BARBARA A. HAN

Curriculum vitae

Cary Institute of Ecosystem Studies, Box AB Millbrook, NY 12545
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EDUCATION

2002 – 2008	Ph.D. Zoology. Department of Zoology, Oregon State University. Advisor: Dr. Andrew R. Blaustein
1998 – 2002	B.S. Biology. Natural Science Division, Pepperdine University. Advisor: Dr. Lee B. Kats

RESEARCH INTERESTS

- Infectious disease ecology and evolution, zoonotic spillover and emergence
- Ecological informatics, data mining, machine learning, predictive analytics
- Macroecology, population ecology, behavioral ecology

POSITIONS HELD

2014 –	Disease Ecologist, Cary Institute of Ecosystem Studies. Millbrook, NY.
2014 –	Adjunct Faculty, Odum School of Ecology, University of Georgia. Athens, GA.
2011 – 2014	National Institutes of Health Ruth Kirschstein Postdoctoral Research Fellow. Odum School of Ecology, University of Georgia. Sponsor: Dr. John M. Drake
2008 – 2010	National Science Foundation Postdoctoral Research Fellow in Biological Informatics. Odum School of Ecology, University of Georgia. Sponsor: Dr. Sonia Altizer
2004 – 2005	U.S. Fulbright Fellow. Instituto Venezolano de Investigaciones Científicas (IVIC), Caracas, Venezuela. Sponsor: Dr. Margarita Lampo

GRANTS & AWARDS

In Review or Pending* ** recently awarded, funding not yet disbursed*

2022 – 2027	*In review*. **NSF** Biological Integration Institute, Implementation Award. PI: Colin Carlson; Co-PIs: Barbara Han, Steph Seifert (WSU), Daniel Becker (OKU), Sadie Ryan, Cynthia Wei (Georgetown). $12M (Cary subaward: ~**$900K**)
2021 – 2022	*In review*. **NSF** Predictive Intelligence for Pandemic Prevention (PIPP), Phase I. Heterogeneous Model Integration for Infectious Disease Intelligence. PI: John M. Drake (UGA), Co-PIs: Barbara A. Han (CIES),

Pej Rohani (UGA), Bogdan Epurneau (UMich), Glenn Nowak (UGA), Justin Bahl (UGA). $1M (Cary subaward $100K).

2021 – 2025 *In review*. **DTRA MIDRP**. USRA/NASA. *Global Vector-borne Disease Risk Mapping and Forecasting (GLOVER)*. Assaf Anyamba (PI), Co-PI: Barbara Han (CIES); Co-I: Seth C. Britch (USDA-CMAVE), Co-I: LTC Kevin Taylor (DoD-GEIS), Co-I: Linda Mcckinon (ISID), Co-I (Institutional PI and Science Advisor): Kenneth J. Linthicum (USDA-CMAVE). $3M (CIES subaward: $620K).

2021 – 2022 *In review*. **NSF** PIPP, Phase I. Bat One Health Consortium. PI: Raina Plowright (MSU), Co-PIs: Emily Gurley (JHU), Connie Chang (MSU), Jamie Lloyd-Smith (UCLA), Peter Hudson (PSU). $1M (Cary subaward: $0).

Funded *Grand total of managed funds: $33.3M* **denotes <$10,000 USD*

2020 – 2025 *In progress*. **NIH National Institute of Allergens and Infectious Diseases**, **Emerging Infectious Diseases Research Center**. *CREATE-NEO: Coordinating Research on Emerging Arboviral Threats Encompassing the Neotropics*. PIs: Nik Vasilakis (UTMB), Kathryn Hanley (NMSU); Co-Is: Barbara Han and 22 others. $8M (**CIES Subawar**d: $556K).

2020 – 2025 *In progress*. **NIH National Institute of Allergens and Infectious Diseases**, R01: *Genetic and ecological determinants of recombination in coronaviruses*. PI: Simon Anthony (Columbia University); Senior Personnel: Barbara Han. **CIES Subaward**: $16.5K

2019 – 2021 *In progress*. **Lang Assael Family Science Innovation Fund**. *Prototyping a global early warning system for zoonotic diseases*. PI: Han BA; Assaf Anyamba (USRA/NASA). $53K

2018 – 2022 *In progress*, **Phase II**. **Defense Advanced Research Projects Agency** (**DARPA**), PREEMPT program: *Preventing emergence and spillover of bat pathogens in high-risk global hotspots*. **CIES Subaward:** $238,388.80

Phase I (complete)**:** Project director: Raina Plowright (MSU), Co-director: Peter Hudson (PSU); Co-PIs: Han (CIES), Aga Rynda-Apple (MSU), Alison Peel (Griffith), Cara Brook (UChicago), Emily Gurley (JHU), Hamish McCallum (Griffith), Hector Aguilar-Carreño (Cornell), Jamie Lloyd-Smith (UCLA), Liam McGuire (TTech), Nita Bharti (PSU), Olivier Restif (Cambridge), Peggy Eby (UNSW/Griffith), Tony Schountz (CSU), Vincent Munster (NIH RML), Colin Parish (Cornell). $9.6M (**CIES Subaward**: $103,793)

2017 – 2022 *In progress*. **National Science Foundation,** Ecology and Evolution of Infectious Diseases Program. *Global patterns, predictors, and their dynamical consequences in zoonotic diseases of mammals*. Lead PI: Barbara Han; Co-PIs: Suzanne O'Regan, John M. Drake. $2M

2016 – 2021	*Complete*. **National Science Foundation,** Ecology and Evolution of Infectious Diseases Program. *The community ecology of viromes in a changing landscape: virome assembly and transmission in white-footed mice and blacklegged ticks*. Lead PI: Kurt Vandegrift. Co-PIs: Han, Peter Hudson, Amit Kapoor, Rick Ostfeld. $2.4M (CIES Subaward to Han: $79K).
2018	*Complete*. **NVIDIA Corporation**, Academic GPU Grant Program. Titan XP GPU donated as an unrestricted gift in aid of research via competitive proposal review. PI: Han
2018	*Complete*. **Lang Assael Family Science Innovation Fund**. *Exploring new frontiers in disease ecology*. PI: Chris Solomon; Co-Is: Han, Shannon LaDeau, Emma Rosi, Rick Ostfeld. $36K
2016	*Complete*. **National Institute for Mathematical and Biological Synthesis** (NIMBioS), Short-term Visitor Award. *Machine learning and mathematical modeling of pace of life in disease ecology*. *
2011 – 2014	*Complete*. **National Institutes of Health,** Ruth Kirschstein National Research Service Award Individual Postdoctoral Fellowship. *Machine learning to forecast zoonotic disease emergence*. Lead PI: Han. $160K
2008 – 2010	*Complete*. **National Science Foundation,** Postdoctoral Research Fellowship in Biology, Biological Informatics. *Allometric scaling of infectious disease dynamics: integrating theory and empirical data*. Lead PI: B. Han. $123K
2008 – 2011	*This fellowship was awarded but not accepted*. **National Institutes of Health,** Ruth Kirschstein National Research Service Award Individual Postdoctoral Fellowship. *Allometric scaling and infectious disease dynamics*. $126K
2006 – 2007	*Complete*. **National Fish and Wildlife Foundation,** Budweiser Conservation Scholarship. *Amphibian declines and a globally emerging infectious disease*. $10K
2006	*Complete*. **NIH Graduate Research Festival**, Postdoctoral recruitment event. *
2006	*Complete*. **Korean American Scholarship Foundation**, Designated scholarship *
2004 – 2005	*Complete*. **U.S. Fulbright Fellowship**, U.S. Department of State. *Disease ecology of an emerging infectious amphibian pathogen*. Affiliations: Instituto Venezolano de Investigaciones Científicas (Caracas, Venezuela). $18K.
2003, 2004	**National Science Foundation,** Pre-doctoral Fellowship, Honorable mentions
2003, 2004	*Complete*. **Oregon State University**, Zoology Research Fund Awards *

2003 *Complete*. **Society of Integrative and Comparative Biology**, Grant in Aid of Research *

PUBLICATIONS **invited*

Articles, submitted or in review:

Faust C, Castellanos AA, Peel A, Eby P, Plowright R, Han BA, Bharti N. Environmental transmission across disparate spatial scales and temporal lags influences Hendra virus spillover. *In prep*, ***J. Applied Ecology***

Martin JT, Fischhoff IR, Castellanos AA, Han BA. Ecological predictors of zoonotic vector status among *Dermacentor* ticks: a traits-based approach. *In revision*, ***J. Medical Entomology***

Moubarak M, Castellanos AA, **Han BA,** Fischhoff IR. A spatially explicit risk assessment of salamander populations to *Batrachochytrium salamandrivorans* in the United States for directing conservation actions. *In revision*, ***Biological Conservation***

O'Regan SM, Umelo M, Drake JM, Schmidt JP, **Han BA**. Theory of spillover for environmentally transmitted pathogens. *In review*, ***American Naturalist***

Frauke E, **Han BA**, Hörnfeldt B, Khalil H, Magnusson M, Singh NJ, Ostfeld RS. Population fluctuations drive spillover transmission of rodent-borne zoonoses. *In revision*, ***Nature Communications***

Articles, Published or In Press:

58. Becker DJ, Albery GF, Sjodin AR, Poisot T, Dallas TA, Eskew EA, Farrell MJ, Guth S, **Han BA**, Simmons NB, Carlson CJ. 2022. Optimising predictive models to prioritise viral discovery in zoonotic reservoirs. ***The Lancet Microbe***. https://doi.org/10.1016/S2666-5247(21)00245-7

57. Celone M, Okech B, **Han BA**, Forshey BM, Anyamba A, Dunford J, Rutherford G, Mendoza NKM, Estallo EL, Khouri R, de Siqueira IC, Pollett S. A systematic review and meta-analysis of the potential non-human animal reservoirs and arthropod vectors of the Mayaro virus. ***PLoS Neglected Tropical Diseases***, 15:e0010016 https://doi.org/10.1371/journal.pntd.0010016

56. Fischhoff I, Castellanos A, Rodrigues J, Varsani A, **Han BA.** Predicting the zoonotic capacity of mammal species for SARS-CoV-2. ***Proc. Roy. Soc. B***, 288:20211651 doi: https://doi.org/10.1101/2021.02.18.431844

55. ***Han BA**, Castellanos A, Fischhoff I, Schmidt JP, Drake JM. 2021. The macroecology of zoonotic diseases in carnivores. ***Trends in Parasitology***, 37:1096. https://doi.org/10.1016/j.pt.2021.08.006

54. Espira L, Brouwer A, **Han BA**, Foufopoulos J, Eisenberg J. 2021. Dilution of epidemic potential of environmentally transmitted infectious diseases for species with partially overlapping habitats. *Online*, ***American Naturalist.*** https://doi.org/10.1086/717413

53. Carlson CJ, Farrell MK, Grange Z, **Han BA** et al. 2021. The future of zoonotic risk prediction. ***Phil. Trans. Roy. Soc.*** https://doi.org/10.1098/rstb.2020.0358

52. Majewska A, **Han BA**, Huang T, Drake JM. 2021. Identifying global environmental risk factors of zoonotic helminthiases. ***Phil. Trans. Royal Soc.*** https://doi.org/10.1098/rstb.2020.0356

51. Kahini W, **Han BA**, Castellanos, Fischhoff, Varsani, Das. ICLR 2021 Predicting zoonotic potential of betacoronavirus RdRp sequences using attention. ***Ninth International Conference on Learning Representations.*** https://arxiv.org/pdf/2108.08077.pdf

50. Wells HL, Letko M, Lasso G, Ssebide B, Nziza J, Byarugaba DK, Navarrete-Macias I, Liang E, Cranfield M, **Han BA**, Tingley MW, Diuk-Wasser M, Goldstein T, Johnson CK, Mazet JAK, Chandran K, Munster VJ, Gilardi K, Anthony SJ. 2021. The evolutionary history of ACE2 usage within the coronavirus subgenus Sarbecovirus. Virus Evol 7:veab007. https://doi.org/10.1093/ve/veab007

49. Becker DJ and **Han BA.** 2021.The macroecology and evolution of avian competence for *Borrelia burgdorderi*. ***Global Ecology and Biogeography***. https://onlinelibrary.wiley.com/doi/abs/10.1111/geb.13256

48. Sacchetto L, Drumond BP, **Han BA**, Nogueira ML, Vasilakis N. 2020. Re-emergence of yellow fever in the neotropics – quo vadis? Emerging Topics in Life Sciences. https://doi.org/10.1042/ETLS20200187

47. **Han BA**, O'Regan SM, Schmidt JP, Drake JM. 2020. Integrating data mining and transmission theory for the ecology of infectious diseases. ***Ecology Letters***, 23:1178. http://dx.doi.org/10.1111/ele.13520

46. Fischhoff I, Huang T, Hamilton S, **Han BA**, Ladeau S, Ostfeld RS, Emma R, Solomon C. 2020. Parasite and pathogen effects on ecosystem processes: a quantitative review. ***Ecosphere***, 5:260. http://dx.doi.org/10.1002/ecs2.3057

45. *Schmidt JP, Maher S, Huang T, Drake JM, **Han BA**. 2019. Ecological indicators of spillover potential among mammal bridge hosts of Ebola virus. ***Philosophical Transactions of the Royal Society***, 374: 20180337. https://doi.org/10.1098/rstb.2018.0337

44. Plowright RK, Becker DJ, Crowley DE, Washburne AD, Huang T, Nameer PO, Gurley ES, **Han BA**. 2019. Prioritizing surveillance of Nipah virus in India. ***PLoS Neglected Tropical Diseases***, 374: 20180337. https://doi.org/10.1371/journal.pntd.0007393

43. Berger KM, Wood JLN, Jenkins B, Olsen J, Morse SS, Gresham L, Root JJ, Rush M, Pigott D, Winkleman T, Gillespie TR, Nuzzo J, **Han BA**, Olinger P, Karesh WB, Mills JN, Annelli JF, Barnabei J, Lucey D, Hayman DTS. Policy and science for global health security: shaping the course of international health. 2019. ***Tropical Medicine and Infectious Diseases***, Special issue: One Health and Zoonoses, 4: 2. https://doi.org/10.3390/tropicalmed4020060

42. **Han BA**, Majumdar S, Calmon FD, Horesh R, Kumar A, Perer A, von Marschall EB, Wei D, Mojsilovic A, Varshney K. 2019. Confronting data sparsity to identify potential sources of Zika virus infection among primates. ***Epidemics***, 27:59-65. https://doi.org/10.1016/j.epidem.2019.01.005

41. Stephens PR, Altizer S, Gittleman JL, Moan E, **Han BA**, Pappalardo P. 2019. Parasite sharing in wild ungulates and their predators: effects of phylogeny, range overlap, and trophic links. ***Journal of Animal Ecology.*** https://doi.org/10.1111/1365-2656.12987

40. *__Han BA__ and Ostfeld RS. 2019. Topic modeling of major research themes in disease ecology of mammals. ***Journal of Mammalogy***, 100:1008–1018. https://doi.org/10.1093/jmammal/gyy174

39. Downs C, Schoenle L, **Han BA**, Harrison J, Martin M. 2019. The scaling of host competence. ***Trends in Parasitology*** 35: 182. https://doi.org/10.1016/j.pt.2018.12.002

38. Walker JW, **Han BA**, Ott IM and Drake JM. 2018. Transmissibility of emerging viral zoonoses. ***PLoS ONE.*** 13: e0206926. https://doi.org/10.1371/journal.pone.0206926

37. Almeida R, **Han BA**, Reisinger AJ, Kagemann C, Rosi E. 2018. High mortality of mosquito predators caused by widespread mosquito repellent: implications for a human-environment feedback loop. ***Biology Letters*** 14: 20180526. https://doi.org/10.1098/rsbl.2018.0526

36. Blaustein AR, Urbina J, Snyder PW, Reynolds E, Dang T, Hoverman JT, **Han BA**, Olson DH, Searle C, Hambalek NH. 2018. The effects of emerging infectious diseases on amphibians: a review of experimental studies. ***Diversity*** 10: 81. https://doi.org/10.3390/d10030081

35. Dallas T, Budischak S, Carlson C, Ezenwa V, **Han BA**, Huang S, Aguirre AA, Stephens PR. 2018. Gauging support for macroecological patterns in helminth parasites. ***Global Ecology and Biogeography*** 27: 1437. https://doi.org/10.1111/geb.12819

34. Dallas T, **Han BA**, Stephens PR, Park AW, Drake JM. 2018. Trait-based prediction of host species roles in parasite sharing networks. ***Oikos,*** 128:23-32. doi:10.1111/oik.05602

33. Strona G, Carstens CJ, Beck PSA, **Han BA**. 2018. The intrinsic vulnerability of networks to epidemics. ***Ecological Modelling***, 383: 91–97.

32. Yang L and **Han BA**. 2018. Data-driven predictions and novel hypotheses about zoonotic tick vectors from the genus *Ixodes*. ***BMC Ecology*** 18:7 doi: 10.1186/s12898-018-0163-2

31. Necamp T, Sattigeri P, Wei D, Ray E, Drissi Y, Poddar A, Mahajan D, Bowden S, **Han BA**, Mojsilović A & Varshney KR. Sept 2017. Cognitive disease hunter: developing automated pathogen feature extraction from scientific literature. Data Science for Social Good Conference (Chicago, IL). [PDF]

30. Stephens PR, Pappalardo P, Huang S, Byers JE, Farrell MJ, Gehman A, Ghai RR, Haas SE, **Han B**, Park AW, Schmidt JP, Altizer S, Ezenwa VO, Nunn CL. 2017. Global Mammal Parasite Database version 2.0. ***Ecology***, 98:1476.

29. Evans MV, Dallas TA, **Han BA**, Murdock CC and Drake JM. 2017. Data-driven identification of potential Zika virus vectors. ***eLife*** 6: 077966.

28. Schmidt JP, Park AW, Kramer A, **Han BA**, Alexander L, Drake JM. 2017. Spatiotemporal fluctuations and triggers of Ebolavirus spillover. ***Emerging Infectious Diseases***, 23:415.

27. *LaDeau SL, **Han BA**, Rosi-Marshall EJ, Weathers KC. 2017. The next decade of big data in ecosystem science. ***Ecosystems***, 20: 274–283.

26. *__Han BA__ and Drake JM. 2016. Future directions in analytics for infectious disease intelligence. ***EMBO Reports***, 17:785.

25. *__Han BA__, Kramer A, Drake JM. 2016. Global patterns of zoonotic disease in mammals. ***Trends in Parasitology***, 32: 565-577

24. __Han BA__, Yang L. Predicting novel tick vectors of zoonotic disease. 2016. ***Proceedings of the 33rd International Conference on Machine Learning*** (**ICML**) Workshop on #Data4Good: Machine Learning in Social Good Applications, New York, NY, USA. arXiv:1606.06323v1 [q-bio.PE]

23. Ilin R, __Han BA.__ Formal Concept Analysis of Rodent Carriers of Zoonotic Disease. 2016. ***Proceedings of the 33rd International Conference on Machine Learning*** (**ICML**) Workshop on #Data4Good: Machine Learning in Social Good Applications, New York, NY, USA. arXiv:1608.07241 [stat.ML]

22. __Han BA__, Schmidt JP, Hayman D, Alexander L, Bowden SE, Drake JM. 2016. Undiscovered bat hosts of filoviruses. ***PLoS Neglected Tropical Diseases***, 7:e0004815

21. Stephens PR, Altizer S, Smith KF, Aguirre A, Brown JH, Budischak S, Byers JE, Critchlow R, Davies JT, Drake JM, Ezenwa V, Farrell M, Gittleman JL, __Han BA__, Huang S, Hutchinson RA, Johnson PTJ, Nunn CL, Onstad D, Park AW, Poulin R, Vazquez-Prokopec GM, Papparlardo P, Schmidt JP. 2016. The macroecology of infectious diseases: a new perspective on global-scale drivers of pathogen distributions and impacts. ***Ecology Letters***. DOI: 10.1111/ele.12644

20. Pigott DM, Millear A, Earl L, __Han BA__, Shearer F, Weiss DJ, Brady OJ, Kraemer MUG, Moyes CL, Bhatt SJ, Gething PW, Golding N, Hay SI. 2016. Updates to the zoonotic niche map of Ebola virus disease in Africa. ***eLife***, 5:e16412.

19. LaDeau S and __Han BA__. 2016. The emergence of disease ecology. ***Japanese Journal of Zoo and Wildlife Management***, 21:53.

18. __Han BA__, Schmidt JP, Bowden SE, Drake JM. 2015. Rodent reservoirs of future zoonotic diseases. ***Proceedings of the National Academy of Science***, 112:7039-7044. DOI: 10.1073/pnas.1501598112

17. __Han BA__, Park AW, Jolles AE, Altizer S. 2015. Infectious diseases transmission and behavioral allometry in wild mammals. ***Journal of Animal Ecology***, 84:637-646. DOI: 10.1111/1365-2656.12336

16. __Han BA__, Kerby JL, Searle CL, Storfer A, Blaustein AR. 2015. Host species composition influences infection severity among amphibians in the absence of spillover transmission. 2015. ***Ecology and Evolution***, 5:1432-1439. DOI: 10.1002/ece3.1385

15. Kats LB, Bucciarelli G, Schlais DE, Blaustein AR, __Han BA.__ 2012. Ultraviolet radiation influences perch selection by a neotropical poison-dart frog. ***PLoS ONE***, 7:e51364. doi:10.1371/journal.pone.0051364

14. __Han BA__, Searle CL, Blaustein AR. 2011. The effects of an infectious fungal pathogen, *Batrachochytrium dendrobatidis,* on amphibian predator-prey interactions. ***PLoS ONE***, 6(2): e16675. doi:10.1371/journal.pone.0016675

13. Altizer S, Bartel R, **Han BA.** 2011. Animal migrations and infectious disease risk. ***Science***, 331:296-302.

12. Blaustein, A.R., **Han, B.A.**, Relyea, R., Johnson, P.T.J., Buck, J., Gervasi, S. and Kats, L.B. 2011. The complexity of amphibian population declines: understanding the role of cofactors in driving amphibian losses. ***Annals of the New York Academy of Sciences***, The Year in Ecology and Conservation Biology (Eds. Ostfeld, R.S. and Schlesinger, W.H.), 1223:108-119. doi: 10.1111/j.1749-6632.2010.05909.x

11. Bancroft, B.A., **Han, B.A.**, Searle, C.L., Biga, L.M., Olson, D.H., Kats, L.B., Lawler, J.J., and Blaustein, A.R. 2011. Species-level correlates of susceptibility to the pathogenic amphibian fungus *Batrachochytrium dendrobatidis* in the United States. ***Biodiversity and Conservation***, 20:1911-1920. doi: 10.1007/s10531-011-0066-4

10. Romansic, J.R., Johnson, P.T.J., Searle, C.L., Johnson, J.E., Tunstall, T., **Han, B.A.**, Rohr, J.R., and Blaustein, A.R. 2011. Individual and combined effects of multiple pathogens on Pacific treefrogs. ***Oecologia***, DOI: 10.1007/s00442-011-1932-1

9. Searle, C.L., Belden, L.K., Bancroft, B.A., **Han, B.A.**, Biga, L.F., and Blaustein, A.R. 2010. Experimental examination of the effects of ultraviolet-B radiation in combination with other stressors in frog larvae. ***Oecologia***, 162:237-245.

8. **Han, B.A.**, Bradley, P.W., and Blaustein, A.R. 2008. Ancient behaviors of larval amphibians in response to an emerging fungal pathogen, *Batrachochytrium dendrobatidis*. ***Behavioral Ecology and Sociobiology***, 63:241-250.

7. Lampo, M., Sánchez, D., Nicolás, A., Márquez, M., Nava-González, F., Garcia, C.Z., Rinaldi, M., Rodríguez-Contreras, A., León, Fabiola, **Han, B.A.**, Chacón-Ortiz, A. 2008. *Batrachochytrium dendrobatidis* in Venezuela. ***Herpetological Review***, 39:449-454.

6. Sánchez, D.A., Chacón-Ortiz, A., León, R., **Han, B.A.**, and Lampo, M. 2008. Widespread occurrence of an emerging pathogen in amphibian communities of the Venezuelan Andes. ***Biological Conservation***, 141:2898-2905.

5. **Han, B.A.**, Kats, L.B., Pommerening, R.C., Ferrer, R.P., Murry-Ewers, M. and Blaustein A.R. 2007. Behavioral avoidance of ultraviolet-B radiation by two species of neotropical poisondart frogs. ***Biotropica***, 39:433-435.

4. Lampo, M., Barrio-Amoros, C.L., and **Han, B.A.** 2006. *Batrachochytrium dendrobatidis* infection in the recently rediscovered *Atelopus mucubajiensis* (Anura, Bufonidae) in the Venezuelan Andes. ***EcoHealth***, 3:299-302.

3. Johnson, P.T.J., Preu, E. R., Sutherland, D. R., Romansic, J., **Han, B.A.**, and Blaustein, A.R. 2006. Adding infection to injury: Synergistic effects of predation and parasitism on salamander limb malformations. ***Ecology***, 87:2227–2235.

2. Blaustein, A. R., Romansic, J. M., Scheessele, E. A., **Han, B.A.**, Pessier, A.P., and Longcore, J.E. 2005. Interspecific variation in susceptibility of frog tadpoles to the pathogenic fungus *Batrachochytrium dendrobatidis*. ***Conservation Biology***, 19:1460-1468.

1. Blaustein, A.R., **Han, B.**, Fasy, B., Romansic, J., Scheessele, E.A., Anthony, R.G., Marco, A., Chivers, D.P., Belden, L.K., Kiesecker, J.M., Garcia, T.S., Lizana, M. and Kats, L.B. 2004. Variable breeding phenology affects the exposure of amphibian embryos to ultraviolet radiation and Optical characteristics of natural waters protect amphibians from UV-B in the U.S. Pacific Northwest: Comment. ***Ecology***, 85:1747-1754.

Other publications:

Pandit P, **Han BA**. 2019. Rise of machines in disease ecology: the arising and established researcher. ***Bulletin of the Ecological Society of America***, 100: 1008-1018. https://doi.org/10.1093/jmammal/gyy174

Han, B.A. 2016. The Algorithm That's Hunting Ebola. Invited feature article, ***IEEE Spectrum Magazine***. *In press and online:* http://spectrum.ieee.org/biomedical/diagnostics/the-algorithm-thats-hunting-ebola

Han, B.A. and Altizer, S. 2013. *Invited chapter*, Conservation and Infectious Disease *in* **The Encyclopedia of Biodiversity** (2nd edition). Levin, S. (Ed.) Academic Press.

Han, B.A., Rushmore, J., Fritzsche, A., Satterfield, D., and Winternitz, J. 2012. Preempting pandemics. ***Science***, 337:647-648. (*Book Review: The Viral Storm by Nathan Wolfe)*.

COLLABORATIVE WORKING GROUPS

2016 - *ongoing*	Pandemic Prediction and Forecasting Science and Technology (PPFST) Working Group, Subcommittee on Biological Defense Research And Development, Committee On Homeland And National Security, National Science And Technology Council.
2016 - *ongoing*	IBM Thomas J. Watson Research Center, Data Science Group.
2013 - *ongoing*	National Science Foundation, Research Coordination Network. Macroecology of Infectious Disease. PIs: Patrick Stephens, Alonso Aguirre, Sonia Altizer.
2019	Ending Pandemics and Salzburg Global Seminar, Finding Outbreaks Faster: Metrics for One Health Surveillance. Salzburg, Austria. Nov 2019.
2018	Allometry of immunity. Hamilton College.
2018	Predicting pathogen spillover. DARPA-funded working group led by R. Plowright at Univ. Montana, February 2018.

SELECTED PRESENTATIONS

2022	*Graduate Student Invited Speaker. IDEAS program, University of Georgia. March 21, 2022.*
2022	Invited speaker. American Museum of Natural History, Sci Café series. January 5, 2022.

2021	Invited speaker. MIT Technology Review Arabia's Virtual Conference. November 30, 2021.
2021	Invited Panelist. UN Environmental Programme, Science Policy Business Forum for Asia and the Pacific (UNEP AP-SPBF). October 5, 2021.
2021	Invited symposium speaker. Infectious Diseases Society of America (IDSA Week). October 2, 2021
2021	Invited panelist. National Academy of Sciences, Engineering, and Medicine (NASEM) Committee on Addressing Inaccurate and Misleading Information about Biological Threats through Scientific Collaboration and Communication. September 8, 2021
2021	Invited panelist. National Academy of Sciences, Engineering, and Medicine (NASEM) Forum on Microbial Threats – One Health Workshop. February 2021.
2021	NIH CREATE-NEO Vectorborne and zoonotic disease seminar series. Virtual. February 2021.
2021	AI + X seminar series. Univ. South Florida. Virtual. February 2021.
2020	Invited symposium speaker. American Association for the Advancement of Science. Seattle, WA. February 2020.
2019	Invited symposium speaker. American Society of Tropical Medicine and Hygiene. Baltimore, MD. November 2019.
2019	Speaker. WNYC/ Jerome Greene Performance Center-The Greene Space. Using AI to Predict and Preempt Epidemics. New York City. October 2019
2019	Invited speaker. NASA Goddard Applied Sciences Seminar. May 2019.
2019	DARPA PREEMPT Program Meeting for Principal Investigators. May 2019.
2019	Invited symposium speaker. ASM BioThreats. January 2019.
2018	Invited speaker. Grand Challenges Meeting of the Bill and Melinda Gates Foundation. November 2018. Berlin, Germany.

SERVICE

Advisory Engagements and Consulting

March 2022 MinuteEarth
Jan 2022 NASA Goddard and The Gordon and Betty Moore Foundation
Dec 2021 Coalition for Epidemic Preparedness Innovation (CEPI) and Health Care Futurists
Dec 2021 University of Michigan, Pathogen Biorepository, Science Advisory
Nov 2021 Center for Strategic Risks, external review of DARPA BTO

Journal editor: 2021 Ecology Letters

Journal reviewer:

Nature
Science
Proceedings of the Nat'l Acad. Sciences
Proceedings of the Royal Society B
Ecology Letters
Trends in Ecology and Evolution
American Naturalist
Journal of Animal Ecology
Ecology
Ecosystems
Nature Communications
Conservation Biology
Royal Society Open Science
Behavioral Ecology and Sociobiology
PLoS ONE
PLoS Neglected Tropical Diseases
Ecosphere
Global Ecology and Biogeography
Ecography
Journal of Experimental Biology
Ethology, Ecology and Evolution
Ticks and Tickborne Diseases
Science Advances
Herpetological Review
Journal of Herpetology
Diseases of Aquatic Organisms
Canadian J. Fisheries Aquatic Sciences
EcoHealth

Grant reviewer:
NIH Special Topics (Panelist)
NSF EEID Grant Program (Panelist)
NSF EPSCoR Grant Program (Panelist)
NSF CAREER Grant Program (Ad hoc)