

HEALTH REPORT SEPTEMBER 2021

Fitting

The JHG Health Report in April was omitted from the WSSC Newsletter in July. To rectify this error the WSSC agreed to send out the report to members, this was done because each of the breed clubs has agreed to follow the Terms of Reference (T.O.R.) of the JHG. The Terms of Reference were agreed by the breed clubs and they have agreed to publish JHG Health Reports in the next available Newsletter or publication. Breaching this agreement could result in a club being asked to leave the JHG.

The JHG only publishes the details of any fitting dog when an owner has given written permission and the vet treating the dog has supplied a signed form with his diagnosis of the fitting. The JHG has sought legal advice regarding the publishing of details of fitting dogs and has confirmation in writing that as long as we have this signed information then we can legally publish.

The JHG is confident that this acknowledges its role in handling health matters

Promoting the JHG

The JHG is looking into ways of promoting the JHG and will be discussing the idea of a Facebook page to supply information for owners.

Give a Dog a Genome

When Give a Dog a Genome was launched the KCGC was based at the Animal Health Trust (AHT) but following permanent closure of the AHT in July 2020, the KCGC has now relocated to the Department of Veterinary Medicine at the University of Cambridge.

Update

Abbreviations used:

<i>GDG</i>	<i>Give a Dog a Genome</i>
<i>IE</i>	<i>Idiopathic Epilepsy</i>
<i>AHT</i>	<i>Animal Health Trust</i>
<i>KCGC</i>	<i>Kennel Club Genome Centre</i>
<i>WGS</i>	<i>Whole Genome Sequences</i>
<i>PRA</i>	<i>Progressive Retinal Atrophy</i>

Interest in GDG (Give a Dog a Genome) exceeded expectations, and ultimately 77 different breed communities contributed funds

towards the cost of sequencing the genomes of 89 different dogs. Some of the dogs were affected with a disorder known to be a problem for their breed whereas others were healthy older dogs. Sequencing of all 89 genomes was completed prior to the closure of the AHT and all the genome sequence data, together with the KCGC's (Kennel Club Genome Centre) collection of approximately 40,000 DNA samples, have been moved to the University of Cambridge where they are stored safely. The 89 GDG whole genome sequences (WGS) have been added to additional WGS (Whole Genome Sequences) generated by the KCGC for other breed- or disease-specific projects and at the time of writing the KCGC genome bank contains the sequences of 218 dogs of 100 different breeds.

The genome bank is utilised for every investigation the KCGC undertakes, regardless of the breed or the disease being investigated. Specific genome sequences within the bank are used as 'cases', when the dog that the sequence belongs to was affected with a disease that is the subject of the specific investigation. In contrast, genome sequences are used as 'controls' if they are from dogs of a different breed, or that are

unaffected with the disease being investigated. Frequently, a genome sequence will be used as a case in one study and a control in another. Thus, every WGS contributes to every study, and therein lies the power of the genome bank.

Studies are currently underway within the KCGC to investigate specific inherited disorders that are of concern to particular GDG breed communities. For example, we have used GDG data to successfully identify the mutation responsible for a novel progressive retinal atrophy (PRA) syndrome that affects Shetland Sheepdogs, and GDG data also played a central role in a similar project to identify the mutation responsible for PRA in the Lhasa Apso.

Idiopathic epilepsy (IE) is a disorder with more complex underlying genetics that the KCGC is actively investigating, and the GDG sequences from dogs affected with IE will play a very important role in those studies as they progress. Importantly for our complex disease studies all the WGS from GDG have played a significant part in enabling us to develop a computational technique called genotype imputation in our lab. This technique allows us to maximise the use of the genome scan datasets that we already have for some of the disorders we are studying and will help us to narrow down any regions of the DNA that we find for these studies going forward.

The KCGC has shared some of the GDG data with researchers at other institutions who are investigating different inherited disorders to those we are investigating, so we anticipate GDG data will benefit studies beyond those undertaken by the KCGC. Over the coming months and years, the KCGC will continue to analyse the GDG data and share it with other researchers. As time and resources permit, we will expand the number of inherited disorders that are the subject of targeted investigations, and we fully expect GDG data to contribute positively to our research for decades to come.

Dr Cathryn Mellersh

The Welsh Springer Spaniel Joint Health Group works with research establishments such as Cambridge University and the Kennel Club Genome Centre providing data and supplying kits to owners to send DNA to Cambridge University.

We would really like to hear from owners about any conditions affecting our beautiful breed. We can only find information on conditions and work towards DNA tests to prevent diseases and conditions if owners help us. Please work with us, the Kennel Club and the research establishments in trying to ensure that we produce fit healthy dogs that are able to live long healthy lives.

Arlene Tester

Secretary WSS JHG

email: arlene.testers@mailfence.co

Tel: 01954 780820