

FEBRUARY E-NEWS

HOW YOU CAN HELP US TACKLE CANINE GLAUCOMA



This year, we are conducting a collaborative research project between our clinical ophthalmology and canine genetics services to investigate primary glaucoma in a number of breeds.

Primary glaucoma in dogs is a painful and blinding disease and sadly, medical and surgical treatments are ultimately usually unsuccessful, with most affected dogs requiring the removal of their eyes on welfare grounds.

The most common form of canine primary glaucoma in the UK is primary angle closure glaucoma; a highly heritable disease which affects at least 1,500 dogs in the UK each year and thus has a major impact on canine welfare. Commonly affected breeds in the UK include the Flatcoated Retriever, Basset Hound, Welsh Springer Spaniel, Cocker Spaniel, American Cocker Spaniel and English Springer Spaniel.

James Oliver, one of our ophthalmologists has teamed up with Dr. Cathryn Mellersh, our Head of Canine Genetics, to investigate the disease in these breeds. During the course of the project James will perform eye examinations and collect DNA samples in the form of cheek swabs from these breeds. The team will then use sophisticated DNA technologies to identify mutations likely to be causative of disease.

Last November, we hosted a highly successful free Flatcoated Retriever Day to help educate breeders and owners of the breed about primary glaucoma, and to also collect DNA samples to help with our research. On Friday 28 March, we will be hosting a free Welsh Springer Spaniel Day to do the same for this breed. Download our Welsh Springer Spaniel Day poster.

Eventually, using these collected DNA samples, we hope to be able to develop genetic tests based on the mutations they identify, that will enable disease prevalence to be effectively reduced and thus decrease the welfare impact this disease has on our canine friends.

If you know of cases that might help this research or would like further information on the project then please contact James Oliver at james.oliver@aht.org.uk. If you would like to donate to help raise funds for this project please contact Fundraising on 01638 555665. All funds donated will be used specifically for our glaucoma research and will not be used for any other purposes.

If you'd like to find out more about our work to eradicate canine glaucoma, visit us at Crufts (6 – 9 March). Dr Cathryn Mellersh will be on the Kennel Club 'Breeding for the Future' zone in Hall 3 on all four days and James Oliver will be joining Cathryn on the Sunday (Gundog Day). Or visit the Animal Health Trust stand on any day to speak to a member of our Fundraising team to find out more about this project, other work the AHT is doing to help eradicate hereditary disease in many other breeds, and how you can help raise vital funds.

CANINE GONIODYSGENESIS AND GLAUCOMA

Primary glaucoma is a painful and blinding disease associated with high eye pressure. The disease affects over 40 breeds of dog worldwide and at least 1,500 dogs in the UK each year. Treatment is usually unsuccessful and most affected dogs ultimately require removal of their eyes on welfare grounds.

The most common form of canine primary glaucoma is primary angle closure glaucoma which has been shown to be significantly associated with goniodysgenesis; an abnormality affecting the drainage pathway of the eye. This abnormality is highly heritable and prevalent in several dog breeds in the UK including the Flatcoated Retriever, Welsh Springer Spaniel, Cocker Spaniel, American Cocker Spaniel, English Springer Spaniel, Basset Hound and Dandie Dinmont Terrier.

We are investigating the genetics of goniodysgenesis and glaucoma in all of these breeds initially by performing eye examinations and collecting DNA (in the form of cheek swabs) from both dogs affected by and those free from disease. Our investigations should lead us to discover genetic mutations responsible for causing goniodysgenesis and glaucoma in these breeds and enable us to develop genetic tests to identify them. This will make it possible for disease prevalence to be reduced effectively when used in parallel with breed-specific guidance.

If you would like more information about our research into goniodysgenesis/glaucoma, please contact James Oliver at james.oliver@aht.org.uk.

Q. Which dogs can contribute to the AHT's goniodysgenesis/glaucoma research?

A. There are three types of dog that are useful to our research:

- i) Dogs of any breed that have been diagnosed by a veterinary ophthalmologist as affected by goniodysgenesis
- ii) Dogs of any breed that have been diagnosed with primary glaucoma by a veterinary ophthalmologist
- ii) Dogs of any breed that have been examined by a veterinary ophthalmologist at the age of five or greater and are clear of goniodysgenesis.