

Figure S1. Pedigree and segregation analysis of paroxysmal dyskinesia in Markiesje. The haplotypes were derived of the genotypes of 5 SNPs at indicated positions on chromosome 31 according to CanFam3.1. The grouping of the alleles in colored haplotyes is based on parent - offspring inheritance and on the occurrence of allele combinations in different branches of the pedigree. The x denotes the affected dog that was not included in the genome-wide association analysis. The disease cosegregates with a frameshift mutation (F, blue) in *SOD1*. The *SOD1* reference allele (R, yellow) corresponds to the DNA sequence of Genbank accession NM\_001003035.1.