GENOMIA
genetic laboratory

Result certificate #117200

Detection of c.1981G>A mutation in the ADAMTS10 gene causing POAG in beagles

Sample
Sample: 18-07007
Name: Zweet Zorro of Aluschta
Breed: Beagle
Microchip: 756 098 100 545 906
Reg. number: 701110
Date of birth: 07.04.2011
Sex: male
Date received: 15.03.2018
Sample type: blood
The identity of the animal has been checked by Dr. med. vet. Fabienne Künzli

Customer
Andrea Wanner
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Result: Mutation was not detected (N/N)

Legend: N/N = wild-type genotype. N/P = carrier of the mutation. P/P = mutated genotype (individual will be most probably affected with the disease). (N = negative, P = positive)

Explanation

Presence or absence of c.1981G>A mutation in the ADAMTS10 gene causing POAG (Primary open angle glaucoma) in beagles was tested. The POAG glaucoma is characterized by elevated intraocular pressure (IOP), loss of retinal ganglion cells and atrophy of the optic nerve.

The clinical symptoms in Beagles occur between 9 and 18 months of age. They are very different and depend on the duration and rate of disease development and the age of the dog.

Mutation that causes POAG in beagles is inherited as an autosomal recessive trait. That means the disease affects dogs with P/P (positive/positive) genotype only. The dogs with N/P (negative/positive) genotype are considered carriers of the disease (heterozygotes), they are healthy but they can transmit the mutation on their offspring. In offspring of two heterozygous animals following genotype distribution can be expected: 25 % N/N (healthy non-carriers), 50 % N/P (healthy carriers) and 25 % P/P (affected).

Method: SOP172-POAG, direct DNA sequencing

Report date: 10.10.2018
Responsible person: Ing. Irena Rusková, Analyst

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