

Health Matters



Update on “Probable Stationary Night Blindness”

Following our recent publications on this condition, Dee Rance, joint owner (with Sue & Mike Oakley) of Caspians Modesty, one of the three affected setters, has noticed that, in addition to problems with night vision, her bitch has begun to have difficulties seeing in daylight. She has, therefore had a further ERG examination at the Royal Veterinary College. Professor Bedford has now reported that this problem may be caused by a form of progressive retinal degeneration. The situation is under review. The three dogs involved (Caspians Modesty, Amity and Cassis) will each have a further ERG examination, probably in September.

To date, we are not aware of any further cases. Our message remains the same. Be aware of your dogs' vision; try the simple “home test” described in the 2007 Annual Review and in the ISAE leaflet on probable stationary night blindness; and have your dogs' eyes regularly examined with an ophthalmoscope by an eye panel vet at a KC/BVA/ISDS Eye Clinic. It is the way to become aware of new problems before they spread widely in the breed.

Eye clinics are listed in the dog papers. They are held at many general championship shows and the ISAE will be holding a clinic at its championship show on Saturday 3rd October in the new building at Stoneleigh (booking form enclosed). Veterans entered in the Show will be tested free of charge and will receive a special invitation to attend. Eyes should be checked at least three times in your dog's life and, ideally, every year. Please take advantage of this opportunity.

The Way Forward

DNA and the Animal Health Trust (AHT)

The ISAE Health Committee has been holding discussions with the AHT as to the best way of making use of the DNA (in the form of blood samples and cheek swabs) stored at the AHT. The majority of these samples were originally collected for DNA testing for PRA rcd 1 and CLAD, and further samples have been collected for future research into specific diseases such as bloat and MO. These samples can be made available for research into other diseases of particular importance in our breed. In order to use them it is important that a complete medical history of the dogs concerned is known.

With this in mind, the AHT has produced a simple, straightforward questionnaire targeted specifically at all those people who originally submitted the blood samples. The AHT is working with the Kennel Club to provide an address database for mailing purposes, but in line with data protection legislation will not disclose personal addresses to the ISAE.

Hopefully, by keeping the initial questionnaire simple, the response rate will be high. If you receive a questionnaire, please don't put it to one side but complete it and return it quickly. Our dream is to find a solution for more complex problems such as bloat, MO, and epilepsy. The survey could prove to be the key which unlocks some solutions for Irish Setters and for other breeds.

DNA Bank at the AHT for all Irish Setters

In addition to the blood samples/cheek swabs already stored, the AHT are willing to store the DNA of every Irish Setter, young or old, healthy or not, along with the dog's medical history, for future research. The following article by Dr Cathryn Mellersh of the AHT provides a full explanation.



Archiving DNA – Why Do It And What Does It Entail?

An increasing number of breed clubs are establishing DNA banks, or archives, to store DNA from dogs that are alive today for the benefit of the breed in the future. The Canine Genetics group at the Animal Health Trust is able to offer DNA Archiving facilities; enquiries should be made by a breed club representative to canine.genetics@aht.org.uk. This article answers frequently asked questions about what a DNA archive is, what the benefits are and what information needs to accompany each DNA sample for the archive to be of maximum benefit.

What is a DNA Archive?

A DNA archive, otherwise known as a DNA bank, is a collection of DNA samples from different individuals that are to be stored for an indefinite period of time. The DNA is collected with a view to using it for future research purposes, as and when it is needed. More information about what the DNA can be used for is included below in ‘What can the stored DNA be used for?’

Which dogs should have their DNA stored?

DNA from any dogs can be stored, but it is especially useful to store DNA from dogs that have or are likely to be bred from and dogs that are known to be closely related to dogs that are affected with inherited conditions.

What Can The Stored DNA Be Used For?

The stored DNA can be used for a variety of purposes. One important use for the DNA is to identify mutations responsible for inherited diseases; these diseases can be ones that are known about today or ones that might arise in the future. During a research project where a causal mutation is being sought it is often useful to analyse the DNA from affected dogs and from their parents and grandparents. For late onset conditions parents and grandparents may no longer be alive by the time an affected dog is identified, but if the DNA from those dogs had been stored then it will be available to use long after the dogs have passed away. The AHT has developed at least one DNA test that was made possible by the analysis of DNA from dogs that had been stored for almost 10 years.

Stored DNA can also be used for general breeds studies, such as estimating the genetic diversity of the breed or the frequency of disease mutations in the general population.

Who Owns The DNA That Is Stored?

When owners submit a sample to the AHT they will be required to agree that the sample becomes the property of the AHT. The AHT will periodically share samples with bona fide researchers at other institutions as part of collaborative projects aimed at improving the health and welfare of dogs.

How can the DNA be collected?

Ideally the DNA would be collected as a blood sample (~5mls) preserved in EDTA. However, in the UK, the Home Office has strict regulations restricting the drawing of blood for non-veterinary procedures, so owners should discuss this with their vet before requesting a blood sample solely for the purposes of DNA archiving. If a dog is having blood drawn for a veterinary procedure then a vet is permitted to draw a little bit extra for research purposes (which is how DNA archiving is classified) or to use any residual blood sample that is left over from the veterinary procedure.

Alternatively the DNA can be collected using buccal (cheek) swabs. Providing the instructions are closely adhered to it is usual to collect enough high-quality DNA for most research purposes.

What information needs to accompany each DNA sample?

The more information that accompanies each DNA sample the more useful it is likely to be. A DNA sample from a dog for which there is little information is unlikely to be of much use. It is usual to provide details such as the dog’s

name, breed, KC registration number, D.O.B., coat colour. You will also be asked for a copy of the dog's 5-generation pedigree and for any information about the health of the dog. Keeping the archive updated with any significant health changes is VERY IMPORTANT. For example, if we want to use a particular dog's DNA sample to study a specific inherited condition we need to know the dogs' clinical status with regard to that disease – in other words, we need to know if the dog is affected or unaffected or unknown. If a dog whose DNA is stored unfortunately develops any serious health condition it is very important that the owner informs the AHT so the dog's record is updated. Likewise, if the dog enjoys a healthy happy life and lives to be a ripe old age that is important information too! You do not need to submit a new DNA sample when you update the archive.

Both dog and owner information is kept in the strictest confidence, although the AHT might, periodically, distribute a list of the names of dogs whose DNA is stored to breed club representatives, for the purposes of sample monitoring. Only the names of dogs will be distributed and no other information will be included.

What does it cost to store DNA?

This varies. If the DNA is to be stored for research into a particular inherited condition, or for any other purposes for which funding has already been obtained, then the DNA can currently be stored free of charge. If the DNA is to be stored for unspecified, future purposes then the AHT asks for a donation of £5 per sample to help cover administrative costs. Details of how to submit a sample can be obtained by emailing canine.genetics@aht.org.uk. This is also the email to use to inform the AHT about a change in your dog's health.

Dr Cathryn Mellersh
Animal Health Trust