

Research project: Genetic investigations of canine idiopathic epilepsy

We would like to invite you to take part in our research to investigate the genetics of idiopathic epilepsy in dogs.

Canine idiopathic epilepsy is a disease that is common in many breeds of dog and can significantly impact the quality of life of affected dogs and their owners. However, there is a severe lack of knowledge concerning the role of genetic factors in susceptibility to the disease in most breeds.

Researchers in the Kennel Club Genetics Centre at the University of Cambridge in collaboration with Linnaeus; the University of Helsinki in Finland; and the University of Manchester in the UK, are conducting genetic studies that aim to identify variants in the DNA that are associated with idiopathic epilepsy.

For our research we require cheek swab DNA samples from dogs with, and without, idiopathic epilepsy. For dogs with idiopathic epilepsy, it is essential for our research that we are as certain of the diagnosis as possible to enable us to exclude cases that may have seizures for other reasons.

What would taking part involve?

For both affected and unaffected dogs we will ask you to collect a cheek swab DNA sample from your dog. This involves rubbing some small brush-like swabs on the inside of your dog's cheek. These take a very thin layer of cells from which DNA can later be extracted.

For potential idiopathic epilepsy cases we would like you to fill in a questionnaire for your dog. This includes detailed information about their seizures, and we ask if possible that you could also include:

- video footage of one or more of the seizures;
- copies of your dog's veterinary medical record;
- copies of the results of any diagnostic investigations performed since their seizures started.

We will also ask for your consent for us to contact your vet, if we feel it is necessary, to clarify any details or to ask for more information regarding your dog's seizures or treatment.

What are the potential benefits of taking part?

By contributing a cheek swab DNA sample from your dog for our idiopathic epilepsy research you are supporting a project that has the potential to help prevent this disorder from occurring in other dogs of your breed and possibly other breeds that might have the same condition.

What do we hope to achieve?

The goals of our research are to help prevent this disease and/or improve its treatment. It is possible that we could develop a preventive DNA-based tool. However, a DNA test which identifies dogs with a variant within a single gene that will cause idiopathic epilepsy is very unlikely. It is more likely that, in the longer-term, we will be able to develop DNA tests that could inform us if the dog has DNA variants that increase their risk of developing idiopathic epilepsy, or that could help inform their treatment.