; $1,090,473 to Adelman lab; $776,902 to Adelman lab at UofM)

Project Title	Agency	Duration	Amount
Ecological and evolutionary causes and consequences of host heterogeneity induced by prior exposure. Hawley, D., J.S. Adelman, A. Fleming-Davies, S.J. Geary, K. Langwig	NIH (NIGMS)	9/1/21-8/31/25	$1,738,528 ($353,496 to Adelman lab at UofM)
Role: Co-PI.			
Biosurveillance for bighorn sheep respiratory disease in and near Glacier National Park. Klaver, R., J.S. Adelman, J.A. Blanchong, C.M. Nuñez	BLM	5/1/20-4/30/22	$49,000 ($0 to Adelman lab; remained at ISU with summer salary and research funds for UofM MS student)
Role: Co-PI.			
Immune mechanisms and epidemiological consequences of tolerance in a naturally occurring host-pathogen system. J.S. Adelman, R. Dalloul, D. Hawley	NSF (IOS-SDS)	5/1/18-4/30/22	$915,914 ($607,185 to Adelman lab; $423,406 at UofM)
Role: Lead-PI.			
Factors influencing spatially-explicit monarch population responses in Midwest agroecosystems. S. Bradbury, J.S. Adelman, J.R. Coats, R.G. Hartzler, R. Hellmich, J. Pleasants, T. Sappington	USDA (NIFA, AFRI)	2/1/18-1/31/21	$670,675 ($81,075 to Adelman lab)
Role: Co-PI.			
Estimating the prevalence of mycoplasmal conjunctivitis in an Iowa songbird. R. Ruden and J.S. Adelman	Iowa Audubon	4/15/17-4/15/18	$500 ($500 to Adelman lab)
Role: PI with PhD student, Rachel Ruden.			
Gut parasites of Iowa song sparrows and their immunomodulatory effects. G. Vaziri and J.S. Adelman	Iowa Ornithologists' Union	5/1/16-7/1/16	$990 ($990 to Adelman lab)
Role: PI with MS student, Grace Vaziri.			
Role of terrestrial wild birds, rodents, and insects in spreading avian influenza virus to commercial layer operations. K.J. Yoon, J.S. Adelman, Y. Sato, P. Gauger, and J.A. Blanchong	Egg Industry Center	9/1/15-8/30/16	$119,866 ($47,227 to Adelman lab)
Role: Co-PI.			

Internal Funding ($15,000)

Project Title	Mechanism	Duration	Amount
Enhancing environmental engagement in urban communities through course-based undergraduate research experience. J.S. Adelman, C.M.V Nuñez, and J.L. Sabel	Engaged Scholarship Faculty Research Grant	8/1/22-7/31/23	$15,000
Role: Lead-PI.			

TEACHING

Courses Taught, Undergraduate (7)

University of Memphis (2)

1) Urban Wildlife Monitoring (3 credits; role 50%; times taught: 1) 2023–present
This course-based undergraduate research experience (CURE) challenges students to develop their own ecological questions about wildlife habitat use in urban environments. Using automated cameras placed around Memphis, and in collaboration with local and national organizations, students compile their research findings into a scientific paper format. Students engage with primary literature to form hypotheses, execute field techniques, and communicate their findings both to scientists and community partners.

2) Immunology (3 credits; role 100%; times taught: 2) 2020–present
In this course, students identify key immune mechanisms that animals use to fight infections and explore how and why those mechanisms vary, as well as the consequences of such variation for infectious disease dynamics. We tackle these issues from multiple perspectives, including molecular, ecological, and evolutionary.

Iowa State University (4)

3) Ecological Methods (3 credits; role 100%; times taught: 5) 2015–2019
This course integrated ecological principles and quantitative, statistical methods to hone analytical skills needed for wildlife management careers, including survey techniques, habitat assessment, data analysis, and presentation of scientific findings.

4) Wildlife Ecology and Management (3 credits; role 50%; times taught: 4) 2015–2019
As a capstone course for Animal Ecology Majors (Wildlife Option), this course challenged students to hone their hands-on, analytical, and communication skills while collaborating with state agencies and private landowners on specific wildlife management issues.

5) Wildlife Population Methods (3 credits; role 50%; times taught: 2) 2017–2018
Taught at the Rod and Connie French Conservation Camp in Montana, this course allowed students to explore field and quantitative methods in the study and estimation of wildlife population dynamics. Students met with wildlife professionals, perform surveys of vegetation, birds, and mammals, and develop analytical skills in the widely used statistical program, R.

6) Natural History of Costa Rica (3 credits; role 50%; times taught: 1) 2016
On-campus, this course engaged students with the broad principles of tropical ecology and challenges of conservation in the tropics, with a focus on the flora and fauna of Costa Rica. The course culminated with a 10-day trip to various ecosystems in Costa Rica during Spring Break.

Courses Taught, Undergraduate (continued)

Princeton University (1)

7) Ecology and Evolution of Immune Systems (~3 credits; role 100%) 2010
   This course explored the diversity of immune systems and host-parasite interactions from an evolutionary framework, relying on molecular, ecological, and theoretical papers from the primary literature.

Courses Taught, Graduate (2)

The University of Memphis (1)

1) Data Wrangling in R for Biologists (3 credits; role 100%; times taught: 2) 2019–present
   As a researcher in biology, or really any professional that deals with science, expertise in data management and analysis is critical. One key to developing such skills is familiarity with command-line programming, which is integral to many of the most powerful programs on the market. In this course, students learn techniques to organize, analyze, and visualize data in R, a free, powerful, highly versatile, and widely-used program across diverse disciplines.

Iowa State University (1)

2) Altitudinal Ecology (3 credits; role 50%; times taught: 1) 2017
   This course focused on altitudinal gradients as "natural laboratories" in the study of ecology and evolution, adaptations to life at high altitude, and threats of global climate change in high-altitude ecosystems. The course included a trip exploring altitudinal gradients in the Colorado's Rocky Mountains.

Other University Teaching (4)

1) Guest lecturer at ISU in AECL 231X, Principles of Wildlife Conservation and Management.
2) Guest lecturer at Virginia Tech in Ornithology and Vertebrate Physiology, at Princeton University in Comparative Physiology and Animal Behavior.
3) Teaching Assistant at Princeton University in Animal Behavior and Introductory Biology.
4) Course Co-Director, Duke University Project WILD—student-run, wilderness training course.

STUDENT MENTORING

Undergraduate Students (38; 15 at UofM, 23 Other)

Research Mentor, UofM (15):

1) Nathan Thomas, Research Assistant (2022)
2) Dwaun Hicks, Research Assistant (2022)
3) Joseph Gendreau, Research Assistant (2021)
4) Rana Rad, Research Assistant (2021)
5) Rasa Rad, Research Assistant (2021)
6) Sarah Coleman, Independent Research (2021, Co-mentored with Frank Tillman)
7) Kameron Hall, UofM CBio-Memphis Zoo Intern (2021, Co-mentored with Cassandra Nuñez and Jennifer Clarke)
8) Tina Wadhwa, Independent Research (2021, Co-mentored with Amberleigh Henschen)
9) Krishna Patel, Research Assistant (2020)
10) Sandra Sarraj, Research Assistant (2020)
11) Jenny Vu, Research Assistant (2020)
12) Makenzie White, Research Assistant (2020)
13) Rachel Hull, Research Assistant (2019)
14) Fatima Jamil, Research Assistant (2019)
15) Leighann Poole, Research Assistant (2019)

Research Mentor, Prior Institutions (23):

1) Melody Campbell, Independent Research, ISU (2019)
2) Fletcher Perry, Independent Research, ISU (2018)
3) Sidney Brenkus, Research Assistant, ISU (2018)
4) Amali Stephens, Research Assistant, ISU (2018)
5) Collin Stratton, Research Assistant, ISU (2018)
6) Sarah Tosh, Research Assistant, ISU (2018)
7) Kyla Yuza-Pate, Research Assistant, ISU (2018)
8) Valeria Rodríguez-Kalil, George Washington Carver Independent Research, ISU (2017)
9) Allyson Ballinger, Independent Research, ISU (2017)
10) Maggie Curtis, Independent Study, Statistics, ISU (2017)
11) Kethryn Eyerhalde, Freshman Honors Research, ISU (2016-2017)
12) Jacob Heatwole, Independent Research, ISU (2016-2017)
13) Morgan Milsap, Independent Research, ISU (2016)
14) Maggie Daves, Honors Research, ISU (2015-2016)
15) Erin McCall, Independent Research, ISU (2015-2017)
16) Hayden Wolfe, Independent Research, ISU (2015-2016)
17) Courtney Youngbar, Independent Research, Virginia Tech (2014-2015)
18) Casey Setash, Honors Project, Virginia Tech (2013-2014)
19) Sydney Robinette, Independent Research, Virginia Tech (2013-2014)
20) Corinne Mayer, Honors Research, Virginia Tech (2012-2014)
21) Ethan Robertson, Independent Research, Virginia Tech (2012)
22) Stephanie Feldstein, Senior Thesis, Princeton University (2008)
23) Nick Cuneo, Senior Thesis, Duke University (2008)

Graduate Students (8; 4 at UofM, 4 Other)

Academic Advisor, UofM (3)

1) Julia Weil (PhD, Biology, 2022 - present). Dissertation title: Can behavioral types predict sickness behaviors and host competency?
2) Francis (Frank) Tillman (PhD, Biology, 2020 - present). Dissertation title: Linking optimal foraging theory and host competency in a wild songbird.
3) Sarah Normand (MS, Biology, 2021). Non-thesis.

Academic Co-Advisor, UofM (1)

4) Sidney Brenkus (MS, Biology, 2020 - present). Thesis title: Bighorn sheep respiratory disease surveillance via animal behavior and community science.

Academic Advisor, ISU (2)

5) Rachel Ruden (PhD, Wildlife Ecology, 2020). Dissertation title: Characterizing disease phenotype and its role in epidemic outcomes in a wild songbird. Now the State Wildlife Veterinarian for Iowa.
6) Grace Vaziri (MS, Wildlife Ecology, 2017). Thesis title: The impact of gut parasites on immune response to microparasites in songbirds. Now PhD candidate, U. Connecticut.

Academic Co-Advisor, ISU (2)

7) Alexander Mullins (MS, Ecology and Evolutionary Biology, 2021). Thesis title: Uncovering monarch butterflies' perceptual range to nectar resources and milkweed plants. Now entomology technician for Bayer Crop Science.
8) Maggie Jones (MS, Wildlife Ecology, 2018). Thesis title: Impacts of immunocontraception and related female behaviors on male behavior and physiology in feral horses. Now PhD candidate, U. Florida.

Member of Graduate Committee (16; 6 at UofM, 10 other)

UofM (6)

1) Elizabeth Schriner (PhD, Biological Sciences, expected 2027)
2) Kelly O'Neil (PhD, Biological Sciences, expected 2024)
3) Wesley Rhinehart (MS, Biological Sciences, expected 2024)
4) Kelly Miller (PhD, Biological Sciences, 2022)
5) Ashley Atkins Coleman (MS, Biological Sciences, 2021)
6) Elina Thomas (MS, Nutrition Science, 2021)

Other (10)

7) Jesse Garrett-Larsen (PhD, Biological Sciences, Virginia Tech, expected 2027)
8) Evans Ifebuche Nnamani (PhD, Integrated Biomedical Sciences, UTHSC, expected 2026)
9) Madeline Sudnick (MS, Biological Sciences, University of Arkansas, expected 2025)
10) Caro Vela (MS, Biological Sciences, Virginia Tech, expected 2024)
11) Briana Spruill-Harrell (PhD, Integrated Biomedical Sciences, UTHSC, 2023)
12) Matt Stephenson (PhD, Wildlife, ISU, expected 2022)
13) Ashley Hedrick (MS, Ecology and Evolutionary Biology, ISU, 2021)
14) Kelsey Fisher (PhD, Entomology, ISU 2021)
15) Kaitlyn Holden (PhD, Ecology and Evolutionary Biology, ISU, 2020)
16) Amy Geffre (MS, Ecology and Evolutionary Biology, ISU, 2018)

Postdoctoral Researchers (2; 1 at UofM, 1 other)

1) Amberleigh Henschen, PhD (2018-2021). Now Postdoctoral Fellow at the Smithsonian Institution.
2) Derek D. Houston, PhD (2015-2016, ISU). Now Faculty at Western Colorado University.

SERVICE

University of Memphis Service

Standing Committees/Positions (5)

Center for Biodiversity Research

1) Advisory Board Member (2021-present)
2) Chair, Guest Researcher Committee (2021-2022)
3) Diversity, Equity, and Inclusion Committee (2020-2023)

Department of Biological Sciences

4) Meeman Biological Station Committee (2019-present)
5) Biology Undergraduate Studies Committee (2021-present)

Ad Hoc Committees and other Activities (1)

Department of Biological Sciences

1) Discover your Major Day and Fall Preview Day (2022-present)
2) Physiologist Faculty Search Committee (2019)

Campus Organizations (1)

1) Pride and Equity Alliance, Member (2022-present)

Outreach and Professional Service (5)

1) Producer and "Boss", Nerd Nite Memphis, a monthly, public speaker series (2019-present)
2) Founder and "Boss", Nerd Nite Des Moines (2017-2019)
3) Associate Editor, Ornithology (formerly "The Auk", 2020-present)
4) *Ad hoc* reviewer for NSF BIO Directorate (2017-present)
5) Reviewer for The American Naturalist, The Auk, Behavioral Ecology, Behavioral Ecology and Sociobiology, Biology Letters, Biotropica, Conservation Physiology, EcoHealth, Functional Ecology, Journal of Animal Ecology, Journal of Avian Biology, Journal of Experimental Biology, Journal of Experimental Zoology, PeerJ, Physiological and Biochemical Zoology, PLoS ONE, Proceedings of the Royal Society Series B.
6) Member, Avian Influenza Technical Advisory Group (ISU/IDALS) (2015-2016)

Professional affiliations / working groups (4)

1) Plant and Animal Diversity and Disease across Levels in Ecology (diverse working group based at Wageningen University in the Netherlands, 2022-present)
2) Society for Integrative and Comparative Biology (2006-present)
    - Chair, Division of Ecoimmunology and Disease Ecology (2022-2024)
    - Chair-Elect, Division of Ecoimmunology and Disease Ecology (2020-2021)
    - Secretary, Division of Ecoimmunology and Disease Ecology (2017-2019)
    - Symposium Co-Chair, “Methods and Mechanisms in Ecoimmunology” (2014)
    - Session Chair, Annual Meetings (2010-2017)
    - Judge, Student Posters/Presentations (2012-2018)
    - Student Worker, Annual Meetings (2008-2009)
3) American Ornithological Society, member (2008-present)
4) NSF-RCN Refining and Diversifying Ecoimmunology, Core Participant (2009-2014)

PROFESSIONAL DEVELOPMENT (2)

1) Project LEA/RN working group participant (2015-2019)
2) NSF grants conference, Washington, DC (2015)

AWARDS AND RECOGNITION (5)

1) Michael K. Harless Faculty Excellence Award for outstanding contributions in teaching, scholarship, service and community outreach, The University of Memphis (2022)
2) Most Beloved Professor, Animal Ecology NREM Department, Iowa State University (2018)
3) NSF Graduate Research Fellowship (2006)
4) Francis Boyer Fellowship in the Life Sciences, Princeton University (2004)
5) Member, Phi Beta Kappa (1999)