

### OPHTHALMIC EXAMINATION FORM

Owner: Lauren Elgie

Address: PO Box 620

North Lakes QLD 4509

Animal Name: *Mango*

Microchip No:

ANIMAL: Species: dog Breed: *Labrador Retriever*

Birthdate: *24/9/16*

Coat: colour/type: *Yellow*

Sex: *F*

PREVIOUS EXAMINATION: ☒ Not prev examined ☐ Not affected ☐ Undetermined ☐ Affected

Date of previous examination: //

EXAMINATION TECHNIQUE: ☐ Direct ophthalmoscopy ☐ Indirect ophthalmoscopy

☐ Biomicroscopy ☐ Other:

MYDRIATIC: ☒ Yes ☐ No

REGIONS EXAMINED:

LIDS CORNEA IRIS LENS FUNDUS OTHER

Not affected

☒ ☒ ☒ ☒ ☒ ☐

Undetermined/suspicious

☐ ☐ ☐ ☐ ☐ ☒

Affected

☐ ☐ ☐ ☐ ☐ ☐

Right

Left

Right

Left

A ☒ P ☒

☒ ☒

Cornea

☒ ☒

Eyelids

☒ ☒

Lens

☒ ☒

Fundus

*Several mild opacities  
in anterior vitreous.  
Possible hyaloid remnants*

INHERITED DISEASE: ☐ Yes ☒ NO ☐ Suspicious Date of examination: *30/11/18*

Should be re-examined:  Months  Yearly SIGNED *Mr Elgie*

# GENETIC ANALYSIS REPORT

## OWNER'S DETAILS

Lauren Elgie  
35 WALLAROO CIRCUIT NORTH LAKES  
BRISBANE  
Queensland 4509 AU



## ANIMAL'S DETAILS

Registered Name:	CAREER DOGS' MANGO	Pet Name:	MANGO
Registration Number:		Breed:	Labrador Retriever
Microchip Number:	953010001304436	Sex:	Intact Female
Date of Birth:	24/9/2016	Colour:	YELLOW

## COLLECTION DETAILS

Case Number:	18158632	Date of Test:	13/02/2018
Approved Collection Method:	NO	Collected By:	

*Sample with Lab ID Number 18158632 was received at Orivet Genetics, DNA was extracted and analysed with the following result reported:*

## TESTS REPORTED

## RESULT <sup>1</sup>

<sup>1</sup>**Please Note:** This is a summary disease and trait report. To view more details on each test, including a DNA profile, please log in to your account and view the detailed single DNA report.

### *Urogenital (Associated with the Urinary and Genital Tracts)*

CANINE HYPERURICOSURIA	NEGATIVE / CLEAR [NO VARIANT DETECTED]
COPPER TOXICOSIS (ATP7B & ATP7A) LABRADOR RETRIEVER TYPE	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CYSTINURIA (SLC3A1) LABRADOR RETRIEVER TYPE	NEGATIVE / CLEAR [NO VARIANT DETECTED]

### *Neurologic (Associated with the Brain, Spinal and Nerves)*

CENTRONUCLEAR MYOPATHY (LABRADOR RETRIEVER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CONGENITAL MYASTHENIC SYNDROME (LABRADOR RETRIEVER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
DEGENERATIVE MYELOPATHY	NEGATIVE / CLEAR [NO VARIANT DETECTED]
EXERCISE INDUCED COLLAPSE	NEGATIVE / CLEAR [NO VARIANT DETECTED]
MYOTUBULAR MYOPATHY X-LINKED (LABRADOR)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
NARCOLEPSY (LABRADOR)	NEGATIVE / CLEAR [NO VARIANT DETECTED]

### *Dermatologic (Associated with Skin)*

DRY NOSE (HEREDITARY NASAL PARAKERATOSIS)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
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### *Haemolymphatic (Associated with the Circulatory System)*

ELLIPTOCYTOSIS (B-SPECTRIN)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
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### *Metabolic (Associated with the Body's Enzymes and Cell Metabolism)*

MALIGNANT HYPERTHERMIA	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PYRUVATE KINASE DEFICIENCY (CANINE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]

### *Ophthalmologic (Associated with the Eyes)*

PROGRESSIVE ROD CONE DEGENERATION (PRCD) - PRA	NEGATIVE / CLEAR [NO VARIANT DETECTED]
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### *Musculoskeletal (Associated with Bones and Muscles)*

SKELETAL DYSPLASIA 2 (DWARFISM SD2)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
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### *Trait (Associated with Phenotype)*

A LOCUS (FAWN/SABLE;TRI/TAN POINTS)  
BROWN (345DELPPO) DELETION  
BROWN (GLNT331STOP) STOP CODON  
BROWN (SER41CYS) INSERTION CODON  
D (DILUTE) LOCUS  
E LOCUS - (CREAM/RED/YELLOW)  
K LOCUS (DOMINANT BLACK)  
LONG HAIR GENE (CANINE)  
WEIGHT AND APPETITE OBESITY PRONE

a<sup>t</sup>/a<sup>t</sup> - TAN POINTS - TAN POINTS or TRICOLOUR MAY BE BRINDLED [SEE K LOCUS]  
BB<sup>d</sup> - DOES NOT CARRY BROWN or CHOCOLATE (DELETION)  
BB<sup>s</sup> - DOES NOT CARRY BROWN or CHOCOLATE (STOP CODON)  
BB<sup>c</sup> - DOES NOT CARRY BROWN or CHOCOLATE (INSERTION)  
DD - NO COPY OF MLPH-D ALLELE (DILUTE) - PIGMENT IS NORMAL  
ee - DOG IS HOMOZYGOUS FOR NON-EXTENSION (WHITE/YELLOW/APRICOT)  
KK - DOMINANT BLACK - SOLID [WILL NOT BE BRINDLED or EXPRESS AGOUTI]  
NEGATIVE - NOT SHOWING THE PHENOTYPE  
NEGATIVE / CLEAR [NO VARIANT DETECTED]

**RESULTS REVIEWED AND CONFIRMED BY:**

Dr. Noam Pik BVSc, BMVS, MBA, MACVSc



George Sofronidis BSc (Hons)



## **EXPLANATION of RESULT TERMINOLOGY**

The terms below are provided to help clarify certain results phrases on your genetic report. The phrases below are those as reported by Orivet and may vary from one laboratory to the other.

### **NEGATIVE / CLEAR [NO VARIANT DETECTED]**

No presence of the variant (mutation) has been detected. The animal is clear of the disease and will not pass on any disease-causing mutation.

### **CARRIER [ONE COPY OF THE VARIANT DETECTED]**

This is also referred to as HETEROZYGOUS. One copy of the normal gene and copy of the affected (mutant) gene has been detected. The animal will not exhibit disease symptoms or develop the disease. Consideration needs to be taken if breeding this animal - if breeding with another carrier or affected or unknown then it may produce an affected offspring.

### **POSITIVE / AT RISK [TWO COPIES OF THE VARIANT DETECTED]**

Two copies of the disease gene variant (mutation) have been detected also referred to as HOMOZYGOUS for the variant. The animal may show symptoms (affected) associated with the disease. Appropriate treatment should be pursued by consulting a Veterinarian.

### **POSITIVE HETEROZYGOUS [ONE COPY OF THE DOMINANT VARIANT DETECTED]**

Also referred to as POSITIVE ONE COPY or POSITIVE HETEROZYGOUS. This result is associated with a disease that has a dominant mode of inheritance. One copy of the normal gene (wild type) and affected (mutant) gene is present. Appropriate treatment should be pursued by consulting a Veterinarian. This result can still be used to produce a clear offspring.

### **POSITIVE HOMOZYGOUS [TWO COPIES OF THE DOMINANT VARIANT DETECTED]**

Also referred to as POSITIVE HOMOZYGOUS. Two copies of the disease gene variant (mutant) have been detected and the animal may show symptoms associated with the disease. Please Note: This disease has dominant mode of inheritance so if mated to a clear animal ALL offspring with be AFFECTED – HETEROZYGOUS ONE COPY.

### **NORMAL BY PARENTAGE HISTORY**

The sample submitted has had its parentage verified by DNA. By interrogating the DNA profiles of the Dam, Sire and Offspring this information together with the history submitted for the parents excludes this animal from having this disease. The controls run confirm that the dog is NORMAL for the disease requested.

### **NORMAL BY PEDIGREE**

The sample submitted has had its parentage verified by Pedigree. The pedigree has been provided and details (genetic testing reports) of the parents have been included. Parentage could not be determined via DNA profile as no sample was submitted.

### **NO RESULTS AVAILABLE**

Insufficient information has been provided to provide a result for this test. Sire and Dam information and/or sample may be required. This result is mostly associated with tests that have a patent/license and therefore certain restrictions apply. Please contact the laboratory to discuss.

### **INDETERMINABLE**

The sample submitted has failed to give a conclusive result. This result is mainly due to the sample failing to "cluster" or result in the current grouping. A recollection is required at no charge.

### **DNA PROFILE**

Also known as a DNA fingerprint. This is unique for the animal. No animal shares the same DNA profile. An individual's DNA profile is inherited from both parents and can be used for verifying parentage (pedigrees). This profile contains no disease or trait information and is simply a unique DNA signature for that animal.

### **PARENTAGE VERIFICATION**

#### **QUALIFIES/CONFIRMED or DOES NOT QUALIFY/EXCLUDED**

Parentage is determined by examining the markers on the DNA profile. A result is generated and stated for all DNA parentage requests. Parentage confirmation reports can only be generated if a DNA profile has been carried out for Dam, Offspring and possible Sire/s.

### **PENDING**

Results for this test are still being processed. Some tests are run independently and are reported at a later date. When completed, the result will be emailed.

### **APPROVED COLLECTION METHOD (YES)**

The sample submitted for testing HAS met the requirements recommended by member bodies for the DNA collection process. The animal has been identified via its microchip number (Positive ID) and collected by a Veterinarian or Approved Collection Agent.

#### APPROVED COLLECTION METHOD (NO)

The sample submitted for testing HAS NOT met the requirements recommended by member bodies for the DNA collection process.

#### TRAIT (PHENOTYPE)

A feature that an animal is born with (a genetically determined characteristic). Traits are a visual phenotype that range from colour to hair length, and also includes certain features such as tail length. If an individual is AFFECTED for a trait then it will show that characteristic eg. AFFECTED for the B (Brown) Locus or bb will be brown/chocolate.

#### POSITIVE – SHOWING THE PHENOTYPE

The animal is showing the trait or phenotype tested.

#### CLARIFICATION OF GENETIC TESTING

The goal of genetic testing is to provide breeders with relevant information to improve breeding practices in the interest of animal health. However, genetic inheritance is not a simple process, and may be complicated by several factors. Below is some information to help clarify these factors.

- 1) Some diseases may demonstrate signs of what Geneticists call “genetic heterogeneity”. This is a term to describe an apparently single condition that may be caused by more than one mutation and/or gene.
- 2) It is possible that there exists more than one disease that presents in a similar fashion and segregates in a single breed. These conditions - although phenotypically similar - may be caused by separate mutations and/or genes.
- 3) It is possible that the disease affecting your breed may be what Geneticists call an “oligogenic disease”. This is a term to describe the existence of additional genes that may modify the action of a dominant gene associated with a disease. These modifier genes may for example give rise to a variable age of onset for a particular condition, or affect the penetrance of a particular mutation such that some animals may never develop the condition.

The range of hereditary diseases continues to increase and we see some that are relatively benign and others that can cause severe and/or fatal disease. Diagnosis of any disease should be based on pedigree history, clinical signs, history (incidence) of the disease and the specific genetic test for the disease.

Penetrance of a disease will always vary not only from breed to breed but within a breed, and will vary with different diseases. Factors that influence penetrance are genetics, nutrition and environment. Although genetic testing should be a priority for breeders, we strongly recommend that temperament and phenotype also be considered when breeding.

**Orivet Genetic Pet Care** aims to frequently update breeders with the latest research from the scientific literature. If breeders have any questions regarding a particular condition, please contact us on **(03) 9534 1544** or **admin@orivet.com** and we will be happy to work with you to answer any relevant questions.





Mango

# VETERINARY CARDIAC SERVICES AUSTRALIA | NEW ZEALAND

## Certificate of Echocardiography

This is to certify that I, Dr Geoff Nicolson BVSc (Hons I) MVETSTUD Dipl. ECVIM-CA (Cardiology), a qualified **Specialist Veterinary Cardiologist**, have today 23-01-19 examined the following animal for evidence of cardiac disease:

Animal name: Mango  
Age/DOB: 24/09/2016 Sex: F Breed: Labrador Retriever  
Colour: Yellow Reg no: \_\_\_\_\_ Microchip no: 95301000130 4436  
Owner: Career Dogs Australia  
Address: PO Box 620, North Lakes, QLD 4509

### Echocardiographic Examination

(cardiologist to complete)

Findings: Trivial TR (likely physiologic valvular regurgitation); otherwise all normal

LVIDd 43.6 LVIDs 30.0 FS% 31

IVSd 6.9 LVFWd 10.3 LA:Ao 1.32 (norm. < 1.6)

Aortic velocity 1.08 m/s (norm. < 2m/s) Pulmonic velocity 0.94 m/s (norm. < 2m/s)

MR velocity — m/s (norm. 5-6m/s) TR velocity — m/s (norm. < 3.0m/s)

### Certification Statement

(cardiologist to complete)

① No echocardiographic evidence of cardiac disease

- ① The above animal has no echocardiographic evidence of cardiac disease  
② The above animal has echocardiographic changes, which I consider to be of no significance with regards to breeding  
③ The above animal has an echocardiographic abnormality, which I consider makes it unsuitable for breeding purposes

GPW

**Dr Geoff Nicolson**

BVSc (Hons I) MVETSTUD Dipl. ECVIM-CA (Cardiology)  
Specialist Veterinary Cardiologist

## PennHIP Report

**Referring Veterinarian:** Dr David Reese

**Email:** DIReports@murdoch.edu.au

**Clinic Name:** Murdoch University Veterinary Hospital

**Clinic Address:** 90 South St  
Perth, WA 6150

**Phone:** 6 (189) 360-2436

**Fax:** 6 (189) 360-6509

## Patient Information

**Client:** CAREER DOGS AUSTRALIA, LAUREN ELGIE

**Patient Name:** CAREER DOGS MANGO

**Reg. Name:** CAREER DOGS MANGO

**PennHIP Num:** 111846

**Species:** Canine

**Date of Birth:** 24 Sep 2016

**Sex:** Female

**Date of Study:** 04 Oct 2017

**Date of Report:** 04 Oct 2017

**Tattoo Num:**

**Patient ID:** TAHMU196808

**Registration Num:**

**Microchip Num:** 953010001304436

**Breed:** LABRADOR RETRIEVER

**Age:** 13 months

**Weight:** 55.1 lbs/25 kgs

**Date Submitted:** 04 Oct 2017

## Findings

**Distraction Index (DI):** Right DI = 0.35, Left DI = 0.41.

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

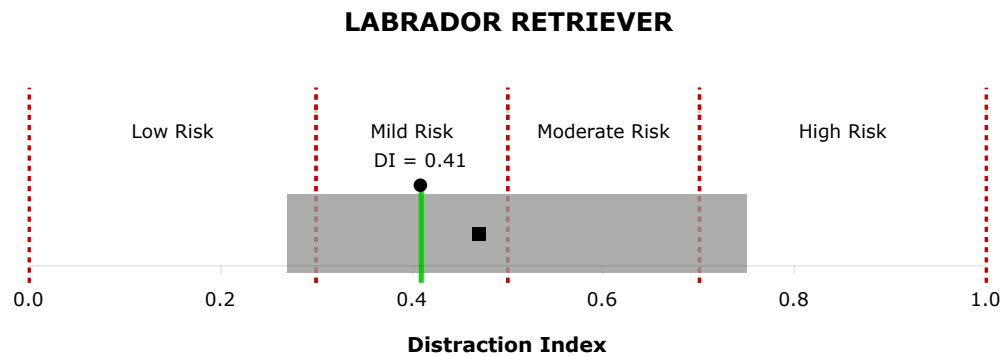
**Cavitation/Other Findings:** None.

## 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 0.41.

**OA Risk Category:**The DI is between 0.31 and 0.49. This patient is at mild risk for hip OA.

**Distraction Index Chart:**



**Breed Statistics:**This interpretation is based on a cross-section of 30983 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 (0.41).

**Summary:**The degree of laxity (DI = 0.41) falls within the central 90% range of DIs for the breed. This amount of hip laxity places the hip at a mild risk to develop hip OA. No radiographic evidence of OA for either hip.

**Interpretation and Recommendations:**No OA/Mild Risk: Low risk to develop radiographic evidence of hip OA early in life, however OA may manifest after 6 years of age or later. Risk of OA increases as DI, age, body weight, and activity level increase. OA susceptibility is breed specific, larger breeds being more susceptible. **Recommendations:** Evidence-based strategies to lower the risk of dogs developing hip OA or to treat those having OA fall into 5 modalities.\* For detailed information, consult these documents.\* Use any or all of these modalities as needed:

- 1) For acute or chronic pain prescribe NSAID PO short or long term. Amantadine can be added if response is marginal or if a neuropathic component to the pain is suspected.
- 2) Optimize body weight, keep lean, at BCS = 5/9.
- 3) Prescribe therapeutic exercise at intensities that do not precipitate lameness.
- 4) Administer polysulfated glycosaminoglycans IM or SQ, so-called DMOAD.
- 5) Feed an EPA-rich prescription diet preventatively for dogs at risk for OA or therapeutically for dogs already showing radiographic signs of OA.

At the present time there is inadequate evidence to confidently recommend any of the many other remedies to prevent or treat OA. Studies are in progress. Consider repeating radiographs at periodic intervals to determine the rate of OA progression and adjust treatment accordingly. Older dogs may show clinical signs such as chronic pain, reluctance to go stairs or jump onto the bed, and stiffness particularly after resting. It is unlikely that end-stage hip disease will develop for dogs at this risk level so surgical therapy for the pain of hip OA would rarely be indicated.

**Breeding Recommendations:** Please consult the PennHIP Manual.

\* From WSAVA Global Pain Council Guidelines and the 2015 AAHA/AAFP Pain Management Guidelines



# CANINE HIP AND ELBOW DYSPLASIA EVALUATION

Diagnostic Imaging Department  
1300 652 494  
direports@murdoch.edu.au

Please see following page for payment information.

Date Radiograph Taken: 4/10/2017
Breed: Labrador
Sex: F Date of Birth: 24/09/2016

KC Registration Number.: Not registered
KC Name: Career Dogs Mango
Microchip Number: 953 010001 304 436

PEDIGREE DETAILS MUST BE INCLUDED

SIRE: GUIDING LIGHT BASIL	PGS: GUIDING LIGHT DIKE
DAM: CAREER DOGS BLITZ	PGD: GUIDEDOGS GIADA
	MGS: GUIDING LIGHT HAWKE
	MGD: CCI'S ASTA II

## OWNERS DETAILS AND DECLARATION

Owner/s Name: Lauren Elgie	Telephone: 0400 350 229
Owners Address: Career Dogs Australia, PO Box 620, North Lakes QLD 4509	
Owners Email: lauren@careerdog.com.au	
I/We hereby declare that : a) The particulars shown above are correct and relate to the dog submitted for Radiographic Examination. b) I give permission for the results of the examination to be used at a future date for the purpose of statistical research which may be published.	

Owners Signature: S. Wise	Date: 4/10/17
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## VETERINARIAN DETAILS

Referring Veterinarian: Dr KATIA DIXON	Telephone: 08 9360 0434
Referring Veterinary Practice: THE ANIMAL HOSPITAL AT MURDOCH	
Address: 90 SOUTH ST MURDOCH	
Email Address: apnurses@murdoch.edu.au	
Positive Identification Sighted: Yes No	ANKC Certificate of Registration and Pedigree Sighted: Yes No
Veterinarian Signature: [Signature]	Date: 4/10/17

## RADIOLOGIST

Film Quality : Satisfactory; underexposed; overexposed; extraneous marks; not labelled adequately				
Positioning: Satisfactory; tilted laterally left/right; femora not sufficiently extended; femora not evenly extended				
HIP JOINT	RIGHT	LEFT	COMMENT	
Norberg angle			Paw Hip only	
Subluxation				
Cranial acetabular edge				
Dorsal acetabular edge				
Cranial effective acetabular rim				
Acetabular fossa				
Caudal acetabular edge				
Femoral head/neck exostosis				
Femoral head recontouring				
TOTAL (max. possible 53 per column)				
Hip Grade: Normal (0) 1 2 3 4 5 6			Breed Average Score :	
ELBOW JOINT	mm of change	Grade	UAP	COMMENT
Right Elbow	0.5	1	Yes (No)	
Left Elbow	0	0	Yes (No)	
Date Radiographs Received: 4/10/2017		Date Radiographs Examined: 5/10/2017		
Date Radiographs Returned:		Examined By: [Signature]		
Payment: Cheque <input type="checkbox"/> Credit Card <input type="checkbox"/> In Person <input checked="" type="checkbox"/>		JL Richardson, BVMS, MVS, FANZCVS (Radiology)		