GENETIC ANALYSIS REPORT

Orivet Genetic Pet Care
Animal Genetics Just Got Personal
Breed Specific Medicine

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A.B.N. 8 722 516 58 99

OWNER'S DETAILS

Lipovenko Elizaveta
142171 Moscow Scherbinka
,

ANIMAL'S DETAILS

Registered Name:	Ermine Trace Olwen	**Registration No:**	Pending
Pet Name:	Ermine Trace Olwen	**Microchip No:**	Pending
Breed:	British Shorthair	**Sex:**	Female

COLLECTION DETAILS

Case Number:	14-051152	**Date of Test:**	11/11/14
Collected By:	Lipovenko Elizaveta	**Approved Coll. Mthd.:**	

Sample with Lab ID Number 14-051152 was received at Orivet Genetics, DNA was extracted and analysed with the following results reported:

DISEASE(S):

PYRUVATE KINASE (PK) DEFICIENCY **(NORMAL / CLEAR - NO MUTATION DETECTED)**
MUCOPOLYSACCHARADOSIS **(NORMAL / CLEAR - NO MUTATION DETECTED)**
POLYCYSTIC KIDNEY DISEASE **(NORMAL / CLEAR - NO MUTATION DETECTED)**
NEIMANN-PICK DISEASE TYPE C **(NORMAL / CLEAR - NO MUTATION DETECTED)**
FAMILIAL EPISODIC HYPOKALEAMIC POLYMYOPATHY **(NORMAL / CLEAR - NO MUTATION DETECTED)**
HYPERTROPHIC CARDIOMYOPATHY - MAINE COON **(NORMAL / CLEAR - NO MUTATION DETECTED)**
HYPERTROPHIC CARDIOMYOPATHY - RAGDOLL **(NORMAL / CLEAR - NO MUTATION DETECTED)**
PROGRESSIVE RETINAL ATROPHY (PRA) CEP 290 (PRA-RDC) **(NORMAL / CLEAR - NO MUTATION DETECTED)**
PROGRESSIVE RETINAL ATROPHY (PRA) CRX (PRA-RDY) **(NORMAL / CLEAR - NO MUTATION DETECTED)**
SPINAL MUSCULAR ATROPHY (SMA) - MAINE COON **(NORMAL / CLEAR - NO MUTATION DETECTED)**
GLYCOGEN STORAGE DISEASE TYPE IV **(NORMAL / CLEAR - NO MUTATION DETECTED)**
GANGLIOSIDOSI- GM2 **(NORMAL / CLEAR - NO MUTATION DETECTED)**

TRAIT(S):

ALBINISM **(ALB N / ALB N - NO ALBINO MUTATION DETECTED)**
AMBER **(E/E - NO COPIES OF AMBER MUTATION DETECTED)**
DILUTION **(D/D FULL COLOUR - DOES NOT HAVE DILUTE ALLELE)**
BLOOD GROUP **(TYPE A (non-b/non-b) CAT HAS A LOW LEVEL OF ANTI-B ANTIBODY)**
CHOCOLATE AND CINAMMON **(B/B (FULL COLOUR - CAT DOES NOT CARRY BROWN OR CINNAMON))**
COLOURPOINT RESTRICTION **(C/c^s(Carrier of Siamese colorpoint restriction))**
AGOUTI **(A/A - ALL OFFSPRING WILL HAVE BANDED HAIR)**
LONG HAIR SHORTHAIR **(N/N = NONE OF THE 4 LONG HAIR MUTATIONS DETECTED)**
WHITE GLOVES **(N^g/N^g - NO GLOVE MUTATION DETECTED)**

14-051152

RESULTS REVIEWED AND CONFIRMED BY:

Dr. Noam Pik BVs MDSV George Sofronidis BSc (Hons)

GLOSSARY OF TERMS

NORMAL/CLEAR/NEGATIVE - No presence of the mutation is detected. The animal is clear or normal for the disease, will not pass on any disease causing mutation.

CARRIER/HETEROZYGOUS - One copy of the normal gene (wild type) and one copy of affected (mutant) gene is present. **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 then you may produce an affected offspring.

AFFECTED (1 COPY)/POSITIVE HETEROZYGOUS - One copy of the normal gene (wild type) and affected (mutant) gene is present, yet due to the **dominant mode of inheritance** of the disease the animal may show symptoms (affected). Appropriate treatment should be pursued by consulting a veterinarian.

AFFECTED /POSITIVE HOMOZYGOUS - Two copies of the disease gene (mutant) are present, the animal may show symptoms (affected) associated with the disease. Appropriate treatment should be pursued by consulting a veterinarian.

NORMAL BY PARENTAGE HISTORY - The sample submitted has had its parentage confirmed- by pedigree or DNA. By definition, this information together with the history submitted for the parent this animal from having this disease. **The controls run confirm that the dog is NORMAL for the disease requested.**

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/licence and therefore certain restrictions apply. Please contact the laboratory to discuss.

DNA Profile - Also known as a DNA fingerprint 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). The nomenclature **CSNP** identifies the single nucleotide polymorphism (SNP) at a particular site on the chromosome with each number representing a different site.

FAIL - The sample submitted has failed to give a conclusive result. Failures are due mainly to quality/quantity of DNA. We strongly advise that another sample be re-collected and submitted. To minimise bacterial contamination you should allow the swab to air dry (stand up) for at least 3 minutes prior to placing them back into the original swab packaging.

PARENTAGE CONFIRMATION - A separate parentage report is generated and emailed for any parentage request. Parentage confirmation report can only be generated if a DNA profile has been carried out for dam, offspring and possible sires.

PENDING - Result for this test is still being processed. When completed report 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 - A feature that an animal is born with (genetically determined characteristic). Traits are a visual phenotype that range from colour to hair length, 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 LOCUS is reported as bb will be brown/chocolate.

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STATEMENT ON 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 and we will be happy to work with you to answer any relevant questions.