HEALTH REPORT FROM THE MEETING OF THE WSS JOINT HEALTH GROUP HELD ON 13th May 2018

CANINE GENOME PROJECT

Update from Louise

As you already know, we selected a Welsh Springer Spaniel with Epilepsy to be whole genome sequenced as part of Give a Dog a Genome (GDG). The sequencing has now been completed by the external laboratory and the data has been made available for us to download.

What happens next?

The amount of data generated for each sample is enormous, around 80-90 Gb. To put that into perspective, data from only 10 dogs will fill up the average modern personal computer, and the processing of the data will use the full capacity of the computer for months. As a result it takes time (about 1 week) and a great deal of computing power to download and process the data so that it is ready for analysis. Once we complete this stage the Welsh Springer Spaniel Epilepsy data will be ready for further analysis.

The data will be added to the genome bank, and will begin contributing to studies in other breeds immediately. In addition, the data will be made available to other scientists for use in their own studies, and your breed has therefore made a vital contribution to genetic research affecting the welfare of dogs worldwide.

Analysis of the data to attempt to identify any variants that contribute to Epilepsy in Welsh Springer Spaniel will take far longer. Please be aware that it is entirely possible that we will not be able to identify any variants that contribute to this condition at all.

You will continue to receive any general GDG updates, but apart from that we will contact you only if there is something specific to the Welsh Springer Spaniel to report. If you don't hear from us, it means that we are still in the analysis stage and have not found anything of significance.

I would once again like to thank you and the breed community for participating in Give a Dog a Genome.

Louise and the rest of the Give a Dog a Genome Team

GLAUCOMA

A meeting took place on Tuesday 23rd January to discuss the pilot scheme regarding eye testing and the grading of each eye. The meeting had been arranged to include the J.H.G.(Delegates), Sheila Crispin (Head Eye Panellist BVA), James Oliver (Opthalmologist), Catherine Mellersh (AHT) and Katy Evans (KC) below is a summary of this meeting.

The new grading scheme allows the collection of data for research, which could be a 5 to 10 year project. Mention was made of using ultra-sound technology and it was said that this would be years away as it was exceedingly expensive. (a figure of 100,000 dollars was mentioned for the equipment)

The use of photography in testing was addressed and whilst it would be great to have this it is not without problems. For repeatability it would require the same person to do it, it is expensive as it would take 20 to 30 minutes per dog. The dog would need to keep still for a considerable time whilst having photos taken from different angles and the repeated replacing of the lens. This would have to be done as a research project

rather than routinely and would need funding. (It might be difficult to get approval for research, as it may not be ethical) 20-30 dogs were mentioned at first dropping to at least 20 to get a minimum of 12 dogs for this research. James mentioned that £20,000 to £25,000 has already been spent on the breed.

We were told that closed angle glaucoma is not likely to be a single gene but multiple genes and even environment factors could be involved. It is a complex problem which will take more time to develop a DNA 'tool' because of more parts being involved.

It was stated that there is no such thing as a pass or fail when testing so these terms should not be used. Also, we will now possibly be getting a reduction on repeat testing; the reduction on the second and third test per dog will amount to 10%.

Catherine Mellersh confirmed that they will not give up and that they are committed to getting to the bottom of this condition.

The 6 breeds for which a test is already available all have different mutations of open angle glaucoma. Although it looks the same in all it is genetically different and each breed has a test relevant to that breed...

A comment was made that by the year 2020 there is likely to be 100 million people on the planet with open angle glaucoma. Huge differences can be found according to race, it being common in African nations. Whilst treatment and surgery works well in humans, it is very different with dogs.

Discussion regarding a database of affected dogs was discussed and this will be looked into but the problem is that ordinary Vets may treat a dog and remove an eye, but to be of use it really needs to have been checked by an eye specialist to confirm the exact diagnosis.

A check will be made that all grade results are visible on Mate Select. (if your dog's results are missing or incorrect then email copies of the certificates to breeder services)

Thanks and appreciation was expressed to the JHG, the breed clubs and especially to the owners of all the dogs tested for the support given to this project.

It was agreed by all that the pilot scheme should go ahead.

Some discussion regarding breeding ensued and it resulted in the advice that Grade 2 should be bred from to prevent restriction of the gene pool. A grade 2 should preferably be mated to a grade 0 which has been tested within 12 months of the mating and is at least 5 years old.

We would be interested to know how the support of testing and research of the WSS community relates to other affected breeds with regard to:

(a) Coordination via similar Health Groups/ Health Coordinators?

(b) What sort of numbers are being tested as % of breed registrations?

(c) Organisation of testing sessions via Health Groups/BHS

(d) Reporting and publishing the names of dogs that develop Glaucoma.

Answers

a) Breed health coordinators of Schedule A & B breeds for goniodysgenesis/glaucoma were contacted during 2013 & 2014 and invited to participate in the AHT research into goniodysgenesis (PLD) prevalence and the genetics of goniodysgenesis and glaucoma in affected breeds. The majority of those contacted were keen to participate and 7 breeds were enrolled onto the study. The same mechanisms were used to collect data for each breed:

- Examination of dogs at shows
- Breed education days at AHT

- Contact of owners of previously examined dogs by BVA (to ensure confidentiality)

b) i) **Numbers being tested as part of BVA/KC/ISDS Eye Scheme**

The BVA was contacted to provide data but only had sufficient time to provide that for a limited number of Schedule A breeds.

Breed	Average annual registration (2014 – 2017)	Average annual tested (2014 – 2017)	% being tested
Welsh Springer Spaniel	335	65	19
Basset Hound	565	45	8
English Springer Spaniel	10160	170	2

ii) **Numbers tested as part of AHT research into PLD/goniodysgenesis**

7 Schedule A & B breeds

Breed	Average annual registration (2014 – 2017)	Numbers examined for PLD prevalence studies (as published)	%
Golden Retriever	7245	230	3
Hungarian Vizsla	2265	112	5
Border Collie	2040	102	5
Flat Coated Retriever	1220	170	14
Basset Hound	565	198	45
Welsh Springer Spaniel	335	227	68
Dandie Dinmont Terrier	110	95	86

c) Many breed clubs organise health testing sessions at shows including eye examinations under the BVA/KC/ISDS Eye Scheme. For all 7 breeds that participated in the AHT research (free eye testing for research), the AHT assisted in the organisation of all of these sessions in the same way.

d) No single database exists for all breeds which records number of dogs affected by primary angle closure glaucoma. This would be extremely difficult (nigh on impossible) to coordinate. For its part, the Eye Scheme only assesses the risk factor for primary angle closure glaucoma (namely goniodysgenesis/PLD) and not primary angle closure glaucoma itself. Responsibility is usually assumed by the breed clubs to monitor health within their individual breed. Some breeds have developed comprehensive means of recording primary angle closure glaucoma cases in their breeds such as the Border Collie which holds a database. The Dandie Dinmont clubs also monitors health very closely.

These are the annual data of numbers affected with goniodysgenesis (PLD)/numbers tested) for the Welsh Springer Spaniel:

2017: 8/75 (10.7%)

2016: 10/70 (14.3%)

2015: 5/42 (11.9%)

2014: 5/81 (6.2%)

2013: 2/66 (3.0%)

Since the meeting a new pricing structure has been introduced by the BVA and is listed below.

There is a 10% discount (when presenting the previous certificate) for a repeat Gonioscopy exam.

Fees:

Number of dogs	**Charge per dog Including certificate**	**(inc VAT)**
Routine eye examination:		
1 dog	£47.50	(£57.00)
Extra dogs in same ownership	£42.08	(£50.50)
Group Testing (25 or more)	£33.33	(£40.00)
Examination of dogs over 8yrs of age	£28.33	(£34.00)
Gonioscopy:		
Per Dog-separate examination	£47.50	(£57.00)
Gonioscopy Performed at the same time as a routine examination:	£42.08	(£50.50)
Repeat Gonioscopy (presenting previous cert) 10% off current price		
Litter screening:		
1-3 puppies	£29.17	(£35.00)
Per puppy thereafter	£9.17	(£11.00)
Duplicate copy of certificate	£30.00	(£36.00)

James Oliver will be holding an eye testing session at the WSSC Championship Show on 1st Sept. bookings will be taken by Julie Revill email to: julita@furzelands.demon.co.uk (tel: 01621 840346)

FITTING

No new cases have been reported. Please remember that it is important to keep reporting any new cases of fitting to help us to work towards a genetic test for this awful condition.

CANCER SURVEY

There is still time to help with this project and you can include all dogs present and past just go to: https://www.surveymonkey.co.uk/r/spaniel_cancer_survey

Update from Mark Dunning

We have just over 330 completed surveys which is great, more are trickling in all the time.
The student working on the project is just finishing her end of year exams and we had planned on getting this analysed over the next few months.
We have a breakdown of breeds that have completed the survey and I will get this to you ASAP.
Nevertheless, I think to date this has been a very successful survey and I hope this will lead to a more focused

project once we have analysed this one.

ALABAMA ROT (CRGV)

Cutaneous and renal glomerular vasculopathy (CRGV or 'Alabama rot') is a serious disease which has only recently been recognised in dogs in the UK. Although CRGVA can be very serious, the number of dogs affected with skin lesions and kidney failure remains low (56 confirmed cases across the UK between Nov. 2012 and May 2015).

Initial presentation with skin lesions (and occasionally in the mouth, which can look like bites, sores, wounds or stings), dogs are typically otherwise asymptomatic. Over the subsequent one to nine days they develop clinical signs referable to acute kidney injury (AKI). Some dogs will present with skin lesions and AKI concurrently and rarely dogs present with AKI prior to the development of skin lesions. Any age, sex, or breed of dog can be affected.

PLEASE BE VIGILANT! Check your dog regularly and if in any doubt seek veterinary help.

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Secretary
WSS JOINT HEALTH GROUP