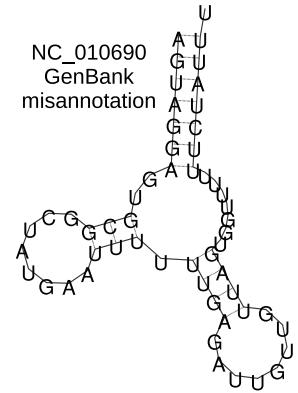
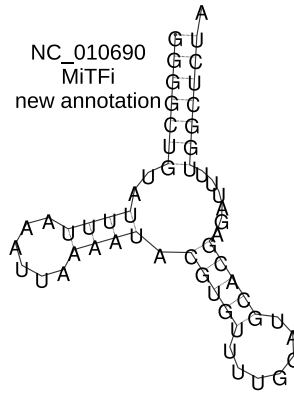
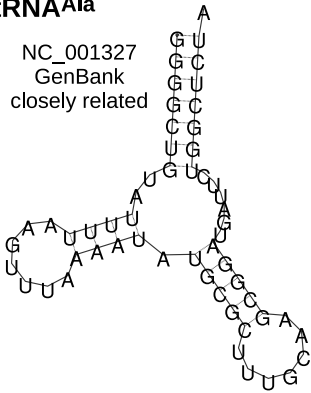
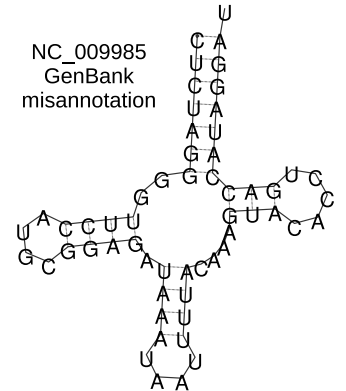
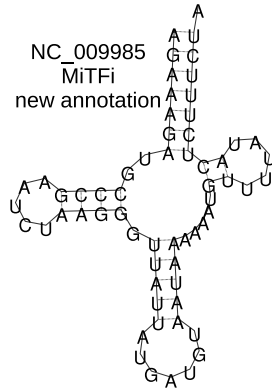
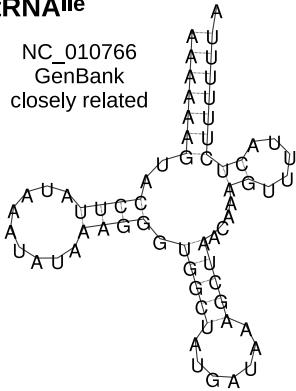


A) Newly identified tRNA genes in mitochondrial genomes and misannotations in comparison to genes of closely related organisms

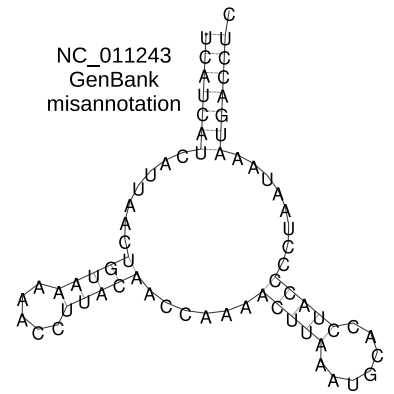
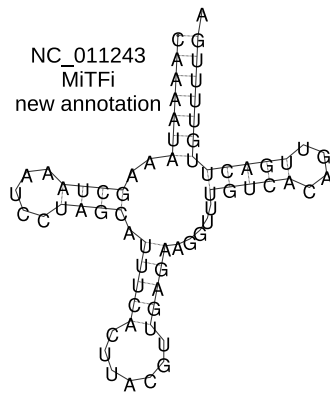
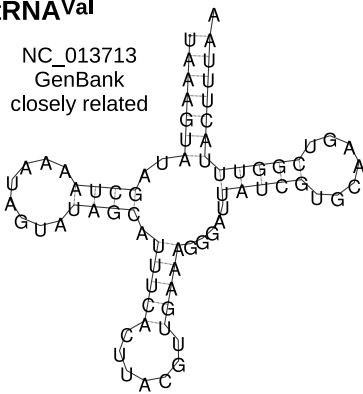
mt-tRNA^{Ala}



mt-tRNA^{Ile}

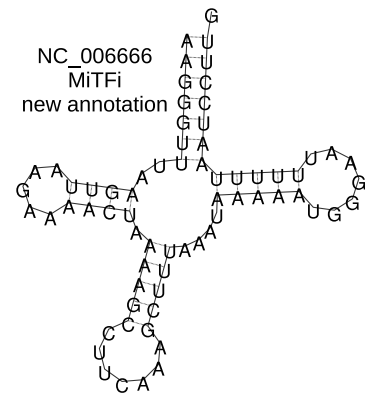
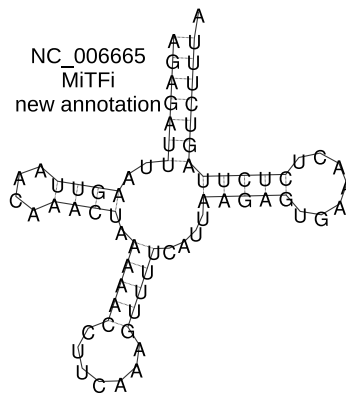
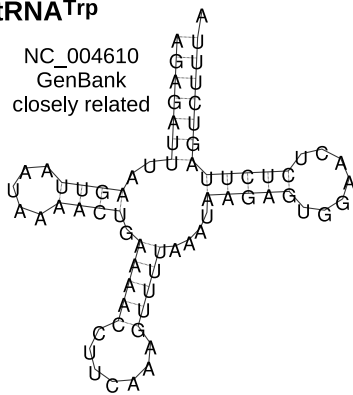


mt-tRNA^{Val}

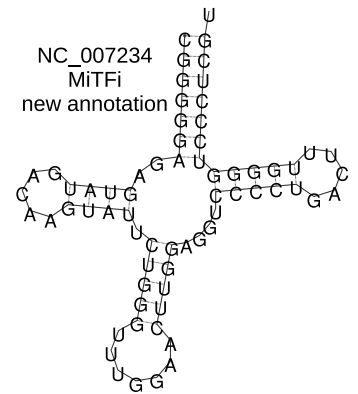
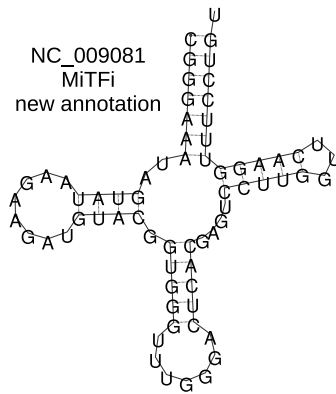
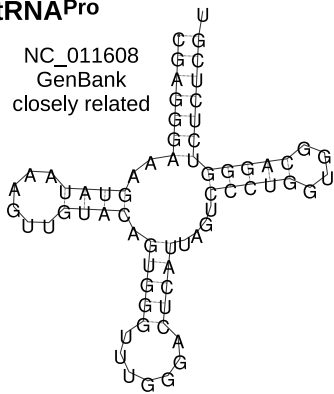


B) Newly identified tRNA genes in mitochondrial genomes in comparison to genes of closely related organisms

mt-tRNA^{Trp}



mt-tRNA^{Pro}



Supplementary figure 1: Examples of newly identified tRNA genes in metazoans. A) Misannotations (right), that could be corrected by MiTFi predictions (middle column)) are presented in comparison to tRNAs of closely related organisms (left). B) MiTFi hits (middle and right column) in genomes missing these tRNA genes completely in their RefSeq annotations. The corresponding tRNA gene of a closely related organism is always shown (left) to illustrate the correctness of MiTFi predictions. All examples of related genes are shown as they are annotated in the RefSeq, only the incorrect strand information of tRNA^{Pro} in NC_011608 was corrected.