

Dear Deerhound owners

We have been working with your breed for nearly a year now undertaking research into the genetics of heart disease and osteosarcoma. In this time we have collected 114 buccal (mouth) swabs from your Deerhounds with associated health data. We have extracted DNA from all of these swabs and we are now starting to look at a few genes that may be involved in heart disease. This is in the early stages. The same genetic samples can be used to investigate genetic causes of other diseases, currently this includes osteosarcoma, but it could include other diseases in the future. For this reason although we are particularly interested in heart disease and osteosarcoma diagnoses at the moment, we may look at other diseases so could you please let us know if the health of your Deerhound changes in any way. The best way of letting us know about any health changes is by filling in this form: <http://tinyurl.com/NottinghamCanineHealthForm> alternatively you can email us: NottinghamCanineHealthGenomics@gmail.com Filling the form in if your Deerhound's health changes is valuable, but equally valuable is knowing that your Deerhound is still healthy, so if you can try to fill in the form once a year even if there has been no change in their health that would be helpful.

Along with buccal swabs to collect DNA samples we have also been collecting osteosarcoma tumour samples to examine the expression of genes in tumour tissue compared to normal tissue. We have three tumour samples from your Deerhounds, these are extremely valuable to our research. These samples are usually taken when the tumour is being biopsied at the time a diagnosis is being made or when the affected limb is being amputated, and so thus does not cause any additional trauma to your Deerhound. We are continuing to collect tumour samples so if your Deerhound is unfortunately diagnosed with Osteosarcoma and you opt for amputation please get in touch with us asap so we can send out specific preserving liquid to your vet in time for the operation. Email: Mark.Dunning@nottingham.ac.uk and/or NottinghamCanineHealthGenomics@gmail.com

With regards to the yield of DNA from buccal swabs most work reliably, but we do find that for a number of possible reasons some just don't yield a high enough quality DNA for further analysis. For this reason we may ask you for another swab to be taken if you let us know that your Deerhound has developed a heart condition or osteosarcoma if the first swab we took hasn't yielded enough high quality DNA for our analysis.

Your top concerns for the breed included investigating Dilated Cardiomyopathy and Osteosarcoma. We have yet to receive many submissions from affected dogs but would encourage as many people to respond as possible so that more of the affected dogs will be sampled. We appreciate that your priority at the time of these upsetting diagnoses is with your Deerhound, but without enough of these cases, and accurate health data to match to the genetics, the statistical power that we have to detect genetic associations is limited, so if you can find the time to let us know (if your dog has already been sampled), or to ask us for a swabbing kit, that would be very helpful. All of this information is kept completely confidential.

Most of the swabs we have were taken at your breed show where you may not have taken all your Deerhounds along. If you have unswabbed Deerhounds, particularly those affected

by heart disease or osteosarcoma, or over 8 years old and healthy, please get in touch with us so we can send you swabs.

The research is very expensive but we are still doing the swabbing for free and paying for the research. We will also pay for postage if you want the swabs to be posted to you. Thank you all so much for your time, effort and samples thus far. We will endeavour to continue to keep you up to date on the progression of our research.

Best wishes,
Siobhan and the Nottingham Canine Health Genomics team

DNA extraction processing and anonymising

