



## **DEGENERATIVE ENCEPHALOPATHY**



Your dog has been tested for the mutation known to cause degenerative encephalopathy in Nova Scotia Duck Tolling Retrievers based on a DNA sample submission. The enclosed report lists the laboratory findings.

### **Explanation of results:**

**NORMAL:** This dog has tested normal (or clear) for the mutation identified as responsible for development of degenerative encephalopathy (DEN) in Nova Scotia Duck Tolling Retrievers. It is not at risk for developing DEN. It can only transmit a normal gene to offspring, and current information indicates that dogs with this result can be bred to a dog with any DNA test result without risk of producing affected offspring.

**CARRIER:** This dog has tested as a carrier for the mutation identified as responsible for development of degenerative encephalopathy (DEN) in Nova Scotia Duck Tolling Retrievers. Carrier individuals are clinically normal, but may transmit either a normal gene or a mutated/affected gene to potential offspring. To avoid risk of producing an affected puppy, these dogs should only be bred to mates which have been DNA-tested normal.

**AFFECTED/AT RISK:** This dog has 2 mutated copies of the gene identified as responsible for development of DEN and is at risk for developing clinical neurologic signs of DEN, starting at a young age and becoming progressively worse with age. Most DEN affected dogs are euthanized due to poor quality of life by 3-5 years of age.

Please contact the University of Missouri research team at [hansenl@missouri.edu](mailto:hansenl@missouri.edu) for additional information, and inclusion in ongoing research.