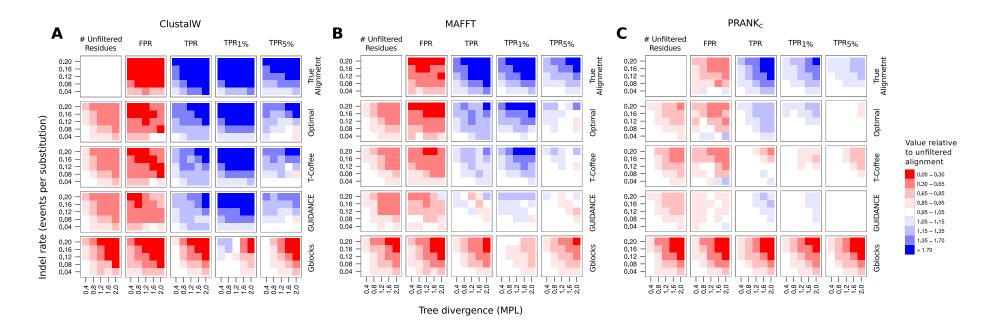


Supplementary Figure S1: This figure depicts the same simulations and uses the same formatting as Figure 4, except that results for MAFFT and PRANK $_{\rm AA}$ have been added to sections (a) and (b) and results using ClustalW + GUIDANCE and MAFFT + GUIDANCE have been added to all sections.



Supplementary Figure S2: This figure depicts largely the same simulations and uses the same formatting as Figure 5 except for two changes. First, results for MAFFT have been added to section (b) and results for $PRANK_C$ have been moved to section (c). Second, the rightmost column has been added, showing the true positive rate (TPR) at a 5% false positive rate (FPR) threshold (labeled $TPR_{5\%}$).