



Why Is It Important That We Store OES DNA?

by Dea Freiheit

"The OES breed was forward thinking when they began storing DNA on dogs in 1999, years prior to the establishment of the CHF DNA Repository." This comment came from one of our current researchers.

As many OESCA members will recall, in 1999 the breed began collecting and submitting blood from all of our dogs to Drs. Johnson and O'Brien at Missouri State for research funded by a Canine Health Foundation grant. That research was the initial grant OESCA supported to search for the defective gene that causes cerebellar atrophy in the Old English Sheepdog. OESCA members answered the call by submitting 328 DNA samples.

Since then DNA blood clinics sponsored by OESCA, regional OES clubs, local groups and individual members have added an additional 250 plus DNA samples. With future DNA clinics scheduled to be offered this fall at the 2010 National Specialty and at Regional Specialties and other OES events, the goal is to reach 750 stored DNA samples by the end of the year.

But, why is this so important?

Blood is the gold standard for genetic material. Every sample could hold the key to locating the defective gene for a disease and eradicating that disease from the breed. Even samples collected years ago are of the highest caliber because of the stability of the purity of the sample.

Stored DNA will allow breeders/owners to take advantage of future disease tests as they become available. It is possible to accurately test the DNA of an animal that has been stored for years. Volumes of information can be gained to inform breeding decisions.

Stored DNA improves the likelihood of genetic discovery in the breed.

Here are two recent examples:

PRA (Progressive Retinal Atrophy)

Recently Dr. Simon Peterson-Jones was pleased when an OES owner provided him with blood from a PRA affected dog. He was even more excited when he received the DNA, along with current eye examination results and pedigrees, from both parents, two siblings and a grand dam to the affected dog. He was amazed when he was informed that the families of both sides of the pedigree had stored DNA as far back as 5-7 generations. AND, that his research team had access to that DNA.

Autoimmune

Likewise Dr. Kennedy, primary researcher on the new OESCA supported autoimmune grant, was astonished when she learned that she could have access to DNA of three OES who died of autoimmune disease over ten years ago and also to the DNA of family members of those dogs, including current living relatives to those dogs.