

Alison J. Peel

DECRA SENIOR RESEARCH FELLOW · WILDLIFE DISEASE ECOLOGY

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Summary of research interests

My primary interests lie in the role of landscape change and anthropogenic influence in driving infectious disease dynamics in wildlife and viral 'spillover' from wildlife to humans. My current research recognises that single host-virus interactions do not exist in isolation — broader, transdisciplinary studies that consider interactions within multi-host-multi-pathogen communities are required to predict and prevent spillover. Specifically, I'm interested in how Hendra virus, the most widely studied bat virus in Australia, exists within a diverse community of viruses in Australian flying-foxes. By examining this well known bat viral system in a broader context, my work provides insight into both Hendra virus dynamics and bat virus spillover in general.

Summary of research achievements

I am currently the full-time equivalent of 6 years 2 months post PhD completion. I have 55 peer-reviewed publications in international journals, including in journals in the top 5% of their discipline. According to Scopus I have been cited > 1460 times (Google Scholar 2299), and my h-index is 20 (Google Scholar 25). I have personally attracted almost a million dollars in research funding and scholarships, including an ARC Discovery Early Career Researcher Award (DECRA), a Queensland government Accelerate Early Career fellowship (2014 - 2018, \$365,000) and University of Cambridge Newton fellowship (2013, £40,000). I am a co-PI on a US National Science Foundation 'Coupled Dynamics of Natural and Human Systems' grant worth USD \$1.65 million and a US Defense grant worth USD \$9.6 million. I co-supervise two PhD students and have successfully supervised three PhD, one masters and several undergraduate students.

Employment

DECRA Senior Research Fellow

Griffith University, Brisbane, Aust.

"BEYOND HENDRA: THE SIGNIFICANCE OF VIRAL COMMUNITIES IN BAT VIRUS SPILLOVER"

Jun 2019 - Jun 2022

- Identifying universal drivers of multi-viral shedding pulses

Queensland Accelerate Postdoctoral Research Fellow

Griffith University, Brisbane, Aust.

"BRIDGING THE GAP IN HENDRA VIRUS RESEARCH"

Dec 2014 - Jun 2019

- Investigate how co-circulation of other known bat viruses might affect the dynamics of Hendra virus within bat populations

Postdoctoral Research Fellow

Griffith University, Brisbane, Aust.

"MODELS TO PREDICT HENDRA VIRUS PREVALENCE IN FLYING FOXES"

Nov 2013 - Nov 2014

- Predicting periods of high risk for Hendra virus transmission from flying foxes to horses

Postdoctoral Research Fellow

University of Cambridge, UK

"THE EFFECT OF SEASONAL BIRTH PULSES OF PATHOGEN PERSISTENCE"

Jun 2012 - Dec 2013

- Mathematical modelling, demonstrating that seasonal births of wildlife species significantly affects persistence of infectious diseases

Research assistant

Galapagos Islands, Ecuador

"RISK: BENEFIT ANALYSIS OF DOMESTIC ANIMAL DISEASES AND VACCINATION ON WILDLIFE POPULATIONS"

Oct 2007 - Dec 2007

- Conducted a risk assessment on the import of domestic animal vaccines into the Galapagos island ecosystem

Clinical Veterinarian

South Australia and UK

MURRAY BRIDGE VETERINARY HOSPITAL, SOUTH AUSTRALIA AND PETCARE, ERITH, UK

Jan 2004 - Dec 2006

Career breaks I have two children (born Nov 2012 and April 2015) and have experienced a total of 3 years and 1 month (FTE) of academic interruptions as a result.

Education

PhD in wildlife disease ecology and population genetics

University of Cambridge, UK

“THE EPIDEMIOLOGY OF LAGOS BAT VIRUS AND HENIPAVIRUSES IN STRAW-COLOURED FRUIT BATS (*Eidolon helvum*), USING POPULATION GENETICS TO INFER CONNECTIVITY”
Mar 2008 - Feb 2012 (conferred 28th Apr)

MSc in Wild Animal Health

Institute of Zoology, London, UK

“QUALITATIVE RISK ANALYSIS FOR THE IMPORTATION OF LIVE AMPHIBIANS INFECTED WITH (*Batrachochytrium dendrobatitidis*) (CHYTRIDIOMYCOSIS) INTO GREAT BRITAIN”

Sep 2006 - Aug 2007

- Award for highest aggregate marks

Bachelor of Veterinary Science

University of Sydney, Australia

CLINICAL MEDICINE AND SURGERY

Feb 1998 - Nov 2003

- First class honours

Bachelor of Science (Veterinary)

University of Sydney, Australia

“NON-INVASIVE FECAL HORMONE ANALYSIS AND BEHAVIORAL OBSERVATIONS FOR MONITORING STRESS RESPONSES IN CAPTIVE WESTERN LOWLAND GORILLAS (*Gorilla gorilla gorilla*)”

Feb 2001 - Dec 2001

- First class honours, Award for highest aggregate marks

Grants & Awards

RESEARCH GRANTS

2021	US DARPA PREEMPT , <i>Phase 2: Preventing emergence and spillover of bat pathogens in high-risk global hotspots</i> , co-PI, DARPA	USD \$4.0 million
2021	Griffith University , PI, Special Research Grants for COVID-19	\$15,843
2019	ARC Discovery Early Career Researcher Award (DECRA) , <i>Beyond Hendra: The significance of viral communities in bat virus spillover</i> , Australian Research Council	\$422,492
2019	Griffith Sciences 2019 International Workshop Award , <i>Community-level approaches to understand and predict parasite co-occurrence patterns</i> , Griffith University	\$10,000
2019	Griffith Sciences 2019 Equipment Scheme , <i>Self-contained mobile workstation and field laboratory</i> , Griffith University	\$39,066
2018	US DARPA PREEMPT , <i>Phase 1: Preventing emergence and spillover of bat pathogens in high-risk global hotspots</i> , co-PI, DARPA	USD \$7.0 million
2017	New Researcher Grant , <i>Daily increments of teeth formation in bats: Microscopic mapping of nutritional stress, secrets of longevity and links to viral dynamics</i> , PI, Griffith University	\$9970
2017	Science with Impact Fund , <i>Establishing lab techniques to study how habitat fragmentation drives both extinction dynamics and disease dynamics</i> , co-PI, University of Queensland	\$18,810
2017	US National Science Foundation 'Coupled Dynamics of Natural and Human systems' Grant , <i>Dynamics of Zoonotic Systems: Human-Bat-Pathogen Interactions</i> , co-PI, US NSF	USD \$1.65 million
2014	QLD Government Accelerate Early Career Fellowship , <i>Bat viral dynamics</i> . Queensland Government	\$365,000
2011	Isaac Newton Trust Research Grant for post-doctoral research , <i>Viral persistence in isolated island systems</i> . Joint application with Prof James Wood and Dr Olivier Restif, U. Cambridge	£40,000
2010	Charles Slater Fund , International field work for my PhD. U. Cambridge	£4790
2010	Zebra Foundation grant , International field work for my PhD, Zebra Foundation UK	£500
2009	Charles Slater Fund , International field work for my PhD. U. Cambridge	£1950
2009	Daisy Balogh Grant , International field work for my PhD. Institute of Zoology, London	£860
2008	Charles Slater Fund , International field work and research equipment for my PhD. U. Cambridge	£5210
2008	Jowett fund , International field work and research equipment for my PhD. U. Cambridge	£3500
2007	Zebra Foundation grant , MSc Research costs, Zebra Foundation UK	£500

TRAVEL GRANTS

2017	IDEAS (Infectious Disease Evolution Across Scales) Research Exchange , Princeton University	USD \$2610
2011	Scientific Meetings Travel Grant , Society of General Microbiology	£500
2010	Student Travel Grant , International Berlin Bat Meeting	€500
2009	Scientific Meetings Travel Grant , Society of General Microbiology	£320
2009	Lane Cox Fund for travel , Wolfson College, Cambridge	£100

AWARDS

2019	Excellence in Health and Safety Initiative/Leadership , Griffith Sciences Pro Vice Chancellor Excellence Awards	
2010	Best Student Presentation , Second International Berlin Bat Meeting	
2010	Best Student Poster , Second International Berlin Bat Meeting	
2009	Best Student Presentation , First International Berlin Bat Meeting	
2009	Wellcome Trust bursary , Wellcome Trust Advanced Course: Molecular Evolution	£770
2007	MSc Wild Animal Health, Award for highest aggregate marks , Royal Vet. Coll. & Inst. of Zoology	
2006	Harriet Beard Scholarship and Eleanor Sophie Wood Scholarship , For international postgraduate study, U. Sydney	\$20,000
2003-04	Rural Veterinary Bonded Scholarship , Australian Government, Quarantine Inspection Service	\$130,000
2002	Best Student Presentation , Australasian Wildlife Disease Association Conference	
2001	H.R Carne Prize and Medal for excellence in BSc(Vet) , U. Sydney	
2001	Best Student Poster , University of Sydney 'Vet Week'	

Peer-reviewed journal articles

I have published 55 peer-reviewed publications, with >1460 citations and an h-index of 20 (Scopus).

1. Hoegh, A, **Peel, A.J.**, Madden, W., Ruiz Aravena, M., Morris, A., Washburne, A., Plowright, R.K. (2021) Estimating Viral Prevalence with Data Fusion for Adaptive Two-Phase Pooled Sampling. *Ecol Evol.* doi.org/10.1002/ece3.8107
2. Lunn TJ, **Peel AJ**, McCallum H, Eby P, Kessler MK, Plowright RK, Restif O (2021) Spatial dynamics of pathogen transmission in communally roosting species: impacts of changing habitats on bat-virus dynamics. *J Anim Ecol.* doi.org/10.1111/1365-2656.13566
3. Lunn TJ, Eby P, Brooks R, McCallum H, Plowright RK, Kessler MK, **Peel AJ** (2021) Conventional wisdom on roosting behavior of Australian flying foxes—A critical review, and evaluation using new data. *Ecol Evol.* doi.org/10.1002/ece3.8079
4. Giles JR, **Peel AJ**, Wells K, Plowright RK, McCallum H, Restif O (2021) Optimizing noninvasive sampling of a zoonotic bat virus. *Ecol Evol.* doi.org/10.1002/ece3.7830
5. Cox-Witton K, Baker ML, Edson D, **Peel AJ**, Welbergen JA, Field H (2021) Risk of SARS-CoV-2 transmission from humans to bats – An Australian assessment. *One Heal* 13:100247. <https://doi.org/10.1016/j.onehlt.2021.100247>
6. Grange ZL, Goldstein T, Johnson CK, Anthony S, Gilardi K, Daszak P, Olival KJ, O'Rourke T, Murray S, Olson SH, Togami E, Vidal G, **Expert Panel**, PREDICT Consortium, Mazet JAK (2021) Ranking the risk of animal-to-human spillover for newly discovered viruses. *Proc National Acad Sci* 118(15):e2002324118. <https://doi.org/10.1073/pnas.2002324118>
7. Anstey SI, Kasimov V, Jenkins C, Legione A, Devlin J, Amery-Gale J, Gilkerson J, Hair S, Perkins N, **Peel AJ**, Borel N, Pannekoek Y, Chaber A-L, Woolford L, Timms P, Jelocnik M (2021) Chlamydia Psittaci ST24: Clonal Strains of One Health Importance Dominate in Australian Horse, Bird and Human Infections. *Pathogens* 10(8):1015. doi.org/10.3390/pathogens10081015
8. **Peel, A. J.**, Field, H., Ruiz-Aravena, M., Edson, D., McCallum, H., Plowright, R. K., and Prada, D. (2020). Coronaviruses and Australian bats: A review in the midst of a pandemic. *Australian Journal of Zoology.* doi.org/10.1071/ZO20046

9. Olival, K., Cryan, P., Amman, B., Baric, R., Blehert, D., Brook, C., Calisher, C., Castle, K., Coleman, J., Daszak, P., Epstein, J., Field, H., Frick, W., Gilbert, A., Hayman, D., Ip, H., Karesh, W., Johnson, C., Kading, R., Kingston, T., Lorch, J., Mendenhall, I., **Peel, A.**, Phelps, K., Plowright, R., Reeder, D., Reichard, J., Sleeman, J., Streicker, D., Towner, J., Wang, a. (2020). Possibility for reverse zoonotic transmission of SARS-CoV-2 to free-ranging wildlife: a case study of bats. *PLOS Pathogens*. 16(9): e1008758. <https://doi.org/10.1371/journal.ppat.1008758>.
10. Hopkins SR, Sokolow SH, Buck JC, Leo GAD, Jones IJ, Kwong LH, LeBoa C, Lund AJ, MacDonald AJ, Nova N, Olson SH, **Peel AJ**, Wood CL, Lafferty KD (2020) How to identify win-win interventions that benefit human health and conservation. *Nat Sustain* :1–7. <https://doi.org/10.1038/s41893-020-00640-z>
11. Rocha, R., Aziz, S., Brook, C., Carvalho, W., Cooper-Bohannon, R., Frick, W., Huang, J., Kingston, T., López-Baucells, A., Maas, B., Mathews, F., Medellín, R., Olival, K., **Peel, A.**, Plowright, R., Razgour, O., Rebelo, H., Rodrigues, L., Rossiter, S., Russo, D., Straka, T., Teeling, E., Treuer, T., Voigt, C., Webala, P. (2020). Bat conservation and zoonotic disease risk: a research agenda to prevent misguided persecution in the aftermath of COVID–19 *Animal Conservation* <https://dx.doi.org/10.1111/acv.12636>
12. Williamson, K., Wheeler, S., Kerr, J., Bennett, J., Freeman, P., Kohlhagen, J., **Peel, A.**, Eby, P., Merritt, T., Housen, T., Dalton, C., Durrheim, D., team, B., Chirio, L., Dale, A., Jones, D., Silas, K. (2020). Hendra in the Hunter Valley *One Health* 10, 100162.
13. Skinner, E., Murphy, A., Jansen, C., Shivas, M., McCallum, H., Onn, M., Reid, S., and **Peel, A.** (2020). Associations Between Ross River Virus Infection in Humans and Vector-Vertebrate Community Ecology in Brisbane, Australia *Vector-Borne and Zoonotic Diseases* <https://dx.doi.org/10.1089/vbz.2019.2585>
14. Skinner, E., Rudd, P., **Peel, A.**, McCallum, H., Reid, S., Herrero, L. (2020). Species Traits and Hotspots Associated with Ross River Virus Infection in Nonhuman Vertebrates in South East Queensland *Vector-Borne and Zoonotic Diseases* <https://dx.doi.org/10.1089/vbz.2020.2648>
15. **Peel, A.J.**, Wells, K., Giles, J., Boyd, V., Burroughs, A., Edson, D., Crameri, G., Baker, M. L., Field, H., Wang, L-F., McCallum, H., Plowright, R. K., and Clark, N. (2019) Synchronous shedding of multiple bat paramyxoviruses coincides with peak periods of Hendra virus spillover. *Emerging Microbes and Infections* 8:1, 1314–1323
16. Sokolow, S.H., Nova, N., Pepin, K.M., **Peel, A.J.**, Pulliam, J.R.C., Manlove, K., Cross, P.C., Becker, D.J., Plowright, R.K., McCallum, H., De Leo, G.A. (2019) Ecological interventions to prevent and manage zoonotic pathogen spillover. *Philosophical Transactions of the Royal Society B - Biological Sciences*. 374: 20180342.
17. Lunn, T.J., Restif, O., **Peel, A.J.**, Munster, V.J., de Wit, E., Sokolow, S., van Doremalen, N., Hudson, P., McCallum, H. (2019) Dose –response and transmission: the nexus between reservoir hosts, environment and recipient hosts. *Philosophical Transactions of the Royal Society B - Biological Sciences*. 374: 20190016
18. Glennon, E.E., Becker, D.J., **Peel, A.J.**, Garnier, R., Suu-Ire R.D., Gibson, L., Hayman, D.T.S., Wood, J.L.N., Cunningham, A.A., Plowright, R.K., and Restif, O. (2019) What is stirring in the reservoir? Modelling mechanisms of henipavirus circulation in fruit bat hosts. *Philosophical Transactions of the Royal Society B - Biological Sciences*. 374: 20190021
19. Edson, D., Peel, A.J., Huth, L., Mayer, D.G., Vidgen, M.E., McMichael, L., Broos, A., Melville, D., Kristoffersen, J., de Jong, C. and McLaughlin, A., 2019. Time of year, age class and body condition predict Hendra virus infection in Australian black flying foxes (*Pteropus alecto*). *Epidemiology and Infection*, 147.
20. Brook, C.E., Ranaivoson, H.C., Broder, C.C., Cunningham, A.A., Héraud, J.M., **Peel, A.J.**, Gibson, L., Wood, J.L., Metcalf, C.J. & Dobson, A.P., 2019. Disentangling serology to elucidate henipa and filovirus transmission in Madagascar fruit bats. *Journal of Animal Ecology*. <https://doi.org/10.1111/1365-2656.12985>
21. Stephenson, E. B., Murphy, A. K., Jansen, C. C., **Peel, A. J.**, & McCallum, H. (2019). Interpreting mosquito feeding patterns in Australia through an ecological lens: an analysis of blood meal studies. *Parasites & vectors*, 12(1), 156.

22. Martin, L.B., Addison, B., Bean, A.G., Buchanan, K.L., Crino, O.L., Eastwood, J.R., Flies, A.S., Hamede, R., Hill, G.E., Klaassen, M. Koch, R.E., Martens, J.M., Napolitano, C., Narayan, E.J., Peacock, L., **Peel, A.J.**, Peters, A., Raven, N., Risely, A., Roast, M.J., Rollins, L.A., Ruiz-Aravena, M., Selechnik, D., Stokes, H.S., Ujvari, B. and Grogan, L.F. (2019). Extreme Competence: Keystone Hosts of Infections. *Trends in Ecology & Evolution*. 34(4):303-314
23. Fitak, R.R., Antonides, J.D., Baitchman, E.J., Bonaccorso, E., Braun, J., Kubiski, S., Chiu, E., Fagre, A.C., Gagne, R.B., Lee, J.S., Malmberg, J.L., Stenglein, M.D., Dusek, R.J., Forgacs, D., Fountain-Jones, N.M., Gilbertson, M.L.J., Worsley-Tonks, K.E.L., Funk, C., Trumbo, D.R., Ghersi, B.M., Grimaldi, W., Heisel, S.E., Jardine, C.M., Kamath, P.L., Karmacharya, D., Kozakiewicz, C.P., Kraberger, S., Loisel, D.A., McDonald, C., Miller, S., O'Rourke, D., Ott-Conn, C.N., Páez-Vacas, M., **Peel, A.J.**, Turner, W.C., VanAcker, M.C., VandeWoude, S. & Pecon-Slattery, J. (2019) The Expectations and Challenges of Wildlife Disease Research in the Era of Genomics: Forecasting with a Horizon Scan-like Exercise. *Journal of Heredity*, esz001, <https://doi.org/10.1093/jhered/esz001>
24. Kessler, M. K., Becker, D. J., **Peel, A. J.**, Justice, N. V., Lunn, T., Crowley, D. E., Jones, D.N., Eby, P., Sánchez, C.A., Plowright, R.K. (2018). Changing resource landscapes and spillover of henipaviruses. *Annals of the New York Academy of Sciences*, 112, 91.
25. Stephenson, E. B., **Peel, A. J.**, Reid, S. A., Jansen, C. C., & McCallum, H. (2018). The non-human reservoirs of Ross River virus: a systematic review of the evidence. *Parasites & Vectors*, 11(1), 188.
26. Grogan, L. F., **Peel, A. J.**, Kerlin, D., Ellis, W., Jones, D., Hero, J.-M., McCallum, H. (2018) Is disease a major causal factor in declines? An evidence framework and case study on koala chlamydiosis. *Biological Conservation* 221:334-344.
27. **Peel, A. J.**, Baker, K. S., Hayman, D. T. S., Broder, C. C., Cunningham, A. A., Fooks, A. R., Garnier, R., Wood, J. L. N., and Restif, O. (2018). Support for viral persistence in bats from age-specific serology and models of maternal immunity. *Scientific Reports*, 8(1), e0004796.
28. Giles, J.R., Eby, P., Parry, H., **Peel, A.J.**, Plowright, R.K., Westcott, D.A. & McCallum, H. (2018) Environmental drivers of spatiotemporal foraging intensity in fruit bats and implications for Hendra virus ecology. *Scientific Reports*, 8: 9555
29. Glennon, E. E., Restif, O., Sbarbaro, S. R., Garnier, R., Cunningham, A. A., Suu-Ire, R. D., Osei-Amponsah R, Wood, J. L. N. and **Peel, A. J.** (2018). Domesticated animals as hosts of henipaviruses and filoviruses: A systematic review. *The Veterinary Journal*, 233, 25–34.
30. Paez, D.J., Giles, J., McCallum, H., Field, H.E., Jordan, D., **Peel, A.J.** & Plowright, R.K. (2017) Conditions affecting the timing and magnitude of Hendra virus shedding across pteropodid bat populations in Australia. *Epidemiology and Infection*, 57, 1–11.
31. Hardy, M.C., Desselle, M.R., and the **Catch a Rising Star Consortium**. (2017) Engaging rural Australian communities in National Science Week helps increase visibility for women researchers. *Royal Society Open Science*, 4, 170548.
32. Jeong, J., C. S. Smith, **A. J. Peel**, R. K. Plowright, D. H. Kerlin, J. McBroom, H. McCallum. Persistent infections support maintenance of a coronavirus in a population of Australian bats (*Myotis macropus*). *Epidemiology and Infection*, 1-9. (2017)
33. **Peel, A. J.**, J. L. N. Wood, K. S. Baker, A. C. Breed, A. de Carvalho, A. Fernández-Loras, H. S. Gabrieli, G. Gembu, V. A. Kakengi, P. M. Kaliba, R. M. Kityo, T. Lembo, F. Esono Mba, D. Ramos, I. Rodríguez-Prieto, R. Suu-Ire, A. A. Cunningham, D. T. S. Hayman. How does Africa's most hunted bat vary across the continent? Population traits of the straw-coloured fruit bat (*Eidolon helvum*) and its interactions with humans. *Acta Chiropterologica* 19(1): 77–92. (2017)
34. **Peel, A. J.**, K. S. Baker, D. T. S. Hayman, R. Suu-Ire, A. C. Breed, G.-C. Gembu, T. Lembo, A. Fernández Loras, D. R. Sargan, A. R. Fooks, A. A. Cunningham, and J. L. N. Wood. Bat trait, genetic and pathogen data from large-scale investigations of African fruit bats, *Eidolon helvum*. *Scientific Data* 3: 160049 (2016)
35. Giles, J. R., R. K. Plowright, P. Eby, **A. J. Peel**, and H. McCallum. Models of Eucalypt phenology predict bat population flux. *Ecology and Evolution*. 6(20): 7230–7245. (2016)

36. Plowright R.K., **A. J. Peel**, D.G. Streicker, A.T. Gilbert, H. McCallum, J.L.N. Wood, M.L. Baker, O. Restif. Transmission or Within-Host Dynamics Driving Pulses of Zoonotic Viruses in Reservoir–Host Populations. *PLoS Neglected Tropical Diseases* 10(8): e0004796. (2016)
37. Hayman, D. T. S., and **A. J. Peel**. Can survival analyses detect hunting pressure in a highly connected species? Lessons from straw-coloured fruit bats. *Biological Conservation* 200: 131–139. (2016)
38. **Peel, A. J.**, J. R. C. Pulliam, A. D. Luis, R. K. Plowright, T. J. O’Shea, D. T. S. Hayman, J. L. N. Wood, C. T. Webb, and O. Restif. The effect of seasonal birth pulses on pathogen persistence in wild mammal populations. *Proceedings of the Royal Society B* 281, 20132962 (2014).
39. Chowdhury, S., S.U. Khan, G. Crameri, J. H. Epstein, C. C. Broder, A. Islam, **A. J. Peel**, J. Barr, P. Daszak, L. F. Wang, and S. P. Luby. Serological Evidence of Henipavirus Exposure in Cattle, Goats and Pigs in Bangladesh. *PLoS Neglected Tropical Diseases* 8, e3302 (2014).
40. Shi, J. J., L. M. Chan, **A. J. Peel**, R. Lai, A. D. Yoder, and S. M. Goodman. Deep divergence between sister species of *Eidolon* (Family Pteropodidae) despite evidence for widespread intraspecific panmixia. *Acta Chiropterologica* 16, 279-292 (2014)
41. O’Shea, T. J., P. M. Cryan, A. A. Cunningham, A. R. Fooks, D. T. S. Hayman, A. D. Luis, **A. J. Peel**, R. K. Plowright, and J. L. N. Wood. Bat Flight and Zoonotic Viruses. *Emerging Infectious Diseases* 20, 741–745 (2014).
42. Horton, D. L., A. Banyard, D. A. Marston, E. Wise, D. Selden, A. Nunez, D. Hicks, T. Lembo, S. Cleaveland, **A. J. Peel**, I. V. Kuzmin, C. E. Rupprecht, and A. R. Fooks. Antigenic and genetic characterisation of a divergent African virus, Ikoma lyssavirus. *Journal of General Virology* (2014).
43. Gilbert, A. T., A. R. Fooks, D. T. S. Hayman, D. L. Horton, T. Müller, R. K. Plowright, **A. J. Peel**, R. A. Bowen, J. L. N. Wood, J. Mills, A. A. Cunningham, and C. E. Rupprecht. Deciphering Serology to Understand the Ecology of Infectious Diseases in Wildlife. *Ecohealth* 10, 1–16 (2013).
44. **Peel, A. J.**, D. R. Sargan, K. S. Baker, D. T. S. Hayman, J. A. Barr, G. Crameri, R. Suu-Ire, C. C. Broder, T. Lembo, L.-F. Wang, A. R. Fooks, S. J. Rossiter, J. L. N. Wood, and A. A. Cunningham. Continent-wide panmixia of an African fruit bat facilitates transmission of potentially zoonotic viruses. *Nature Communications* 4, 2770 (2013).
45. Baker, K. S., S. Todd, G. A. Marsh, G. Crameri, J. Barr, A. O. Kamins, **A. J. Peel**, M. Yu, D. T. S. Hayman, B. Nadjm, G. Mtove, B. Amos, H. Reyburn, A. K. Nyarko, R. Suu-Ire, P. R. Murcia, A. A. Cunningham, J. L. N. Wood, and L.-F. Wang. Novel, Potentially Zoonotic Paramyxoviruses from the African Straw-Colored Fruit Bat *Eidolon helvum*. *Journal of Virology* 87, 1348–1358 (2013).
46. **Peel, A. J.**, T. J. McKinley, K. S. Baker, J. A. Barr, G. Crameri, D. T. S. Hayman, Y.-R. Feng, C. C. Broder, L.-F. Wang, A. A. Cunningham, and J. L. N. Wood. Use of cross-reactive serological assays for detecting novel pathogens in wildlife: assessing an appropriate cutoff for henipavirus assays in African bats. *Journal of Virological Methods* 193, 295–303 (2013).
47. Hayman, D. T. S., R. A. Bowen, P. M. Cryan, G. F. McCracken, T. J. O’Shea, **A. J. Peel**, A. Gilbert, C. T. Webb, and J. L. N. Wood. 2013. Ecology of Zoonotic Infectious Diseases in Bats: Current Knowledge and Future Directions. *Zoonoses Public Health* 60, 2–21 (2013).
48. Wood, J. L. N., M. Leach, L. Waldman, H. MacGregor, A. R. Fooks, K. E. Jones, O. Restif, D. Dechmann, D. T. S. Hayman, K. S. Baker, **A. J. Peel**, A. O. Kamins, J. Fahr, Y. Ntiamoa-Baidu, R. Suu-Ire, R. F. Breiman, J. H. Epstein, H. E. Field, and A. A. Cunningham. A framework for the study of zoonotic disease emergence and its drivers: spillover of bat pathogens as a case study. *Philosophical Transactions of the Royal Society B* 367, 2881–2892 (2012).
49. **Peel, A. J.**, M. Hartley and A. A. Cunningham. Qualitative risk analysis of introducing *Batrachochytrium dendrobatidis* to the UK through the importation of live amphibians. *Diseases of Aquatic Organisms* 98, 95–112 (2012).

50. Billeter, S. A., D. T. S. Hayman, **A. J. Peel**, K. Baker, J. L. N. Wood, A. A. Cunningham, R. Suu-Ire, K. Dittmar and M.Y. Kosoy. Bartonella species in bat flies (Diptera: Nycteribiidae) from western Africa. *Parasitology* 139, 324–329 (2012).
51. Ossa, G., S. Kramer-Schadt, **A. J. Peel**, A. K. Scharf and C. C. Voigt. The movement ecology of the straw-colored fruit bat, *Eidolon helvum*, in sub-Saharan Africa assessed by stable isotope ratios. *PLoS ONE* 7, e45729 (2012).
52. **Peel, A. J.**, K. S. Baker, G. Cramer, J. A. Barr, D. T. S. Hayman, E. Wright, C. C. Broder, A. Fernández Loras, A. R. Fooks, L.-F. Wang, A. A. Cunningham, and J. L. N. Wood. Henipavirus neutralising antibodies in an isolated island population of African fruit bats. *PLoS ONE* 7, e30346 (2012).
53. **Peel, A. J.**, S. J. Rossiter, J. L. N. Wood, A. A. Cunningham and D. R. Sargan. Characterization of microsatellite loci in the straw-colored fruit bat, *Eidolon helvum* (Pteropodidae). *Conservation of Genetic Resources* 2, 279–282 (2010).
54. **Peel, A. J.**, T. Bouts, E. Flach, S. Rivers and A. Routh. Pituitary pars intermedia dysfunction (Equine Cushing's disease) in an onager (*Equus hemionus onager*). *Journal of Zoo and Wildlife Medicine* 40, 773–780 (2009).
55. **Peel, A. J.**, L. Vogelnest, M. Finnigan, L. Grossfeldt, and J. K. O'Brien. Non-invasive fecal hormone analysis and behavioral observations for monitoring stress responses in captive Western lowland gorillas (*Gorilla gorilla gorilla*). *Zoo Biology* 24, 431–445 (2005).

Peer-reviewed letters

1. Eby, P., Plowright, R., McCallum, H., **Peel, A.** (2020). Conditions predict heightened Hendra virus spillover risk in horses this winter: actions now can change outcomes *Australian Veterinary Journal* 98(6), 270-271.
2. **Peel, A. J.**, Eby, P., Kessler, M., Lunn, T., Breed, A. C., & Plowright, R. K. (2017). Hendra virus spillover risk in horses: heightened vigilance and precautions being urged this winter. *Australian Veterinary Journal*, 95(7), N20–N21.
3. **Peel, A. J.**, H. E. Field, P. A. Reid, R. K. Plowright, C. C. Broder, L. F. Skerratt, D. T. S. Hayman, O. Restif, M. Taylor, G. Martin, G. Cramer, I. Smith, M. Baker, G. A. Marsh, J. A. Barr, A. C. Breed, J. L. N. Wood, N. Dhand, J.-A. Toribio, A. A. Cunningham, I. Fulton, W. L. Bryden, C. Secombe, and L.-F. Wang. The equine Hendra virus vaccine remains a highly effective preventative measure against infection in horses and humans. A response to Zahoor and Mudie. *Infection Ecology and Epidemiology* 6: 31658 (2016)

Other

1. Lentini, P., **Peel, A.**, Field, H., Welbergen, J. (2020). No, Aussie bats won't give you COVID-19. We rely on them more than you think. *The Conversation*. theconversation.com/no-aussie-bats-wont-give-you-covid-19-we-rely-on-them-more-than-you-think-137168

Teaching and Research supervision

TEACHING

2016-2021 Guest Lecturer , Animal Diversity (2251ENV)	<i>Griffith U.</i>
2016-2021 Guest Lecturer , Emerging topics in Conservation (3308ENV)	<i>Griffith U.</i>
2018-2020 Lecturer , Quantitative Ecology (3241ENV), Emerging Topics in Conservation(3308ENV)	<i>Griffith U.</i>
2010 Guest Lecturer , BSc (Hons) Animal Science and Management	<i>Royal Agric. Coll.</i>
2010 Problem-based learning facilitator , MSc in Wild Animal Health	<i>Inst. Zool. London</i>

PHD

- 2017- **Devin Jones**, *The role of the gut microbiome in flying foxes in the within-host dynamics of emerging infectious diseases* Montana State U.
- 2017-2020 **Tamika Lunn**, *Within- and between-host processes driving infection dynamics of Hendra virus in Pteropus bats* Griffith U.
- 2016-2019 **Eloise Stephenson**, *Understanding the ecology of Ross River virus; novel approaches and new insights into non-human reservoirs* Griffith U.
- 2014-2017 **John Giles**, *Determining the role of flying fox population dynamics in the emergence of Hendra virus* Griffith U.
- 2014-2018 **Jaewoon Jeong**, *Modelling Viral Infectious Diseases of Bats in Australia* Griffith U.
- 2012 **Alice Wright**, *Epidemiology of zoonotic viruses in African fruit bats* U. Cambridge

MASTERS AND HONOURS

- 2019-20 **Scout Owens**, *Census count methods for Australian Flying Fox Roosts*. Honours Griffith U.
- 2018-19 **Remy Brooks**, *The Ecological Characteristics of Australian Flying Fox Roosts*. Honours Griffith U.
- 2008-09 **Melissa Nollet**, *Population structure of African fruit bats*. Masters in Wild Animal Health Inst. of Zoology

Service and Professional Memberships

SERVICE

- 2018- **Wildlife Health Australia, Bat Health Focus Group**, University Research Representative
- 2019- **Frontiers in Public Health**, Review Editor in Planetary health

PROFESSIONAL MEMBERSHIPS

- 2014- **Wildlife Health Australia**, Member
- 2001- **Wildlife Disease Association**, Member, QLD State Representative (2015-2016, 2021-)
- 2015- **Australasian Bat Society**, Member
- 2017-2019 **Australian Mammal Society**, Member
- 2018-2019 **Ecological Society of Australia**, Member

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