Helsinki, Finland

2017-11-09

TO WHOM IT MAY CONCERN

Von Willebrand's Disease (vWD) Type 1 in Kromfohrländers

Blood clotting is a complex physiological process involving a high number of different clotting factors. Von Willebrand's factor (vWF) is one of these clotting factors. vWF plays a crucial role in blood clotting, being important in platelet adhesion and aggregation. Von Willebrand's disease (vWD) is a bleeding disorder caused by the deficiency or abnormal structure of the vWF. Type 1 is the mildest form of vWD in which the plasma level of vWF is reduced. vWD Type 1 rarely causes spontaneous bleeding, but increased bleeding tendency can be observed after surgery or trauma.

The clinical manifestation of vWD most closely follows an autosomal recessive mode of inheritance. Dogs carrying two copies of the mutation do not produce sufficient amounts of vWF and have abnormally long bleeding times. Dogs carrying a single copy of the predisposing genetic mutation typically have mildly reduced plasma levels of vWF, but abnormal bleeding is rarely seen in these animals. The variation in severity of clinical signs of vWD is related to the amount of vWF present in plasma, which is affected both by the predisposing genetic mutation and by physiological state of the animal.

The characterised canine mutation for vWD type 1 is present in more than 15 breeds. Its presence also in Kromfohrländers was identified as a part of research carried out using the MyDogDNA screening panel for inherited disorders (Donner et al., 2016). As a part of the research and standard operating procedure of the testing laboratory (Figure 1), the finding has been followed up on by confirmation with a secondary genetic technology and validated clinically. According to the best available scientific knowledge, vWD Type 1 disease manifests similarly in Kromfohrländers as in other breeds carrying the same mutation.

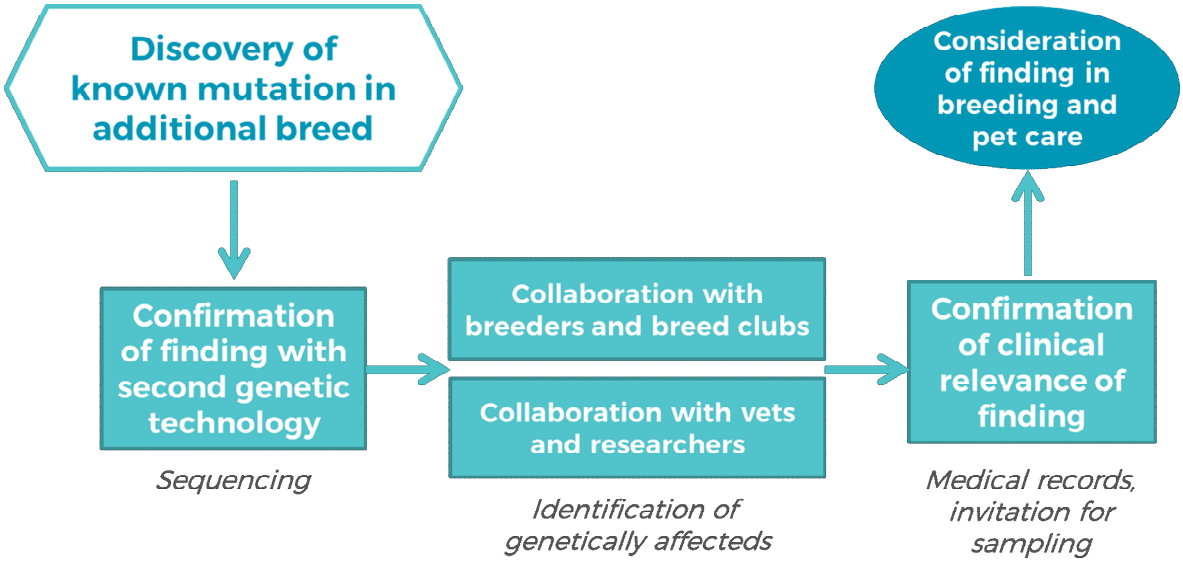

Figure 1

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