Bull Terrier Kidney Disease
Bryan McLaughlin B.Sc.

Input from Veterinarians is absolutely pivotal for genetic research into inherited disease seen in any animal. Development of a mutation based DNA test for **renal nephropathy in Bull Terriers** will require a decent volume of samples accompanied by robust clinical information.

If a vet is drawing blood for diagnostic reasons then taking **a couple ml extra** for research is absolutely fine, but to take blood from a healthy Bull Terrier solely for research purposes **requires a special licence issued by the Home Office**.

Vets in practice are the **most likely** to see Bull Terriers in their surgery with suspected kidney disease, and at this time it's usual to require a blood sample for analysis, before consideration of a referral. The owner's emotions are typically running high at this time, concerning the health and welfare of their family pet, so it may not be appropriate to broach the subject of research studies.

However, permissions for research uses are sometimes **incorporated into the consent form** that the owner will need to complete when a procedure is being carried out, but alternatively consent can also be given verbally.

Renal nephropathy is considered to follow an autosomal dominant pattern of inheritance with perhaps some incomplete penetrance.
The physiological defect is in the structure of the glomerular basement membrane, and **kidney failure is generally around 5 years of age**, although the severity and rate of progression will vary between individual dogs.

Canine genetic researchers at the Animal Health Trust, Newmarket – are hoping to acquire **a sufficient number of samples from clinically affected cases** to enable the determination of a genetic cause, and in turn allow the development of a DNA test which could be used as diagnostic tool by veterinarians, and would also help breeders make informed decisions for their breeding strategies.

Appeal For Help From Veterinary Surgeons
Terry Heath

In 1975 I attended GUVS to study the RANA course where we were trained in veterinary ethics. Since the veterinary surgeon is responsible for the actions of his/her staff, this knowledge was considered an essential part of the course. In the nineties I was involved in all the Bull Terrier research projects that took place in Glasgow University Veterinary School i.e. Lethal Acrodermititis, Mitral Dysplasia, Resorption in the Bull Terrier Bitch and Deafness - comparing BAER Testing and Otoacoustic Testing.

In 1990 The Bull Terrier Clinical Studies Fund was set up to support the work on Bull Terriers. I have also handled hundreds of Bull Terriers from all over UK and dearly love the breed.
In 2012 I set about raising funds to finance the project to develop a DNA test for renal nephropathy. The £11,000 to set it up was reached in a matter of months with donations coming in from all over the world. This clearly indicated to me that this DNA test was needed and wanted...

THE PROJECT TO DEVELOP A DNA TEST FOR RENAL NEPHROPATHY COULD PROCEED.

The next move was to set up a DNA bank at the Animal Health Trust (controls) and we had a good response to that when to help us, the AHT used the pet name as registered with their vet instead of KC registered names and had the owners of Bull Terriers send in the samples themselves. A huge batch of DNA samples are now banked with the AHT.

The AHT requires samples (blood/swabs) and clinical histories/diagnoses from Bull Terriers who are showing signs and symptoms of kidney disease and are clinically diagnosed as such by a veterinary surgeon. It is accepted practice that the owner's authorisation is obtained to send off blood samples for diagnostic analysis. This authorisation would also cover an extra couple of ml of blood drawn at the same time to be sent to the genetics department of the AHT for diagnostic screening.

Any Bull Terrier who develops renal nephropathy is born with the gene for the disease in their DNA profile, is born affected by renal nephropathy disease and will die young – between two and five years of age.

It is therefore absolutely critical for the development of the DNA test that we have the veterinary surgeons participating in the project. Veterinary surgeons who have Bull Terrier clients diagnosed with kidney disease and who are willing to send samples (blood tissue or swabs) from affected Bull Terriers to the Animal Health Trust for genetic screening, are essential for the development of the DNA test.

The AHT requires a large number of samples as it is only by comparison of the DNA profiles of healthy Bull Terriers and affected Bull Terriers, that the rogue gene can be found. This rogue gene will only be found in affected Bull Terriers and can then be identified, configured and recognised as the gene responsible for renal nephropathy

The project to develop the DNA test for renal nephropathy can only succeed with the participation of veterinary surgeons in practice that has Bull Terriers on their client list.

Blood samples (in EDTA) accompanied by relevant clinical information should be sent to Bryan McLaughlin at the following address:

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