

Research aims

Our team at Nottingham researches genetic links for a few key diseases in dogs, with the ultimate (although long term) aim of earlier diagnosis and treatment, and potentially even prevention. The group consists of cardiovascular and cancer genetics specialists and small animal and cardiovascular specialist veterinary surgeons. In the first Nottingham University School of Veterinary Medicine and Science Deerhound Owners Forum we listened to your needs and worries concerning your dogs. Two major worries came up namely cardiomyopathy and osteosarcoma. At this point the Nottingham Canine Health Genomics group agreed to start looking into dilated cardiomyopathy (DCM) in your breed.

At the moment the diseases we are focusing on in Deerhounds are heart diseases, particularly dilated cardiomyopathy, and osteosarcoma. For the last 18 months we have been asking for swabs that allow us to get DNA samples in a non-invasive manner and if these individuals have, or develop in the future, any health conditions we can aim to match this information up with the DNA. Likewise if these individuals stay healthy well into old age we can match this up with the DNA. We also ask you to fill out a health questionnaire and to continue to update us as time moves on whether your dog's health remains the same, or whether any changes occur. This matching up of any diagnoses, or healthy into old age relies on you, the owners, keeping us informed about the health of your dogs, so please keep us regularly updated even if there is no change.

In addition to meeting with your health group, we write updates on our research for the newsletter/website and keep you informed about what has been discovered or interesting papers of relevance.

How do I get involved? To get swabs and an initial information pack, you can email NottinghamCanineHealthGenomics@gmail.com. If you have already joined the study and wish to update on your dogs health please fill in the online form at <http://goo.gl/forms/PaZHGZJDT0>. You can also read our website and facebook updates to learn more about the study. <https://www.facebook.com/pages/Nottingham-Canine-Health-Genomics/639908492764194>

Nottingham Canine Health Genomics group

Newsletter/Website Updates September 2015

This update contains information from the Nottingham Canine Health Genomics group about the DNA samples collected and the laboratory work being undertaken, future work and updates, and some interesting news on a paper that we recently published.

DNA samples

We have now collected DNA samples from 117 Deerhounds and we are on the way with lab work, but we still need your help. We need health updates from you, the owners. Without accurate up-to-date health information our research into the genetic side of health conditions is invalid. While owners are busy people and if your dog develops a health condition your focus clearly should be with them, but we need you to update us on the health of your dogs regularly. It is a very simple online form which should take a maximum of 5 minutes. Even if your dog's health hasn't changed please take a few minutes to update us on the health of your dogs here: <http://goo.gl/forms/PaZHGZJDTO>

We are particularly concerned about the underreporting of dilated cardiomyopathy (DCM). At the forum day here at Nottingham Vet School Deerhound owners indicated that this disease was prevalent and of concern within the breed. This matches literature reports of up to 50% prevalence. Despite this we only know of 2 Deerhounds of the 117 with a diagnosis of DCM, this in only 1.7%. It would be great to believe that these numbers represent all cases of DCM but as they are so far away from previously reported percentages we doubt this to be the case. Although it can be upsetting news, please do let us know if your Deerhound develops a heart condition. All information you provide us with is treated confidentially and is anonymised so you do not have to worry about anyone discovering any diagnoses due to informing us.

The health of your dogs? – An update

In October 2015 we have recruited some undergraduate researchers to help us update the health information of your dogs. We will be contacting those of you who provided us with contact details to ask you the questions included in the health form. This is to ensure that the information we have is as up-to-date as possible.

Heart tissue samples

To further our research into heart conditions, in particular DCM, heart tissue from both affected and unaffected dogs would be invaluable for a range of analyses. These analyses have the potential to lead to more targeted treatments which would improve the quality of life for affected individuals.

Unfortunately unlike osteosarcoma samples which can be taken as part of treatment, heart samples can only be taken during a post mortem examination. We know that this is a very emotive subject and understandably some owners are not happy with the thought of a post mortem being carried out on their beloved pet. If, however, this is something that you think you may be comfortable with please get in touch with us. We are happy to answer any questions you have and discuss logistics in advance of any health conditions arising which may lead to the sad loss of your pet.

Osteosarcoma

Along with DCM, Osteosarcoma incidence in Deerhounds was a main health problem in the forum day that we hosted. Prior to the forum day where you told us this, we had already started extensive research into osteosarcoma in Rottweilers. This gives us a good launch pad from which to investigate the disease in Deerhounds as well.

The main focus of our research into osteosarcoma is currently focussed on tumour samples themselves. These samples are usually taken when an individual has the affected limb amputated as part of treatment, although they can also be taken immediately post mortem. We currently have tumour samples from 10 Rottweilers and 3 Deerhounds. We hope that anything discovered about osteosarcoma in one breed will have relevance in other breeds, but this may not be the case. To allow us to establish the relevance across breeds we require additional tumour samples from affected Deerhounds. This work is particularly expensive with the analysis of a single tumour sample costing £1000 just for the initial testing and much more for the analysis.

