

### Demographic Information

Call Name	Luisa
Registered Name	
Breed	Miniature Poodle
Sex	F
Owner	Robin Miller
DOB	January 30, 2022
Registration Number	
Tattoo	
Microchip	
Laboratory #	AN-22-004061
Report Date	July 11, 2022

These tests were developed and performed by Paw Print Genetics<sup>®</sup>, Spokane WA.

## **Explanation of Results**

Normal	A 'Normal' result means that your dog does not have the mutation that causes the associated genetic disease.
Carrier	A 'Carrier' result indicates that your dog has inherited one copy of the mutation that has been reported to cause this genetic disease. Your dog may not be clinically affected by this mutation because two copies of the mutation are usually required to cause disease.
Carrier / At-Risk	A 'Carrier / At-Risk' result indicates that your dog inherited one copy of the mutation that has been reported to cause this genetic disease. Based on the mode of genetic inheritance for this particular disease, inheriting one mutant copy of the gene may result in the disease. Dogs with one copy of the mutation may have a milder phenotype as compared to dogs with two copies of this mutation.
At-Risk / Affected	An 'At-Risk / Affected' result indicates that your dog inherited one or two copies of the mutation that has been reported to cause this genetic disease. Based on the mode of genetic inheritance for this particular disease, inheriting one or two mutant copies of the gene may result in the disease.

esult' indicates that we were unable to obtain a genotype for your dog for this ic disease or trait and does not mean that your dog is a carrier or at-risk for this se. There are a variety of reasons why a specific test may not provide a reportable. Unique variations in the genetic code of some individuals may exist and cause in regions of the genome to not perform properly with a specific test. In addition, otimal sampling of the dog's cheek cells could also result in poor sample rmance due to inadequate cell counts, bacterial and fungal growth, or the presence it test inhibitors. An acceptable level of tests with no results has been determined w Print Genetics. Dogs with at least 90% of the test results are determined to be table and reportable. If your dog has an unacceptable level of tests with no results, ill be contacted for a new sample to repeat the testing.

Please review our testing terms and disclaimers regarding your results.		
WT: (wild type (normal) M: (mutant	Y:	Y chromosome (male)

## **Breed Profile**

Firefox

Disease Name	Geno.	Interpretation
Degenerative Myelopathy	WT/WT	Normal (Clear)
Degenerative Myelopathy (Bernese Mountain Dog Variant) Degenerative Myelopathy (Common Variant)	0 0	
GM2 Gangliosidosis Poodle Type	WT/WT	Normal (Clear)
Hereditary Cataracts	WT/WT	Normal (Clear)
Intervertebral Disc Disease Risk Factor and Chondrodystrophy CDDY with IVDD	M/M	At-Risk
Multidrug Resistance 1	WT/WT	Normal (Clear)
Neonatal Encephalopathy with Seizures	WT/WT	Normal (Clear)
Osteochondrodysplasia	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, Progressive Rod-Cone Degeneration prcd	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, Rod-Cone Dysplasia 4	WT/WT	Normal (Clear)
Von Willebrand Disease I	WT/WT	Normal (Clear)

# Coat Colors & Traits

Trait Name	Geno.	Interpretation
A Locus Agouti	a <sup>t</sup> /a <sup>t</sup>	Tricolor, black and tan

<u>A<sup>s</sup>Locus</u> Saddle Tan	N/N	No saddle tan/creeping tan
<u>B Locus</u> Brown	B/B	Black coat, nose and foot pads
B Locus (Brown) - b <sup>a</sup> B Locus (Brown) - b <sup>c</sup> B Locus (Brown) - b <sup>d</sup> B Locus (Brown) - b <sup>s</sup>	0 0 0 0	
Brachycephaly	BR/br	Likely medium to long muzzle (short muzzle carrier)
Chondrodysplasia CDPA	cd/cd	Likely typical leg length
<u>Cu Locus</u> <u>Curly Hair</u>	Cu <sup>C</sup> /Cu <sup>C</sup>	Curly coat
D Locus Dilute	D/D	Non dilute
D Locus (Dilute) - d <sup>1</sup> D Locus (Dilute) - d <sup>2</sup>	0 0	
<u>E Locus</u> Yellow/Red	E/e	Black (carries yellow/red)
<mark>E<sup>g</sup>_Locus</mark> Grizzle, Afghan Hound Type	N/N	No grizzle
<mark>E<sup>h</sup> Locus</mark> Sable, Cocker Spaniel Type	N/N	No sable
<u>E<sup>m</sup>Locus</u> Melanistic Mask	N/N	No melanistic mask
<u>H Locus</u> Harlequin, Great Dane Type	h/h	No harlequin
Hr Locus FOXI3 Hairless Gene Test <u>, Mexican Hairless, Peruvian</u> Hairless and Chinese Crested Type	hr/hr	Coated
l Locus Intensity	i/i	Reduced intensity, likely light shades or white
IC Locus Improper Coat/Furnishings	F/F	Furnishings
<u>K Locus</u> Dominant Black	K <sup>B</sup> /k <sup>y</sup>	No agouti expression allowed (carrier)
<u>L Locus</u> <u>Long Hair/Fluffy</u> <u>- Lh<sup>1</sup>, Lh<sup>2</sup></u>	Lh/Lh	Longhaired

L Locus (Long Hair/Fluffy) - Lh <sup>1</sup> L Locus (Long Hair/Fluffy) - Lh <sup>2</sup>	2 0	
M Locus Merle	m/M267	Single copy merle carrier
<u>Polydactyly</u>	pd/pd	Normal (typical) toes (likely no hind dewclaws)
<u>S Locus</u> White Spotting, Parti, or Piebald	s <sup>p</sup> /s <sup>p</sup>	Nearly solid white, parti, or piebald
Shedding	sd/sd	Low shedding
Sex Determination	X/X	Female
<u>T Locus</u> Natural Bobtail	t/t	Normal tail

Determinants of coat colors and traits are complex. Many of these variants are known and many of the genes screened in the Canine HealthCheck interact. In addition, not all the genetic factors that contribute to a dog's coat color and traits are known. Because of the complexities in gene-gene interactions, the coat colors and traits reported in your Canine HealthCheck results may vary from your dog's actual appearance. Individual differences in genes throughout the canine genome, not tested in this genetic screen, may also affect the final coat color or traits seen in your dog.

## Diseases

Disease Name Acral Mutilation Syndrome	Geno. WT/WT	Interpretation Normal (Clear)
Acute Respiratory Distress Syndrome	WT/WT	Normal (Clear)
Adult Paroxysmal Dyskinesia	WT/WT	Normal (Clear)
Alaskan Husky Encephalopathy	WT/WT	Normal (Clear)
Alaskan Malamute Polyneuropathy	WT/WT	Normal (Clear)
Amelogenesis Imperfecta	WT/WT	Normal (Clear)
Benign Familial Juvenile Epilepsy	WT/WT	Normal (Clear)
Canine Multiple System Degeneration Chinese Crested Type	WT/WT	Normal (Clear)
Canine Multiple System Degeneration Kerry Blue Terrier Type	WT/WT	Normal (Clear)
Canine Scott Syndrome	WT/WT	Normal (Clear)

Catalase Deficiency	WT/WT	Normal (Clear)
Centronuclear Myopathy	No Result	No Result
<u>Cerebellar Ataxia</u> Finnish Hound Type	WT/WT	Normal (Clear)
Cerebellar Cortical Degeneration	WT/WT	Normal (Clear)
Cerebellar Degeneration	WT/WT	Normal (Clear)
<u>Chondrodysplasia</u> Karelian Bear Dog and Norwegian Elkhound Type	WT/WT	Normal (Clear)
<u>Cleft Palate and Syndactyly</u> Nova Scotia Duck Tolling Retriever Type	WT/WT	Normal (Clear)
Coagulation Factor VII Deficiency	WT/WT	Normal (Clear)
Collie Eye Anomaly	WT/WT	Normal (Clear)
Complement 3 Deficiency	WT/WT	Normal (Clear)
Cone Degeneration	WT/WT	Normal (Clear)
Cone Degeneration German Shepherd Dog Type	WT/WT	Normal (Clear)
Cone Degeneration German Shorthaired Pointer Type	WT/WT	Normal (Clear)
Cone Degeneration Labrador Retriever Type	WT/WT	Normal (Clear)
Congenital Hypothyroidism with Goiter Terrier Type	WT/WT	Normal (Clear)
Congenital Methemoglobinemia	No Result	No Result
Congenital Myasthenic Syndrome Jack Russell Terrier Type	WT/WT	Normal (Clear)
Congenital Myasthenic Syndrome Labrador Retriever Type	WT/WT	Normal (Clear)
Congenital Myasthenic Syndrome Old Danish Pointer Type	WT/WT	Normal (Clear)
Congenital Stationary Night Blindness	WT/WT	Normal (Clear)
Craniomandibular Osteopathy	WT/WT	Normal (Clear)
Cyclic Neutropenia	WT/WT	Normal (Clear)
<u>Cystinuria</u> Australian Cattle Dog Type	WT/WT	Normal (Clear)
<u>Cystinuria</u> Labrador Retriever <u>Type</u>	WT/WT	Normal (Clear)

<u>Cystinuria</u> Miniature Pinscher Type	WT/WT	Normal (Clear)
Cystinuria Newfoundland Type	WT/WT	Normal (Clear)
<u>Cystinuria Type 3</u> Bulldog Type Risk Factor, Variant 3	WT/WT	Normal (Clear)
Cystinuria Type 3 Bulldog Type Risk Factor, Variants 1 and 2	WT/WT	Normal (Clear)
Cystinuria Type 3 (Bulldog Type Risk Factor, Variant 1) Cystinuria Type 3 (Bulldog Type Risk Factor, Variant 2)	0 0	
Dandy-Walker-Like Malformation	WT/WT	Normal (Clear)
Degenerative Myelopathy	WT/WT	Normal (Clear)
Degenerative Myelopathy (Bernese Mountain Dog Variant) Degenerative Myelopathy (Common Variant)	0 0	
Degenerative Myelopathy Early-Onset Risk Modifier Pembroke Welsh Corgi Type	WT/WT	Normal (Clear)
Dental Hypomineralization	WT/WT	Normal (Clear)
Diffuse Cystic Renal Dysplasia and Hepatic Fibrosis	WT/WT	Normal (Clear)
Dilated Cardiomyopathy Doberman Pinscher Type Risk Factor, Variant 1	WT/WT	Normal (Clear)
Dilated Cardiomyopathy Doberman Pinscher Type Risk Factor, Variant 2	WT/WT	Normal (Clear)
Dilated Cardiomyopathy Schnauzer Type	WT/WT	Normal (Clear)
Dry Eye Curly Coat Syndrome	WT/WT	Normal (Clear)
Dystrophic Epidermolysis Bullosa	WT/WT	Normal (Clear)
Early Retinal Degeneration	WT/WT	Normal (Clear)
Ectodermal Dysplasia Chesapeake Bay Retriever Type	WT/WT	Normal (Clear)
Ectodermal Dysplasia, X-Linked Dachshund Type	WT/WT	X-Linked Female Normal
Ectodermal Dysplasia, X-Linked Shepherd Type	WT/WT	X-Linked Female Normal
Ehlers-Danlos Syndrome	WT/WT	Normal (Clear)
Ehlers-Danlos Syndrome (Variant 1) Ehlers-Danlos Syndrome (Variant 2)	0 0	

WTNormal (Clear)WTNormal (Clear)WTNormal (Clear)WTNormal (Clear)WTNormal (Clear)WTNormal (Clear)WTNormal (Clear)WTNormal (Clear)WTNormal (Clear)
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NT Normal (Clear)
VT Normal (Clear)
NT Normal (Clear)

Greyhound Polyneuropathy	WT/WT	Normal (Clear)
Hemophilia A Boxer Type	WT/WT	X-Linked Female Normal
<u>Hemophilia A</u> German Shepherd Dog <u>, Type 1</u>	WT/WT	X-Linked Female Normal
<u>Hemophilia A</u> German Shepherd Dog <u>, Type 2</u>	WT/WT	X-Linked Female Normal
<u>Hemophilia B</u> Cairn Terrier Type	WT/WT	X-Linked Female Normal
Hemophilia B Lhasa Apso Type	WT/WT	X-Linked Female Normal
Hemophilia B Rhodesian Ridgeback Type	WT/WT	X-Linked Female Normal
Hereditary Cataracts	WT/WT	Normal (Clear)
Hereditary Cataracts Australian Shepherd Type	WT/WT	Normal (Clear)
Hereditary Footpad Hyperkeratosis Irish Terrier and Kromfohrländer Type	WT/WT	Normal (Clear)
Hereditary Nasal Parakeratosis	WT/WT	Normal (Clear)
<u>Hereditary Nasal Parakeratosis</u> <u>Greyhound Type</u>	WT/WT	Normal (Clear)
<u>Hereditary Nephritis</u> <u>Samoyed Type</u>	WT/WT	X-Linked Female Normal
<u>Hyperuricosuria</u>	WT/WT	Normal (Clear)
Hypomyelination Weimaraner Type	WT/WT	Normal (Clear)
<u>Ichthyosis</u> American Bulldog <u>Type</u>	WT/WT	Normal (Clear)
<u>Ichthyosis</u> Golden Retriever Type 1	WT/WT	Normal (Clear)
<u>Ichthyosis</u> <u>Great Dane Type</u>	WT/WT	Normal (Clear)
Inherited Myopathy of Great Danes	WT/WT	Normal (Clear)
Intervertebral Disc Disease Risk Factor and Chondrodystrophy CDDY with IVDD	M/M	At-Risk
Intestinal Cobalamin Malabsorption Beagle Type	WT/WT	Normal (Clear)
Intestinal Cobalamin Malabsorption	WT/WT	Normal (Clear)

Border Collie Type		
Juvenile Laryngeal Paralysis and Polyneuropathy	WT/WT	Normal (Clear)
Juvenile Myoclonic Epilepsy Rhodesian Ridgeback Type	WT/WT	Normal (Clear)
L-2-Hydroxyglutaric Aciduria Staffordshire Bull Terrier Type	WT/WT	Normal (Clear)
Lagotto Storage Disorder	WT/WT	Normal (Clear)
Late Onset Ataxia	WT/WT	Normal (Clear)
Lethal Acrodermatitis	WT/WT	Normal (Clear)
Leukocyte Adhesion Deficiency, Type I	WT/WT	Normal (Clear)
Leukocyte Adhesion Deficiency, Type III	WT/WT	Normal (Clear)
Ligneous Membranitis	WT/WT	Normal (Clear)
Lundehund Syndrome	WT/WT	Normal (Clear)
Macular Corneal Dystrophy Labrador Retriever Type	WT/WT	Normal (Clear)
May-Hegglin Anomaly	WT/WT	Normal (Clear)
Mucopolysaccharidosis I	WT/WT	Normal (Clear)
Mucopolysaccharidosis IIIA Dachshund Type	WT/WT	Normal (Clear)
Mucopolysaccharidosis IIIA New Zealand Huntaway Type	WT/WT	Normal (Clear)
Mucopolysaccharidosis VII Shepherd Type	WT/WT	Normal (Clear)
Multidrug Resistance 1	WT/WT	Normal (Clear)
Multifocal Retinopathy 1	WT/WT	Normal (Clear)
Multifocal Retinopathy 2	WT/WT	Normal (Clear)
Multifocal Retinopathy 3	WT/WT	Normal (Clear)
<u>Muscular Dystrophy</u> <u>Golden Retriever Type</u>	WT/WT	X-Linked Female Normal
Musladin-Lueke Syndrome	WT/WT	Normal (Clear)
Myostatin Deficiency Whippet and Longhaired Whippet Type	WT/WT	Normal (Clear)
Myotonia Congenita Australian Cattle Dog Type	WT/WT	Normal (Clear)
Myotonia Congenita	WT/WT	Normal (Clear)

<u>Schnauzer Type</u>		
Myotubular Myopathy 1	WT/WT	X-Linked Female Normal
<u>Myotubular Myopathy 1</u> Rottweiler Type	WT/WT	X-Linked Female Normal
<u>Narcolepsy</u> Dachshund Type	WT/WT	Normal (Clear)
<u>Narcolepsy</u> Doberman Pinscher Type	WT/WT	Normal (Clear)
<u>Narcolepsy</u> Labrador Retriever <u>Type</u>	WT/WT	Normal (Clear)
Neonatal Cerebellar Cortical Degeneration	WT/WT	Normal (Clear)
Neonatal Encephalopathy with Seizures	WT/WT	Normal (Clear)
Neuroaxonal Dystrophy Rottweiler Type	WT/WT	Normal (Clear)
<u>Neuroaxonal Dystrophy</u> Spanish Water Dog Type	WT/WT	Normal (Clear)
<u>Neuronal Ceroid Lipofuscinosis</u> Tibetan Terrier Type	WT/WT	Normal (Clear)
Neuronal Ceroid Lipofuscinosis 1	WT/WT	Normal (Clear)
<u>Neuronal Ceroid Lipofuscinosis 1</u> <u>Cane Corso Type</u>	WT/WT	Normal (Clear)
Neuronal Ceroid Lipofuscinosis 10	WT/WT	Normal (Clear)
Neuronal Ceroid Lipofuscinosis 12	WT/WT	Normal (Clear)
Neuronal Ceroid Lipofuscinosis 2	WT/WT	Normal (Clear)
Neuronal Ceroid Lipofuscinosis 4A	WT/WT	Normal (Clear)
Neuronal Ceroid Lipofuscinosis 5 Australian Cattle Dog/Border Collie Type	WT/WT	Normal (Clear)
<u>Neuronal Ceroid Lipofuscinosis 5</u> Golden Retriever Type	WT/WT	Normal (Clear)
Neuronal Ceroid Lipofuscinosis 6	WT/WT	Normal (Clear)
Neuronal Ceroid Lipofuscinosis 7	WT/WT	Normal (Clear)
Neuronal Ceroid Lipofuscinosis 8 Australian Shepherd Type	WT/WT	Normal (Clear)
Neuronal Ceroid Lipofuscinosis 8 Setter Type	WT/WT	Normal (Clear)
Oculocutaneous Albinism	WT/WT	Normal (Clear)

Oculocutaneous Albinism Small Breed Type	WT/WT	Normal (Clear)
<u>Osteochondrodysplasia</u>	WT/WT	Normal (Clear)
<u>Osteogenesis Imperfecta</u> <u>Beagle Type</u>	WT/WT	Normal (Clear)
<u>Osteogenesis Imperfecta</u> Dachshund Type	No Result	No Result
Osteogenesis Imperfecta Golden Retriever Type	WT/WT	Normal (Clear)
P2RY12 Receptor Platelet Disorder	WT/WT	Normal (Clear)
<u>Pembroke Welsh Corgi Duchenne Muscular</u> <u>Dystrophy</u>	WT/WT	X-Linked Female Normal
Persistent Müllerian Duct Syndrome	WT/WT	Normal (Clear)
Polyneuropathy Leonberger and Saint Bernard Type	WT/WT	Normal (Clear)
Polyneuropathy Leonberger Type 2	WT/WT	Normal (Clear)
Polyneuropathy with Ocular Abnormalities and Neuronal Vacuolation	WT/WT	Normal (Clear)
Pompe Disease	WT/WT	Normal (Clear)
Prekallikrein Deficiency	WT/WT	Normal (Clear)
Primary Ciliary Dyskinesia	WT/WT	Normal (Clear)
Primary Hyperoxaluria	WT/WT	Normal (Clear)
Primary Lens Luxation	WT/WT	Normal (Clear)
Primary Open Angle Glaucoma	WT/WT	Normal (Clear)
Primary Open Angle Glaucoma Basset Fauve de Bretagne Type	WT/WT	Normal (Clear)
Primary Open Angle Glaucoma Basset Hound Type	WT/WT	Normal (Clear)
Primary Open Angle Glaucoma Norwegian Elkhound Type	WT/WT	Normal (Clear)
Primary Open Angle Glaucoma and Primary Lens Luxation Shar Pei Type	WT/WT	Normal (Clear)
<u>Progressive Retinal Atrophy</u> <u>Basenji Type</u>	WT/WT	Normal (Clear)

Progressive Retinal Atrophy Bullmastiff/Mastiff Type	WT/WT	Normal (Clear)
Progressive Retinal Atrophy Giant Schnauzer Type	WT/WT	Normal (Clear)
Progressive Retinal Atrophy Irish Setter Type	WT/WT	Normal (Clear)
Progressive Retinal Atrophy Shetland Sheepdog Type	WT/WT	Normal (Clear)
<u>Progressive Retinal Atrophy</u> <u>Sloughi Type</u>	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, Cone-Rod Dystrophy	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, Cone-Rod Dystrophy 1	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, Cone-Rod Dystrophy 2	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, Cone-Rod Dystrophy 4 crd4/cord1	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, Generalized	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, Golden Retriever 1	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, Golden Retriever 2	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, PRA1 Papillon Type	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, PRA3 Tibetan Terrier and Spaniel Type	No Result	No Result
Progressive Retinal Atrophy, Progressive Rod-Cone Degeneration prcd	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, Rod-Cone Dysplasia 3	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, Rod-Cone Dysplasia 4	WT/WT	Normal (Clear)
Progressive Retinal Atrophy, X-Linked 1	WT/WT	X-Linked Female Normal
Protein Losing Nephropathy	WT/WT, WT/WT	Normal (Clear) - No Increased Risk
Protein Losing Nephropathy (Variant 1) Protein Losing Nephropathy (Variant 2)	0 0	
Pyruvate Dehydrogenase Deficiency	WT/WT	Normal (Clear)
<mark>Pyruvate Kinase Deficiency</mark> Basenji Type	WT/WT	Normal (Clear)
Pyruvate Kinase Deficiency	WT/WT	Normal (Clear)

WT/WT	Normal (Clear)
WT/WT	Normal (Clear)
WT/WT	X-Linked Female Normal
WT/WT	X-Linked Female Normal
WT/WT	Normal (Clear)
	WT/WT   WT/WT

Trapped Neutrophil Syndrome	WT/WT	Normal (Clear)
<u>Urolithiasis</u> Native American Indian Dog Type	WT/WT	Normal (Clear)
Van Den Ende-Gupta Syndrome	WT/WT	Normal (Clear)
Von Willebrand Disease I	WT/WT	Normal (Clear)
Von Willebrand Disease II	WT/WT	Normal (Clear)
<u>Von Willebrand Disease III</u> Kooikerhondje Type	WT/WT WT: (wild type (normal))	Normal (Clear) M: (mutant) Y: (Y chromosome (male))
Von Willebrand Disease III Scottish Terrier Type	WT/WT	Normal (Clear)
Von Wilebrand Osease III Sbriand Sheepgog Type	WT/WT	Normal (Clear)
Allh Smit	ChH	2
Helen F Smith, PhD	Ch	ristina J Ramirez, PhD, DVM, DACVP
Associate Laboratory Director		Medical Director

Canine HealthCheck is a product of Paw Print Genetics. This test was developed and its performance determined by Paw Print Genetics®. This laboratory has established and verified the test's accuracy and precision. Because all tests are preformed are DNA-base, rare genomic variations may interfere with the performance of some tests producing false results. If you think these results are in error, please contact the laboratory for further evaluation.