



Dr Hume Field is an internationally recognized authority on emerging diseases associated with bats. He is a veterinary epidemiologist with particular expertise in Hendra virus and Australian bat lyssavirus (the focus of his PhD research), Nipah virus (he worked with US Centres for Disease Control colleagues to control the 1999 Malaysian outbreak and identify the natural reservoir) and SARS coronaviruses (he worked with Australian, Chinese and US colleagues to identify the origins of SARS in 2003-4).

He has been a temporary advisor to the United Nations World Health Organisation (on henipaviruses and SARS), the United Nations Food and Agricultural Organisation (on SARS), and the World Organisation for Animal Health (on rabies and other lyssaviruses). He strongly believes that human, livestock, wildlife and environmental health are inextricably linked, and has long championed a 'One Health' approach to emerging infectious diseases associated with wildlife. He coordinated the Ecology of Emerging Infectious Diseases research program for the Australian Biosecurity Cooperative Research Centre from 2003-2010.

He developed the Wildlife Epidemiology component of the Master of Veterinary Public Health course for the University of Western Sydney in 2004-5. He was visiting Professor of Zoonoses at the University of Malaysia, Sarawak in 2009-10.

His current research is focused on identifying risk factors for Hendra virus spillover. He is Principal Scientist in the Queensland Centre for Emerging Infectious Diseases in Brisbane.

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# THE APPLICATION OF ONE HEALTH APPROACHES to Henipavirus Research.

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## **Abstract**

Henipaviruses cause fatal infection in humans and domestic animals. Transmission from fruit bats, the wildlife reservoirs of henipaviruses, is putatively driven (at least in part) by anthropogenic changes that alter host ecology. Human and domestic animal fatalities occur regularly in Asia and Australia, but recent findings suggest henipaviruses are present in bats across the Old World tropics. We review the application of the One Health approach to henipavirus research in three locations: Australia, Malaysia and Bangladesh. We propose that by recognising and addressing the complex interaction among human, domestic animal and wildlife systems, research within the One Health paradigm will be more successful in mitigating future human and domestic animal deaths from henipavirus infection than alternative single-discipline approaches.

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