



\*For best printing results please use Chrome or IE.  
Owner's Copy

### PennHIP Report

<b>Referring Veterinarian:</b> Dr Jaqui Hall <b>Email:</b> jaq@jaqhall.com	<b>Clinic Name:</b> Karingal Veterinary Hospital <b>Clinic Address:</b> 328 Cranbourne Road Frankston, Victoria, VIC 3199 <b>Phone:</b> 6 (139) 789-3444 <b>Fax:</b> 6 (139) 776-6127
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### Patient Information

<b>Client:</b> Dogs4Kids, Katie <b>Patient Name:</b> Bond <b>Reg. Name:</b> <b>PennHIP Num:</b> 109640 <b>Species:</b> Canine <b>Date of Birth:</b> 15 Jul 2016 <b>Sex:</b> Male <b>Date of Study:</b> 20 Jul 2017 <b>Date of Report:</b> 21 Jul 2017	<b>Tattoo Num:</b> <b>Patient ID:</b> 1005818 <b>Registration Num:</b> <b>Microchip Num:</b> 900079000175363 <b>Breed:</b> LABRADOR RETRIEVER <b>Age:</b> 12 months <b>Weight:</b> 55.6 lbs/25.2 kgs <b>Date Submitted:</b> 20 Jul 2017
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### Findings

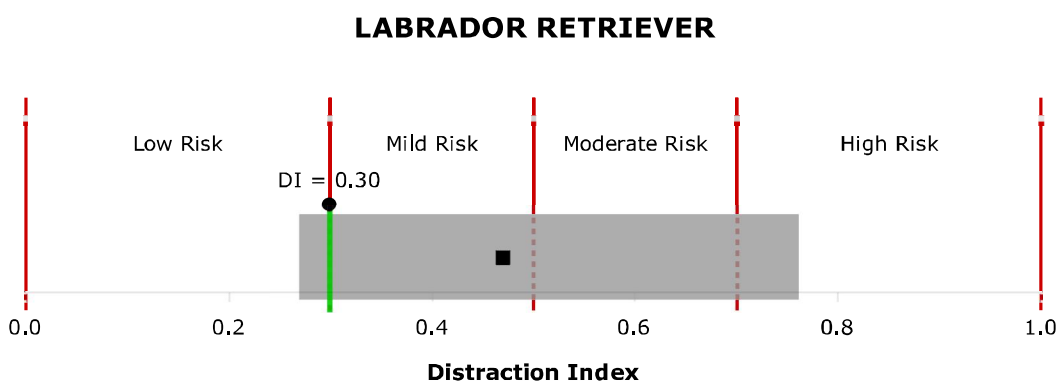
<b>Distraction Index (DI):</b> Right DI = 0.30, Left DI = 0.21. <b>Osteoarthritis (OA):</b> No radiographic evidence of OA for either hip. <b>Cavitation/Other Findings:</b> None.
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### Interpretation

**Distraction Index (DI):**The laxity ranking is based on the hip with the greater laxity (larger DI). In this case the DI used is 0.30.

**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 30533 canine patients of the LABRADOR RETRIEVER breed in the AIS PennHIP database. The gray strip represents the central 90% range of DIs (0.27 - 0.76) for the breed. The breed average DI is 0.47 (solid square). The patient DI is the solid circle (0.30).

**Summary:**The degree of laxity (DI = 0.30) falls within the central 90% range of DIs for the breed. This amount of hip laxity places 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.

# LAVELLE'S DIAGNOSTIC IMAGING

RB LAVELLE MA Vet MB MRCVS DVR FANZCVS FAVA

ABN755 75202799

## Canine Hip & Elbow Dysplasia Evaluation Report

KC Name:	Identification No:	900 079 000 175 363
KC Reg No:	Pet Name:	Bond

Date Radiograph taken:	20.07.2017	Breed:	Labrador
Sex:	Male	DOB:	15.07.2016
Name of Owner:	Career Dog Australia / DKD	Address:	C/- 1/15 Lakewood Boulevard Carrum Downs 3201
		Email:	<a href="mailto:info@dkd.org.au">info@dkd.org.au</a> email@karingalvet.com.au
Sire:	<i>Guidinglight Aztec</i>	Dam:	<i>Career Dogs' Petaluma Emma.</i>

The results of the examination will be used at a future date for the purposes of statistical research which will be published. Please check that the particulars above are correct and relate to the dog submitted for radiographic examination by: Karingal Veterinary Hospital.

Signature of owner: 

Please inform Dr R B Lavelle, 80 Ashworths Road, Lancefield, Victoria, 3435 if you object to the use of the results. Telephone (03) 5429 1682 BH

<b>Film quality:</b>	Satisfactory		
<b>Positioning:</b>	Satisfactory		
<b>Comment:</b>	<b>ON ED ASSESSMENT: Suitable for breeding</b>		
Elbow Grade: Right :	Normal 0	Left:	Normal 0
Date received for examination:	25.07.2017	<i>R. B. Lavelle</i>	
Date returned:	25.07.2017	RB LAVELLE MA Vet MB MRCVS DVR FANZCVSc FAVA	

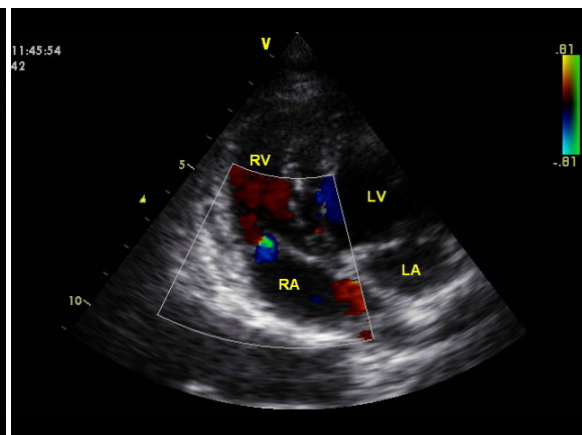
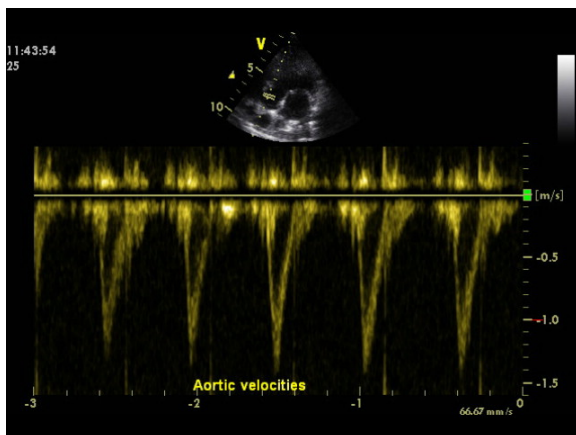
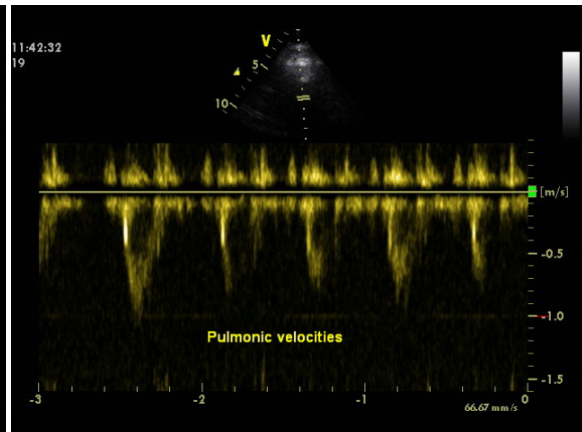
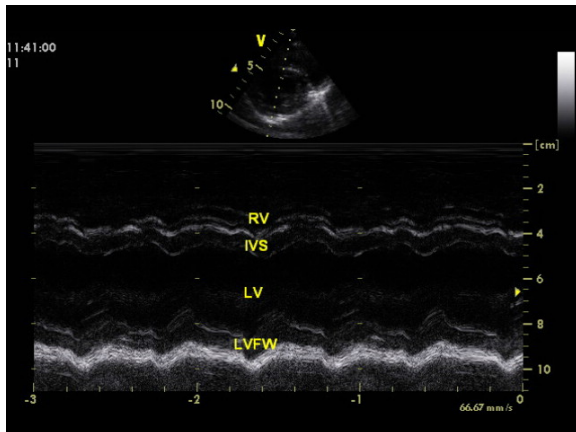
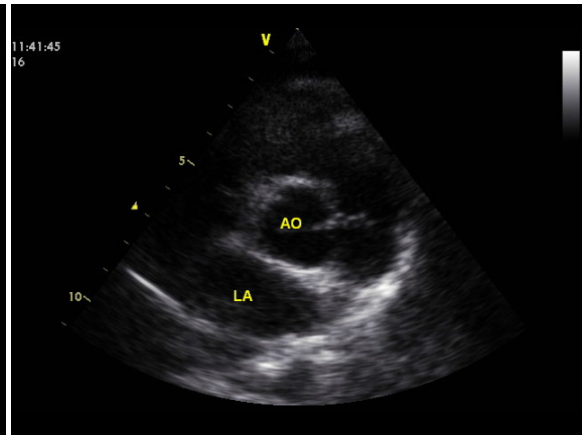
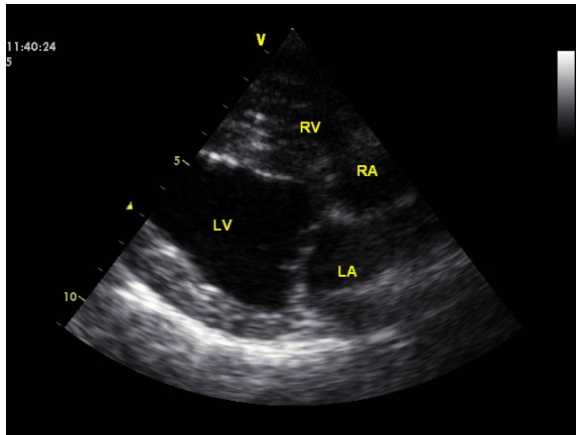
# Echocardiography Report



CARDIORESPIRATORY  
PET REFERRALS  
VICTORIA

Name **Dogs for Kids with Disabilities, Bond** Date **10/08/2017**  
Patient Id **PESC 10/8/17**  
Age **1** Labrador  
Weight **0.0 kg**

Richard Woolley  
BVetMed DipECVIM-CA  
(Cardiology) MRCVS  
Registered Specialist in Veterinary Cardiology  
email: [vetcardiology@gmail.com](mailto:vetcardiology@gmail.com)



Print Date: 8/10/2017

**2D**

Ao Diam	24.27 mm
LA Diam	25.98 mm
LA/Ao	1.07

**M-Mode**

IVSd	7.63 mm
LVIDd	41.35 mm
LVPWd	10.04 mm
IVSs	9.23 mm
LVIDs	26.09 mm
LVPWs	10.44 mm
%FS	37 %

**Doppler**

AV Vmax	1.41 m/s
AV maxPG	7.97 mmHg
PV Vmax	0.88 m/s
PV maxPG	3.11 mmHg

**Referral Reasons**

Bond presented for an echocardiogram prior to being possibly used for breeding.

On physical examination today Bond was bright, alert and responsive. Heart rate was 126bpm with a regular rhythm. No murmur was present. No other associated abnormalities were identified.

**Findings**

ECG rhythm: Sinus rhythm.

Study quality: The study was technically adequate.

Left Ventricle: The left ventricle size is normal.

Left Atrium: The left atrial size is normal.

Right Ventricle: The right ventricle is normal in size and function.

Right Atrium: The right atrium is normal in size and function.

Aortic Valve: The aortic valve is trileaflet and appears structurally normal.

Mitral Valve: The mitral valve is normal.

Tricuspid Valve: The tricuspid valve appears structurally normal. Trace/Mild (physiologic) regurgitation.

Pulmonic Valve: The pulmonic valve is normal.

Pericardium: The pericardium is normal.

**Clinical Diagnosis**

No abnormalities were present on echocardiographic examination today.

**Conclusion**

As no cardiac abnormalities were evident on echocardiographic examination there is no cardiac contraindication with regards to breeding.

Kind regards,  
Richard Woolley (mob. 0410 3636 20)

**OPHTHALMIC EXAMINATION FORM**

Owner: Career Dog Australia  
 Address: PO Box 620  
 North Lakes QLD 4509

Animal Name: Bond  
 Microchip No: 900079000175363

ANIMAL: Species: dog Breed: Labrador Retriever  
 Coat: colour/type: Black

Birthdate: 15/7/16  
 Sex: M

PREVIOUS EXAMINATION:  Not prev examined  Not affected  Undetermined  Affected

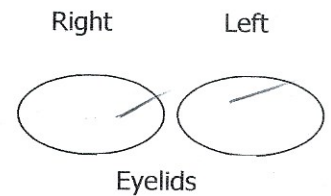
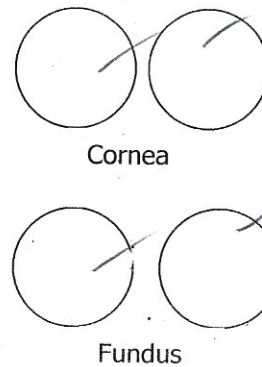
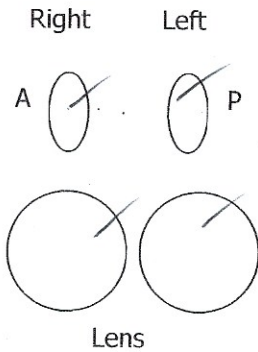
Date of previous examination: \_\_\_/\_\_\_/\_\_\_

EXAMINATION TECHNIQUE:  Direct ophthalmoscopy  Indirect ophthalmoscopy  
 Biomicroscopy  Other

MYDRIATIC:  Yes  No

REGIONS EXAMINED:	LIDS	CORNEA	IRIS	LENS	FUNDUS	OTHER
Not affected	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Undetermined/suspicious	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Affected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Right Left



INHERITED DISEASE:  Yes  NO  Suspicious Date of examination: 16/8/18

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:	BOND	Pet Name:	BOND
Registration Number:	Pending	Breed:	Labrador Retriever
Microchip Number:	900079000175363	Sex:	
Date of Birth:	1/1/1985	Colour:	

## COLLECTION DETAILS

Case Number:	17079866	Date of Test:	
Approved Collection Method:	NO (Collected by Owner)	Collected By:	

*Sample with Lab ID Number 17079866 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]
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]
NARCOLEPSY (LABRADOR)	NEGATIVE / CLEAR [NO VARIANT DETECTED]

### *Metabolic (Associated with the Body's Enzymes and Cell Metabolism)*

COPPER TOXICOSIS (ATP7B & ATP7A) LABRADOR RETRIEVER TYPE	NEGATIVE / CLEAR [NO VARIANT DETECTED]
MALIGNANT HYPERTHERMIA	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PYRUVATE KINASE DEFICIENCY (CANINE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]

### *Dermatologic (Associated with Skin)*

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

ELLIPTOCYTOSIS (B-SPECTRIN)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
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### *Musculoskeletal (Associated with Bones and Muscles)*

MYOTUBULAR MYOPATHY X-LINKED	NEGATIVE / CLEAR [NO VARIANT DETECTED]
SKELETAL DYSPLASIA 2 (DWARFISM SD2)	NEGATIVE / CLEAR [NO VARIANT DETECTED]

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

OCULO-SKELETAL DYSPLASIA	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PROGRESSIVE ROD CONE DEGENERATION (PRCD) - PRA	NEGATIVE / CLEAR [NO VARIANT DETECTED]

**Trait (Associated with Phenotype)**

A LOCUS (FAWN/SABLE;TRI/TAN POINTS)  
BROWN (345DELP) 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)

a<sup>t</sup>/a - TRI COLOUR / TAN POINTS [CARRYING BICOLOUR GENE]  
BB - DOES NOT CARRY BROWN or CHOCOLATE  
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 - DOMINANT BLACK DOES NOT CARRY YELLOW/RED/WHITE  
K/k - ONE COPY DOMINANT BLACK (K) and ONE COPY NON BLACK (k) or BRINDLE (k<sup>br</sup>)  
NORMAL - NOT SHOWING THE PHENOTYPE



**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.

### **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. 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.