

## Result report certificate

### Detection of mutation in dog PRCD gene

**Owner address**

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**Details of animal**

Case: 471  
Name: Marvel Powder Puff  
Breed: Miniature Poodle  
Sex: male  
Year of birth: 20.10.2008  
Tattoo: HR 16388 PDm  
Microchip: 191100000239972 HRV  
Date received: 24.2.2010  
Sample type: cheek swab

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**Result: N/N**

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**Result codes:**

N/N clear (normal homozygote)  
N/P carrier (heterozygote)  
P/P affected (mutated homozygote)

**Result interpretation**

Mutation 1298G>A in PRCD gene in CFA9 (canine chromosome 9) has been examined. This mutation induces progressive retinal atrophy – prcd (progressive rod cone degeneration). Disease causes the degeneration of retinal cells in the eye. Firstly, rod cells are affected and the animal develops night blindness. Later, cone cells degenerate. That results in complete blindness of animal. The age of onset of disease varies, but, generally, it can not be recognized before the adulthood of the animal.

Prcd-PRA is inherited as an autosomal recessive trait. That means the disease affects dogs with P/P genotype only. The dogs with P/N genotype are considered carriers of the disease (heterozygotes). In offspring of two heterozygous animals following genotype distribution can be expected: 25 % N/N (healthy non-carriers), 25 % P/P (affected), and 50 % N/P (healthy carriers).

The PRA-prcd mutation was found in following dog breeds: Miniature Poodle, Toy Poodle, American Cocker Spaniel, English Cocker Spaniel, Portuguese Waterdog, Labrador Retriever, Golden Retriever, Chesapeake Bay Retriever, Nova Scotia Duck tolling Retriever, Entlebuch Mountain dog, Swedish Lapp dog, Finnish Lapp dog, Silky Terrier, English Mastiff, Australian cattle dog, Greyhound, Basenji and Papillon. With lower probability, other breeds can be also affected by PRA-prcd.

Report date: 2.3.2010

Responsible person: Mgr. Martina Šafrová, analyst

