GENETIC ANALYSIS REPORT

OWNER'S DETAILS

Orivet vet clinic
Dr John Smith

ANIMAL'S DETAILS

Registered Name	: labby me full of it
Pet Name	: Labby
Registration Number	: 56783930
Breed	: Mixed Breed
Microchip Number	: 6758393648
Sex	: Intact Male
Date of Birth	: 1st Jun 2017
Colour	:

COLLECTION DETAILS

Case Number	: 17154266
Date of Test	: 31st Aug 2017
Collected By	:
Approved Collection	: **NO**

Sample with Lab ID Number 17154266 was received at Orivet Genetics, DNA was extracted and analysed with the following result reported:

GENETIC ANALYSIS SUMMARY

[1] **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.

TESTS REPORTED	RESULT [1]
Ophthalmologic - Associated with the eyes and associated structures	
ACHROMATOPSIA (POINTER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CANINE MULTIFOCAL RETINOPATHY CMR2 (COTON DU TULEAR TYPE)*	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CANINE MULTIFOCAL RETINOPATHY CMR3 (LAPPHUND TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
COLLIE EYE ANOMALY/CHOROIDAL HYPOPLASIA	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CONE DEGENERATION*	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CONE-ROD DYSTROPHY I - PRA (CRD -4/CORD I)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CONGENITAL STATIONARY NIGHT BLINDNESS	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CURLY COAT DRY EYE SYNDROME (CAVALIER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
GENERALISED PRA 1 (GOLDEN RETRIEVER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
GENERALISED PRA 2 (GOLDEN RETRIEVER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
HEREDITARY CATARACT	NEGATIVE / CLEAR [NO VARIANT DETECTED]
MULTIFOCAL RETINOPATHY CMR1 (MASTIFF/BULL BREEDS TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
OCULO-SKELETAL DYSPLASIA (LABRADOR RETRIEVER TYPE)*	POSITIVE / AT RISK [TWO COPIES OF THE VARIANT DETECTED]
PRIMARY GLAUCOMA	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PRIMARY LENS LUXATION	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PRIMARY OPEN ANGLE GLAUCOMA (BEAGLE TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PROGRESSIVE RETINAL ATROPHY - LATE ONSET (BASENJI TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PROGRESSIVE RETINAL ATROPHY - RCD3 (CORGI/CRESTED TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PROGRESSIVE RETINAL ATROPHY (MASTIFF)*	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PROGRESSIVE RETINAL ATROPHY 3	INDETERMINABLE [INCONCLUSIVE RESULT - RECOLLECTION REQUIRED]
PROGRESSIVE RETINAL ATROPHY DOMINANT (MASTIFF TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PROGRESSIVE RETINAL ATROPHY PRA1 (PAPILLON TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PROGRESSIVE ROD CONE DEGENERATION (PRCD) - PRA	NEGATIVE / CLEAR [NO VARIANT DETECTED]

RCD4-PRA (LATE ONSET)	INDETERMINABLE [INCONCLUSIVE RESULT - RECOLLECTION REQUIRED]
RETINAL DEGENERATION (NORWEGIAN ELKHOUND TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
RETINAL DEGENERATION RCD1A	NEGATIVE / CLEAR [NO VARIANT DETECTED]
TYPE A PRA 1 (MINIATURE SCHNAUZER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
X-LINKED PRA (SAMOYED/HUSKY TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]

Urinary system / Urologic - Associated with the kidneys, bladder, ureters and urethra

ALPORT SYNDROME/ HEREDITARY NEPHRITIS (SAMOYED TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
AUTOSOMAL HEREDITARY RECESSIVE NEPHROPATHY	NEGATIVE / CLEAR [NO VARIANT DETECTED]
COPPER TOXICOSIS (ATP7B & ATP7A) (LABRADOR RETRIEVER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CYSTINURIA (NEWFOUNDLAND TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CYSTINURIA (SLC3A1) (AUSTRALIAN CATTLE DOG TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CYSTINURIA (SLC3A1) LABRADOR RETRIEVER TYPE	NEGATIVE / CLEAR [NO VARIANT DETECTED]
HYPERURICOSURIA	NEGATIVE / CLEAR [NO VARIANT DETECTED]
RENAL CYSTADENOCARCINOMA AND NODULAR DERMATOFIBROSIS (GERMAN SHEPHERD TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]

Immunologic - Associated with the organs and cells of the immune system

CANINE LEUKOCYTE ADHESION DEFICIENCY TYPE I (IRISH SETTER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
TRAPPED NEUTROPHIL SYNDROME (BORDER COLLIE TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]

Metabolic - Associated with the enzymes and metabolic processes of cells

CATALASE DEFICIENCY (BEAGLE TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
COBALAMIN MALABSORPTION (BEAGLE TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
COBALAMIN MALABSORPTION: CUBILIN DEFICIENCY (BORDER COLLIE TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
FUCOSIDOSIS (ENGLISH SPRINGER SPANIEL TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
GANGLIOSIDOSIS GM1 GLB1 (SHIBA INU TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
GANGLIOSIDOSIS GM2 (POODLE TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
GLYCOGEN STORAGE DISEASE III*	NEGATIVE / CLEAR [NO VARIANT DETECTED]
MALIGNANT HYPERTHERMIA	NEGATIVE / CLEAR [NO VARIANT DETECTED]
MUCOPOLYSACCHARIDOSIS VI (POODLE TYPE)*	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PHOSPHOFRUCTOKINASE DEFICIENCY (SPANIEL TYPE)	INDETERMINABLE [INCONCLUSIVE RESULT - RECOLLECTION REQUIRED]
POMPES DISEASE (LAPPHUND TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PYRUVATE DEHYDROGENASE PHOSPHATASE DEFICIENCY (CLUMBER SPANIEL TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PYRUVATE KINASE DEFICIENCY (CANINE)*	NEGATIVE / CLEAR [NO VARIANT DETECTED]

Musculoskeletal - Associated with muscles, bones and associated structures

CENTRONUCLEAR MYOPATHY (LABRADOR RETRIEVER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CENTRONUCLEAR MYOPATHY /INHERITED MYOPATHY (GREAT DANE TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CHONDRODYSPLASIA ITGA10 (ELKHOUND TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
MYOTONIA CONGENITA (MINIATURE SCHNAUZER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
MYOTONIA CONGENITA CLCN1 (CATTLE DOG TYPE)*	NEGATIVE / CLEAR [NO VARIANT DETECTED]
MYOTUBULAR MYOPATHY X-LINKED*	NEGATIVE / CLEAR [NO VARIANT DETECTED]
OSTEOGENESIS IMPERFECTA SERPINH1 (DACHSHUND TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
SKELETAL DYSPLASIA 2 (MILD DISPROPORTIONATE DWARFISM)	NEGATIVE / CLEAR [NO VARIANT DETECTED]

Nervous system / Neurologic - Associated with the brain, spinal cord and nerves

CEREBELLAR ATAXIA (AMERICAN STAFFORDSHIRE TERRIER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CEREBELLAR CORTICAL DEGENERATION (HUNGARIAN VIZSLA TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CONGENITAL MYASTHENIC SYNDROME (JACK RUSSELL TERRIER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CONGENITAL MYASTHENIC SYNDROME (LABRADOR RETRIEVER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CONGENITAL MYASTHENIC SYNDROME (OLD DANISH POINTER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
DEGENERATIVE MYELOPATHY	NEGATIVE / CLEAR [NO VARIANT DETECTED]

EPISODIC FALLING SYNDROME (CAVALIER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
EXERCISE INDUCED COLLAPSE (RETRIEVER TYPE)	POSITIVE / AT RISK [TWO COPIES OF THE VARIANT DETECTED]
HEREDITARY ATAXIA (AUTOPHAGY)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
IVERMECTIN SENSITIVITY MDR1 (MULTI DRUG RESISTANCE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
L2- HYDROXYGLUTARIC ACIDURIA	NEGATIVE / CLEAR [NO VARIANT DETECTED]
NARCOLEPSY (DOBERMANN TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
NARCOLEPSY (LABRADOR)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
NEONATAL ATAXIA (COTON DU TULEAR TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
NEONATAL CEREBELLAR CORTICAL DEGENERATION (BEAGLE TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
NEONATAL ENCEPHALOPATHY (POODLE TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
NEUROAXONAL DYSTROPHY (PAPILLON TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
NEURODEGENERATIVE VACUOLAR STORAGE DISEASE (LAGOTTO ROMAGNOLOTYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
NEURONAL CEROID LIPOFUSCINOSIS 1 (DACHSHUND TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
NEURONAL CEROID LIPOFUSCINOSIS 10 (AMERICAN BULLDOG TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
NEURONAL CEROID LIPOFUSCINOSIS 5 (BORDER COLLIE TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
NEURONAL CEROID LIPOFUSCINOSIS 6 (AUSTRALIAN SHEPHERD TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
NEURONAL CEROID LIPOFUSCINOSIS 8 (ENGLISH SETTER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
NEURONAL CEROID LIPOFUSCINOSIS A (TIBETAN TERRIER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
NEURONAL CEROID LIPOFUSCINOSIS MFSD8 (CHINESE CRESTED TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
POLYNEUROPATHY (NDRG1) (ALASKAN MALAMUTE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
POLYNEUROPATHY (NDRG1) (GREYHOUND)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
POLYNEUROPATHY AND NEURONAL VACUOLATION (JLPP)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
SPINOCEREBELLAR ATAXIA (CAPN1)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
SPINOCEREBELLAR ATAXIA (JACK RUSSELL TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
SPONGY DEGENERATION WITH CEREBELLAR ATAXIA (KCNJ10)	INDETERMINABLE [INCONCLUSIVE RESULT - RECOLLECTION REQUIRED]
STARTLE HYPEREKPLEXIA (WOLFHOUND TYPE)*	NEGATIVE / CLEAR [NO VARIANT DETECTED]

Endocrine - Associated with hormone-producing organs

CONGENITAL HYPOTHYROIDISM WITH GOITER (TENTERFIELD TERRIER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
CONGENITAL HYPOTHYROIDISM WITH GOITER (TOY FOX TERRIER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PITUITARY DWARFISM	NEGATIVE / CLEAR [NO VARIANT DETECTED]

Cardiovascular - Associated with the heart and blood vessels

DILATED CARDIOMYOPATHY (DOBERMANN TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]

Haemolymphatic - Associated with the blood and lymph

ELLIPTOCYTOSIS B-SPECTRIN (LABRADOR RETRIEVER/POODLE TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
FACTOR VII DEFICIENCY	NEGATIVE / CLEAR [NO VARIANT DETECTED]
GLOBOID CELL LEUKODYSTROPHY/KRABBE'S DISEASE	NEGATIVE / CLEAR [NO VARIANT DETECTED]
GREY COLLIE SYNDROME (CYCLIC HEMATOPOIESIS) AP3	NEGATIVE / CLEAR [NO VARIANT DETECTED]
HAEMOPHILIA A / FACTOR VIII (GERMAN SHEPHERD TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
HAEMOPHILIA B / FACTOR IX (CAIRN TERRIER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
PREKALLIKREIN DEFICIENCY (SHIH TZU TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
THROMBOPATHIA (PLATELET DYSFUNCTION)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
VON WILLEBRAND'S DISEASE TYPE I	NEGATIVE / CLEAR [NO VARIANT DETECTED]
VON WILLEBRAND'S DISEASE TYPE II	NEGATIVE / CLEAR [NO VARIANT DETECTED]
VON WILLEBRAND'S DISEASE TYPE III	NEGATIVE / CLEAR [NO VARIANT DETECTED]

Digestive system / Gastrointestinal - Associated with the organs and structures of the digestive system

GALL BLADDER MUCOCELE FORMATION (SHETLAND SHEEPDOG TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]

Dermatologic - Associated with the skin

HEREDITARY NASAL PARAKERATOSIS/DRY NOSE (LABRADOR RETRIEVER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
ICHTHYOSIS (AMERICAN BULLDOG)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
ICHTHYOSIS (NORFOLK TERRIER)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
ICHTHYOSIS A (GOLDEN RETRIEVER)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
MUSLADIN-LUEKE SYNDROME (BEAGLE TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]
KRABBE'S DISEASE*	NEGATIVE / CLEAR [NO VARIANT DETECTED]

Reproductive - Associated with the reproductive tract

MULLERIAN DUCT SYNDROME (MINIATURE SCHNAUZER TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]

Respiratory - Associated with the lungs and respiratory system

PRIMARY CILIARY DYSKINESIA (OLD ENGLISH SHEEPDOG TYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]

Trait (Associated with Phenotype)

E LOCUS - (CREAM/RED/YELLOW)	e/e - HOMOZYGOUS FOR NON-EXTENSION [WHITE/YELLOW/APRICOT/WHEATEN]
EM (MC1R) LOCUS - MELANISTIC MASK	E^n/E^n - NO MELANISTIC MASK (E^n) EXTENSION ALLELE
EG LOCUS (GRIZZLE)	Eg/Eg - NO GRIZZLE PHENOTYPE
BROWN DELETION = BD	B^d/B^d - DOES NOT CARRY BROWN/RED/LIVER or CHOCOLATE [DELETION]
BROWN STOP CODON = BS	B^s/b^s - CARRIER OF BROWN/LIVER/RED/CHOCOLATE [STOP CODON]
BROWN INSERTION = BC	B^c/b^c - CARRIER OF BROWN/LIVER/RED/CHOCOLATE [INSERTION]
D (DILUTE) LOCUS	D/D - NO COPY OF MLPH-D ALLELE (DILUTE) - PIGMENT IS NORMAL
K LOCUS (DOMINANT BLACK)	k^y/k^y - RECESSIVE NON- BLACK [COLOUR PATTERN DETERMINED BY A LOCUS]
A LOCUS (FAWN/SABLE;TRI/TAN POINTS)	a^y/a^y - FAWN/RED or SABLE only PRODUCE ay OFFSPRING
SPOTTING (W) LOCUS (MASTIFF TYPE)*	NEGATIVE - NOT SHOWING THE PHENOTYPE
BLACK AND TAN/SADDLE COAT COLOUR	NEGATIVE - NOT SHOWING THE PHENOTYPE
HARLEQUIN (H) PATTERN (GREAT DANE TYPE)	H/H - DOES NOT CARRY AND WILL NOT EXPRESS ANY HARLEQUIN PATTERN
LONG HAIR GENE (CANINE C95F)	POSITIVE - SHOWING THE PHENOTYPE
NATURAL BOB TAIL (SHORT TAIL PHENOTYPE)	NEGATIVE / CLEAR [NO VARIANT DETECTED]

Dermatologic - Associated with the skin

BLACK HAIR FOLLICULAR DYSPLASIA	NEGATIVE - NOT SHOWING THE PHENOTYPE
COAT COLOUR DILUTION ALOPECIA*	INDETERMINABLE [INCONCLUSIVE RESULT - RECOLLECTION REQUIRED]

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 (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.