

Daniel G. Streicker

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EDUCATION

University of Georgia, Odum School of Ecology, Ecology, Ph.D *Viral host shifts: ecological dynamics, cross-species transmission and host adaptation in bat rabies*. Advised by Sonia Altizer and Pejman Rohani, 2011.

University of Virginia, Psychology (B.A.) and Biology (minor) *Host community heterogeneity and parasite risk in small mammals*. Advised by Amy Pedersen and Janis Antonovics, 2004.

APPOINTMENTS AND EXPERIENCE

- 2019 – pres. **Wellcome Trust Senior Research Fellow**, University of Glasgow
2014 – 2020 **Adjunct Graduate Faculty**, Odum School of Ecology, University of Georgia
2013 – 2018 **Wellcome Trust/Royal Society Sir Henry Dale Research Fellow**, University of Glasgow
2012 – 2013 **Postdoctoral Research Associate**, Odum School of Ecology, University of Georgia
2004 – 2006 **Emerging Infectious Diseases Training Fellow**, Rabies Laboratory, Centers for Disease Control and Prevention
2004 **Intern**, Consortium for Conservation Medicine (now EcoHealth Alliance).
2002 – 2004 **Research Assistant**, Department of Biology, University of Virginia.
2003 **Research Experiences for Undergraduates (REU) Program**, at Mountain Lake Biological Station, University of Virginia.

GRANTS & FELLOWSHIPS

- 2020 – 2023 NSF-BBRSC Ecology and Evolution of Infectious Diseases Grant. *US-UK collaboration: Integrating ecology, epidemiology, and human interests for strategic management of zoonoses in complex wildlife reservoirs* (UK: £540,828, PI: Streicker; US: \$1,695,140, PI: Osorio, BB/V003798/1)
2020 – 2025 Wellcome Trust Senior Research Fellowship. *Data-driven interventions to prevent bat virus emergence* (£1,924,975, PI: Streicker; 217221/Z/19/Z)
2018 – 2019 Wellcome Institutional Strategic Support Fund (ISSF) ECR Catalyst Grant. *Investigating a novel deltavirus in vampire bats* (£17,357, PI: Streicker, project designed by Laura Bergner)
2018 – 2021 Human Frontier Science Program. *Probing persistence paradigms: synthetically, immunologically and ecologically* (\$1,050,000; RGP0013/2018, PI: Felix Drexler)
2018 – 2021 NERC Standard Grant. *The impact of resource availability on parasite transmission: insights from a natural multi-parasite community*. (£631,347; NE/R011397/1, PI: Amy Pedersen).
2014 – 2019 Wellcome Trust/Royal Society Sir Henry Dale Fellowship. *Managing viral emergence at the interface of bats and livestock* (£976,385, Grant 102507/Z/13/Z, PI: D. Streicker)
2017 – 2018 Royal Society Challenge Grant. *Towards oral vaccination of vampire bats for rabies control in Latin America* (£96,253, CH160097, PI: Streicker)
2016 – 2019 Leverhulme Trust Research Grant. *From observation to intervention: overcoming weak data with new approaches to complex biological problems* (£181,909, Grant RPG-2015-259, PIs: Dan Haydon & Mafalda Viana)
2016 – 2017 CONCYTEC Basic Research Grant. *The role of the vampire bat in the transmission of bacteria resistant to antibiotics used in humans and livestock* (£80,000, PIs: Carlos Shiva and Nestor Falcon)
2016 – 2018 National Science Foundation Doctoral Dissertation Improvement Grant. *Dissertation Research: Consequences of resource heterogeneity for immune defense, connectivity, and rabies dynamics in vampire bats* (\$19,499, ~£14,743; DEB-1601052, PI: Dan Becker).
2013 National Science Foundation Postdoctoral Fellowship in Biology (2 years, \$138,000, declined for Sir Henry Dale Fellowship)

- 2010 - 2014 National Science Foundation Research Grant. *Demographic and behavioral responses to resource shifts and the transmission of rabies in vampire bats* (\$580,000; NSF DEB 1020966; PIs: S. Altizer and P. Rohani; Project designed by D. Streicker).
- 2009 - 2010 CDC/UGA Research Collaboration in Infectious Disease (\$92,000, PIs: S. Altizer and C. Rupprecht; Project designed by D. Streicker)
- 2010 Odum School of Ecology Small Grant for Graduate Research (\$900)
- 2007 - 2010 National Science Foundation Graduate Research Fellowship (3 years, \$122,500)
- 2008 National Geographic Young Explorers Grant (1 year, \$5,000)
- 2007 American Philosophical Society, Lewis and Clark Explorers Grant (1 year, \$4,900)
- 2007, 2008 Latin American and Caribbean Studies Summer Research Travel Award (2 years, \$2,100)
- 2004 - 2006 CDC/APHL Emerging Infectious Diseases Training Fellowship (2 years, ~\$49,000)

AWARDS

- 2015 National Geographic Emerging Explorer (\$10,000)
- 2014 Wellcome-Beit Prize (£25,000, ~\$41,767)
- 2014 Royal Society of Edinburgh International Exchange Programme (£500)
- 2013 *Science* and SciLifeLab Prize for Young Scientists – Grand Prize (\$25,000)
- 2013 Robert C. Anderson Memorial Award for Best Dissertation in the Life Sciences at the University of Georgia (\$1000)
- 2013 University of Georgia 'Darwin Days,' Best Postdoctoral Poster
- 2011 Odum School of Ecology Best Student Paper Award (\$250)
- 2011 University of Georgia Dissertation Completion Award (\$13,268)
- 2009 University of Georgia Graduate Student Travel Award (\$1,200)
- 2008 AAAS/ *Science* Program for Excellence in Science
- 2007, 2008 Ecology and Evolution of Infectious Diseases Conference Travel Award (\$500)
- 2007 1st place PhD student presentation, Ecology Graduate Student Symposium (\$250)
- 2005 Evolution of Infectious Diseases Symposium Travel Award (\$500)
- 2004 Phi Beta Kappa Honor Society
- 2003 NSF Research Experiences for Undergraduates Internship
- 2003 Harrison Undergraduate Research Award

PUBLICATIONS

- Streicker, D.G. and Gilbert, A.T. Contextualizing bats as viral reservoirs. *Science in press*
- Meza, D.K., Broos, A.B., Becker, D.J., Behdenna, A., Willett, B., Viana, M., **Streicker, D.G.** (2020) Predicting the presence and titer of rabies virus neutralizing antibodies from low-volume serum samples in low-containment facilities. *Transboundary and Emerging Diseases in press*
- Benavides, J.A., Valderrama, W., Recuenco, S., Uieda, W., Suzán, G., Avila-Flores, R., Velasco-Villa, A., Almeida, M., Andrade, F.A., Molina, M., Vigilato, M., Pompei, J., Tizzani, P., Carrera, J., Ibanez, D., **Streicker, D.G.** (2020) Defining new pathways to manage the ongoing emergence of bat rabies in Latin America. *Viruses* 12(9), 1002; <https://doi.org/10.3390/v12091002>
- Bergner, L.M., Orton, R.J., & **Streicker, D.G.** (2020) Complete *Alphacoronavirus* genome sequence from common vampire bats in Peru. *Microbiology Resource Announcements* doi: 10.1128/MRA.00742-20
- Olival, K., Cryan, P.M., Amman, B.R., Baric, R.S., Blehert, D.S., Brook, C., Calisher, C., Castle, K.T., Coleman, J.T.H., Daszak, P., Epstein, J.H., Field, H., Frick, W.F., Gilbert, A.T., Hayman, D.T.S., Ip, H.S., Karesh, W.B., Kreuder Johnson, C., Kading, R.C., Kingston, T., Lorch, J., Mendenhall, I.H., Peel, A.J., Phelps, K.L., Plowright, R.K., Reeder, D.M., Reichard, J.D., Sleeman, J.M., **Streicker, D.G.**, Towner, J.S., Wang, L-F. (2020) Possible risks of SARS-CoV-2 spillover from humans to free-ranging wildlife: a case study of bats *PLoS Pathogens* <https://doi.org/10.1371/journal.ppat.1008758>
- Becker, D.J., Broos, A., Bergner, L.M., Meza, D.K., Simmonds, N.B., Fenton, M.B., Altizer, S. & **Streicker D.G.** (2020) Temporal patterns of vampire bat rabies and host connectivity in Belize. *Transboundary and Emerging Diseases* <https://doi.org/10.1111/tbed.13754>
- Mollentze, N. & **Streicker, D.G.** (2020) Viral zoonotic risk is homogenous among taxonomic orders of mammalian and avian reservoir hosts. *Proceedings of the National Academy of Sciences* <https://doi.org/10.1073/pnas.1919176117>
- Becker, D.J., Speer, K.A., Brown, A.M., Washburne, A.D., Fenton, M.B., Altizer, S., **Streicker, D.G.**,

- Plowright, R.K., Chizhikov, V.E., Simmons, N.B., & Volokhov, D.V. (2020) Ecological and evolutionary drivers of hemoplasma infection and genotype sharing in a Neotropical bat community. **Molecular Ecology** <https://doi.org/10.1111/mec.15422>
9. Benavides, J. Velasco-Villa A., Godino, L.C., Satheshkumar, P.S., Nino, R., Rojas-Paniagua E., Shiva C., Falcon, N, & **Streicker D.G.** (2020) Abortive vampire bat rabies infections in Peruvian peridomestic livestock. **PLoS Neglected Tropical Diseases** <https://doi.org/10.1371/journal.pntd.0008194>
 10. Bakker, K.M., Rocke, T.E., Osorio, J.E., Tello, C., Carrera, C., Valderrama, W., Shiva, C., Falcon, N., & **Streicker, D.G.** (2019) Fluorescent biomarkers demonstrate prospects for self-spreading vaccines to control disease transmission in wild bats. **Nature Ecology & Evolution** 10.1038/s41559-019-1032-x
 11. **Streicker, D.G.**, Fallas González, S.L., Luconi, G., González Barrientos, R., & Leon, B. (2019) Phylodynamics reveals extinction-recolonization dynamics underpin apparently endemic vampire bat rabies in Costa Rica. **Proceedings of the Royal Society B** 10.1098/rspb.2019.1527
 12. Bergner, L.M, Orton, R.J., Benavides, J.A., Becker, D.J., Tello, C., Biek, R., & **Streicker, D.G.** (2019) Viral diversity is shaped by host demography and environmental heterogeneity as revealed by ecological metagenomics in vampire bats. **Molecular Ecology** 10.1111/mec.15250
 13. Becker, D.J., Nachtmann, C., Argibay, D.N, Botto, G., Czirják, G.A., Escalera-Zamudio, M., Carrera, J.E., Tello, C., Winiarski, E., Greenwood, A.D., Rojas-Anaya, E., Loza-Rubio, E., Lavergne, A., de Thoisy, B., Plowright, R.K., Altizer, S. & **Streicker, D.G.** (2019) Leukocyte profiles reflect geographic range limits in a widespread Neotropical bat. **Integrative and Comparative Biology** 10.1093/icb/icz007
 14. Grillet, M., Hernández, J., Llewellyn, M., Paniz-Mondolfi, A., Tami, A., Vincenti-Gonzalez, M., Marquez, M., Mogollon-Mendoza, A., Hernandez-Pereira, C., Plaza-Morr, J., Blohm, G., Grijalva, M., Costales, J., Ferguson, H., Schwabl, P., Hernandez-Castro, L., Lambertson, P., **Streicker, D.G.**, Haydon, D., Miles, M., Acosta-Serrano, A., Acquattella, H., Basañez, M., Benaim, G., Colmanares, L., Conn, J., Espinoza, R., Freilij, H., Graterol-Gil, Hotez, P., & Kato, H. (2019) Venezuela's humanitarian crisis, resurgence of vector-borne diseases and implications for spillover in the region: a call for action. **Lancet Infectious Diseases** 10.1016/S1473-3099(18)30757-6
 15. Bergner, L., Orton, R.J., da Silva Filipe, A., Shaw, A., Becker, D., Tello, C., Biek, R. & **Streicker, D.G.** (2018) Using non-invasive metagenomics to characterize viral communities from wildlife. **Molecular Ecology Resources** doi: 10.1111/1755-0998.12946. PMID: 30240114
 16. Babayan, S., Orton, R.J. & **Streicker D.G.** (2018) Predicting Reservoir Hosts and Arthropod Vectors from Evolutionary Signatures in RNA Virus Genomes. **Science**. doi: 10.1126/science.aap9072
 17. Becker, D.J., Bentz, A.B., Bergner, L.M., Orton, R.J., Altizer, S.A. & **Streicker, D.G.** (2018) Genetic diversity, infection prevalence and possible transmission routes of *Bartonella* spp. in vampire bats. **PLoS Neglected Tropical Diseases** doi: 10.1371/journal.pntd.0006786. PMID: 30260954
 18. **Benavides, J.**, Shiva, C., Virhuez, M., Tello, C., Appelgren, A., Vendrell, J., Solassol, J., Godreuil, S., **Streicker, D.G.** (2018) Extended-spectrum beta-lactamases-producing *Escherichia coli* in common vampire bats *Desmodus rotundus* and livestock in Peru. **Zoonoses and Public Health** doi: 10.1111/zph.12456.
 19. Bohmann, K., Gopalakrishnan, S., Nielsen, L., Jones, G., **Streicker, D.G.**, Gilbert, M. (2018) Using DNA metabarcoding for simultaneous inference of common vampire bat diet and population structure. **Molecular Ecology Resources** doi: 10.1111/1755-0998.12891
 20. Altizer, S.A., Becker, D.J., Epstein, J.H., Forbes, K.M., Gillespie, T.R., Hall, R.J., Hawley, D., Hernandez, S.M., Martin, L.B., Plowright, R.K., Satterfield, D.A., & **Streicker D.G.** (2018) Food for contagion: Synthesis and future directions for studying host–parasite responses to resource shifts in anthropogenic environments. **Philosophical Transactions of the Royal Society B** doi: 10.1098/rstb.2017.0102
 21. Fisher, C., **Streicker, D.G.**, Schnell, M. (2018) The spread and evolution of rabies virus: conquering new frontiers **Nature Reviews Microbiology** doi: 10.1038/nmicro.2018.11
 22. Zepeda-Mendoza, M.L.* , Xiong, Z., Escalera-Zamudio, M., Runge, A.K., Thézé, J., **Streicker, D.G.**, Frank, H.K., Loza-Rubio, E., Liu, S., Ryder, O.A., Katzourakis, A., Pybus, O.G., Li, Y., Rojas-Anaya, E.,

- Bohmann, K., Carmona-Baez, A., Liu, S., Greenwood, A.D., Frost Bertelsen, M., White, N., Bunce, M., Zhang, G. Sicheritz-Pontén, T. & Gilbert, M.T.P. (2018) Hologenomic adaptations underlying the evolution of sanguivory in the vampire bat. **Nature Ecology and Evolution** doi: 10.1038/s41559-018-0476-8
23. Becker, D., Czirják, G.A., Volokhov, D.V., Bentz A.B, Carrera, J.E., Camus, M.S., Navara, K.J., Chizhikov, V.E., Fenton, M.B, Simmons, N.B., Gilbert, A.T., Recuenco, S.E., Altizer, S., **Streicker, D.G.** (2018) Livestock abundance predicts vampire bat demography, immune profiles, and bacterial infection risk. **Philosophical Transactions of the Royal Society B** doi: 10.1098/rstb/2017.0089
 24. Benavides, J., Rojas Paniagua, E., Hampson, K. & **Streicker, D.G.** (2017) Quantifying the burden of vampire bat rabies in Peruvian livestock. **PLoS Neglected Tropical Diseases** doi: 10.1371/journal.pntd.0006105
 25. Volokhov, D.V., Becker, D.J., Bergner, L.M., Camus, M.S., Orton, R.J., Chizhikov, V.E., Altizer, S. & **Streicker, D.G.** (2017) Novel hemotropic mycoplasmas are widespread and genetically diverse in vampire bats. **Epidemiology and Infection** doi: 10.1017/S095026881700231X
 26. Becker, D.J., **Streicker, D.G.**, Altizer, S.A. (2017) Using host species traits to understand the consequences of resource provisioning for host-parasite interactions. **Journal of Animal Ecology** doi: 10.1111/1365-2656.12765
 27. Becker, D.J., Chumchal, M.M., Bentz. A.B., Platt, S.G., Czirják, G.A., Rainwater, T.R., Altizer, S., **Streicker, D.G.** (2017) Predictors and immunological consequences of sublethal mercury exposure in vampire bats. **Royal Society Open Science** doi: 10.1098/rsos.170073
 28. Pepin, K., Davis, A., **Streicker, D.G.**, Fischer, J, VerCauteren, K. & Gilbert, A. (2017) Predicting spatial spread of rabies in wildlife populations using surveillance data reported by the public. **PLoS Neglected Tropical Diseases** doi: 10.1371/journal.pntd.0005822
 29. Velasco-Villa, A., Escobar, E., Sanchez, A., Shi, M., **Streicker, D.G.**, Gallardo-Romero, N., Vargas-Pino, F., Gutierrez-Cedillo, V., Damon, I. (2017) Successful strategies implemented towards the elimination of canine rabies in the Western Hemisphere. **Antiviral Research** doi: 10.1016/j.antiviral.2017.03.023
 30. Velasco-Villa, A., Mauldin, M. Shi, M., Escobar, E., Gallardo, N., Damon, I., Olson, V., **Streicker, D.G.**, Emerson, G. (2017) The history of rabies in the Western Hemisphere. **Antiviral Research** doi: 10.1016/j.antiviral.2017.03.013
 31. **Streicker, D.G.**, Winternitz, J., Satterfield, D., Condori-Condori, R.E., Broos, A., Tello, C., Recuenco, S., Velasco-Villa, A., Altizer, S., Valderrama, W. (2016) Host-pathogen evolutionary signatures reveal dynamics and future invasions of vampire bat rabies **Proceedings of the National Academy of Sciences of the USA** doi: 10.1073/pnas.1606587113
 32. Plowright, R., Peel, A., **Streicker, D.G.**, Gilbert, A., McCallum, H., Wood, J., Baker, M. & Restif, O. (2016) Transmission or within-host dynamics driving pulses of zoonotic viruses in reservoir-host populations **PLoS Neglected Tropical Diseases** doi: 10.1371/journal.pntd.0004796
 33. Benavides, J., Valderrama, W., & **Streicker, D.G.** Spatial expansions and travelling waves of rabies in vampire bats (2016) **Proceedings of the Royal Society B** doi: 10.1098/rspb.2016.0328
 34. **Streicker, D.G.** & Allgeier, J.E. From food web to disease ecology: foraging choices of vampire bats in diverse landscapes (2016) **Journal of Applied Ecology** doi: 10.1111/1365-2664.12690
 35. O’Shea, T., Cryan, P., Hayman, D., Plowright, R., **Streicker, D.G.** Multiple mortality events in bats: a global review (2016) **Mammal Review** doi: 10.1111/mam.12064
 36. Fenton, A., **Streicker, D.G.**, Petchy, O.L. & Pedersen, A.B., Are all hosts created equal? Partitioning host species contributions to parasite persistence in multi-host communities (2015) **American Naturalist** doi: 10.1086/683173
 37. Becker, D., **Streicker, D.G.** & Altizer, S.A. (2015) Linking anthropogenic resources to wildlife-pathogen dynamics: a review and meta-analysis. **Ecology Letters** doi: 10.1111/ele.12428
 38. Mollentze, N., Biek, R., & **Streicker D.G.** (2014) The role of viral evolution in rabies host shifts and emergence. **Current Opinion in Virology** doi: 10.1016/j.coviro.2014.07.004

39. Stoner-Duncan, B., **Streicker, D.G.** & Tedeschi, C. (2014) Vampire bats and rabies: towards an ecological solution to a public health problem. **PLoS Neglected Tropical Diseases** doi: 10.1371/journal.pntd.0002867
40. Gottdenker, N., **Streicker, D.G.**, Faust, C. & Carrol, R. (2014) Anthropogenic land use change and infectious diseases: a review of the evidence. **Ecohealth** doi: 10.1007/s10393-014-0941-z
41. **Streicker, D.G.** (2013) From Persistence to Cross-Species Emergence of a Viral Zoonosis. **Science** 342 (6163) doi: 10.1126/science.1247566 (**Science and SciLifeLab Prize Essay*)
42. Blackwood, J., **Streicker, D.G.**, Altizer, S. & Rohani, P. (2013) Resolving the roles of immunity, pathogenesis and immigration for rabies persistence in vampire bats. **Proceedings of the National Academy of Sciences of the USA** doi: 10.1073/pnas.1308817110
43. **Streicker, D.G.**, Fenton, A. & Pedersen, A.B. (2013) Differential sources of host species heterogeneity influence the transmission and control of multihost parasites **Ecology Letters** 16 (8); doi: 10.1111/ele.12122
44. Condori, R.E. **Streicker, D.G.**, Cabezas-Sanchez, C. & Velasco-Villa, A. (2013) Enzootic and epizootic rabies associated with vampire bats in Peru. **Emerging Infectious Diseases** 19 (9) doi: 10.3201/eid1909.130083
45. Tello, C., **Streicker, D.G.**, Gomez, J., Velazco, P. (2013) New records of pigmentation disorders in molossid and phyllostomid (Chiroptera) bats from Peru. **Mammalia** doi: 10.1515/mammalia-2013-0019
46. **Streicker, D.G.**, Franka, R., Jackson F.R. & Rupprecht, C.E. (2013) Anthropogenic roost switching and rabies virus dynamics in house roosting big brown bats. **Vector Borne and Zoonotic Diseases** 13 (7); doi: 10.1089/vbz.2012.1113
47. Faria, N., Suchard, M., Rambaut, A., **Streicker, D.G.** & Lemey, P. (2013) Simultaneously reconstructing viral cross-species transmission history and identifying the underlying constraints. **Philosophical Transactions of the Royal Society B** 368 (1614); doi: 10.1098/rstb.2012.0196
48. **Streicker, D.G.**, Altizer, S., Velasco-Villa & Rupprecht, C.E. (2012) Variable evolutionary routes to host establishment across repeated rabies virus host shifts among bats **Proceedings of the National Academy of Sciences of the USA** 109 (38); doi: 10.1073/pnas.1203456109.
49. **Streicker, D.G.**, Recuenco, S., Valderrama, W., Gomez-Benavides, J., Vargas, I., Pacheco, V., Condori, R.E, Montgomery, J., Rupprecht, C.E., Rohani, P. & Altizer, S. (2012) Ecological and anthropogenic drivers of rabies exposure in vampire bats: implications for transmission and control. **Proceedings of the Royal Society B** 279, 3384-3392; doi: 10.1098/rspb.2012.0538
50. **Streicker, D.G.**, Lemey, P., Velasco-Villa, A. & Rupprecht, C.E. (2012) Rates of viral evolution are linked to host geography in bat rabies. **PLoS Pathogens** 8 (5) doi: 10.1371/journal.ppat.1002720
51. Kuzmin, I., Shi, M., Orciari, L.A., Yager, P.A., Velasco-Villa, A., Kuzmina, N., **Streicker, D.G.**, Yu, C., Bergman, D.L. & Rupprecht, C.E. (2012) Molecular inferences suggest multiple host shifts of rabies viruses from bats to mesocarnivores in Arizona during 2001-2009. **PLoS Pathogens** 8 (6), doi: 10.1371/journal.ppat.1002786
52. Daszak, P., Ball, S.J., **Streicker, D.G.**, Jones, C.G. & Snow, K.R. (2011) A new species of *Caryospora* Leger, 1904 (Apicomplexa: Eimeriidae) from the endangered Round Island boa *Casarea dussumieri* (Schlegel) (Serpentes: Bolyeridae) or Round Island, Mauritius: an endangered parasite? **Systematic Parasitology** 78: 117-122; doi: 10.1007/s11230-010-9280-9
53. Daszak, P., Ball, S.J., **Streicker, D.G.**, & Snow, K.R. (2011) A New Species of *Eimeria* (Apicomplexa: Eimeriidae) from the Western Hognose Snake, *Heterodon nasicus* (Serpentes: Xenodontidae), from Texas. **Journal of Parasitology** 97 (3): 463-465 doi: 10.1645/GE-2698.1
54. **Streicker, D.G.**, Turmelle, A.S., Vonhoff, M.J., Kuzmin, I., McCracken, G.F. & Rupprecht, C.E. (2010) Host phylogeny constrains cross-species emergence and establishment of rabies virus in bats. **Science** 329, 676; doi: 10.1126/science.1188836 (*cover article*).
55. Daszak, P., Ball, S.J., Jones, C.J., **Streicker, D.G.**, & Snow, K.R. (2009) Six new species of coccidia (Apicomplexa: Eimeriidae) from endangered *Phelsuma* spp. geckoes (Sauria: Gekkonidae) of the Black River Gorges National Park, Mauritius. **Folia Parasitologica** 56 (4): 233-241.

56. Cui, J., Han, N., **Streicker, D.G.**, Li, G., Tang, X., Shi, Z., Hu, Z., Zhao, G., Fontanet, A., Guan, Y., Wang, L., Jones, G., Field, H., Daszak, P., & Zhang, S. (2007) Evolutionary relationships between bat coronaviruses and their hosts. **Emerging Infectious Diseases** 13 (10): 1526-1532.
57. Franka, R., Constantine, D.G., Kuzmin, I., Velasco-Villa, A., Reeder, S., **Streicker, D.G.**, Orciari, L.A., Wong, A.J., Blanton, J.D. & Rupprecht, C.E. (2006) A new phylogenetic lineage of *Rabies virus* associated with western pipistrelle bats (*Pipistrellus hesperus*). **Journal of General Virology** 87 (8): 2309-2321.
58. Reeves, W.K., **Streicker, D.G.**, Loftis, A.D. & Dasch, G.A (2006) Serologic survey of *Eptesicus fuscus* from Georgia, U.S.A. for *Rickettsia* and *Borrelia* and laboratory transmission of a *Rickettsia* by bat ticks. **Journal of Vector Ecology** 31(2):386-389.

PREPRINTS AND MANUSCRIPTS UNDER REVIEW

58. Bergner, L.M., Orton, R.J., Broos, A., Tello, C., Becker, D.J., Carrera, J.E., Patel, A.H., Biek, R. & **Streicker, D.G.** (2020) Diversification of mammalian deltaviruses by host shifting **bioRxiv** <https://doi.org/10.1101/2020.06.17.156745>
59. Mollentze, N., **Streicker, D.G.**, Murcia, P.R., Hampson, K., Biek, R. (2020) Dynamics of index infections in novel hosts. **bioRxiv** <https://doi.org/10.1101/2020.04.09.033928> (in revision, **PNAS**)
60. Bergner, L.M., Becker, D.J., & **Streicker, D.G.** Detection of *Trypanosoma cruzi* in the saliva of diverse Neotropical bats (in review)
61. Griffiths, M., Bergner, L., Broos, A., da Silva Filipe, A., Davison, A., Tello, C., Becker, D.J. & **Streicker, D.G.** Infection biology of a novel herpesvirus in rabies endemic vampire bat populations (in revision, **Nature Communications**)
62. Shaw, A.E., Rihn, S.J., Stewart, D.G., Bakshi, S., Busby, J., Orton, R.J., Wickenhagen, A., Gu, Q., Bamford, C., Johnson, P., Da Silva Filipe, A., Castello Palomares, A., **Streicker, D.G.**, Robertson, D.L., Palmarini, M., & Wilson, S.J. The antiviral state has shaped the CpG composition of the vertebrate interferome (in revision, **eLife**)
63. Worsley-Tonks, K., Escobar, L., Biek, R., Castaneda, M., Craft, M., **Streicker, D.G.**, White, L., & Fountain-Jones, N. Using host traits to predict reservoir host species of rabies virus (in revision, **PLoS Neglected Tropical Diseases**)
64. Gonçalves, F., Galetti, M., & Streicker, D.G. Management of vampire bats and rabies: a precaution for rewilding projects in the Neotropics (in review).

OTHER PUBLICATIONS

Streicker, D.G. & Biek, R. (2021) Evolution of Rabies Virus (*Book chapter* for Rabies: Scientific Basis of the Disease and Its Management, Edited by Fooks and Jackson)

Fenton, M.B., **Streicker, D.G.**, Racey, P.A., Tuttle, M.D., Medellín, R.A, Daley, M.J., Recuenco, S. & Bakker, K.M. (2020) Matters arising: Knowledge gaps about rabies transmission from vampire bats to humans. **Nature Ecology and Evolution**. doi: 10.1038/s41559-020-1144-3

Benavides, J.A. & **Streicker, D.G.** (2016) How to stop vampire bats wreaking havoc (no stakes or garlic required). **The Conversation**, June 28, 2016.

Streicker, D.G. & Pedersen, A.B. (2012) On the origin of zoonoses. **Science**, 338: 1030; doi: 10.1126/science.1230791 (*Invited review* of Spillover: Animal Infections and the Next Human Pandemic, by David Quammen)

INVITED PRESENTATIONS AND SEMINARS

- 2020 Head of College Scholar's List Event, Glasgow, UK
- 2020 Glasgow Zoological Society, Glasgow, UK
- 2019 Ecological Society of America, *Organized Session: Ecological Levers for Human Health*. Louisville, Kentucky, USA
- 2019 Doñana Biological Station, Seville, Spain
- 2019 Scottish Tropical Ecology and Biology Meeting, Glasgow, UK
- 2018 TEDMED, Palm Springs, California, USA

- 2018 National Autonomous University of Mexico (UNAM), Faculty of Veterinary Sciences, Mexico City, Mexico
- 2018 National Service of Animal Health of Costa Rica, San Jose, Costa Rica
- 2018 67th Annual Wildlife Disease Association Conference, St. Augustine, Florida, USA
- 2018 Gaps and Opportunities for Research on Rabies, Zoonosis and Emerging Diseases in Peru, Centro de Investigaciones Tecnológicas, Biomedicas y Medioambientales (CITBM), Lima, Peru
- 2017 Institute of Research for Development (IRD)/Centre for Functional Ecology and Evolution (CEFE), Montpellier, France
- 2017 22nd Glasgow Virology Workshop, Glasgow, UK
- 2016 Pathogen Host Shifts Workshop, University of Cambridge, UK
- 2016 7th Joint Beit Memorial and Wellcome Beit Prize Fellows Meeting, London, UK
- 2016 Meril Animal Health, Atlanta, USA
- 2016 University of Wageningen, Netherlands
- 2015 British Ecological Society, Edinburgh, UK
- 2015 National Geographic Explorers Symposium, Washington, DC
- 2015 National Institute of Health of Peru, Lima, Peru
- 2015 20th Glasgow Virology Workshop, Glasgow, UK
- 2014 5th Joint Beit Memorial and Wellcome Beit Prize Fellows Meeting, London, UK
- 2014 VIII International Conference of the National Institute of Health of Peru, Lima, Peru
- 2014 Boyd Orr Symposium, Viral Genotype to Phenotype, Glasgow, UK
- 2014 University of Edinburgh, Institute of Evolutionary Biology, Edinburgh, UK
- 2014 Imperial College London, Department of Infectious Disease Epidemiology, London, UK
- 2014 Cambridge University, Department of Veterinary Medicine, Cambridge, UK
- 2014 Emory University, Population Biology, Ecology and Evolution, Atlanta, GA
**graduate student invited speaker*
- 2014 University of Georgia, Odum School of Ecology, Athens, GA
- 2014 Cambridge University, Department of Genetics, Cambridge, UK
- 2013 University of Upsalla, Sweden
- 2013 SciLifeLab, Stockholm, Sweden
- 2013 Ecology and Evolution of Infectious Diseases Conference, State College, PA
- 2013 ETH Zurich, Institute of Integrative Biology. Zurich, Switzerland.
- 2012 University of Glasgow, Institute of Biodiversity, Animal Health and Comparative Medicine. Glasgow, UK.
- 2012 University of Georgia College of Veterinary Medicine. Athens, GA
- 2012 Centers for Disease Control and Prevention, Division of High Consequence Pathogens and Pathology Science Seminar. Atlanta, GA
- 2011 University of Michigan Early Career Scientist Symposium. Ann Arbor, MI
- 2011 Infectious Diseases and One Health: Vaccines and Therapeutics. Atlanta, GA
- 2009 39th North American Society for Bat Research Conference. Special symposium on Health and Disease in Bats. Portland, OR
- 2009 Ministry of Health of Peru, Office of Epidemiology. Lima, Peru
- 2008 University of Georgia, Center for Tropical and Emerging Global Diseases, Athens, GA
- 2007 Amherst College, Department of Biology. Amherst, MA
- 2007 37th North American Society for Bat Research/14th International Bat Research Conference. Special Symposium on Emerging Diseases in Bats. Merida, Mexico
- 2007 Ministry of Health of Peru, Office of Epidemiology. Lima, Peru
- 2006 Wuhan Institute of Virology. Wuhan, China

CONTRIBUTED CONFERENCE PRESENTATIONS

- 2015 13th Ecology and Evolution of Infectious Diseases Conference, Athens, GA. *Poster.*
- 2015 4th International Berlin Bat Meeting, Berlin, Germany.
- 2014 European Wildlife Disease Association Conference, Edinburgh, UK.
- 2014 Jacques Monod Conference: From Emerging to Pandemic Viruses: Interplay between Host Ecology and Viral Evolution, Roscoff, France.
- 2012 Ecological Society of America, Portland, OR.
- 2011 Odum School of Ecology Graduate Student Symposium. Athens, GA.
- 2010 2nd Congress of the Peruvian Society of Mammalogy, National University of San Agustín, Arequipa, Peru (*in Spanish*).

- 2010 Ecology and Evolution of Infectious Disease Conference, Cornell University. Ithaca, NY. *Poster.*
- 2008 International Conference on Rabies in the Americas, Centers for Disease Control and Prevention. Atlanta, GA. *Poster.*
- 2008 Ecology and Evolution of Infectious Disease Conference, Colorado State University. Ft. Collins, CO. *Poster.*
- 2008 University of Georgia Graduate Student Symposium. Athens, GA.
- 2007 Ecology and Evolution of Infectious Disease Conference, Cornell University. Ithaca, NY.
- 2007 University of Georgia Graduate Student Symposium. Athens, GA.
- 2006 University of Georgia Ecology of Infectious Diseases Lecture Series, Athens, GA. *Poster.*
- 2003 Mountain Lake Biological Station REU Symposium, Pembroke, VA.

WORKSHOPS AND WORKING GROUPS

- 2020 USGS National Rapid Risk Assessment for Risk of SARS-CoV-2 to North American Bats
- 2017 USGS 'Spillover at the Wildlife-Livestock Interface' Workshop, Ft. Collins, CO
- 2016-pres. Bat Rabies Vaccination Working Group
- 2013 RAPIDD Cross-Species Prediction; Ft. Collins, CO
- 2012-2015 RAPIDD Small Mammal Reservoirs of Infectious Disease
- 2010 RAPIDD Cross-Species Transmission Workshop; Bethesda, MD.
- 2010 - 2013 Computational Ecology and Epidemiology Study Group, Athens, GA.
- 2009 Workshop on Molecular Evolution, Europe; Cesky Krumlov, Czech Republic.

SUPERVISION/EXAMINATION

Postdocs

1. Laura Bergner, University of Glasgow, 2018-pres.
2. Nardus Mollentze, University of Glasgow, 2018-pres.
3. Kevin Bakker, University of Glasgow, 2017-2018. *Current position:* NIH Research Fellow / Research Faculty, University of Michigan
4. Julio Benavides, University of Glasgow, 2014-2018. *Current position:* Assistant Professor, Universidad Andres Bello, Chile
5. Richard Orton, University of Glasgow, 2017-2018. *Current position:* Bioinformatician, MRC-University of Glasgow Centre for Virus Research.

PhD Students

6. Zulma Rojas, Andres Bello University (Chile), 2020-pres. *Environmental and anthropogenic drivers of bat-borne pathogens in Latin America.* Co-advised with Julio Benavides
7. Megan Griffiths, University of Glasgow, 2019-pres. *Ecology and evolution of bat betaherpesviruses*
8. Diana Villa Meza, University of Glasgow, 2018-pres. *Dynamics of viral co-infections in wild vampire bats.* Co-advised with Mafalda Viana and Pablo Murcia.
9. James Shepard, University of Glasgow, 2017-pres. *Transmission networks of novel viral causes of human febrile illness in Uganda.* Co-advised with Emma Thompson
10. Laura Bergner, University of Glasgow, 2014-2018. *Viral communities in vampire bats: geographic variation and ecological drivers.* Co-advised with Roman Biek and Richard Orton
11. Nardus Mollentze, University of Glasgow, 2013-2017. *Epidemiology and evolution of Rabies virus host shifts.* Co-advised with Roman Biek, Katie Hampson & Pablo Murcia
12. Daniel Becker, University of Georgia, 2011-2017. *Resource provisioning and wildlife disease: theory, meta-analysis and field studies.* Co-advised with Sonia Altizer. *Current position:* Assistant Professor, University of Oklahoma

Graduate Committee Member

1. Janine Seetahal, University of the West Indies, 2018-2021. PhD. Supervisor: Christine Carrington
2. German Botto, Montana State University, 2017-2020 PhD. Supervisor: Raina Plowright
3. Cecilia Montoya, Universidad Nacional Autónoma de México, 2020-2022. MSc. Supervisor: Rafael Ojeda Flores

PhD Examinations

1. Francisco Miroslav Ulloa-Stanojlovic, University of Sao Paulo, 2019. *Descriptive evaluation of human*

- and animal rabies and development of a predictive model of bovine rabies in Peru. Supervisor: Ricardo Dias
2. Alfred Filol Salom, University of Glasgow, 2019. *The discovery of phage-inducible chromosomal islands (PICIs) in Gram-negative bacteria*. Supervisor: Jose Penades
 3. Liam Brierley, University of Edinburgh, 2016. *The ecology of emerging diseases: virulence and transmissibility of human RNA viruses*. Supervisors: Amy Pedersen & Mark Woolhouse
 4. Amy Burroughs, University of Queensland, 2015. *Risk factors for virus excretion from a bat colony: an observational study of grey-headed flying foxes (Pteropus poliocephalus) at Eastern Park, Geelong*. Supervisor: Lin-Fa Wang
 5. Kirstyn Brunner, University of Glasgow, 2016. *The landscape epidemiology of canine rabies virus in Tanzania*. Supervisors: Katie Hampson & Roman Biek

Masters Students

1. Deborah Keen, University of Glasgow, 2020. Epidemiology of Infectious Diseases & Antimicrobial Resistance (MSc). *SARS-CoV-2: Elucidating potential intermediate hosts, species susceptible to reverse zoonotic transmission, and feasible model organisms using supervised machine learning*
2. Jingyi Chen, University of Glasgow, 2020. Biomedical Sciences (MSc). *Receptor binding of a novel bat alphacoronavirus*
3. Grace Walsh, University of Glasgow, 2020. Medical Genetics (MSc). *Evolutionary history of endogenous betaretroviruses in bats*
4. Katie Allan, University of Glasgow, 2018-2019. Ecology and Environmental Biology (MRes). *The role of hematophagous arthropods in the transmission of Bartonella spp. in the common vampire bats, Desmodus rotundus*.
5. Carly Trille, University of Glasgow, 2017-2018. Biomedical Sciences (MRes). *Community epidemiology of betaherpesviruses in South American bats*
6. Jordan Bone, University of Glasgow, 2017-2018. Quantitative Methods in Conservation, Ecology and Epidemiology (MSc). *Environmental factors and their impact on rabies epidemic spread across South America*
7. James Guildler, University of Glasgow, 2016-2017. Quantitative Methods in Conservation, Ecology and Epidemiology (MSc). *Vampire bat foraging effort: potential implications for social networks and rabies dynamics*
8. Danielle Dekoski, University of Glasgow, 2016-2017. Quantitative Methods in Conservation, Ecology and Epidemiology (MSc). *Effects of population demography and genetic structure on rabies exposure in common vampire bats (Desmodus rotundus)*
9. Megan Wallace, University of Glasgow, 2015-2016. Quantitative Methods in Conservation, Ecology and Epidemiology (MSc). *Ecological and evolutionary drivers of rabies transmission between bat species*.
10. Victoria Estacio, University of Glasgow, 2015-2016. Quantitative Methods in Conservation, Ecology and Epidemiology (MSc). *Ecological niche modelling of vampire bats and rabies outbreaks for rabies control*

TEACHING

2018-2020	BIOL 5314 <i>Emerging Viruses</i> (Masters). University of Glasgow
2017-2020	MRC-University of Glasgow Centre for Virus Research PhD Training Course
2017-2020	BIOL 4960 <i>Animal Biology</i> (Undergraduate). University of Glasgow
2017	Wellcome Advanced Course: <i>Mathematical Models for Infectious Disease Dynamics</i> , Hinxton, UK
2017	University of Glasgow, <i>Applied Ecology</i>
2014	3 rd ANTIGONE OneHealth Course, Bonn, Germany
2009 - 2013	ECOL 6150 <i>Population Biology of Infectious Diseases</i> , University of Georgia. Athens, GA
2009 - 2013	ECOL 4000: <i>Evolutionary Ecology</i> , University of Georgia. Athens, GA
2008, 2013	BIOL 461 / 861: <i>Ecology of Wildlife Diseases</i> , Mountain Lake Biological Station. Pembroke, VA
2004 - 2006	Organized and led bat speciation workshops for public health laboratorians. Atlanta, GA
2005	Instructor, National Laboratory Training Network: Rabies Diagnostics. Atlanta, GA

PROFESSIONAL SERVICE

Conference organization: 16th Ecology and Evolution of Infectious Diseases Conference (Lead Organizer, May 2018, University of Glasgow), 4th International Berlin Bat Meeting (Chaired special session on Bat

Movement and Infectious Diseases, Berlin). Ecology and Control of Infectious Diseases in Vampire Bats (Lead Organizer, Nov 2016, Cayetano Heredia University),

Journal Reviewer: *American Naturalist, Bioinformatics, BMC Research Notes, Ecology and Evolution, Ecology Letters, Ecohealth, eLife, Epidemics, Evolutionary Applications, Heredity, Infection Genetics and Evolution, Journal of Animal Ecology, Journal of Applied Ecology, Journal of Evolutionary Biology, Journal of the Royal Society Interface, Journal of Mammalogy, Lancet Infectious Diseases, Molecular Ecology, Nature Communications, Nature Ecology and Evolution, Nature Microbiology, Philosophical Transactions of the Royal Society B, Molecular Phylogenetics and Evolution, Pathogens and Global Health, PLoS Biology, PLoS Computational Biology, PLoS Neglected Tropical Diseases, PLoS One, PNAS, Proceedings of the Royal Society B, Science, Virology, Virus Evolution, Virus Research, Zoonoses and Public Health*

Review Editor: *EcoHealth, PLoS Neglected Tropical Diseases*

Grant Reviewer: *DEFRA, Leverhulme Trust, National Geographic, National Science Center of Poland, Royal Society, Singapore National Research Foundation, U.S. National Science Foundation, Wellcome Trust*

REFERENCES

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Comparative Medicine, University of Glasgow
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