

### Supplementary Information, Table S4 Mutation rate along the dog lineage

Sister species	Estimated branch length	Divergence time <sup>1</sup>	Mutation rate
Cat	0.0996	45 M	2.21*10 <sup>-9</sup>
Horse	0.1535	74M	2.07*10 <sup>-9</sup>
Cattle	0.1513	83M	1.82*10 <sup>-9</sup>
Mutation rate from the literature			
1.853-2.010*10 <sup>-9</sup>	Liu et al 2006 <sup>2</sup>	2.2*10 <sup>-9</sup>	Kumar & Subramanian 2002 <sup>3</sup>

<sup>1</sup>Hedges SB. The origin and evolution of model organisms. *Nat Rev Genet* 2002; **3**:838-849.

<sup>2</sup>Liu GE, Matukumalli LK, Sonstegard TS, Shade LL, Van Tassell CP. Genomic divergences among cattle, dog and human estimated from large-scale alignments of genomic sequences. *BMC Genomics* 2006; **7**.

<sup>3</sup>Kumar S, Subramanian S. Mutation rates in mammalian genomes. *Proc Natl Acad Sci U S A* 2002; **99**:803-808.