

Understanding crocodile disease

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In a breakthrough in understanding crocodile disease University of Sydney scientists have discovered the genetic profile of a group of viruses in crocodile genes that are not found in alligators or other like reptiles.

The discovery of these endogenous retroviruses (ERVs), to be documented in the upcoming [Journal of Virology](#), means that scientists can examine whether they trigger disease in crocodiles.

This research is the basis for continuing full analysis of saltwater crocodiles in the Northern Territory, both wild and farmed, to understand the

genesis of crocodile diseases.

The loss of crocodiles to disease is a major concern for Australia's crocodile export industry.

In 2006 several thousand farmed baby crocodiles in the Northern Territory unexpectedly died. The deaths - at first a mystery - were later determined to have been caused by chlamydia. However, when some "chlamydia-infected" tissue was put into a crocodile cell line, it was discovered to be associated with a virus. Many more crocodiles die every year from unidentified causes which could also be viral-related.

Much mystery still surrounds disease development in crocodiles, particularly those in farmed environments. Disease outbreaks in farmed crocodile populations have the potential to shake the crocodile industry to the core.

University of Sydney veterinary PHD student Weerachai Jaratlerdsiri conducted the research with his supervisor Dr Jaime Gongora and other colleagues from the Faculty of Veterinary Science. The research is being funded by the Rural Industries Research and Development Corporation (RIRDC) in collaboration with Berrimah Veterinary Laboratory and Darwin Crocodile Farm.

Dr Gongora said there was increasing interest in the study of immune genetics, virology and genomics in relation to crocodiles.

"It is important both for the sake of our wildlife and also for the crocodile industry," he said.

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