

Curriculum Vitae

David T. S. Hayman

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Tertiary education

- ***Doctor of Philosophy (Veterinary Science)***
Department of Veterinary Medicine, University of Cambridge, UK, 2011.
- ***Master of Science (Conservation Biology)***
School of Anthropology and Conservation, University of Kent, UK, 2005.
- ***Bachelor of Veterinary Medicine and Surgery***
School of Veterinary Studies, University of Edinburgh, UK, 2002.

Professional experience

- ***Associate Professor in Veterinary Public Health - Massey University, New Zealand.***
 - *Senior Lecturer*, 2014-2016
- ***Affiliate*** - Faculty of Veterinary Science, University of Sydney, Australia (April 2016 - March 2019).
- ***Associate*** - Department of Biology, Colorado State University, USA (June 2015 - March 2018).
- ***Co-Director*** - ^mEpiLab, Molecular Epidemiology and Public Health Laboratory, Massey University, New Zealand (2015 onward; line manager of 12 researchers and staff).
- ***Diplomate*** - European College of Zoological Medicine, Wildlife Population Health speciality (2014-present).
- ***Consultant and Research Associate*** - Dept. of Homeland Security (DHS) and National Institutes of Health (NIH), USA, funded Research and Policy for Infectious Disease Dynamics (RAPIDD) Bat and Small Mammal Disease Working groups (2010-2015, end of program).
- ***David H. Smith Conservation Research Fellow*** - Colorado State University (CSU) (2012-2014) with Prof. Colleen Webb (CSU), Prof. Juliet Pulliam (University of Florida) and Dr. Paul Cryan (USGS).
- ***Wellcome Trust Research Training Fellow*** - University of Cambridge, UK (2009-2012) with Prof. James Wood (supervisor), Prof. Jonathan Heeney (sponsor), Veterinary Science.
 - *Visiting Post-doctoral Researcher* - Colorado State University, USA (2011-2012) with Prof. Colleen Webb, Biology.
 - *Visiting Researcher* - Institute of Zoology (IoZ), UK (2007-2011) with Prof. Andrew Cunningham, Wildlife Epidemiology.

- *Visiting Researcher* - Animal Health and Veterinary Laboratories Agency (AHVLA), UK (2007-2011) with Prof. Anthony Fooks, Wildlife Zoonoses and Vector-borne Research Group.
- *PhD student* - University of Cambridge (2008-2011, Dr. Olivier Restif, supervisor), IoZ and AHVLA (a non-academic institution), UK.
- *Member* - Environmental and Social Ecology of Human Infectious Diseases (ESEI) bat working group (MRC, BBSRC, ESRC, and NERC funded) (2010-2011, end of programme).
- *Cambridge Infectious Diseases Consortium Veterinary Fellow* - University of Cambridge, UK (2007-2009), with Prof. James Wood, Veterinary Science.
- *Clinical Veterinarian* - Cinque Ports Veterinary Associates (two periods, 2002-2004 and 2005-2006): including UK State Veterinary Service Local Veterinary Inspector (panel 1 and 2: tuberculosis (TB), brucellosis, anthrax, rabies and notifiable diseases).
 - *Wildlife Field Veterinarian* - Project Protection des Gorilles, Republic of Congo (two periods, 2mo in 2005 and 2mo in 2006), screening western lowland gorillas for human hepatitis A, B, HTLV, HIV and TB.
 - *Field Assistant* - Institute of Zoology Jackal Project, Namibia (1.5mo, 2004), studying behavioural ecology of carnivores.
 - *Wildlife Field Veterinarian* - University of Edinburgh Anoa and Babirusa Conservation Project (two periods, 2mo in 2002 and 1.5mo in 2003), Indonesia, screening wildlife (especially primates) for infectious diseases.
 - *Wildlife Field Veterinarian* - University of Edinburgh Ethiopian Wolf Conservation Project (2mo, 2002), Ethiopia, implementing rabies and canine infectious disease control programmes.
 - *Wildlife Field Veterinarian* - LiFeline Belize (2mo, 2003), screening Neo-tropical cats for infectious diseases.

Publications

- [1] D. T. **Hayman**, R. Suu-Ire, A. C. Breed, J. A. McEachern, L. Wang, J. L. Wood, and A. A. Cunningham, “Evidence of henipavirus infection in west african fruit bats,” *PLoS one*, vol. 3, no. 7, p. e2739, 2008.
- [2] D. T. **Hayman**, A. R. Fooks, D. Horton, R. Suu-Ire, A. C. Breed, A. A. Cunningham, and J. L. Wood, “Antibodies against lagos bat virus in megachiroptera from west africa,” *Emerging infectious diseases*, vol. 14, no. 6, p. 926, 2008.
- [3] D. T. **Hayman**, P. Emmerich, M. Yu, L.-F. Wang, R. Suu-Ire, A. R. Fooks, A. A. Cunningham, and J. L. Wood, “Long-term survival of an urban fruit bat seropositive for ebola and lagos bat viruses,” *PLoS One*, vol. 5, no. 8, p. e11978, 2010.
- [4] A. C. Breed, R. K. Plowright, D. T. **Hayman**, D. L. Knobel, F. M. Molenaar, D. Gardner-Roberts, S. Cleveland, D. T. Haydon, R. A. Kock, A. A. Cunningham, *et al.*, “Disease management in endangered mammals,” in *Management of disease in wild mammals*, pp. 215–239, Springer Japan, 2009.
- [5] A. C. Banyard, D. **Hayman**, N. Johnson, L. McElhinney, and A. R. Fooks, “Bats and lyssaviruses,” *Advances in Virus Research*, vol. 79, pp. 239–289, 2011.
- [6] E. Wright, D. T. **Hayman**, A. Vaughan, N. J. Temperton, J. L. Wood, A. A. Cunningham, R. Suu-Ire, R. A. Weiss, and A. R. Fooks, “Virus neutralising activity of african fruit bat (*Eidolon helvum*) sera against emerging lyssaviruses,” *Virology*, vol. 408, no. 2, pp. 183–189, 2010.
- [7] D. T. **Hayman**, N. Johnson, D. L. Horton, J. Hedge, P. R. Wakeley, A. C. Banyard, S. Zhang, A. Alhassan, and A. R. Fooks, “Evolutionary history of rabies in ghana,” *PLoS Negl Trop Dis*, vol. 5, no. 4, p. e1001, 2011.
- [8] D. T. **Hayman**, L.-F. Wang, J. Barr, K. S. Baker, R. Suu-Ire, C. C. Broder, A. A. Cunningham, and J. L. Wood, “Antibodies to henipavirus or henipa-like viruses in domestic pigs in ghana, west africa,” *PLoS one*, vol. 6, no. 9, p. e25256, 2011.

- [9] A. O. Kamins, O. Restif, Y. Ntiamo-Baidu, R. Suu-Ire, D. T. **Hayman**, A. A. Cunningham, J. L. Wood, and J. M. Rowcliffe, "Uncovering the fruit bat bushmeat commodity chain and the true extent of fruit bat hunting in Ghana, West Africa," *Biological Conservation*, vol. 144, no. 12, pp. 3000–3008, 2011.
- [10] D. T. **Hayman**, A. C. Banyard, P. R. Wakeley, G. Harkess, D. Marston, J. L. Wood, A. A. Cunningham, and A. R. Fooks, "A universal real-time assay for the detection of lyssaviruses," *Journal of virological methods*, vol. 177, no. 1, pp. 87–93, 2011.
- [11] M. Kosoy, D. T. **Hayman**, and K.-S. Chan, "Bartonella bacteria in nature: where does population variability end and a species start?," *Infection, Genetics and Evolution*, vol. 12, no. 5, pp. 894–904, 2012.
- [12] S. Billeter, D. **Hayman**, A. J. Peel, K. Baker, J. Wood, A. Cunningham, R. Suu-Ire, K. Dittmar, and M. Kosoy, "Bartonella species in bat flies (Diptera: Nycteribiidae) from western Africa," *Parasitology*, vol. 139, no. 03, pp. 324–329, 2012.
- [13] D. T. **Hayman**, "Wildlife zoonoses," *Epidemiology: Open Access*, vol. 2012, 2011.
- [14] D. **Hayman**, A. Fooks, J. Rowcliffe, R. McCrea, O. Restif, K. Baker, D. Horton, R. Suu-Ire, A. Cunningham, and J. Wood, "Endemic Lagos bat virus infection in Eidolon helvum," *Epidemiology and Infection*, vol. 140, no. 12, pp. 2163–2171, 2012.
- [15] A. J. Peel, K. S. Baker, G. Cramer, J. A. Barr, D. T. **Hayman**, E. Wright, C. C. Broder, A. Fernández-Loras, A. R. Fooks, L.-F. Wang, *et al.*, "Henipavirus neutralising antibodies in an isolated island population of African fruit bats," *PloS one*, vol. 7, no. 1, p. e30346, 2012.
- [16] D. T. **Hayman**, T. King, and K. Cameron, "Successful treatment of acute systemic anaphylaxis in a western lowland gorilla (gorilla gorilla gorilla)," *Journal of Zoo and Wildlife Medicine*, vol. 41, no. 3, pp. 522–525, 2010.
- [17] D. **Hayman**, M. Yu, G. Cramer, L. Wang, R. Suu-Ire, J. Wood, and A. Cunningham, "Ebola virus antibodies in fruit bats, Ghana, West Africa," *Emerging Infectious Diseases*, vol. 18, no. 7, p. 1207, 2012.
- [18] O. Restif, D. T. **Hayman**, J. R. Pulliam, R. K. Plowright, D. B. George, A. D. Luis, A. A. Cunningham, R. A. Bowen, A. R. Fooks, T. J. O'Shea, *et al.*, "Model-guided fieldwork: practical guidelines for multidisciplinary research on wildlife ecological and epidemiological dynamics," *Ecology Letters*, vol. 15, no. 10, pp. 1083–1094, 2012.
- [19] D. **Hayman**, R. Bowen, P. Cryan, G. F. McCracken, T. O'Shea, A. J. Peel, A. Gilbert, C. Webb, and J. Wood, "Ecology of zoonotic infectious diseases in bats: current knowledge and future directions," *Zoonoses and Public Health*, vol. 60, no. 1, pp. 2–21, 2013.
- [20] J. L. Wood, M. Leach, L. Waldman, H. MacGregor, A. R. Fooks, K. E. Jones, O. Restif, D. Dechmann, D. T. **Hayman**, K. S. Baker, *et al.*, "A framework for the study of zoonotic disease emergence and its drivers: spillover of bat pathogens as a case study," *Phil. Trans. R. Soc. B*, vol. 367, no. 1604, pp. 2881–2892, 2012.
- [21] D. T. **Hayman**, R. McCrea, O. Restif, R. Suu-Ire, A. R. Fooks, J. L. Wood, A. A. Cunningham, and J. M. Rowcliffe, "Demography of straw-colored fruit bats in Ghana," *Journal of Mammalogy*, vol. 93, no. 5, pp. 1393–1404, 2012.
- [22] K. S. Baker, S. Todd, G. A. Marsh, G. Cramer, J. Barr, A. O. Kamins, A. J. Peel, M. Yu, D. T. **Hayman**, B. Nadjm, *et al.*, "Novel, potentially zoonotic paramyxoviruses from the African straw-colored fruit bat Eidolon helvum," *Journal of Virology*, vol. 87, no. 3, pp. 1348–1358, 2013.
- [23] D. T. **Hayman**, E. S. Gurley, J. R. Pulliam, and H. E. Field, "The application of one health approaches to henipavirus research," in *One Health: The Human-Animal-Environment Interfaces in Emerging Infectious Diseases*, pp. 155–170, Springer Berlin Heidelberg, 2012.
- [24] A. D. Luis, D. T. **Hayman**, T. J. O'Shea, P. M. Cryan, A. T. Gilbert, J. R. Pulliam, J. N. Mills, M. E. Timonin, C. K. Willis, A. A. Cunningham, *et al.*, "A comparison of bats and rodents as reservoirs of zoonotic viruses: are bats special?," in *Proc. R. Soc. B*, vol. 280, p. 20122753, The Royal Society, 2013.
- [25] A. J. Peel, T. J. McKinley, K. S. Baker, J. A. Barr, G. Cramer, D. T. **Hayman**, Y.-R. Feng, C. C. Broder, L.-F. Wang, A. A. Cunningham, *et al.*, "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*, vol. 193, no. 2, pp. 295–303, 2013.

- [26] D. T. **Hayman**, K. D. McDonald, and M. Y. Kosoy, “Evolutionary history of rat-borne bartonella: the importance of commensal rats in the dissemination of bacterial infections globally,” *Ecology and evolution*, vol. 3, no. 10, pp. 3195–3203, 2013.
- [27] A. T. Gilbert, A. R. Fooks, D. T. **Hayman**, D. L. Horton, T. Müller, R. Plowright, A. J. Peel, R. Bowen, J. L. Wood, J. Mills, *et al.*, “Deciphering serology to understand the ecology of infectious diseases in wildlife,” *EcoHealth*, vol. 10, no. 3, pp. 298–313, 2013.
- [28] K. S. Baker, R. Suu-Ire, J. Barr, D. T. **Hayman**, C. C. Broder, D. L. Horton, C. Durrant, P. R. Murcia, A. A. Cunningham, and J. L. Wood, “Viral antibody dynamics in a chiropteran host,” *Journal of animal ecology*, vol. 83, no. 2, pp. 415–428, 2014.
- [29] A. J. Peel, D. R. Sargan, K. S. Baker, D. T. **Hayman**, J. A. Barr, G. Cramer, R. Suu-Ire, C. C. Broder, T. Lembo, L.-F. Wang, *et al.*, “Continent-wide panmixia of an african fruit bat facilitates transmission of potentially zoonotic viruses,” *Nature communications*, vol. 4, 2013.
- [30] N. Johnson, *The Role of Animals in Emerging Viral Diseases*. Academic Press, 2013.
- [31] T. J. O’Shea, P. M. Cryan, A. A. Cunningham, A. R. Fooks, D. **Hayman**, A. D. Luis, A. J. Peel, R. K. Plowright, and J. L. Wood, “Bat flight and zoonotic viruses,” *Emerg Infect Dis*, vol. 20, no. 5, pp. 741–5, 2014.
- [32] K. J. Olival and D. T. **Hayman**, “Filoviruses in bats: current knowledge and future directions,” *Viruses*, vol. 6, no. 4, pp. 1759–1788, 2014.
- [33] A. C. Banyard, D. **Hayman**, C. M. Freuling, T. Müller, A. R. Fooks, and N. Johnson, “Bat rabies,” in *Rabies: scientific basis of the disease and its management*, pp. 215–267, Elsevier Academic Press, Oxford, UK, 2013.
- [34] A. J. Peel, J. Pulliam, A. Luis, R. Plowright, T. O’Shea, D. **Hayman**, J. Wood, C. Webb, and O. Restif, “The effect of seasonal birth pulses on pathogen persistence in wild mammal populations,” *Proceedings of the Royal Society of London B: Biological Sciences*, vol. 281, no. 1786, p. 20132962, 2014.
- [35] S. Souther, M. W. Tingley, V. D. Popescu, D. T. **Hayman**, M. E. Ryan, T. A. Graves, B. Hartl, and K. Terrell, “Biotic impacts of energy development from shale: research priorities and knowledge gaps,” *Frontiers in Ecology and the Environment*, vol. 12, no. 6, pp. 330–338, 2014.
- [36] P. M. Cryan, P. M. Gorresen, C. D. Hein, M. R. Schirmacher, R. H. Diehl, M. M. Huso, D. T. **Hayman**, P. D. Fricker, F. J. Bonaccorso, D. H. Johnson, *et al.*, “Behavior of bats at wind turbines,” *Proceedings of the National Academy of Sciences*, vol. 111, no. 42, pp. 15126–15131, 2014.
- [37] Y. Bai, D. T. **Hayman**, C. D. McKee, and M. Y. Kosoy, “Classification of bartonella strains associated with straw-colored fruit bats (*Eidolon helvum*) across africa using a multi-locus sequence typing platform,” *PLoS Negl Trop Dis*, vol. 9, no. 1, p. e0003478, 2015.
- [38] D. T. **Hayman**, “Biannual birth pulses allow filoviruses to persist in bat populations,” *Proceedings of the Royal Society of London B: Biological Sciences*, vol. 282, no. 1803, p. 20142591, 2015.
- [39] K. M. Pepin, C. B. Leach, C. Marques-Toledo, K. H. Laass, K. S. Paixao, A. D. Luis, D. T. **Hayman**, N. G. Johnson, M. G. Buhnerkempe, S. Carver, *et al.*, “Utility of mosquito surveillance data for spatial prioritization of vector control against dengue viruses in three brazilian cities,” *Parasites & vectors*, vol. 8, no. 1, p. 1, 2015.
- [40] A. D. Luis, T. J. O’Shea, D. T. **Hayman**, J. L. Wood, A. A. Cunningham, A. T. Gilbert, J. N. Mills, and C. T. Webb, “Network analysis of host–virus communities in bats and rodents reveals determinants of cross-species transmission,” *Ecology letters*, vol. 18, no. 11, pp. 1153–1162, 2015.
- [41] D. T. **Hayman**, “Bats as viral reservoirs,” *Annual Review of Virology*, vol. 3, no. 1, 2016.
- [42] T. J. O’Shea, P. M. Cryan, D. T. **Hayman**, R. K. Plowright, and D. G. Streicker, “Multiple mortality events in bats: a global review,” *Mammal Review*, 2016.
- [43] D. T. **Hayman**, J. R. Pulliam, J. C. Marshall, P. M. Cryan, and C. T. Webb, “Environment, host, and fungal traits predict continental-scale white-nose syndrome in bats,” *Science advances*, vol. 2, no. 1, p. e1500831, 2016.
- [44] D. T. **Hayman**, “Conservation as vaccination,” *EMBO reports*, vol. 17, no. 3, pp. 286–291, 2016.

- [45] A. J. Peel, H. E. Field, P. A. Reid, R. K. Plowright, C. C. Broder, L. F. Skerratt, D. T. **Hayman**, O. Restif, M. Taylor, G. Martin, *et al.*, “The equine hendra virus vaccine remains a highly effective preventative measure against infection in horses and humans: the imperative to develop a human vaccine for the hendra virus in australia,” *Infection ecology & epidemiology*, vol. 6, 2016.
- [46] D. T. **Hayman** and A. J. Peel, “Can survival analyses detect hunting pressure in a highly connected species? lessons from straw-coloured fruit bats,” *Biological Conservation*, vol. 200, pp. 131–139, 2016.
- [47] A. J. Peel, K. S. Baker, D. T. **Hayman**, R. Suu-Ire, A. C. Breed, G.-C. Gembu, T. Lembo, A. Fernández-Loras, D. R. Sargan, A. R. Fooks, *et al.*, “Bat trait, genetic and pathogen data from large-scale investigations of african fruit bats, *eidolon helvum*,” *Scientific data*, vol. 3, 2016.
- [48] B. A. Han, J. P. Schmidt, L. W. Alexander, S. E. Bowden, D. T. **Hayman**, and J. M. Drake, “Undiscovered bat hosts of filoviruses,” *PLoS Negl Trop Dis*, vol. 10, no. 7, p. e0004815, 2016.
- [49] C. D. McKee, D. T. **Hayman**, M. Y. Kosoy, and C. T. Webb, “Phylogenetic and geographic patterns of bartonella host shifts among bat species,” *Infection, Genetics and Evolution*, vol. 44, pp. 382–394, 2016.
- [50] J. C. Garcia-R and D. T. **Hayman**, “Origin of a major infectious disease in vertebrates: The timing of cryptosporidium evolution and its hosts,” *Parasitology*, vol. 143, no. 13, p. 1683, 2016.
- [51] D. T. **Hayman**, “As the bat flies,” *Science*, vol. 354, no. 6316, pp. 1099–1100, 2016.
- [52] D. A. Wilkinson and D. T. **Hayman**, “Bat and virus ecology in a dynamic world,” *Microbiology Australia*, vol. 38, no. 1, pp. 33–35, 2017.
- [53] M. C. Rulli, M. Santini, D. T. **Hayman**, and P. D’Odorico, “The nexus between forest fragmentation in africa and ebola virus disease outbreaks,” *Scientific Reports*, vol. 7, 2017.

Google scholar April 12, 2017, *citations* = 1861, *h-index* = 25, *i10-index* = 34.

Reports

- D. T. S. **Hayman**, J. C. Marshall, N. P. French, T. E. Carpenter, and M. G. Roberts, “Measles risk assessment, modelling, and benefit-cost analyses for New Zealand”, *Report to New Zealand Ministry of Health*, 2015
- D. T. S. **Hayman**, P. Biggs, A. Pita, N. Velathanthiri, B. Phiri, R. Shrestha, A. Lal, N. P. French, “Gastrointestinal Protozoa Report for the New Zealand Ministry of Health, July 2013 to June 2014”, *Report to New Zealand Ministry of Health*, 2014
- D. T. S. **Hayman**, N. P. French, J-C Garcia Ramirez, A. Pita, B. Phiri, P. Biggs, N. Velathanthiri, A. Midwinter, M. Chan, A. Fayaz, K. Gedye, “Gastrointestinal Protozoa Report for the New Zealand Ministry of Health, July 2014 to July 2015”, *Report to New Zealand Ministry of Health*, 2015
- D. T. S. **Hayman**, N. P. French, J-C Garcia Ramirez, A. Pita, B. Phiri, P. Biggs, N. Velathanthiri, A. Midwinter, M. Chan, A. Fayaz, K. Rouw, K. Gedye, “Gastrointestinal Protozoa Report for the New Zealand Ministry of Health, July 2015 to July 2016”, *Report to New Zealand Ministry of Health*, 2016

Grants, contracts and Awards

- *Principal Investigator* - Massey University International Visitors Research Fund (2017, NZD 5,000).
- *Co-Principal Investigator* - New Zealand Ministry of Health Aquatic Protozoa Analysis and Advice Services (2016, NZD 750,000).
- *Principal Investigator* - The Royal Society of New Zealand Marsden Fund Fast Start (2015, NZD 300,000).
- *Co-Principal Investigator* - US Dept of Defense SERDP (Strategic Environmental Research and Development Program) (2016, USD 2,523,007).
- *Award* - Massey University Research Medal (Early Career, Sciences) (2015, NZD 10,000).

- *Principal Investigator* - Massey University Research Fund (2014, NZD 19,200).
- *Principal Investigator* - McGeorge Research Grant (2014, NZD 4,800).
- *Co-Principal Investigator* - New Zealand Ministry of Health Measles Risk Assessment (2014, NZD 94,435).
- *Principal Investigator* - David H. Smith Conservation Postdoctoral Research Fellowship (2012-2014, USD 140,000)
- *Principal Investigator* - The Wellcome Trust Research Training Fellowship (2009-2012, GB£240,471)
- *Fellowship* - Veterinary Fellowship, Cambridge Infectious Diseases Consortium (CIDC), University of Cambridge (2007-2009)
- *Research and travel grants* - The Lubee Bat Conservancy Luis F. Bacardi Bat Conservation and Research Fund Small Grant (2009), The Jowett Fund, University of Cambridge (2008), Wildlife Conservation Society (2005), University of Edinburgh (2002), North of England Zoological Society Veterinary Studentship (2002)
- *Award* - UK Veterinary Student of the Year Award (2002)

Memberships

- *International Union for Conservation of Nature (IUCN) Species Survival Commission (SSC) Wildlife Health Specialist Group* - Member 2015-present
- *European College of Zoological Medicine* - Member 2014-present
- *Veterinary Council of New Zealand* - Member 2014-present
- *Wildlife Disease Association* - Member 2013-present
- *Society for Conservation Biology* - Life member 2012-present
- *American Society for Microbiology* - Member 2012-present
- *Royal College of Veterinary Surgeons* - Member 2002-present

Service

- *Ad Hoc Committee* - U. S. National Academy of Sciences, One Health Fellowships (2015-present).
- *Independent expert panel* - Ministry for Primary Industries (MPI) and Department of Conservation (DOC) New Zealand sea lion risk assessment (2015).
- *Steering Committee* - U. S. White House and American Academy for the Advancement of Science led Global Health Security Agenda NGO working group (2014-2016).
- *Review Editor* - EcoHealth (2014-present).
- *Assistant Editor* - Journal of Wildlife Diseases (2013-present).
- *Journal referee* - Journal of Medical Primatology, Epidemiology and Infection, Zoonoses and Public Health, PLoS ONE, Philosophical Transactions of the Royal Society, Journal of Community Medicine and Health Education, Emerging Infectious Diseases, Vector-borne and Zoonotic Diseases, BMC Microbiology, Journal of Wildlife Diseases, Virology Journal, The Lancet, Journal of the Royal Society Interface, Archives of Virology, Molecular Ecology, Viruses, EcoHealth, PLoS Neglected Tropical Diseases, Landscape Ecology, DATABASE, Proceedings of the Royal Society, B., Ecological Applications, Conservation Biology, The American Naturalist, Journal of Animal Ecology, Science, Acta Tropica, Parasites & Vectors, Epidemics, PLoS Biology, BMC Veterinary Research, eLife, PeerJ, Scientific Data, PLoS Computational Biology, Journal of Applied Ecology, Biology Letters, FEMS Microbiology Letters, Virulence, Virologica Sinica, BioScience.

- *Ad Hoc grant referee* - South African Medical Research Council, BiodivERsA ERA-NET, FACCE-JPI European Union FP7, “Sciences de la vie” of the French National Research Agency (ANR), The David H. Smith Conservation Research Fellowship, (invited but declined due to conflict of interest) AXA Research Fund / post-doctoral applications 2016, and National Fellowships Committee for Sigma Delta Epsilon, Graduate Women in Science (2016 & 2017), Hungarian National Research, Development and Innovation Office Hungarian Scientific Fund (OTKA) programme grant, Council for Earth and Life Sciences (ALW) Netherlands Organization for Scientific Research (NWO), Wellcome Trust Sir Henry Dale Fellowship.
- *Hiring committee* - Massey University (7 total, 5 as chair)
- *Proposal reviewer* - 26th International Congress for Conservation Biology Proposal reviewer.
- *External PhD examiner* - University of Ghana (2015).
- *External BSc (Hons) examiner* - University of Auckland (2016).
- *External Full Professor application* - University of Pretoria (2016).
- *Internal examiner* - PhD confirmation, Massey University (2016).
- *Book proposal reviewer* - Wiley-Blackwell.

Supervision, mentoring, and visiting researchers

Current graduate student supervision

- *PhD main supervisor* - Carter Reed Hranac, BSc, MSc, Massey University, working on spatiotemporal dynamics of emerging bat diseases (2015-present).
- *PhD main supervisor* - Janelle Wierenga, BS, DVM, MPH, Massey University, working on metagenomic studies of pathogenic viruses in rural Uganda (2015-present).
- *PhD student committee* - Ben Golas, BS, VMD, CSU, working on infection dynamics of white-nose syndrome in bats (2016-present).
- *PhD student committee* - Sarah Michael, BVSc, MSc, University of Sydney, working on causes of mortality in endangered New Zealand sea lions (2016-present).
- *PhD student committee* - Clifton McKee, BSc, MSc, CSU, working on within host dynamics of *Bartonella* in bats (2015-present).
- *PhD student committee* - Samuel Bloomfield, BSc (Hons), Massey University, working on *Salmonella* and *Campylobacter* transmission dynamics and evolution (2014-present).

Completed graduate student supervision

- *MSc student committee* - Clifton McKee, CSU, thesis title: Spatial, Demographic, and Phylogenetic Patterns of *Bartonella* Diversity in Bats (2013-2015).

Doctor of Veterinary Medicine externship student supervision

- *DVM* - Taylor Winkleman, University of Georgia, USA (8 weeks, 2016).
- *DVM* - Erez Gueta, Michigan State University, USA (8 weeks, 2015).

Undergraduate student supervision

- *Biology major* - Katherine D. McDonald, Colorado State University, USA (20hrs per week, 2011-2012).
- *Wildlife Biology major* - Nick Dannemiller, Colorado State University, USA (6hrs per week, 2012-2013).

Visiting researchers

- *Sabbatical* - Prof. Ya Bin Wang, Henan Agricultural University, China (1 year, 2015-2016).

Undergraduate and Doctor of Veterinary Medicine mentoring

- *Graduate mentor* - I mentored Doctor of Veterinary Medicine (DVM) graduates for the CSU Wildlife Disease Association.
- *Graduate mentor* - I met with DVM students on the CDC Epidemiology Elective Program on rotation with the US National Parks Service to discuss disease ecology and the role of the DVM/PhD.

Teaching

Courses coordinated

- 227.502 Veterinary Public Health, Food Safety and Quality Management, Massey University Bachelor of Veterinary Sciences (2014-2016).

Courses

- 227.511 Veterinary Clinics and Public Health, Massey University Bachelor of Veterinary Sciences (2016-present)
- 227.415 Integrative Studies in Veterinary Science VI, Massey University Bachelor of Veterinary Sciences (2016-present)
- 227.416 Integrative Studies in Farm Animal Health and Production and Veterinary Public Health, Massey University Bachelor of Veterinary Sciences (2016-present)

Guest lecturing

- *Guest lecturer* - Master of Veterinary Medicine, Massey University MSc (2015).
- *Guest lecturer* - Veterinary Public Health, Massey University MSc (2014).
- *Guest lecturer* - One Health, Master of Public Health (2013), CSU and Colorado University, Boulder.
- *Guest lecturer* - Basic disease modelling/mathematical epidemiology, Theory of Population and Evolutionary Ecology, Graduate class (BZ548), CSU.
- *Graduate teaching* - Problem-based learning on the Royal Veterinary College/IoZ, London, MSc Wild Animal Health and MSc Wild Animal Biology courses (2009/2010).

Meetings and Presentations

Meeting organiser

- *Joint RAPIDD-GHSA Workshop: Policy Implications of Detecting Haemorrhagic Fever Viruses in Wildlife and Domestic Animals*, Washington DC, USA (2 days) 2015, with Ambassador Bonnie Jenkins (US Dept. of State), Prof. James Wood (University of Cambridge, UK), and Dr. Kavita Berger (Gryphon Scientific, USA).
- *RAPIDD workshop: African Viral Haemorrhagic Fever Disease Dynamics in Small Mammal Wildlife Hosts*, Colorado, USA (2 days) 2015, with Prof. James Wood (University of Cambridge, UK) and Prof. Colleen Webb (Colorado State University, USA).
- *David H Smith Fellows retreat*, Colorado, USA (5 days) 2013, with Dr Tabitha Graves, US Geological Survey.

Meeting attendee

*Oral presentation †Poster presentation ‡No presentation

§Session moderator or organiser #Invited speaker NB Titles are removed for space

† *Responding to emerging infectious diseases* Public Health Summer School, University of Otago (2017), Wellington, New Zealand.

* # *Targeting the Microbiome Conference* (2016), Boston USA.

† *8th International Symposium on Filoviruses* (2016), Antwerp, Belgium.

§* # *International Bat Research Conference* (2016), South Africa.

* # *CALIconf: Mitigation Strategies for Emerging Infectious Diseases* (2016), Colombia.

§* # *One Health Aotearoa Symposium* (2016), Otago University, New Zealand.

* *National Academy of Sciences Pakistan One-Health Career Development Symposium* (2016), Dubai.

* *8th Annual Conference: Otago International Health Research Network (OIHRN)* (2015), New Zealand.

* # *CALIconf: International on Mitigation Strategies for Emerging Infectious Disease* (2015), Colombia.

* # *Seoul Defense Dialogue 2015* (2015), Korea.

* # *2nd Wildbase Recovery Conference* (2015), New Zealand.

§ *7th annual New Zealand Next Generation Sequencing (NGS) Conference* (2015), New Zealand.

* *RAPIDD Small Mammal Disease Working Group meeting* (2015), Colorado State University, USA.

* # *Gordon Research Conference* (2015), California, USA.

‡ *RAPIDD Translating serology data to disease dynamics meeting* (2015), National Wildlife Research Center, USA.

* *MidCentral District Health Board Public Health Seminar* (2014), Palmerston North, New Zealand.

* # *AAAS Global Health Security Agenda NGO meeting* (2014), George Washington University, USA.

* # *Infectious Disease Research Centre Symposium* (2014), Massey University, New Zealand.

* *Society for Risk Analysis - Australia and New Zealand* (2014), Massey University, New Zealand.

* *Molecular Diagnostics Workshop* (2014), National Centre for Biosecurity and Infectious Diseases, New Zealand.

* *RAPIDD Small Mammal Disease Working Group meeting* (2014), University of Cambridge, UK.

* *6th Annual White-nose Syndrome workshop* (2013), Boise, USA.

* *26th International Congress for Conservation Biology* (2013), Baltimore, USA.

* *RAPIDD Small Mammal Disease Working Group meeting* (2013), University of Cambridge, UK.

* # *The 2012 Gwendolen M. Carter Lectures in African Studies "Health, Society, and Development in Africa" series* (2012), University of Florida, USA.

* *Dept. of Biology and Emerging Pathogens Institute* (2012), University of Florida, USA.

* *RAPIDD Small Mammal Disease Working Group meeting* (2012), University of Cambridge, UK (Two talks, remotely presented with Dr. Colleen Webb).

* *Ecological Society of America conference* (2012), Portland, Oregon, USA.

* *L'Institut de recherche pour le d?veloppement seminar* (2012), Montpellier, France.

* *Centre d'Ecologie Fonctionnelle et Evolutive seminar* (2012), Montpellier, France.

† *Ecology and Evolution of Infectious Diseases (EEID) conference* (2011), University California, Santa Barbara, USA.

* *RAPIDD Working Group* (2011), CSU, USA.

* *ESEI workshop* (2010), University of Sussex, UK.

* *Second International Symposium on Bat Infectious Diseases* (2010), Leibniz - Institute for Zoo and Wildlife Research, Berlin, Germany.

* *RAPIDD Workshop: Bat Disease Dynamics* (2010), University of Cambridge, UK.

‡ *NIH Bats and Emerging Viral Diseases Workshop* (2009), NIH Washington DC, USA.

† *Wellcome Trust Clinical Research Fellows Meeting* (2009), Wellcome Trust, London, UK.

* *First International Symposium on Bat Migration* (2009), Leibniz - Institute for Zoo and Wildlife Research, Berlin, Germany.

* *Department of Zoology seminar*, University of Ghana, Accra, Ghana (2009).

* # *Centre for Epidemiology and Risk Analysis seminar*, Veterinary Laboratories Agency, UK (2009).

* *Rabies in the Americas (RITA)* (2008), Centers for Disease Control and Prevention (CDC), Atlanta, USA.

* *Workshop on the ecology of *Eidolon helvum* and its associated infections* (2008), University of Cambridge, UK.

* *Wellcome Trust Sanger Institute and CIDC Research Day* (2007), UK.

Publicity, policy and outreach

- *YouTube* - Global Health Security Agenda presentation www.youtube.com
- *TV interview* - 3 News 3rd Degree www.3news.co.nz regarding Ebola
- *Briefing* - Science Media Centre www.sciencemediacentre.co.nz regarding Ebola
- *Article* - The Conversation www.theconversation.com regarding Ebola in W. Africa 2014
- *Interviewee* - *Mongabay* www.mongabay.com on bats, *Deutschlandfunk, Germany* www.deutschlandfunk.de on white-nose syndrome in bats, *Graeme Hill, RadioLive, New Zealand* www.radiolive.co.nz, on Marsden project and the origins of infectious diseases, *NPR Morning Edition, USA* www.npr.org, *Manawatu Standard* Manawatu Standard and *Taranaki Daily News* Taranaki Daily News on ebolavirus in W. Africa, 2014, *Radio France International* www.rfi.com on ebolavirus in W. Africa, 2014, *Science News* www.sciencenews.org and *Live Science* www.livescience.com regarding Luis et al. PRSB 2013.
- *Meetings* - US Senator Mark Udall (Democrat, Colorado) and Tom Udall (Democrat, New Mexico) representatives/staffers to discuss the use of science in policy, Washington DC, 2014.
- *Research feature or news article* - *MedicalXpress* www.medicalxpress.com, *NZ Herald* www.nzherald.co.nz, *Stuff* www.stuff.co.nz, *CMCC* www.cmcc.it, *News Xinhuanet (Asia Pacific)* www.news.xinhuanet.com, *Daily Times Pakistan* www.dailytimes.com.pk, *BioEcoGeo (Italy)* www.bioecogeo.com, *China.com* www.china.com, *IPASVIBIO (Italy)* www.ipasvido.it, *Valori (Italy)* www.valori.it, (all on [53]) *NZ Herald* www.nzherald.co.nz, *Nature* www.nature.com, *derStandard* www.derstandard.at, *der Spiegel* www.spiegel.de, *Die Welt* www.welt.de, *Science News* www.sciencenews.org, *Phys.org* www.phys.org, *Voxy* www.voxy.co.nz, *Science Daily* www.sciencedaily.com (all on [43]), *The Guardian* www.theguardian.com, and *The Telegraph* www.telegraph.co.uk on Cryan et al., PNAS, 2014; *Science Daily* www.sciencedaily.com, *Science News* www.sciencenews.org on Olival and Hayman, Viruses, 2014; *BBC* (Dr. Luis interviewed) www.bbc.co.uk, *NBC* www.nbcnews.com, and *Nature* www.nature.com on Luis et al., PRSB, 2013; and *Nature* www.nature.com, highlighting Hayman et al., PLoS ONE, 2008 and Hayman et al., PLoS ONE, 2011.
- *Science advisor* - *Cambridge University Science Festival* - children's "bug" cards (Ebolavirus and Rabies virus), *Carnegie Mellon University* "Sixth Extinction in Motion" film - "Bats" thextinctioninmotion.com.
- *Team member* - Exhibition at the Royal Society Summer Science Exhibition. www.royalsociety.org.

References

- *Prof. Nigel P French* - Director, ^mEpiLab and Infectious Disease Research Centre, Massey University, New Zealand.
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- *Prof. Colleen T Webb* - Department of Biology, Colorado State University, USA.
Email: ctwebb@lamar.colostate.edu.
- *Dr. Paul M Cryan* - Research Scientist, US Geological Survey, USA.
Email: cryanp@usgs.gov.
- *Dr. Juliet R. C. Pulliam* - Assistant Professor, Department of Biology and Emerging Pathogens Institute, University of Florida, USA.
Email: pulliam@ufl.edu.
- *Prof. James LN Wood* - Director of Disease Dynamics Unit and Head of Department of Veterinary Medicine, University of Cambridge, UK.
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- *Prof. Tony Fooks* - Head of Wildlife Zoonoses and Vector-borne Diseases Group, Animal Health and Veterinary Laboratories Agency Weybridge, UK.
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- *Prof. Andrew A Cunningham* - Professor of Wildlife Epidemiology, Royal Veterinary College, Deputy Head, Institute of Zoology, Zoological Society of London, UK.
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