OFA CANINE HEALTH INFORMATION CENTER

FR'S HOT HAWAIIAN LICKER
registered name

SR91609603
registration no.

LABRADOR RETRIEVER
breed

F
sex

2/13/2016
date of birth

Chip 956000004037236
permanent id

7/5/2018
date of report

CHIC#: 131799

REQUIRED TESTS

EYES	OFA	LR-EYE14803/23F-VPI	2/3/2018
D LOCUS	OFA	LR-DL982/25F-PI	3/19/2018
EXERCISE INDUCED COLLAPSE	OFA	LR-EIC4460/25F-PI	3/19/2018
ELBOW	OFA	LR-EL84530F27-VPI	6/12/2018
HIPS	OFA	LR-234375G27F-VPI	6/12/2018

OTHER TESTS

CENTRONUCLEAR MYOPATHY	OFA	LR-CNM1981/25F-PI	3/19/2018
RETINAL DYSPLASIA /OSD	OFA	LR-RDY683/25F-VPI	3/19/2018

owner

CASEY & JESSICA DOWLER
PO BOX 72
BRITTON, SD 57430

G.G.KELLER. D.V.M., M.S., DACVR
CHIEF OF VETERINARY SERVICES

www.caninehealthinfo.org

ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.

FR'S HOT HAWAIIAN LICKER
registered name

SR91609603
registration no.

LABRADOR RETRIEVER
breed

F
sex

2/13/2016
date of birth

956000004037236
tattoo/microchip/DNA profile

27
age at evaluation in months

A Not-For-Profit Organization

1823936
application number

LR-234375G27F-VPI
O.F.A. NUMBER

This number issued with the right to correct or revoke by the Orthopedic Foundation for Animals.

6/22/2018
date of report

RESULTS:

Based upon the radiograph submitted, the consensus was that no evidence of hip dysplasia was recognized. The hip joint conformation was evaluated as:

GOOD

owner

CASEY & JESSICA DOWLER
PO BOX 72
BRITTON, SD 57430

G.G.KELLER. D.V.M., M.S., DACVR
CHIEF OF VETERINARY SERVICES

www.ofa.org

Owner's Copy

PennHIP Report

Referring Veterinarian: Dr Matt Stork	**Clinic Name:** All City Pet Care West
Email: petcarewest@nvanet.com	**Clinic Address:** 3400 S. Holbrook Ave Sioux Falls, SD 57106
	Phone: (605) 361-3537
	Fax:(605) 361-1761

Patient Information

Client: Dowler, Jessica	**Tattoo Num:**
Patient Name: Nene	**Patient ID:** 21020Nene
Reg. Name: FR's Hot Hawaiian Licker	**Registration Num:** SR91609603
PennHIP Num: 119268	**Microchip Num:** 956000004037236
Species: Canine	**Breed:** LABRADOR RETRIEVER
Date of Birth: 13 Feb 2016	**Age:** 28 months
Sex: Female	**Weight:** 76 lbs/34.5 kgs
Date of Study: 12 Jun 2018	**Date Submitted:** 12 Jun 2018
Date of Report: 13 Jun 2018	

Findings

Distraction Index (DI): Right DI = 0.26, Left DI = 0.27.

Osteoarthritis (OA): No radiographic evidence of OA for either hip.

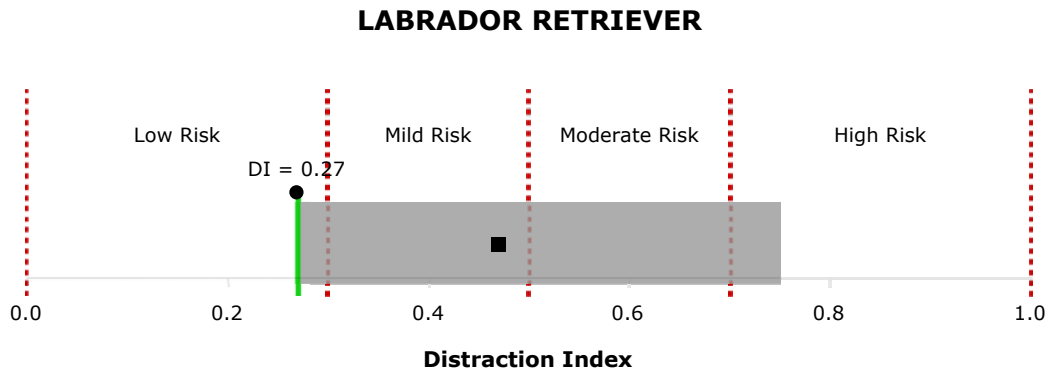
Cavitation/Other Findings: None.

Interpretation

Distraction Index (DI): The laxity ranking is based on the hip with the greater laxity (larger DI). In this case the DI used is 0.27.

OA Risk Category: The DI is less than or equal to 0.30. This patient is at minimal risk for hip OA.

Distraction Index Chart:



Breed Statistics: This interpretation is based on a cross-section of 32092 canine patients of the LABRADOR RETRIEVER breed in the AIS PennHIP database. The gray strip represents the central 90% range of DIs (0.27 - 0.75) for the breed. The breed average DI is 0.47 (solid square). The patient DI is the solid circle (0.27).

Summary: The degree of laxity (DI = 0.27) ranks the hip within the tightest 5% of DIs for the breed. This amount of hip laxity places the hip at a minimal risk to develop hip OA. No radiographic evidence of OA for either hip.

Interpretation and Recommendations: No OA/Minimal Risk: Unlikely to show radiographic evidence of hip OA; even more unlikely to develop clinical signs of hip dysplasia. **Recommendations**: Normal to strenuous activity is permitted. Keep lean: try to maintain BCS at 5/9 for a longer and healthier life.

Breeding Recommendations: Please Consult the PennHIP Manual.

ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.

FR'S HOT HAWAIIAN LICKER
registered name

LABRADOR RETRIEVER
breed

956000004037236
tattoo/microchip/DNA profile

1823936
application number

6/22/2018
date of report

SR91609603
registration no.

F
sex

2/13/2016
date of birth

27
age at evaluation in months

LR-EL84530F27-VPI
O.F.A. NUMBER

This number issued with the right to correct or revoke by the Orthopedic Foundation for Animals.

A Not-For-Profit Organization

RESULTS:
Based upon the radiograph submitted, the consensus was that no evidence of elbow dysplasia was recognized.

NORMAL

owner

CASEY & JESSICA DOWLER
PO BOX 72
BRITTON, SD 57430

G.G.KELLER. D.V.M., M.S., DACVR
CHIEF OF VETERINARY SERVICES

www.ofa.org

Paw Print Genetics
A division of Genetic Veterinary Sciences, Inc.

Canine Genetic Health Certificate™

Call Name:	Nene	**Laboratory #:**	31810
Registered Name:	FR's Hot Hawaiian Licker	**Registration #:**	SR91609603
Breed:	Labrador Retriever	**Microchip #:**	956000004037236
Sex:	Female	**Certificate Date:**	May 16, 2022
DOB:	Feb. 2016		

This canine's DNA showed the following genotype(s):

Disease	Gene	Genotype	Interpretation
Centronuclear Myopathy	*PTPLA*	WT/WT	Normal (clear)
Congenital Myasthenic Syndrome (Labrador Retriever Type)	*COLQ*	WT/M	Carrier
Copper Toxicosis (Labrador Retriever Type) ATP7A	*ATP7A*	M/M	Two Copy Carrier Female
Copper Toxicosis (Labrador Retriever Type) ATP7B	*ATP7B*	WT/WT	Normal (clear)
Degenerative Myelopathy	*SOD1*	WT/WT	Normal (clear)
Exercise-Induced Collapse	*DNM1*	WT/WT	Normal (clear)
Hereditary Nasal Parakeratosis	*SUV39H2*	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Golden Retriever 2	*TTC8*	WT/WT	Normal (clear)
Progressive Retinal Atrophy, Progressive Rod-Cone Degeneration	*PRCD*	WT/M	Carrier
Retinal Dysplasia/Oculoskeletal Dysplasia 1	*COL9A3*	WT/WT	Normal (clear)
Skeletal Dysplasia 2	*COL11A2*	WT/WT	Normal (clear)

WT, wild type (normal); M, mutant; Y, Y chromosome (male)

Blake C Ballif, PhD
Laboratory & Scientific Director

Casey R Carl, DVM
Associate Medical Director

Paw Print Genetics® performed the testing on the dog listed on this certificate. See the Laboratory Report for interpretation and recommendations based on these findings. The genes/diseases reported here were selected by the client. Normal results do not exclude inherited mutations not tested in these or other genes that may cause medical problems or may be passed on to offspring. The results included in this report relate only to the items tested using the sample provided. These tests were developed and their performance determined by Paw Print Genetics. This laboratory has established and verified the test(s)' accuracy and precision with >99.9% sensitivity and specificity. The presence of mosaicism may not be detected by this test. Non-paternity may lead to unexpected results. This is not a breed identification test. Because all tests performed are DNA-based, 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 immediately for further evaluation. In the event of a valid dispute of results claim, Paw Print Genetics will do its best to resolve such a claim to the customer's satisfaction. If no resolution is possible after investigation by Paw Print Genetics with the cooperation of the customer, the extent of the customer's sole remedy is a refund of the fee paid. In no event shall Paw Print Genetics be liable for indirect, consequential or incidental damages of any kind. Any claim must be asserted within 60 days of the report of the test results. Genetic counseling is available at Paw Print Genetics.

ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.

FR'S HOT HAWAIIAN LICKER
registered name

SR91609603
registration no.

LABRADOR RETRIEVER
breed

F
sex

31810
film/test/lab #

2/13/2016
date of birth

956000004037236
tattoo/microchip/DNA profile

25
age at evaluation in months

1823936
application number

LR-CNM1981/25F-PI
O.F.A. NUMBER

This number issued with the right to correct or revoke by the Orthopedic Foundation for Animals.

5/22/2018
date of report

A Not-For-Profit Organization

RESULTS:

CENTRONUCLEAR MYOPATHY (CNM): CLEAR

These results are based on the laboratory report from PAW PRINT GENETICS and the owner's certification that the sample provided was from the animal described above. The OFA registers these lab results, but cannot warrant the accuracy of the lab results.

owner

CASEY & JESSICA DOWLER
PO BOX 72
BRITTON, SD 57430

G.G.KELLER. D.V.M., M.S., DACVR
CHIEF OF VETERINARY SERVICES

www.ofa.org

ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.

FR'S HOT HAWAIIAN LICKER
registered name

SR91609603
registration no.

LABRADOR RETRIEVER
breed

F
sex

31810
film/test/lab #

2/13/2016
date of birth

956000004037236
tattoo/microchip/DNA profile

25
age at evaluation in months

1823936
application number

LR-EIC4460/25F-PI
O.F.A. NUMBER

This number issued with the right to correct or revoke by the Orthopedic Foundation for Animals.

5/22/2018
date of report

A Not-For-Profit Organization

RESULTS:

EXERCISE INDUCED COLLAPSE (EIC): CLEAR

These results are based on the laboratory report from PAW PRINT GENETICS and the owner's certification that the sample provided was from the animal described above. The OFA registers these lab results, but cannot warrant the accuracy of the lab results.

owner

CASEY & JESSICA DOWLER
PO BOX 72
BRITTON, SD 57430

G.G.KELLER. D.V.M., M.S., DACVR
CHIEF OF VETERINARY SERVICES

www.ofa.org

ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.

FR'S HOT HAWAIIAN LICKER
registered name

SR91609603
registration no.

LABRADOR RETRIEVER
breed

F
sex

31810
film/test/lab #

2/13/2016
date of birth

956000004037236
tattoo/microchip/DNA profile

25
age at evaluation in months

A Not-For-Profit Organization

1823936
application number

LR-PRA1890/25F-PI-CAR
O.F.A. NUMBER

This number issued with the right to correct or revoke by the Orthopedic Foundation for Animals.

5/22/2018
date of report

RESULTS:

prcd - PROGRESSIVE RETINAL ATROPHY: CARRIER

These results are based on the laboratory report from PAW PRINT GENETICS and the owner's certification that the sample provided was from the animal described above. The OFA registers these lab results, but cannot warrant the accuracy of the lab results.

owner

CASEY & JESSICA DOWLER
PO BOX 72
BRITTON, SD 57430

G.G.KELLER. D.V.M., M.S., DACVR
CHIEF OF VETERINARY SERVICES

ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.

FR'S HOT HAWAIIAN LICKER
registered name

SR91609603
registration no.

LABRADOR RETRIEVER
breed

F
sex

31810
film/test/lab #

2/13/2016
date of birth

956000004037236
tattoo/microchip/DNA profile

25
age at evaluation in months

1823936
application number

LR-RDY683/25F-VPI
O.F.A. NUMBER

This number issued with the right to correct or revoke by the Orthopedic Foundation for Animals.

5/22/2018
date of report

A Not-For-Profit Organization

RESULTS:

RETINAL DYSPLASIA (RD/OSD): HOMOZYGOUS NORMAL

These results are based on the laboratory report from PAW PRINT GENETICS and the owner's certification that the sample provided was from the animal described above. The OFA registers these lab results, but cannot warrant the accuracy of the lab results.

owner

CASEY & JESSICA DOWLER
PO BOX 72
BRITTON, SD 57430

G.G.KELLER. D.V.M., M.S., DACVR
CHIEF OF VETERINARY SERVICES

www.ofa.org

ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.

FR'S HOT HAWAIIAN LICKER
registered name

SR91609603
registration no.

LABRADOR RETRIEVER
breed

F
sex

433193
film/test/lab #

2/13/2016
date of birth

956000004037236
tattoo/microchip/DNA profile

23
age at evaluation in months

1823936
application number

LR-EYE14803/23F-VPI
O.F.A. NUMBER

This number issued with the right to correct or revoke by the Orthopedic Foundation for Animals.

5/21/2018
date of report

A Not-For-Profit Organization

RESULTS:

Based upon the exam dated 2/3/2018, this dog has been found to be free of observable inherited eye disease and has been issued an Eye Certification Registry Number which is valid for one year from the time of the exam.

owner

CASEY & JESSICA DOWLER
PO BOX 72
BRITTON, SD 57430

G.G.KELLER. D.V.M., M.S., DACVR
CHIEF OF VETERINARY SERVICES

www.offa.org

Companion Animal Eye Registry (CAER)

Orthopedic Foundation for Animals
2300 E Nifong Blvd, Columbia, MO 65201-3806
Phone: (573) 442-0418; Fax: (573)875-5073
www.offa.org, A not-for-profit organization

Dr. Daniel M. Betts EC101
2108 Hughes Ave.
Ames, IA 50014
515-230-0413

Ophthalmologist Name:	
Ophthalmologist Address:	
City:	State: / Zip/postal code:
Phone:	ACVO #:
Email:	

Registered name: FR's Hot Hawaiian Licker
Breed: Lab Ret — Sex: F
ID Number (if any): ☐ Tattoo ☒ Microchip: 956000004037236
Registration Number: ☒ AKC ☐ Other: SR91609603
Date of Birth (mm/dd/yy): 021316 — Date of Exam (mm/dd/yy): 020318

Owner Name: Casey Dowler
Co-Owner Name: Jessica Dowler — Phone: 6056913044
Owner Address: PO Box 72
City: Britton — State: SD — Zip/postal code: 57430
E-Mail (use both lines if needed): frlabs@yahoo.com

I hereby certify that the animal examined is the animal described on this application, and understand that the results of this exam will be submitted by the examining ophthalmologist to the database for statistical gathering purposes. I understand that only passing results will be released to the public unless the initials of a registered owner or authorized agent appear in the authorization box below which permits the OFA to release non-passing results to the public.

Jessica F Dowler
Signature of owner or authorized agent/representative

I hereby authorize the OFA to release the results of the evaluation of the animal described on this application to the public if the results are non-passing (initials) _____

☒ **I DID** verify microchip/tattoo on this dog
☐ **I DID NOT** verify microchip/tattoo on this dog

I certify that I have performed this ophthalmic examination using pharmacological mydriasis, ophthalmoscopy, and biomicroscopy.

Signature	ACVO #	Date
D M Betts	101	2-3-18

Diplomate, American College of Veterinary Ophthalmologists

FEES AND CREDIT CARD INFORMATION ON THE BACK OF THE WHITE (OWNER) COPY

433193

GLOBE

RIGHT EYE — LEFT EYE

- ☐ microphthalmos ☐
- ☐ keratoconjunctivitis sicca ☐
- ☐ glaucoma ☐

EYELIDS

- ☐ entropion ☐
- ☐ ectropion ☐
- ☐ distichiasis ☐
- ☐ ectopic cilia ☐
- ☐ imperforate lacrimal punctum ☐

NICTITANS

- ☐ cartilage anomaly/eversion ☐
- ☐ gland prolapse ☐
- ☐ plasmoma/atypical pannus ☐

CORNEA

- ☐ dystrophy—epithelial/stromal ☐
- ☐ dystrophy—endothelial ☐
- ☐ pannus ☐
- ☐ pigmentary keratitis/keratopathy ☐

UVEA

- ☐ uveal cyst ☐ (free floating ☐ single ☐ multiple)
- ☐ iris coloboma ☐
- ☐ iris hypoplasia ☐
- ☐ iris sphincter dysplasia ☐
- ☐ pigmentary uveitis ☐
- ☐ uveal melanoma ☐
- ☐ persistent pupillary membranes ☐ (endothelial opacity/no strands ☐ lens pigment foci/no strands ☐ iris sheets ☐ iris to cornea ☐ iris to lens ☐ iris to Iris ☐)

CORNEA: T N / A P — CORNEA: N T / A P

LENS

	Incomp.	Incip.	Punc.		Punc.	Incip.	Incomp.
anterior cortex	☐	☐	☐		☐	☐	☐
posterior cortex	☐	☐	☐		☐	☐	☐
equatorial cortex	☐	☐	☐		☐	☐	☐
anterior sutures	☐	☐	☐		☐	☐	☐
posterior sutures	☐	☐	☐		☐	☐	☐
nucleus	☐	☐	☐		☐	☐	☐
capsular	☐	☐	☐		☐	☐	☐

- ☐ generalized/complete ☐
- ☐ resorbing/hypermature ☐

CATARACT: T N / A P — CATARACT: N T / A P

☐ ***suspect not inherited*** ☐

- ☐ subluxation/luxation ☐

VITREOUS

- ☐ PHPV/PHTVL ☐
- ☐ persistent hyaloid artery ☐
- ☐ degeneration ☐ (ant. chamber ☐ syneresis ☐)

FUNDUS

RIGHT EYE — LEFT EYE

- ☐ retinal detachment ☐
- ☐ retinal atrophy—generalized ☐
- ☐ retinopathy ☐
- ☐ retinal dysplasia ☐ (detached ☐ geographic ☐ folds ☐)
- ☐ choroidal hypoplasia ☐
- ☐ coloboma ☐
- ☐ optic nerve coloboma ☐
- ☐ optic nerve hypoplasia ☐
- ☐ micropapilla ☐

OTHER CONDITIONS

- ☐ Unlisted conditions suspected as **inherited**. Describe in comments ☐
- ☐ Unlisted conditions suspected as **not inherited** ☐

NORMAL

Comments

WHITE = Owner/OFA Registration copy; PINK = ACVO Diplomate copy; YELLOW = ACVO Research copy

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08/19/16

Orthopedic Foundation for Animals
2300 E Nifong Blvd, Columbia, MO 65201-3806
Phone: (573) 442-0418; Fax: (573)875-5073
www.ofa.org, A not-for-profit organization

Companion Animal Eye Registry (CAER)

Call name: NeNe
Registered name: FR's Hot Hawaiian Licker
Breed: Lab
Sex: F
ID Number (if any): ☐ Tattoo ☒ Microchip
9560000040 3723
Registration Number: ☒ AKC ☐ Other
5R916096 03
Date of Birth (mm/dd/yy): 021316
Date of Exam (mm/dd/yy): 022920

Owner Name: Casey + Jessica Dowler
Co-Owner Name:
Phone: 6056913044
Owner Address: PO Box 72
City: Britton
State: SD
Zip/postal code: 57430
E-Mail (use both lines if needed): Frlabs@yahoo.com

I hereby certify that the animal examined is the animal described on this application, and understand that the results of this exam will be submitted by the examining ophthalmologist to the database for statistical gathering purposes. I understand that only passing results will be released to the public unless the initials of a registered owner or authorized agent appear in the authorization box below which permits the OFA to release non-passing results to the public.

Jessica Dowler
Signature of owner or authorized agent/representative

I hereby authorize the OFA to release the results of the evaluation of the animal described on this application to the public if the results are non-passing (initials) _____

●	I **DID** verify microchip/tattoo on this dog
☐	I **DID NOT** verify microchip/tattoo on this dog
☐	**NO MICROCHIP/TATTOO PRESENT**

I certify that I have performed this ophthalmic examination using pharmacological mydriasis, ophthalmoscopy, and biomicroscopy.

Signature	ACVO #	Date
DM Betts	101	2-29-20

Diplomate, American College of Veterinary Ophthalmologists

FEES AND CREDIT CARD INFORMATION ON THE BACK OF THE WHITE (OWNER) COPY

650640

Ophthalmologist Name: Dr. Daniel M. Betts EC101
Ophthalmologist Address: 2108 Hughes Ave
City: Ames, IA 50014
Phone: 515-230-0413
Email:

RIGHT EYE	GLOBE	LEFT EYE
☐	microphthalmos	☐
☐	keratoconjunctivitis sicca	☐
☐	glaucoma	☐
	EYELIDS	
☐	entropion	☐
☐	ectropion	☐
☐	distichiasis	☐
☐	ectopic cilia	☐
☐	imperforate lacrimal punctum	☐
	NICTITANS	
☐	cartilage anomaly/eversion	☐
☐	gland prolapse	☐
☐	plasmoma/atypical pannus	☐
	CORNEA	
☐	dystrophy—epithelial/stromal	☐
☐	dystrophy—endothelial	☐
☐	pannus	☐
☐	pigmentary keratitis/keratopathy	☐
	UVEA	
☐	uveal cyst	☐
☐	iris coloboma	☐
☐	iris hypoplasia	☐
☐	iris sphincter dysplasia	☐
☐	pigmentary uveitis	☐
☐	uveal melanoma	☐
☐	persistent pupillary membranes	☐
	LENS	
☐	subluxation/luxation	☐
	VITREOUS	
☐	PHPV/PHTVL	☐
☐	persistent hyaloid artery	☐
☐	degeneration	☐

CORNEA (T, N, A, P) — CORNEA (N, T, A, P)

endothelial opacity/no strands ☐; lens pigment foci/no strands ☐; iris sheets ☐; iris to cornea ☐; iris to lens ☐; iris to Iris ☐; free floating ☐; single ☐; multiple ☐

CATARACT (T, N, A, P) — CATARACT (N, T, A, P)

Incomp.	Incip.	Punc.		Punc.	Incip.	Incomp.
☐	☐	☐	anterior cortex	☐	☐	☐
☐	☐	☐	posterior cortex	☐	☐	☐
☐	☐	☐	equatorial cortex	☐	☐	☐
☐	☐	☐	anterior sutures	☐	☐	☐
☐	☐	☐	posterior sutures	☐	☐	☐
☐	☐	☐	nucleus	☐	☐	☐
☐	☐	☐	capsular	☐	☐	☐
☐			generalized/complete			☐
☐			resorbing/hypermature			☐

☐ ***Significance Unknown/Suspect Not Inherited*** ☐

ant. chamber ☐; syneresis ☐; multiple ☐; single ☐; free floating ☐; iris to Iris ☐; iris to lens ☐; iris to cornea ☐; iris sheets ☐; lens pigment foci/no strands ☐; endothelial opacity/no strands ☐

RIGHT EYE	FUNDUS	LEFT EYE
☐	retinal detachment	☐
☐	retinal atrophy—generalized	☐
☐	retinopathy	☐
☐	retinal dysplasia	☐
☐	choroidal hypoplasia	☐
☐	coloboma	☐
☐	optic nerve coloboma	☐
☐	optic nerve hypoplasia	☐
☐	micropapilla	☐

detached ☐; geographic ☐; folds ☐

OTHER CONDITIONS	
☐ Unlisted conditions suspected as **inherited**. Describe in comments	☐
☐ Unlisted conditions suspected as **not inherited**	☐

NORMAL

Comments

02/27/19

WHITE = Owner/OFA Registration copy; PINK = ACVO Diplomate copy; YELLOW = ACVO Research copy

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Paw Print Genetics
A division of Genetic Veterinary Sciences, Inc.

Coat Color and Trait Certificate

Call Name:	Nene	**Laboratory #:**	31810
Registered Name:	FR's Hot Hawaiian Licker	**Registration #:**	SR91609603
Breed:	Labrador Retriever	**Microchip #:**	956000004037236
Sex:	Female	**Certificate Date:**	March 19, 2018
DOB:	Feb. 2016		

This canine's DNA showed the following genotype(s):

Coat Color/Trait Test	Gene	Genotype	Interpretation
B Locus (Brown)	*TYRP1*	B/B	Black coat, nose and foot pads
D Locus (Dilute)	*MLPH*	D/D	Non dilute
E Locus (Yellow/Red)	*MC1R*	E/e	Black (carries yellow/red)

Interpretation:

This dog carries two copies of **B** at all three of the b^c, b^d and b^s loci making the overall B locus genotype of this dog **B/B**. The overall B locus genotype for a dog is determined by the combination of the genotypes at the b^c, b^d, and b^s loci. The b^c, b^d, and b^s variants confer brown coat, nose, and foot pads when at least one of these DNA changes is present on both genes of the dog at the B locus. If the dog has one or no copies of **b** then the dog will have a black coat, nose, and foot pads. However, this dog's coat color is also dependent on the E, K, and A genes. This dog will pass on **B** to 100% of its offspring.

This dog carries two copies of **D** which does not result in the "dilution" or lightening of the black and yellow/red pigments that produce the dog's coat color. The base coat color of this dog will be primarily determined by the E, K, A, and B genes. This dog will pass on **D** to 100% of its offspring.

This dog carries one copy of **E** and one copy of **e** which allows for the production of black pigment. However, this dog's coat color is also dependent on the K, A, and B genes. This dog will pass **E** on to 50% of its offspring and **e** to 50% of its offspring, which can produce a yellow/red coat (including shades of white, cream, yellow, apricot or red) if inherited with another copy of **e**.

Paw Print Genetics® has genetic counseling available to you at no additional charge to answer any questions about these test results, their implications and potential outcomes in breeding this dog.

Blake C Ballif, PhD
Laboratory & Scientific Director

Casey R Carl, DVM
Associate Medical Director

Normal results do not exclude inherited mutations not tested in these or other genes that may cause medical problems or may be passed on to offspring. These tests were developed and their performance determined by Paw Print Genetics®. This laboratory has established and verified the tests' accuracy and precision. Because all tests performed are DNA-based, 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 immediately for further evaluation. In the event of a valid dispute of results claim, Paw Print Genetics will do its best to resolve such a claim to the customer's satisfaction. If no resolution is possible after investigation by Paw Print Genetics with the cooperation of the customer, the extent of the customer's sole remedy is a refund of the fee paid. In no event shall Paw Print Genetics be liable for indirect, consequential or incidental damages of any kind. Any claim must be asserted within 60 days of the report of the test results.

ORTHOPEDIC FOUNDATION FOR ANIMALS, INC.

FR'S HOT HAWAIIAN LICKER
registered name

SR91609603
registration no.

LABRADOR RETRIEVER
breed

F
sex

31810
film/test/lab #

2/13/2016
date of birth

956000004037236
tattoo/microchip/DNA profile

25
age at evaluation in months

A Not-For-Profit Organization

1823936
application number

LR-DL982/25F-PI
O.F.A. NUMBER

This number issued with the right to correct or revoke by the Orthopedic Foundation for Animals.

5/22/2018
date of report

RESULTS:

D LOCUS (DL): DD - does not carry the d gene

These results are based on the laboratory report from PAW PRINT GENETICS and the owner's certification that the sample provided was from the animal described above. The OFA registers these lab results, but cannot warrant the accuracy of the lab results.

DD NORMAL/CLEAR

owner

CASEY & JESSICA DOWLER
PO BOX 72
BRITTON, SD 57430

G.G.KELLER. D.V.M., M.S., DACVR
CHIEF OF VETERINARY SERVICES

www.ofa.org

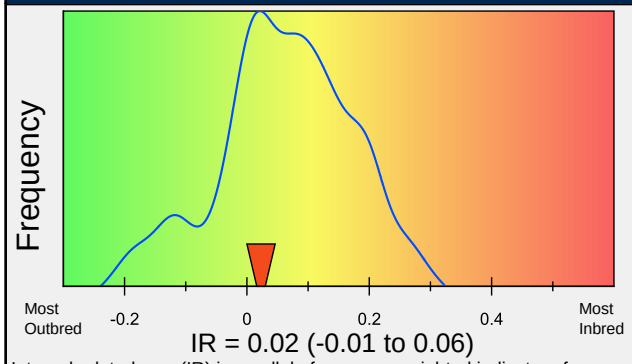
DOG GENETIC DIVERSITY ANALYSIS

FR'S HOT HAWAIIAN LICKER

Breed: Labrador Retriever
Sex: Female
Color: EeBBDD
DOB: 2016
Reg: SR91609603

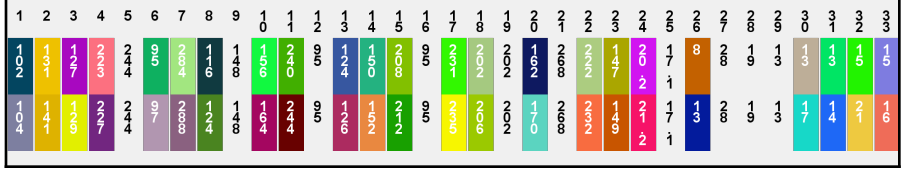
Case: NCD73778
Print Date: March 20, 2018
Report ID: 8869-7908-3941-6108

Labrador Retriever IR



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



Labrador Retriever DLA

	DLA I	DLA II
Haplotype 1	1008	2052
Haplotype 2	1105	2024

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.

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VETERINARY GENETICS LABORATORY
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CANINE GENETIC MARKER REPORT

JESSICA DOWLER
11024 422ND AVE, PO BOX 72
BRITTON, SD 57430

Case: **NCD73778**
Date Received: 22-Jan-2018
Print Date: 20-Mar-2018
Report ID: 8869-7908-3941-6108
Verify report at www.vgl.ucdavis.edu/myvgl/verify.html

Name: **FR'S HOT HAWAIIAN LICKER** *Reg:* **SR91609603**
DOB: **02/13/2016** *Sex:* **Female** *Breed:* **Labrador Retriever** *Microchip:* **956000004037236** *Color:* **EeBBDD**

Sire: SDK'S FOR THOSE ABOUT TO ROCK *Reg:* SR65109201
Dam: FR'S HOMEMADE HOOCH *Reg:* SR71950301

DIVERSITY PANEL

LOCUS	TYPE	LOCUS	TYPE	LOCUS	TYPE
1: AHT121	102/104	*2: AHT137*	131/141	*3: AHTH130*	127/129
4: AHTh171-A	223/227	*5: AHTh260*	244/244	*6: AHTk211*	95/97
7: AHTk253	284/288	*8: C22.279*	116/124	*9: FH2001*	148/148
10: FH2054	156/164	*11: FH2848*	240/244	*12: INRA21*	95/95
13: INU005	124/126	*14: INU030*	150/152	*15: INU055*	208/212
16: LEI004	95/95	*17: REN105L03*	231/235	*18: REN162C04*	202/206
19: REN169D01	202/202	*20: REN169O18*	162/170	*21: REN247M23*	268/268
22: REN54P11	222/232	*23: REN64E19*	147/149	*24: VGL0760*	20.2/21.2
25: VGL0910	17.1/17.1	*26: VGL1063*	8/13	*27: VGL1165*	28/28
28: VGL1828	19/19	*29: VGL2009*	13/13	*30: VGL2409*	13/17
31: VGL2918	13/14	*32: VGL3008*	15/21	*33: VGL3235*	15/16

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