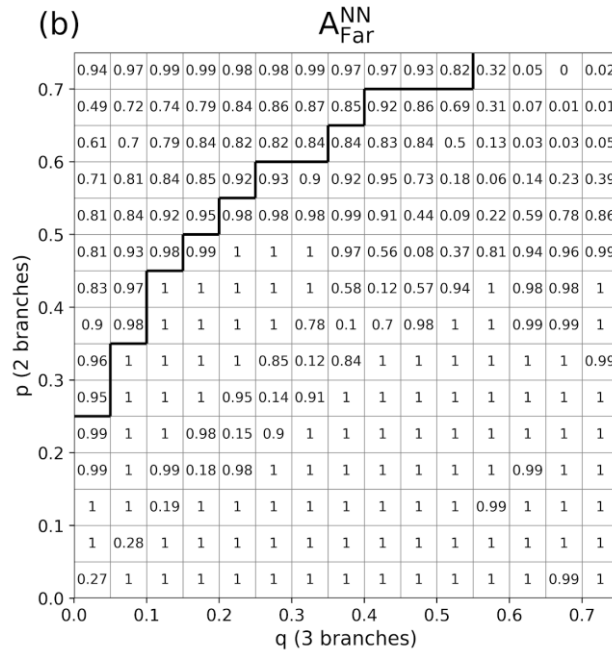
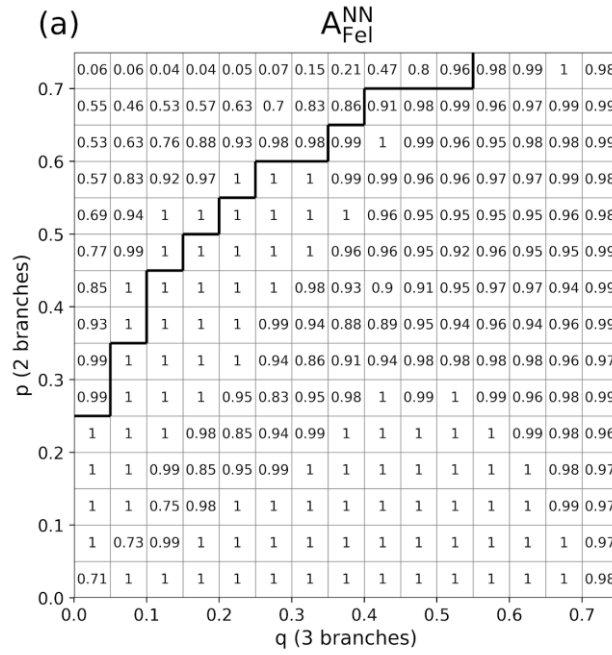


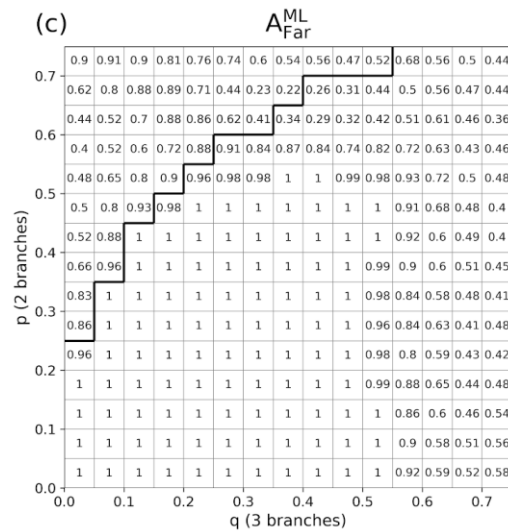
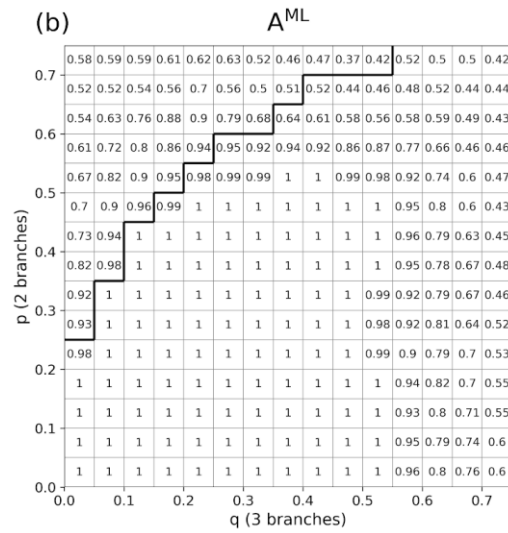
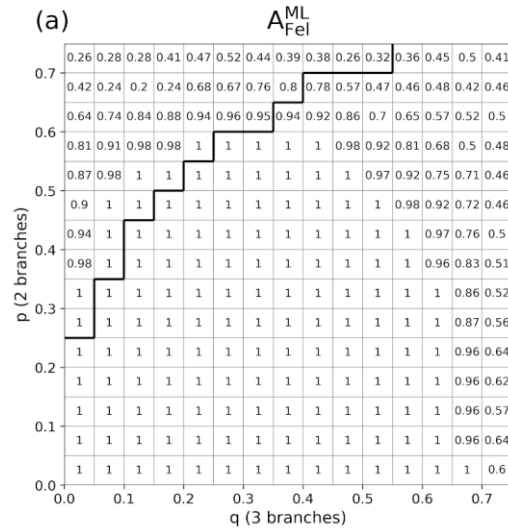
**Supplementary Figures for**

**Distinguishing Felsenstein zone from Farris zone using neural networks**

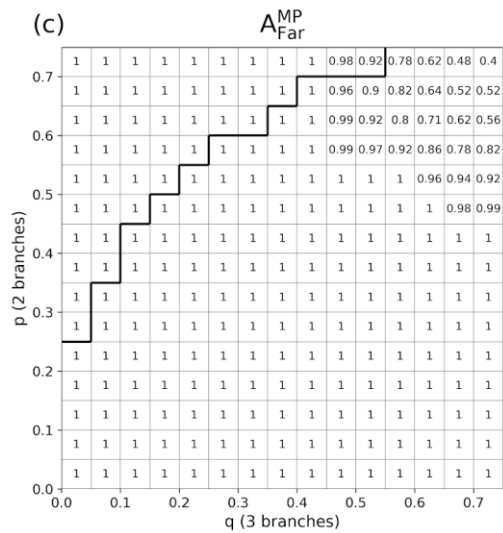
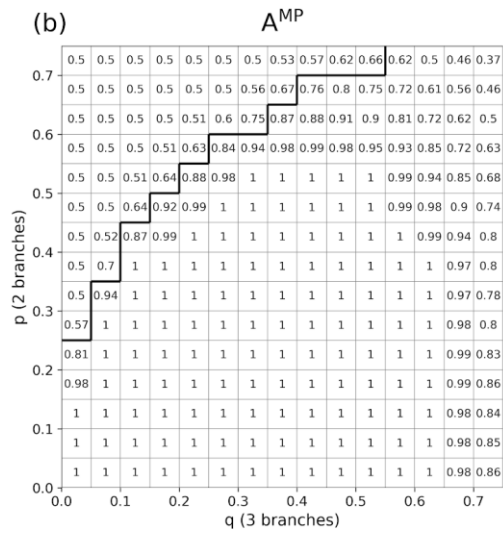
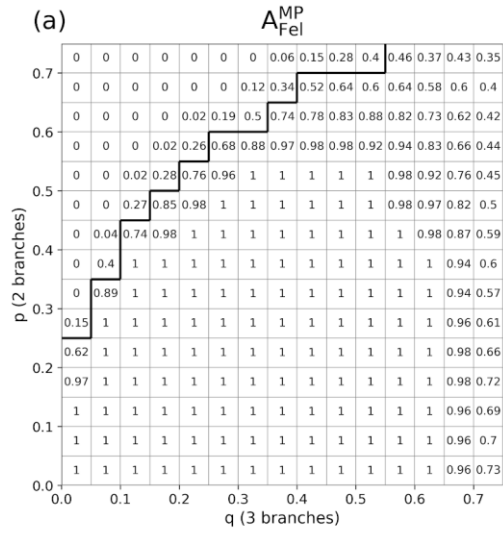
Alina F. Leuchtenberger<sup>1,\*</sup>, Stephen M. Crotty<sup>1,3,4,\*</sup>, Tamara Drucks<sup>1</sup>, Heiko A. Schmidt<sup>1</sup>, Sebastian Burgstaller-Muehlbacher<sup>1</sup>, Arndt von Haeseler<sup>1,2,§</sup>



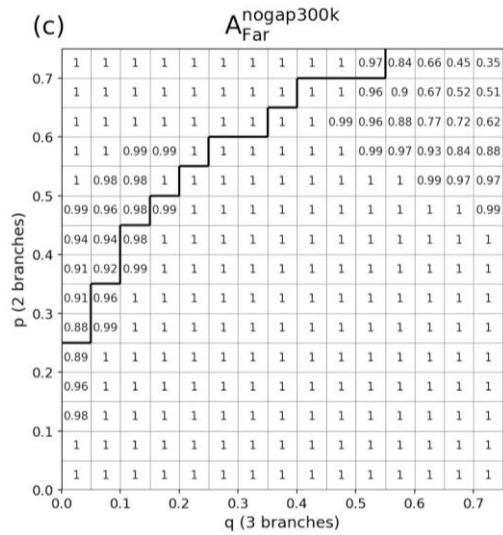
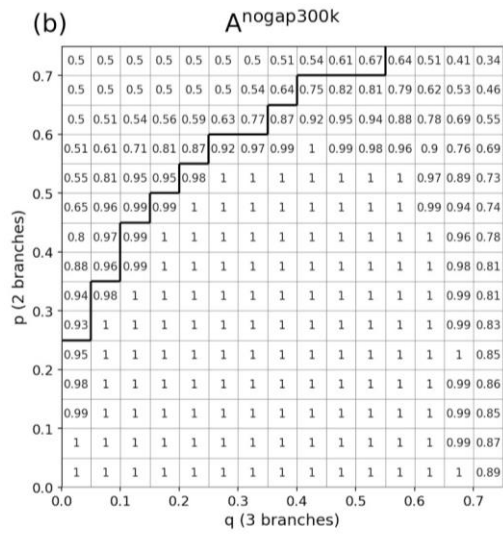
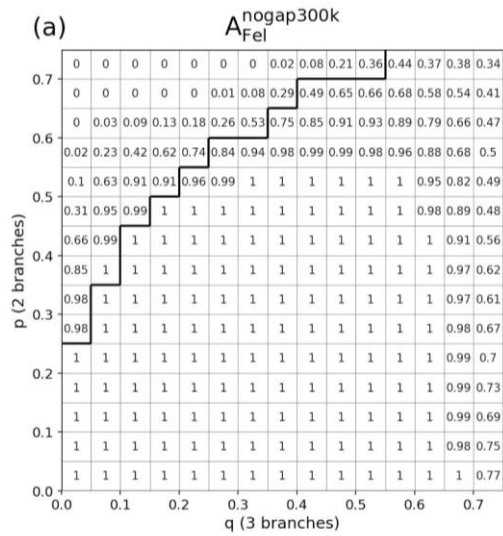
**Supplementary fig. S1:** Accuracy of F-zoneNN to infer the correct tree type under a Felsenstein-type tree (A) and Farris-type tree (B) assuming alignments of length 1,000bp. In each plot the region above the curve reflects the Felsenstein zone and the region below reflects the  $(p,q)$ -combinations where MP is consistent. Accordingly, the percentage above the curve denotes the accuracy of F-zoneNN in the Felsenstein zone and the number below the accuracy outside the Felsenstein zone.



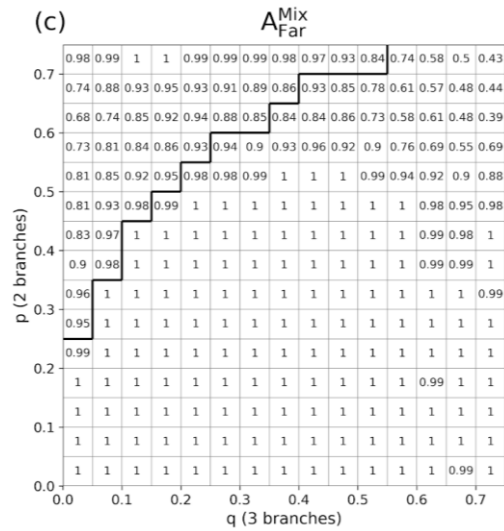
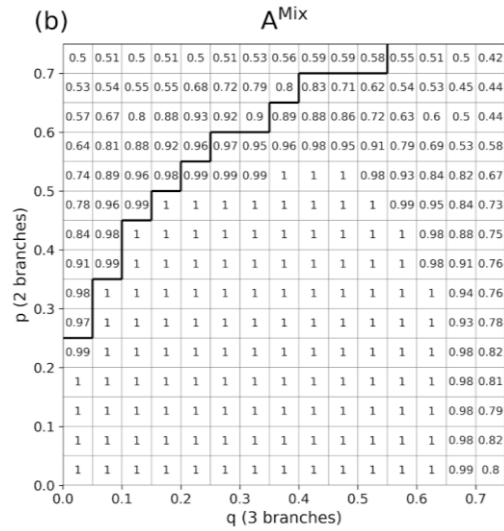
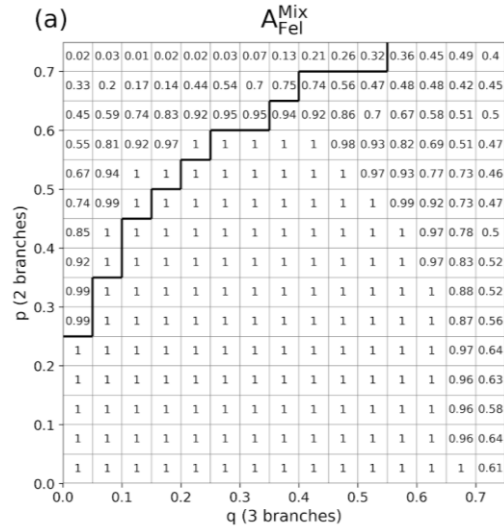
**Supplementary fig. S2:** Accuracies of phylogenetic reconstruction using ML assuming alignments of length 1,000bp. In each plot the region above the thick line reflects the Felsenstein zone and the region below reflects the  $(p,q)$ -combinations where MP is consistent.



**Supplementary fig. S3:** Accuracies of phylogenetic reconstruction using MP assuming alignments of length 1,000bp. In each plot the region above the thick line reflects the Felsenstein zone and the region below reflects the  $(p,q)$ -combinations where MP is consistent.



**Supplementary fig. S4:** Accuracies of phylogenetic reconstruction using nogap300k (Suvorov et al. 2020) assuming alignments of length 1,000bp. In each plot the region above the thick line reflects the Felsenstein zone and the region below reflects the  $(p,q)$ -combinations where MP is consistent.



**Supplementary fig. S5:** Accuracies of phylogenetic reconstruction using the Mixed strategy involving F-zoneNN, MP and ML assuming alignments of length 1,000bp. In each plot the region above the thick line reflects the Felsenstein zone and the region below reflects the  $(p,q)$ -combinations where MP is consistent.