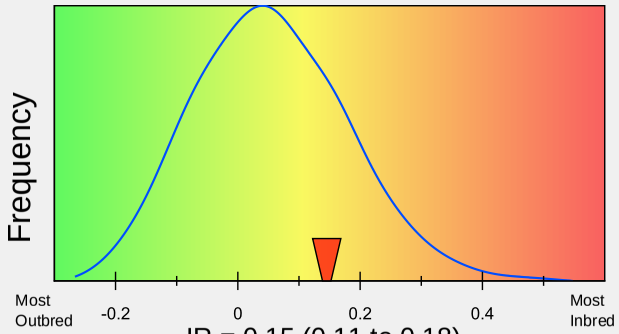
DOG GENETIC DIVERSITY ANALYSIS

CALHOUN'S FIZZY MUDSLIDE

Breed: Golden Retriever
Sex: Female
Color: Gold
DOB: 2023
Reg: SS42827601

Case: NCD261416
Print Date: November 21, 2025
Report ID: 4538-5313-7648-9024

Golden Retriever IR



IR = 0.15 (0.11 to 0.18)

Internal relatedness (IR) is an allele frequency weighted indicator of homozygosity. IR values of siblings vary due to segregation but will increase on average with inbreeding. Lower IR values indicate greater genetic diversity. IR is calculated relative to breed.

Diversity Panel

Golden Retriever DLA

	DLA I	DLA II
Haplotype 1	1066	2048
Haplotype 2	1069	2045

Maintaining diversity in the DLA which helps regulate immune responses is beneficial to a breed. Choosing mates differing in their DLA haplotypes helps maintain diversity in litters.

Veterinary Genetics Laboratory
One Shields Avenue, Davis, CA 95616
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TRACY CALHOUN
36290 GERIG DR SE
ALBANY, OR 97322

UCDAVIS VETERINARY MEDICINE
Veterinary Genetics Laboratory

CANINE GENETIC DIVERSITY TEST REPORT

Provided Information:		*Case:*	**NCD261416**
Name:	**CALHOUN'S FIZZY MUDSLIDE**	*Date Received:*	17-Nov-2025
Registration:	**SS42827601**	*Report Issue Date:*	21-Nov-2025
		Report ID:	4538-5313-7648-9024

Verify report at vgl.ucdavis.edu/verify

DOB: **06/27/2023** *Sex:* **Female** *Breed:* **Golden Retriever** *Microchip:* **956000017164321** *Color:* **Gold**

Call Name: **Maeve**

Sire:	CALHOUN'S LUCK OF THE IRISH	*Dam:*	CALHOUN'S MAYHEM ON A SATURDAY NIGHT
Reg:	SS14893707	*Reg:*	SS15346901
Microchip:		*Microchip:*	

INTERNAL RELATEDNESS

IR = 0.15 (0.11 to 0.18)

DLA HAPLOTYPE RESULT

	DLA I	DLA II
Haplotype 1	1066	2048
Haplotype 2	1069	2045

DIVERSITY PANEL

LOCUS	TYPE	LOCUS	TYPE	LOCUS	TYPE
1: AHT121	102/102	*2: AHT137*	133/137	*3: AHTH130*	125/129
4: AHTh171-A	219/219	*5: AHTh260*	246/248	*6: AHTk211*	93/93
7: AHTk253	286/292	*8: C22.279*	116/120	*9: FH2001*	144/148
10: FH2054	148/168	*11: FH2848*	236/238	*12: INRA21*	91/91
13: INU005	110/126	*14: INU030*	144/152	*15: INU055*	210/216
16: LEI004	107/95	*17: REN105L03*	233/233	*18: REN162C04*	206/206
19: REN169D01	212/216	*20: REN169O18*	164/164	*21: REN247M23*	268/268
22: REN54P11	232/234	*23: REN64E19*	147/149	*24: VGL0760*	20.2/22.2
25: VGL0910	15.1/19.1	*26: VGL1063*	13/13	*27: VGL1165*	28/28
28: VGL1828	19/19	*29: VGL2009*	15/15	*30: VGL2409*	16/16
31: VGL2918	12/17.3	*32: VGL3008*	14/21	*33: VGL3235*	12/12

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CANINE GENETIC DIVERSITY TEST REPORT

Client/Owner/Agent Information:	*Case:* **NCD261416**
TRACY CALHOUN 36290 GERIG DR SE ALBANY, OR 97322	***Date Received:*** 17-Nov-2025 ***Report Issue Date:*** 21-Nov-2025 ***Report ID:*** 4538-5313-7648-9024 Verify report at vgl.ucdavis.edu/verify

Name: **CALHOUN'S FIZZY MUDSLIDE**

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.

The Veterinary Genetics Laboratory is an institutional member of ISAG. DNA types are reported according to standardized nomenclature for those markers tested in the ISAG core panel.

For more detailed information on Canine Genetic Diversity test results, please visit our website at:
vgl.ucdavis.edu/test/canine-genetic-diversity

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

ANAB ANSI National Accreditation Board ACCREDITED ISO/IEC 17025 TESTING LABORATORY

UCDAVIS VETERINARY MEDICINE
Veterinary Genetics Laboratory

GOLDEN RETRIEVER GENETIC HEALTH PANEL TEST REPORT

Provided Information:

Name: **CALHOUN'S FIZZY MUDSLIDE**

Registration: **SS42827601**

Case: **NCD261416**
Date Received: 17-Nov-2025
Report Issue Date: 21-Nov-2025
Report ID: 2481-8548-0898-3066

Verify report at vgl.ucdavis.edu/verify

DOB: **06/27/2023** *Sex:* **Female** *Breed:* **Golden Retriever** *Microchip:* **956000017164321** *Color:* **Gold**

Call Name: **Maeve**

Sire: CALHOUN'S LUCK OF THE IRISH
Reg: SS14893707
Microchip:

Dam: CALHOUN'S MAYHEM ON A SATURDAY NIGHT
Reg: SS15346901
Microchip:

	RESULT	INTERPRETATION
Congenital Hypomyelinating Polyneuropathy (HPN-MPZ)	**N/N**	Normal. No copies of the MPZ allele associated with congenital hypomyelinating polyneuropathy (HPN) detected.
Congenital Hypomyelinating Polyneuropathy (HPN-MTMR2)	**N/N**	Normal. No copies of the MTMR2 allele associated with congenital hypomyelinating polyneuropathy (HPN) detected.
Congenital Hypomyelinating Polyneuropathy (HPN-SH3TC2)	**N/N**	Normal. No copies of the SH3TC2 allele associated with congenital hypomyelinating polyneuropathy (HPN) detected.
Congenital Ichthyosis 1 (Ich1)	**N/N**	Normal. Dog does not have the variant associated with congenital ichthyosis 1 found in Golden Retrievers.
Congenital Ichthyosis 2 (Ich2)	**N/N**	Normal. Dog does not have the variant associated with congenital ichthyosis 2 found in Golden Retrievers.
Congenital Myasthenic Syndrome (CMS)	**N/N**	Normal. Dog does not have the variant associated with congenital myasthenic syndrome found in Golden Retrievers.
Degenerative Myelopathy (DM)	**N/N**	No copies of the DM mutation.
Neuronal Ceroid Lipofuscinosis (NCL)	**N/N**	Normal. Dog does not have the variant associated with neuronal ceroid lipofuscinosis found in Golden Retrievers.
Progressive Retinal Atrophy (PRA1)	**N/N**	Normal. Dog does not have the variant associated with PRA1 found in Golden Retrievers.
Progressive Retinal Atrophy (PRA2)	**N/N**	Normal. Dog does not have the variant associated with PRA2 found in Golden Retrievers.
Progressive Rod-Cone Degeneration (PRCD)	**N/N**	Normal. No copies of this progressive rod-cone degeneration (PRA-prcd) allele detected.
Sensory Ataxic Neuropathy (SAN)	**N/N**	Normal. Dog does not have the variant associated with sensory ataxic neuropathy found in Golden Retrievers.

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TRACY CALHOUN 36290 GERIG DR SE ALBANY, OR 97322	***Date Received:*** 17-Nov-2025 ***Report Issue Date:*** 21-Nov-2025 ***Report ID:*** 2481-8548-0898-3066 Verify report at vgl.ucdavis.edu/verify

Name: **CALHOUN'S FIZZY MUDSLIDE**

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 Golden Retriever Genetic Health Panel test results, please visit our website at: vgl.ucdavis.edu/panel/golden-retriever-health-panel

For terms and conditions of testing, please see vgl.ucdavis.edu/about/terms-and-conditions

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

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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