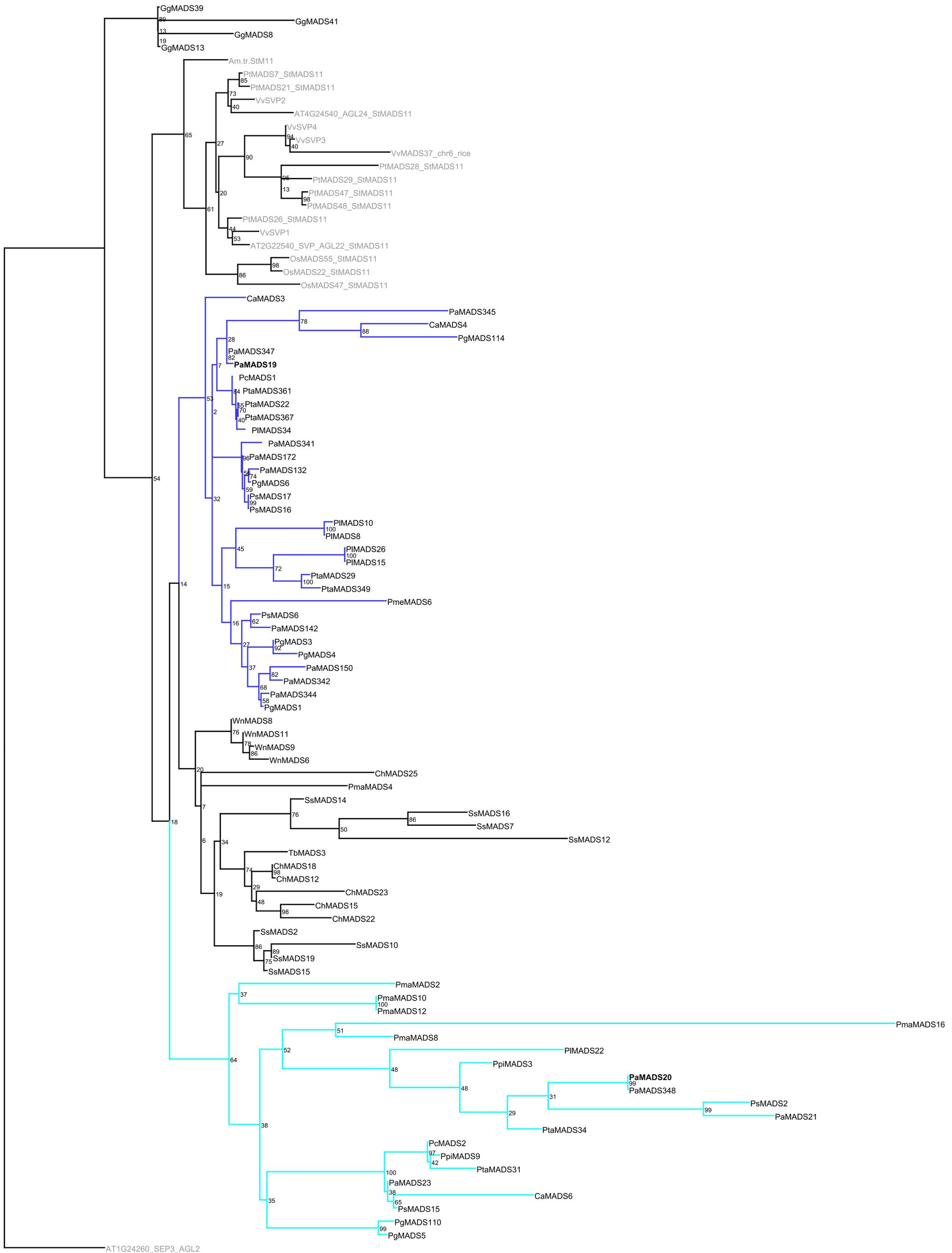


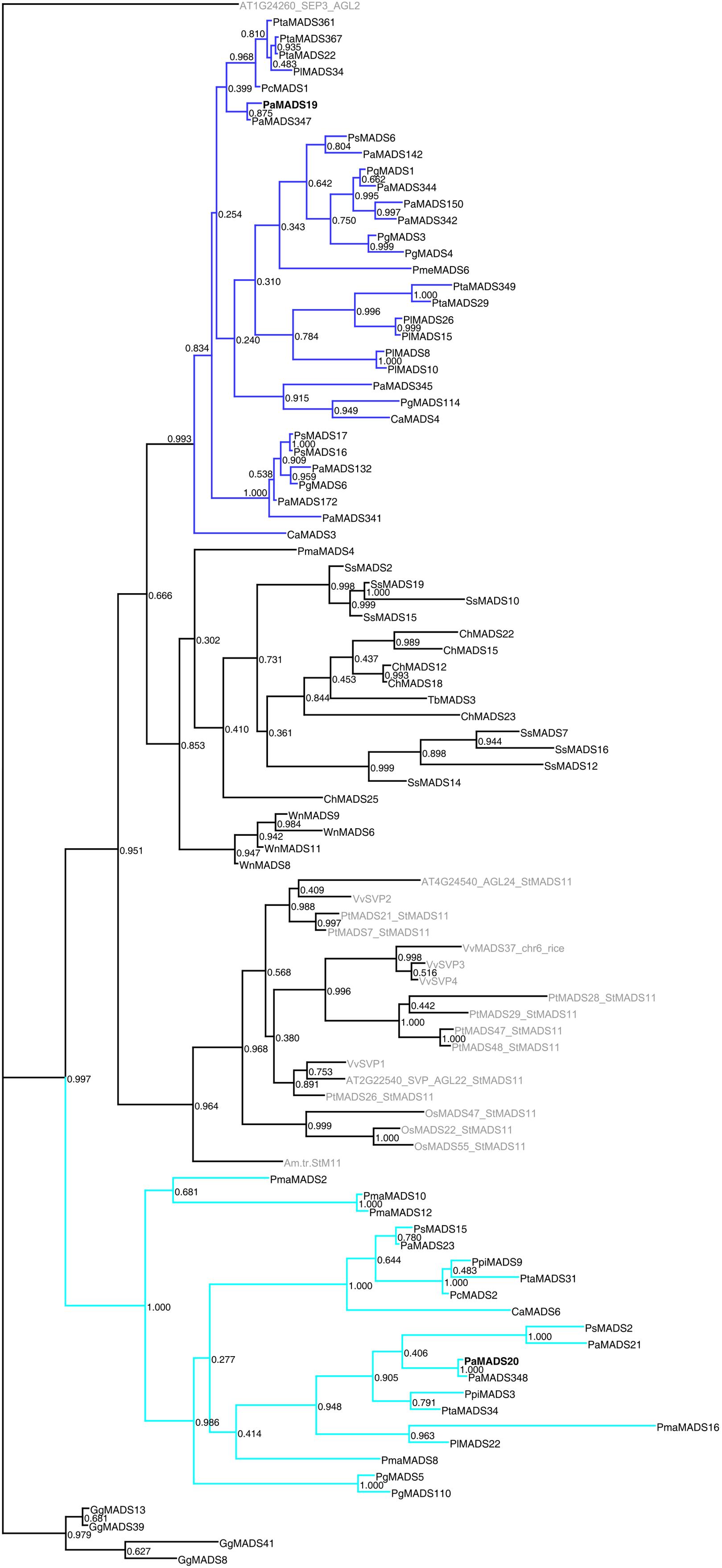
**Fig. S12a: RAxML-Phylogeny of SIMADS11-like MADS-box genes.**

The subclade of PaMADS19-like genes is colored dark blue and the subclade of PaMADS20-like genes is colored in light blue. Gene names of genes from species not belonging to gymnosperms are colored in grey. Gene names of genes from gymnosperms are as shown in Table 1 and Supplementary Data Table S1. Gymnosperm genes for which the name ends with "\_G" are solely derived from genomic data and no expression evidence was found. Gene names starting with AT, Arabidopsis thaliana; Am.tr., Amborella trichopoda; Os, Oryza sativa; PIMADS, Populus trichocarpa; Vv, Vitis vinifera. The numbers at the nodes represent bootstrap values.



**Fig. S12b: RAxML-Phylogeny of StMADS11-like MADS-box genes only including gymnosperm genes for which expression evidence was found.**

The subclade of PaMADS19-like genes is colored dark blue and the subclade of PaMADS20-like genes is colored turquoise. Gene names of genes from species not belonging to gymnosperms are colored in grey. Gene names of genes from gymnosperms are as shown in Table 1 and Supplementary Data Table S1. Gene names starting with AT, Arabidopsis thaliana; Am.tr., Amborella trichopoda; Os, Oryza sativa; PtMADS, Populus trichocarpa; Vv, Vitis vinifera. The numbers at the nodes represent bootstrap values.



**Fig. S12c: MrBayes-Phylogeny of StMADS11-like MADS-box genes only including gymnosperm genes for which expression evidence was found.**  
 The subclade of PaMADS19-like genes is colored dark blue and the subclade of PaMADS20-like genes is colored turquoise. Gene names of genes from species not belonging to gymnosperms are colored in grey. Gene names of genes from gymnosperms are as shown in Table 1 and Supplementary Data Table S1. Gene names starting with AT, Arabidopsis thaliana; Am.tr., Amborella trichopoda; Os, Oryza sativa; PtMADS, Populus trichocarpa; Vv, Vitis vinifera. The numbers at the nodes represent bootstrap values.