UCDAVIS VETERINARY MEDICINE
Veterinary Genetics Laboratory

NOVA SCOTIA DUCK TOLLING RETRIEVER GENETIC HEALTH PANEL TEST REPORT

Provided Information:	***Case:*** **NCD220495**
Name: **IRWLEND JUULIA JOLANTE**	***Date Received:*** 22-May-2023
Registration: **EST-03286/20**	***Report Issue Date:*** 06-Feb-2025
	Report ID: 6363-4486-4023-1042
	Reissue of: 0034-4646-5623-7102
	Verify report at vgl.ucdavis.edu/verify

DOB: **07/27/2020** *Sex:* **Female** *Breed:* **Nova Scotia Duck Tolling Retriever** *Microchip:* **900113002034826** *Color:* **red white**

Call Name: **JOLA**

Sire: IRWLEND DEREK DENISS	*Dam:* BELL AND FIRE AMBER SHINE
Reg: EST-02762/17	*Reg:* EST-04264/16
Microchip:	*Microchip:*

RESULT		INTERPRETATION
Cardiac Laminopathy (CLAM)	**N/N**	Normal. No copies of the Nova Scotia Duck Tolling Retriever cardiac laminopathy (CLAM) allele detected.
Cerebellar Degeneration - Myositis Complex (CDMC)	**N/N**	Normal. No copies of the Nova Scotia Duck Tolling Retriever cerebellar degeneration-myositis complex (CDMC) allele detected.
Cleft Palate (CP1)	**N/N**	Normal. No copies of the Nova Scotia Duck Tolling Retriever cleft palate 1 (CP1) allele detected.
Cleft Lip / Palate and Syndactyly (CLPS)	**N/N**	Normal. No copies of the Nova Scotia Duck Tolling Retriever cleft lip/palate and syndactyly (CLPS) allele detected.
Chondrodystrophy (CDDY)	**N/CDDY**	1 copy of CDDY mutation. Dog has IVDD and is at risk for disc herniation. Mutation causes leg shortening compared to N/N dogs. When bred to an N/N dog, will produce 50% of normal sized puppies and 50% of puppies with shorter legs that also have IVDD and are at risk for disc herniation.
Degenerative Myelopathy (DM)	**N/N**	No copies of the DM mutation.
Juvenile Addison's Disease (JADD)	**N/N**	Normal. No copies of the Nova Scotia Duck Tolling Retriever juvenile Addison's disease (JADD) allele detected.
Progressive Rod-Cone Degeneration (PRCD)	**N/PRCD**	Carrier. One copy of this progressive rod-cone degeneration (PRA-prcd) allele detected.
DILUTE (D LOCUS)	**D/D**	No known dilution variants present.

UCDAVIS VETERINARY MEDICINE
Veterinary Genetics Laboratory

NOVA SCOTIA DUCK TOLLING RETRIEVER GENETIC HEALTH PANEL TEST REPORT

Client/Owner/Agent Information:	*Case:* **NCD220495**
TIIU HIRV VÕRUMAA, LASVA KÜLA, VÕRU VALD 65401 ESTONIA	***Date Received:*** 22-May-2023 ***Report Issue Date:*** 06-Feb-2025 ***Report ID:*** 6363-4486-4023-1042 ***Reissue of:*** 0034-4646-5623-7102 Verify report at vgl.ucdavis.edu/verify
Name: **IRWLEND JUULIA JOLANTE**	

Additional Information

If testing for a disease or a disorder was performed and results indicate the animal is affected or at risk, we recommend contacting your veterinarian for further clinical evaluation and for additional information on disease and management.

For more detailed information on Toller Panel test results, please visit our website at:
vgl.ucdavis.edu/panel/nova-scotia-duck-tolling-retriever-health-panel

Results are determined using PCR-based methods. The results relate only to the sample tested as identified by the submitter (for example, identity and/or breed).

Report authorized by Dr. Rebecca Bellone, VGL Director

UCDAVIS VETERINARY MEDICINE
Veterinary Genetics Laboratory

Degenerative Myelopathy

Degenerative Myelopathy is associated with a genetic variant in the *SOD1* gene (c.118G>A). We therefore denote this associated allele as DM on our reports.

Many dog breeds carry the *SOD1* allele associated with Degenerative Myelopathy. The following breeds have been reported as having **clinically-affected** individuals with two copies of the *SOD1* associated variant (denoted on our report as **DM/DM**): American Eskimo Dog, Australian Shepherd, Bernese Mountain Dog, Bloodhound, Borzoi, Boxer, Cardigan Welsh Corgi, Cavalier King Charles Spaniel, Chesapeake Bay Retriever, Czech Wolfdog, English Springer Spaniel, German Shepherd, Golden Retriever, Hovawart, Kerry Blue Terrier, Labrador Retriever, Pembroke Welsh Corgi, Pug, Rhodesian Ridgeback, Rough Collie, Soft Coated Wheaten Terrier, Standard Poodle, and Wire Fox Terrier. Testing is advisable for these breeds.

There have also been reports of crossbred dogs with two copies of the SOD1 allele that were clinically affected by degenerative myelopathy.

What do the results mean for my dog?

Within clinically-affected breeds, dogs with two copies of DM (**DM/DM**) are considered at higher risk for developing clinical signs of DM. However, not all dogs that are DM/DM will develop clinical signs of disease, and not all cases of degenerative myelopathy are explained by the DM/DM result.

Why some DM/DM dogs display symptoms of disease and others do not, is not yet known, but one hypothesis is that there are other genetic modifiers that contribute to risk. This is still under investigation.

Dogs with one copy of DM (**N/DM**) are not expected to develop clinical signs of degenerative myelopathy. They are considered carriers, because they carry the allele associated with disease.

Dogs with **N/N** genotype do not have this *SOD1* variant associated with degenerative myelopathy.

Please note that there may be other causes for degenerative myelopathy in the dog that are not explained by the *SOD1* variant (c.118G>A) tested by the VGL.

What about breeding my dog?

Dogs with a DM/DM genotype will pass on the DM allele to all of their offspring.

Dogs with an N/DM genotype may pass on the DM allele to ~50% of their offspring. If bred to another N/DM dog, 25% of puppies will be expected to have a DM/DM genotype and be at increased risk for developing DM.

For more detailed information about DM, visit https://vgl.ucdavis.edu/test/degenerative-myelopathy