

Epilepsy Research

I'm working in a Canine Genetics Research Group in University of Helsinki. We are studying epilepsy in many breeds, including Finnish Lapphunds. Very recently we identified a benign juvenile epilepsy gene from Lagotto Romagnolos and now there is a genetic test available for them. So far we have collected over 30 epileptic cases from Finland, Sweden and Netherlands. Based on the pedigrees we assume that the disease is polygenic in Lapphunds meaning that several genes are involved in its inheritance. We aim to identify these genes and hopefully we can offer a genetic test in the future.

Since the disease seems to be polygenic, we need more samples to be able to identify the genes compared to the diseases that are caused by single recessive gene. Therefore every single epileptic dog is very important for the study. In addition we need controls that are related to epileptic individuals. The older the control dogs are the better. We collect blood samples (~3-5 ml blood in EDTA tube). There is not enough DNA in cheek swabs for research purposes.

We have also studied epileptic Lapphunds clinically including electroencephalography (EEG) and magnetic resonance imaging (MRI) measurements. Only one of the studied dogs had brain tumour, all others suffered from idiopathic epilepsy. The age of onset varies a lot (12 weeks - 12 years), but the average is around 3 years. In addition to epilepsy, we are also studying HC (hereditary cataract) in Lapphunds. The same samples can be used in both studies. Therefore we are also collecting eye certificates when ever those are available. The cases and controls used in the HC study need to be eye examined.

Hopefully UK dogs are also willing to participate to the study. If you send us samples, please send a copy of a pedigree and an attached sample form from each individual. Attached is also an epilepsy questionnaire that we use to collect more detailed information from the epileptic dogs.

Do not hesitate to ask if you have any other questions.

Best regards,
Eija Seppälä