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Media Statement

WA RESEARCHERS AIM TO SAVE PETS FROM DEADLY SNAKE BITES

Local researchers are investigating a way to save family pets from the potentially fatal impact of venomous snake bites.

As part of her PhD at the Western Australian Institute for Medical Research (WAIMR) and The University of Western Australia, student Tammy Jacoby is analysing venom levels in dogs and cats with the hope of improving treatments for animals after being bitten by a snake.

Ms Jacoby said the venoms of brown, tiger and black snakes can be fatal in pets and the current snake bite treatment available can be expensive and distressing for owners.

“If a venomous snake bites a dog or a cat it can cause paralysis, bleeding disorders and muscle damage which - if not treated quickly - will lead to death,” she said.

“The current snakebite treatment uses anti-venom which can require up to 10 vials costing hundreds of dollars each and so it can be a very expensive option - regularly leading to pet owners having no financial choice but to put their beloved pet down.”

Project collaborator and Senior Lecturer in the Veterinary Emergency and Critical Care at Murdoch University Veterinary Hospital, Dr Katrin Swindells said: “At present, the only way a vet can assess whether a pet is healthy enough to stop administering anti-venom is if they start showing an improvement in the general, clinical signs of health as well as returning normal blood test results.

“However, it is still unknown how long after administering anti-venom it may take for that improvement to occur, so there is a risk that more than the necessary vials are being used.”

Ms Jacoby said the new research aimed to develop a better understanding of the serious effects that snake venom may cause and to investigate a way to successfully use less vials of anti-venom.

“At present, the only way a vet can assess whether a pet is healthy enough to stop requiring the administration of anti-venom is if they start showing an improvement in the usual clinical signs of health as well as displaying a normal blood test,” she said.

“But it is not known how long after the administration of anti-venom it may take for improvement to occur and so there is the risk that more vials may be utilized than are necessary.”

Ms Jacoby said the research will focus on the detection of measurable levels of circulating venom in the blood and tissue of the animals.

“It is hoped that by analysing venom levels, correlations can be made to clinical measurements of clotting function, renal failure, paralysis and muscle degradation, and will aid in the determination of when a vet can safely stop administering anti-venom,” she said.

“We anticipate that this will ultimately lead to a quicker, less costly treatment which will help both pets and their owners.”

Ms Jacoby's supervisor Kathleen Davern, who heads WAIMR's Monoclonal Antibody Facility, said the research may also be used to help human snake bite victims.

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In 2008 WAIMR celebrates 10 years since its inception and the many internationally-important discoveries which have transformed it into WA's premier adult medical research institute.



“The treatment for snake bite is similar in humans but because there are few financial constraints on patient care - death from snake bite is rare - however this research still has the potential to aid sickness and the long periods of hospitalisation which are often associated with snake bite patients,” she said.

Each year in Australia, there are more than 6,000 reported snake bite cases in domestic animals, most of which are linked to brown, tiger and black snakes.

Ms Jacoby is also co-supervised by The University of Western Australia (UWA) Professor Ian Dadour, at the Centre for Forensic Science, Associate Professor Simon Brown at the Centre for Clinical Research and Emergency Medicine and WAIMR's Professor Grant Morahan.

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MEDIA CONTACT: Sarah Hayward, WAIMR Media Consultant, m 0411 404 415, o 9388 9280