

DOBERMANN HYPOTHYROID RESEARCH

HOW CAN DOBERMANN OWNERS HELP

Hypothyroid disease and the Dobermann

Autoimmune diseases are due to the immune system turning against and destroying the cells and tissues of the body. Many different diseases can develop and these are largely classified by the tissue or organ involved and the clinical symptoms depend on the damage caused by the immune response. Diabetes, thyroiditis and multiple sclerosis are examples of autoimmune disease in man. Dogs are also prone to autoimmune diseases.

There is a strong genetic basis for most autoimmune disease both in man and in dogs. This is particularly clear in some dog breeds which may have originated from a relatively small number of founder animals.

Genes which are responsible for producing certain proteins on the surface of cells, known as tissue types, are strongly involved in autoimmunity. Many different forms of these tissue types can exist. If certain tissue types are present in individuals they have significant increased risk of developing particular diseases. We have recently shown this is also the case in dogs.

The Dobermann appears to have a high prevalence of hypothyroid autoimmune disease. We have shown that affected dogs are more likely to have a particular tissue type.

We are now looking for other genetic markers that are associated with hypothyroid disease.

If we can identify a set of markers that indicate a predisposition to the disease, such information could help breeders develop strategies to eradicate the condition in this breed.

Samples needed

We have a group of affected and unaffected Dobermann dogs from America, but would like to collect similar groups from the UK.

All the DNA samples are placed in the UK Companion Animal DNA Archive, so that they are available for researchers investigating this disease.

We already have access to any Dobermanns that are part of the Dilated Cardiomyopathy (DCM) trial. But we would be very interested to receive samples from dogs that are not in that trial. These can be dogs that are affected or unaffected with hypothyroid disease, since we need both types of dogs to identify genetic markers.

We are particularly keen to collect affected and unaffected dogs that are closely related: e.g. siblings or parent/offspring.

In fact, a multi-generation family with samples from affected and unaffected dogs could provide the key to identifying the genetic markers.

Sample collection

Ideally we would like blood samples in EDTA, but it is not always possible to obtain these, and a good alternative is saliva collected into a special collection pot. If the dog is a "dribbler" it is easy to collect the saliva into the pot. Otherwise we will provide special foam swabs to soak up the saliva, which can then be placed in the collection pot.

For each sample, we would also need some sort of ID, owner name, dog name, age, sex, disease status, relationship to other samples in the study.

All such information would be confidential and owner name information would be stored separately from genetic data.

Breeders can contact Lorna Kennedy directly by e mail to discuss which dogs would be suitable for inclusion in the study.

Individual owners would email Lorna Kennedy to request a sample collection kit.

The sample collection kits would be sent out as requested **free of charge**, and would include a saliva collection pot plus swabs, a form for the owners to fill in and a pre-paid reply envelope.

We would plan to collect 200 dogs if possible.

Related research

These samples would be included as part of a pan European study on Hypothyroid disease in dogs, for which Lorna Kennedy is the co-ordinator.

Lorna Kennedy, CIGMR, University of Manchester.

CONTACT e mail Subject "DOBERMANN STUDY " Lorna.Kennedy@manchester.ac.uk,

If further assistance is needed contact Carol Smith DBC Health Co-ordinator
0115 9321698 e mail remesca@aol.com