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LABOGEN

genetic news

Recently, we have been able to establish a whole series of new tests for the detection of hereditary diseases. Below you will find descriptions of the diseases and their modes of inheritance. All these diseases can be detected in any sample containing the genetic material of the animal: thus anything from buccal swabs to whole blood samples can be submitted. Detecting a genetic defect is not linked to the manifestation of the disease. On the contrary, even carriers of the defective gene, which would never develop illness, but who can pass it to their offspring, can be identified reliably via genetic testing. All genetic tests are available independent of the age of the animal. For more details about the tests, as well as prices therof you may contact us directly (labogen@laboklin.de).

PRA in Basenjis as well as in Papillons and Phalènes

Progressive retinal atrophy (PRA) occurs in many breeds. Also, the causative mutation is known for a number of breeds, already, and genetic testing enables targeted breeding resulting in the avoidance of producing affected offsprings.
Through continued intense research, the genetic defects have now been identified in the breeds Basenji, Papillon and Phalène.

In the breeds Papillon and Phalène, the occurrence of the PRA was described in 1995 for the first time. The onset of disease and the severity of the symptoms vary greatly - probably depending on different genetic backgrounds. In the Basenji breed PRA occurs late in life beginning with night and ending in complete blindness. The mode of inheritance is, as with almost all forms of PRA, autosomal recessive.

LABOKLIN now offers a genetic test for PRA in these breeds. It should be noted, that there are other forms of PRA with different genetic causes.

Cystinuria in Labradors and Australian Cattle Dogs

Cystinuria is an inherited metabolic disorder characterized by abnormal transport of certain amino acids in the intestinal epithelium and proximal renal tubule. Due to the accumulation of high concentrations of cystine in the urin and its poor solubility in water, it percipitates out and can form cystine stones. The urinary stones, that cause clinical symptoms, can occur at the age of 4-6 months. This can lead to life-threatening closure of the urinary tract.
Analogous to the breeds Landseer and Newfoundland, cystinuria in Labrador Retrievers is inherited in an autosomal recessive manner. In the Australian Cattle Dog, on the other hand, the mode of inheritence is dominant, with homozygous animals displaying a more serious course of disease than heterozygous dogs.

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CMSD in Chinese Cresteds und Kerry Blue Terriers

Canine multiple system degeneration (CMSD) is an inherited movement disorder that occurs in both the Chinese Crested and Kerry Blue Terrier. Affected dogs develop normally during the first three to six months of life. Then cerebellar ataxia occurs, causing movement disorders of the head, at first, and later the legs. Due to a continually advancing instability of the body, the dog falls frequently. No later than at one to two years of age, the dogs must be euthanized.
Since this disease is inherited as an autosomal recessive trait, DNA testing can, with subsequent controlled breeding, insure that affected animals are not born.

Hereditary cataract in Boston Terriers and Staffordshire Bull Terriers

The cataract is one of the most common diseases in dogs and a hereditary form has been described in 100 breeds, already. In addition to a genetic epidemiology, eye injuries, metabolic disorders (including diabetes) or nutritional deficiencies may also lead to cataracts.

The disease leads to blindness by a clouding of the lens. In the Boston Terrier, a distinction is made between two forms: the early form occurs at the age of a few months, always progressive, and ends in complete blindness, while the late form occurs after three years of age and expresses a highly variable course and severity of disease. The same genetic variant, as seen in the early form in the Boston Terrier, results in hereditary cataracts in Staffordshire Bull Terriers. Since this form is inherited autosomal recessive in both breeds, genetic testing allows for the determination of the genetic status, and thereby selective breeding. The test is carried out by a partner laboratory in a patent-free country.

Inherited myopathy in the Great Dane

In addition to the Labrador Retriever, the Great Dane can be affected by a hereditary myopathy. The symptoms, which begin at the age of six months, include progressive muscle weakness and an intolerance to strenuous activity. This disease is an autosomal recessive trait, so that the occurrence of affected animals can be prevented by means of selective breeding.

Download submission forms: www.laboklin.com genetic / lab order

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