FORENSICS AND ANIMAL GENETICS: AN EMERGING SCIENCE

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In the past, various methods of human DNA analysis have been employed to link suspects to crime scenes. Now, crimes are also being solved with the use of animal DNA testing. Both mitochondrial DNA as well as STRs are now commonly used in the animal industries. In recent years, these resources are also being used to solve crimes. Cases have ranged from fraud disclosed using equine mitochondrial DNA to linking a suspect to the crime scene of a homicide with canine mitochondrial DNA. Additionally, multi-species STRs yield results in just as wide a variety of forensic cases. Equine STRs coupled with human STRs were utilized to not only identify a racehorse injected with cocaine, but also to identify the human profile of the suspect that injected the horse. Canine STRs amplified from DNA extracted from saliva stains on a victim's clothing after a brutal dog attack resulting in linking a neighbor's dogs to the attack and resulting criminal negligence charges. Bovine and equine STRs have been utilized on numerous occasions on various cattle rustling cases as well as horse theft with great success. Wildlife enforcement also utilizes animal DNA analysis to successfully prosecute cases. Deer STRs can link meat to bloodstains or remains in poaching cases. Additionally, sex of the deer can be determined so that laws relating to the harvesting of antlerless deer can be enforced.

With multi-species DNA analysis capabilities, more crimes will be solved in the future. If a suspect owns an animal or works around animals, chances are that animal hair will be present on his person. Even with gloves or other protective measures that a suspect might take to prevent transfer of his or her own DNA, animal hair has been left behind at crime scenes time after time. Increased utilization of available animal DNA analysis methods will insure that more cases will not remain unsolved.