



<sup>a</sup> SNP(S: NS: NC)

<sup>b</sup>  $\wedge$ , transmission between different host

<sup>c</sup> ■ Daughter 1 ■ Daughter 2 ■ Dog ■ Father ■ Son

Figure S1. Phylogenetic tree of the 14 clone D isolates presented in relation to date of isolation. The mutations along each branch are shown, and this information is highlighted for the branches used for estimating the mutation rate. The distribution of isolation dates and hosts shows that there must have been several instances of transfer of this lineage between hosts, with the minimum number consistent with the tree data being 6, as marked on the tree.