

Dog attacks is there an aggressive way to solve them?

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Abstract

With over 100,000 dog attacks in Australia per year many go unsolved and have not only an impact on the community but leave an emotional burden to individuals involved. Councils are usually left to pick up the pieces and unaware that at most attacks there is plenty of evidence left behind – DNA evidence. As a tool DNA is fast becoming the useful and evidential method of choice as a means of prosecuting individuals for dog attacks. The Dog Attack Pack now provides the necessary tools to be able to collect potential DNA evidence at the scene of crime. How can we target these potential dogs and thus try and prevent any such attacks? Can we genetically screen dogs and thus have a means of identifying whether they are a danger? Is there a genetic means of being able to evaluate whether a dog has a predisposition to attack such as level of aggression? Can a test to measure phenotypic behaviours such as aggression, obedience and anxiety, be developed? Studies have already demonstrated certain aspects of dog behaviour to be heritable. A genome wide scan using linkage analysis to identify traits for canine behaviour would have huge benefits to the community and play a vital role in matching a dog to the owner or particular task.

Introduction

DNA has been shown to be a successful tool for management of pedigrees and assessment of certain genetic diseases. With recent advances in technology, especially in the field of forensics, many still remain unaware of the role DNA can play in helping solve dog attacks. The role of DNA now has the ability to expand and become a useful management tool in the area of local law enforcement.

Australia has one of the highest incidences of dog attacks with over 100,000 attacks per year, councils and the public remain defiant in finding a means of tackling these attacks. Many of these attacks occur on livestock and other companion animals and the majority of the cases arise from owners who simply allow their dogs to roam freely without any adequate control.

Trying to solve these attacks has previously been difficult with most rangers not familiar with what samples need to be collected, how to collect them and more importantly the procedures that need to be followed to ensure the samples integrity and that it holds up in court.

Genetic Technologies (GTG) – NATA Accredited Forensic Laboratory

Genetic Technologies (www.gtg.com.au) is a private laboratory situated in the Melbourne and houses one of the most extensive canine databases in Australasia. With tests to determine disease, pedigrees and verification of pedigrees GTG continues to be the forefront of the dog world assisting breeders, vets and dog owners with genetic insight into their companion animals. In 2005 GTG was the first private laboratory to be accredited by NATA in the area of human forensic testing and in 2006 became the only NATA forensic accredited lab in the area of canine forensics. GTG became the first company in Australia to use DNA to help solve a case of animal cruelty for the RSPCA using DNA evidence to convict a man accused of attacking his dogs. GTG also has DNA experts and can provide expert testimony on forensic matters.

Dog Attack Kit – What is It?

GTG is only too aware of the issues councils can face when it comes to dog attacks and in June of 2007 launched what was a worldwide first – The Dog Attack Pack. One of the main frustrations encountered by councils/rangers when it came to investigating dog attacks was that by the time rangers had contacted a laboratory to obtain the relevant information and necessary collection tools it was all too late. The key is to collect samples as quickly as possible and avoid prolonged exposure to the environment and avoid DNA degradation and the possibility of key evidence not being collected. A DNA collection kits that contains most of the necessary tools to carry out a sample collection and more importantly procedures and relevant paperwork such as chain of custody forms now gives rangers everything they need to take a sample at a crime scene. Rangers are now part of the CSI team – Canine Sample Investigation. The kit would now allow rangers to collect a sample from any attack there and then and thus eliminate one of the problems with dog attacks the time taken to collect a sample.

It's not the dog it's the owner

Debate continues as to why dogs attack; is it the particular breed? Is it their behaviour or has the owner simply been negligent? Behaviour and temperament remain one of the important factors to whether dog is retained by its owner. Dogs' traits or phenotypic behaviour is one of the exciting features of dogs with certain pedigrees/breeds associated to certain behaviours. These traits have been shown to be quite broad for all dogs and demonstrated to be evolutionary stable. There is plenty of documented evidence to support that certain aspects of canine behaviour are heritable. Can genetic markers be developed to assess certain behavioural traits such as friendliness, sociability, aggression, handleability, anxiety, dominance, submission and general level of trainability? As a genetic tool the ability to be able to determine certain behavioural traits will revolutionise animal management and ownership and go so far in ensuring that dogs are matched with appropriate owners thus potentially lowering the rejection rate of dogs.

About the Author

George Sofronidis B.Sc (Hons) is the Manager Animal Diagnostics – Companion Animals and has over 15 years of dedicated experience in molecular biology and the way it can assist in areas of animal management.

Following his initial work and research in forensic science at the Victorian Institute of Forensic Medicine he moved his focus into the area of animal reproduction and conservation, a career which has seen him work on some of Australia's most endangered mammals and research which has focused on the role of sperm competition and conservation genetics. George has worked at Monash University, Melbourne University and the Zoological Parks and Gardens Board. His strong appreciation for the benefits animals bring to our society saw George in 2000 establish Genetic Science Services, a company dedicated to animal DNA testing. Extensive experience in building and developing business relationships with animal enthusiasts both, domestic and livestock.

George joined Genetic Technologies in April 2002 and continues to focus on educating breeders, farmers, vets, associations and pet owners on the benefits of DNA testing in particular the insight it brings to all animal enthusiasts.