

## PennHIP Report

Referring Veterinarian: Dr David Reese

Email: DIReports@murdoch.edu.au

Clinic Name: The Animal Hospital at  
Murdoch University

Clinic Address: 90 South St  
Perth, WA 6150

Phone: 6 (189) 360-2436

Fax: 6 (189) 360-6509

## Patient Information

Client: ELGIE, Lauren

Patient Name: CAREER DOGS GRACE AND  
GRATITUDE

Reg. Name: Career Dogs' Grace and  
Gratitude

PennHIP Num: 106887

Species: Canine

Date of Birth: 27 Mar 2016

Sex: Female

Date of Study: 13 Apr 2017

Date of Report: 19 Apr 2017

Tattoo Num:

Patient ID: 192807

Registration Num:

Microchip Num: 900079000147182

Breed: GOLDEN RETRIEVER

Age: 13 months

Weight: 69.4 lbs/31.5 kgs

Date Submitted: 18 Apr 2017

## Findings

Distraction Index (DI): Right DI = 0.37, Left DI = 0.37.

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

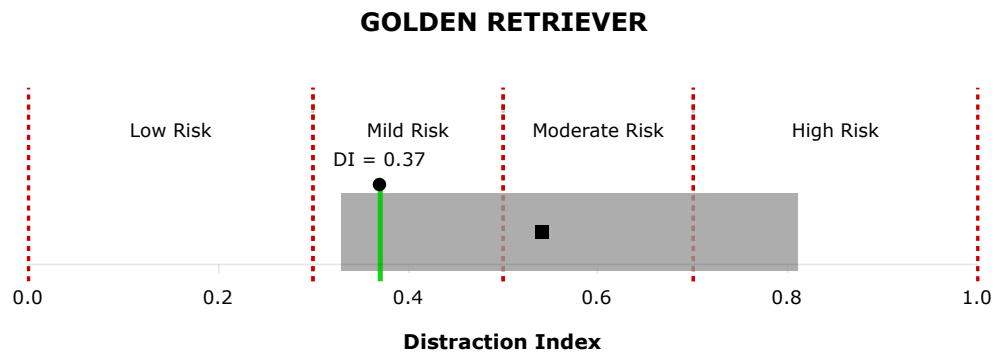
Cavitation/Other Findings: No cavitation present.

## 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 0.37.

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 19004 canine patients of the GOLDEN RETRIEVER breed in the AIS PennHIP database. The gray strip represents the central 90% range of DIs (0.33 - 0.81) for the breed. The breed average DI is 0.54 (solid square). The patient DI is the solid circle (0.37).

Summary: The degree of laxity (DI = 0.37) 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.**



DIAGNOSTIC IMAGING SERVICE  
MURDOCH UNIVERSITY VETERINARY HOSPITAL  
South Street, Murdoch, WA 6150  
Tel: (08) 9360 2436 Fax: (08) 9360 6509

CREDIT ONLY EXTENDED TO VETERINARY  
PRACTICES.  
OWNERS MUST INCLUDE PAYMENT.  
HIPS ONLY - \$105.00 GST INC  
HIPS & ELBOWS - \$105.00 GST INC  
ELBOWS ONLY - \$55.00 GST INC

## CANINE HIP AND ELBOW DYSPLASIA EVALUATION

0334

DATE RADIOGRAPH TAKEN: 13/4/17 ✓	
BREED: Golden Retriever	
SEX: F	DATE OF BIRTH: 27/03/16
XRAY NO.: P/N 2807 ✓	

KC REG. NO.:
IDENTIFICATION NO.: 9000790001471821 ✓
KC NAME: CareerDogs Grace And Gratitude ✓
PET NAME: Rosie

NAME OF OWNER: Lauren Elgie	ADDRESS: PO Box 620 North Lakes, QLD 4509 lauren@careerdog.com.au
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### PEDIGREE DETAILS MUST BE INCLUDED

SIRE: Longheath Truman of Guidewell	PGS: Guidewell Beau
	PGD: Bethwood Heath's Beauty
DAM: CareerDogs Islas Alsie	MGS: Guiding Light Brooder
	MGD: Winter Leg Striking the pose

I hereby declare that

- (a) The particulars above are correct and relate to the dog submitted for radiographic examination.
- (b) The dog has not previously been submitted for scoring.
- (c) I give permission for the results of the examination to be used at a future date for the purposes of statistical research which will be published.

Owner's Signature

*Lauren Elgie*

Date:

13.4.17

Veterinarian Submitting Radiographs: Joanne Russell-Smith

Dog Anaesthetised: ☒ Y

Address: Nyarrie Drive, Murdoch 6150

The Animal Hospital at Murdoch University

Date: 13/4/17

Signed: *Joanne Russell-Smith*

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	COMMENTS						
Norberg angle									
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)									
TOTAL SCORE (max possible 106)									
Hip Grade: Normal (0)	1	2	3	4	5	6	Breed Average Score		
Elbow Grade: Right: (0)	1	2	3	(0 mm)	Left: (0)	1	2	3	(0 mm)

Date examined:

18/4/2017

Examined by:

J.L. Richardson, BVMS, MVS, FACVSc (Radiol)

Date received:

Date Returned:



# VETERINARY CARDIAC SERVICES

## AUSTRALIA | NEW ZEALAND

Rosie

### 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 19-6-18 examined the following animal for evidence of cardiac disease:

Animal name: "ROSIE" - CAREER DOGS' GRACE AND GRATITUDE

Age/DOB: 27/03/1 Sex: F Breed: GOLDEN RETRIEVER

Colour: GOLD Reg no: N/A Microchip no: 900079000147182

Owner: CAREER DOGS AUSTRALIA

Address: PO BOX 620, NORTH LAKES, QUEENSLAND 4509

#### Echocardiographic Examination (cardiologist to complete)

Findings: normal

LVIDd 44mm LVIDs 35mm FS% 30

IVSd 10mm LVFWd 11mm LA:Ao 1.51 (norm. <1.6)

Aortic velocity 1.53 m/s (norm. <2m/s) Pulmonic velocity 0.8 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.) The above animal has 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

**Dr Geoff Nicolson**  
BVSc (Hons I) MVETSTUD Dipl. ECVIM-CA (Cardiology)  
Specialist Veterinary Cardiologist

### OPHTHALMIC EXAMINATION FORM

Owner: *Career Dogs Australia*

Animal Name: *ROSIE*

Address: *PO Box 620  
North Lakes  
QLD 4509*

Microchip No: *900079000147182*

ANIMAL: Species: *dog* Breed: *Golden Retriever*  
Coat: colour/type:

Birthdate:

Sex: *Female*

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	<i>/</i>	<i>/</i>	<i>/</i>	<i>/</i>	<i>/</i>	<i>/</i>
Undetermined/suspicious	<i>/</i>	<i>/</i>	<i>/</i>	<i>/</i>	<i>/</i>	<i>/</i>
Affected	<i>/</i>	<i>/</i>	<i>/</i>	<i>/</i>	<i>/</i>	<i>/</i>

Right Left

Right Left  
A */* P */*  
*/* */*  
Lens

*/* */*  
Cornea  
*/* */*  
Fundus

Right Left  
*/* */*  
Eyelids

INHERITED DISEASE: ☐ Yes ☒ NO ☐ Suspicious Date of examination: *24/01/19*

Should be re-examined: *\_\_\_* Months *\_\_\_* Yearly SIGNED: *[Signature]*



# GENETIC ANALYSIS SUMMARY REPORT

## OWNER'S DETAILS

Lauren Elgie  
35 WALLAROO CIRCUIT NORTH LAKES  
BRISBANE  
Queensland 4509 AU



## ANIMAL'S DETAILS

Registered Name:  
Registration Number:  
Microchip Number:  
Date of Birth: //

Pet Name: ROSIE  
Breed: Golden Retriever  
Sex:  
Colour:

## COLLECTION DETAILS

Case Number: 17079486  
Approved Collection Method: NO (Collected by Owner)  
Date of Test: 18/08/2017  
Collected By:

*Sample with Lab ID Number 17079486 was received at Orivet Genetics, DNA was extracted and analysed with the following result reported:*

## DISEASES REPORTED

## RESULT <sup>1</sup>

### Neurologic - Associated with the Brain, Spinal and Nerves

DEGENERATIVE MYELOPATHY

NEGATIVE / CLEAR [NO VARIANT DETECTED]

### Ophthalmologic - Associated with the Eyes

GENERALISED PRA 1

NEGATIVE / CLEAR [NO VARIANT DETECTED]

PROGRESSIVE ROD CONE DEGENERATION (PRCD) - PRA

NEGATIVE / CLEAR [NO VARIANT DETECTED]

GENERALISED PRA 2

NEGATIVE / CLEAR [NO VARIANT DETECTED]

### Dermatologic - Associated with Skin

ICHTHYOSIS A (GOLDEN RETRIEVER)

CARRIER [ONE COPY OF THE VARIANT DETECTED]

### Musculoskeletal - Associated with Bones and Muscles

SKELETAL DYSPLASIA 2

NEGATIVE / CLEAR [NO VARIANT DETECTED]

<sup>1</sup> - Please note this is a summary report. To view more details on each test including clarification of the type of test and result please view the single detailed report.



**RESULTS REVIEWED AND CONFIRMED BY:**

A handwritten signature in black ink, appearing to read 'N. Pik'.

Dr. Noam Pik BVSc, BMVS, MBA, MACVS

A handwritten signature in black ink, appearing to read 'George'.

George Sofronidis BSc (Hons)



# GENETIC ANALYSIS SUMMARY REPORT

## OWNER'S DETAILS

Lauren Elgie  
35 WALLAROO CIRCUIT NORTH LAKES  
BRISBANE  
Queensland 4509 AU



## ANIMAL'S DETAILS

Registered Name:  
Registration Number:  
Microchip Number:  
Date of Birth: //

Pet Name: ROSIE  
Breed: Golden Retriever  
Sex:  
Colour:

## COLLECTION DETAILS

Case Number: 17079486  
Approved Collection Method: NO (Collected by Owner)

Date of Test: 18/08/2017  
Collected By:

## TRAITS REPORTED

## RESULT

Trait - Associated with Phenotype  
E LOCUS - (CREAM/RED/YELLOW)

ee - WHITE/YELLOW/APRICOT



## RESULTS REVIEWED AND CONFIRMED BY:

A handwritten signature in black ink, appearing to read "N. Pik".

Dr. Noam Pik BVSc, BMVS, MBA, MACVS

A handwritten signature in black ink, appearing to read "George Sofronidis".

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.

### **NORMAL/CLEAR/NEGATIVE - 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.

### **AFFECTED/POSITIVE FOR THE VARIANT**

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/AFFECTED – HETEROZYGOUS ONE COPY (AUTOSOMAL DOM)**

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/AFFECTED – HOMOZYGOUS TWO COPIES (AUTOSOMAL DOM)**

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. This will be repeated and looked at manually; if a result cannot be determined, a recollection may be requested.

### **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.