Can cats at a crime scene help find key DNA evidence?

November 1 2022, by Flinders University

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Pets at a crime scene may be helpful in gathering key evidence but rarely are they considered for their role in human DNA transfer.

For the first time, Flinders University forensic science researchers have examined the presence and transfer of human DNA on pets such as cats and dogs.

This research considers cats both as receptors and vectors for DNA of a person of interest—key evidence in criminal investigations.

In collaboration with the Victoria Police Forensic Services Department, forensic science researchers Heidi Monkman and Dr. Mariya Goray, from the College of Science and Engineering at Flinders, collected human DNA from 20 pet cats from multiple households.

Detectable levels of DNA were found in 80% of the samples and interpretable profiles that could be linked to a person of interest were generated in 70% of the cats tested.

"Collection of human DNA needs to become very important in crime scene investigations, but there is a lack of data on companion animals such as cats and dogs in their relationship to human DNA transfer," says Monkman.

"These companion animals can be highly relevant in assessing the presence and activities of the inhabitants of the household, or any recent visitors to the scene."

An experienced crime scene investigator Dr. Goray, an expert in DNA transfer, says this data can be very relevant when interpreting forensic DNA results obtained from a crime scene that includes pets.

"This type of data can help us understand the meaning of the DNA results obtained, especially if there is a match to a person of interest.

"Are these DNA finding a result of a criminal activity or could they have been transferred and deposited at the scene via a pet?"

"Further research is required on the transfer, persistence and prevalence of human DNA to and from cats and other pet animals and the influences animal behavioral habits, the DNA shedder status of the owners and many other relevant factors," the researchers say.

To this point, further collaborative work on cats and dogs is currently underway at the Flinders University forensic laboratory.

The article, "Is There Human DNA on Cats?," has been published in *Forensic Science International: Genetic Supplement Series*.

More information: Heidi Monkman et al, Is there human DNA on cats, *Forensic Science International: Genetics Supplement Series* (2022). DOI: 10.1016/j.fsigss.2022.10.014

Provided by Flinders University