



Canine Genetics Progress Report

Breed: Large Munsterlander

Condition: Hereditary Cataract

Date: 09.03.2009

Recent / Current Funding:

Funding Body: Kennel Club Charitable Trust

Amount: £250,000

Start Date: 01.03.2006, duration 36 months

The above grant is specifically to study Hereditary Cataract (HC) and Progressive Retinal Atrophy (PRA) in the Golden Retriever, the Tibetan Spaniel and the American Cocker Spaniel but it is our intention to also study any breeds for which we can collect sufficient samples.

In addition to the above personal donations of approximately £2000 were received during 2008, and £383 has so far been received during 2009 to contribute to Hereditary Cataract research in the Large Munsterlander.

Samples

As we reported previously we have selected 17 dogs from which we have DNA samples that are affected with cataracts that are typical of HC in the Large Munsterlander. The average age of diagnosis of these dogs was 3.00 years of age. We have also selected 29 dogs that were clear of cataracts at their last eye examination to act as our controls. These dogs had an average age at diagnosis of 6.69 years of age. As also reported previously the yield of DNA from some Large Munsterlander samples was lower than hoped for so, towards the end of 2008, we wrote to the owners of these 46 dogs to request additional DNA samples. We have since received additional samples from 15 of the 17 affected dogs, and 16 of the 29 unaffected dogs. We have been informed that one of the dogs we requested a sample from is no longer alive and one owner has contacted us to decline our request for an additional sample from their dog. We have not, however, heard from any of the owners of the remaining dogs and would encourage them to submit a sample from their dogs, ASAP, if they have not however done so. The more samples we analyse the better our chances of finding a region of the genome associated with HC in this breed.

We are currently extracting DNA from the dogs we have received re-samples from, and are quality controlling it, in preparation for analysing it as part of the whole genome scan (WGS). DNA from these 31 dogs (and any more than come in soon) will be genotyped with 22,000 markers each in our initial WGS experiments. The Large Munsterlander samples will be genotyped alongside a large number of samples of other breeds with different conditions; all samples are currently being

prepared and will be genotyped at the same time, hopefully by the end of May 2009. The genotyping data will take us about six weeks to fully analyse, so we anticipate having results to report by mid-July 2009.

Thank You

The AHT would like to thank the very many Munsterlander owners and breeders who have offered us samples and information about their dogs. Without this kind of co-operation we would not be in a position to investigate HC in this breed; with your continued co-operation we will continue to make progress.