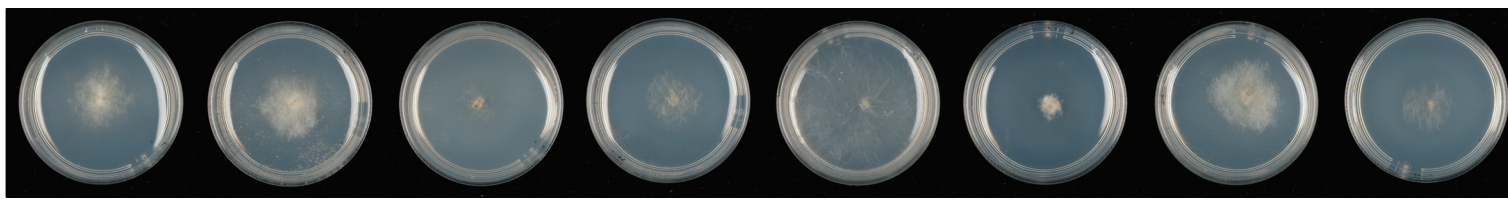
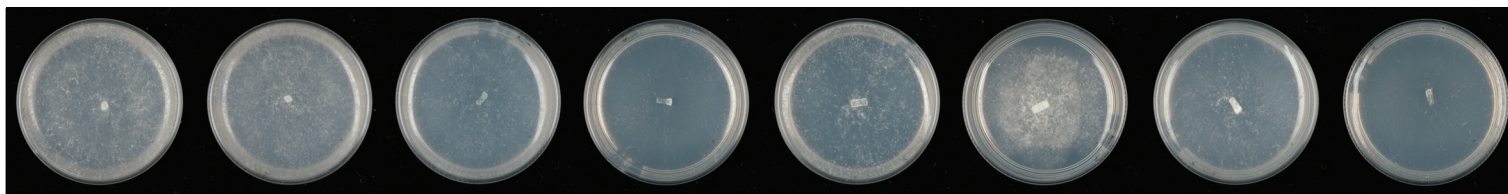


*P. carnos*



++ ++ ± + + ± ++ +

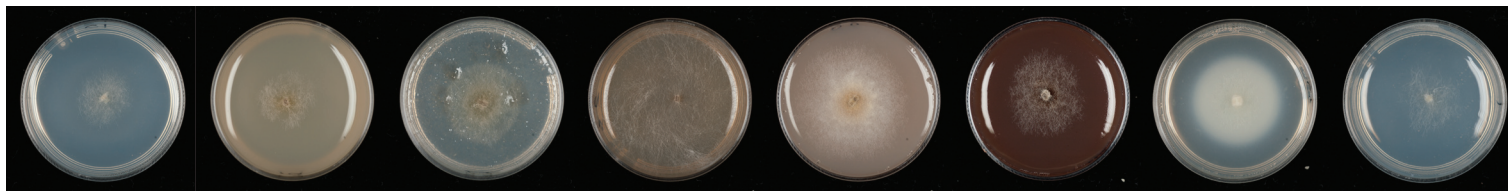
*P. chrysosporium*



++ ++ ± ± + +++ ± ±

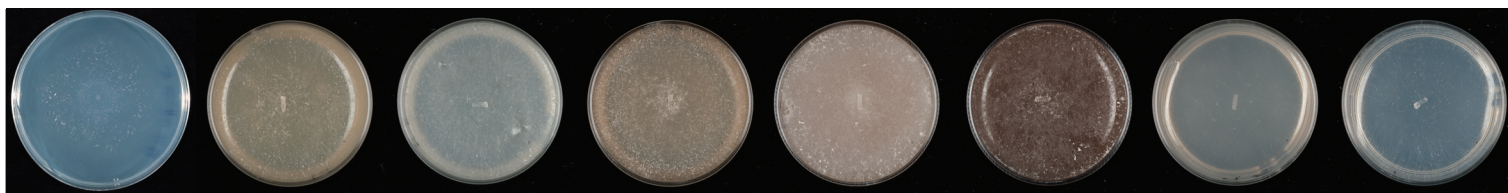
D-glucose  
D-mannose  
D-xylose  
L-rhamnose  
D-galacturonic acid  
Cellobiose  
Maltose  
Sucrose

*P. carnos*



+ + ++ + +++ + +++ ±

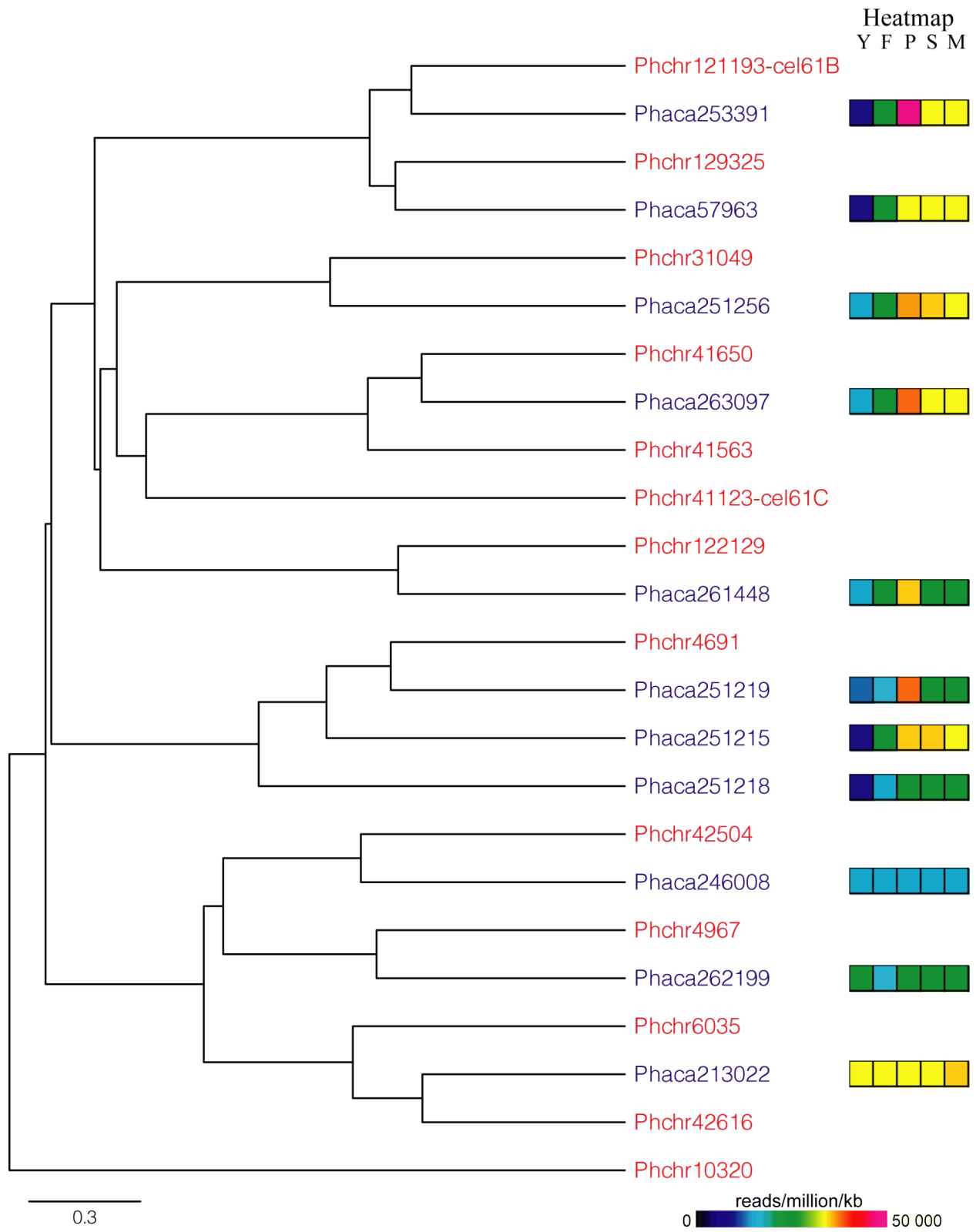
*P. chrysosporium*



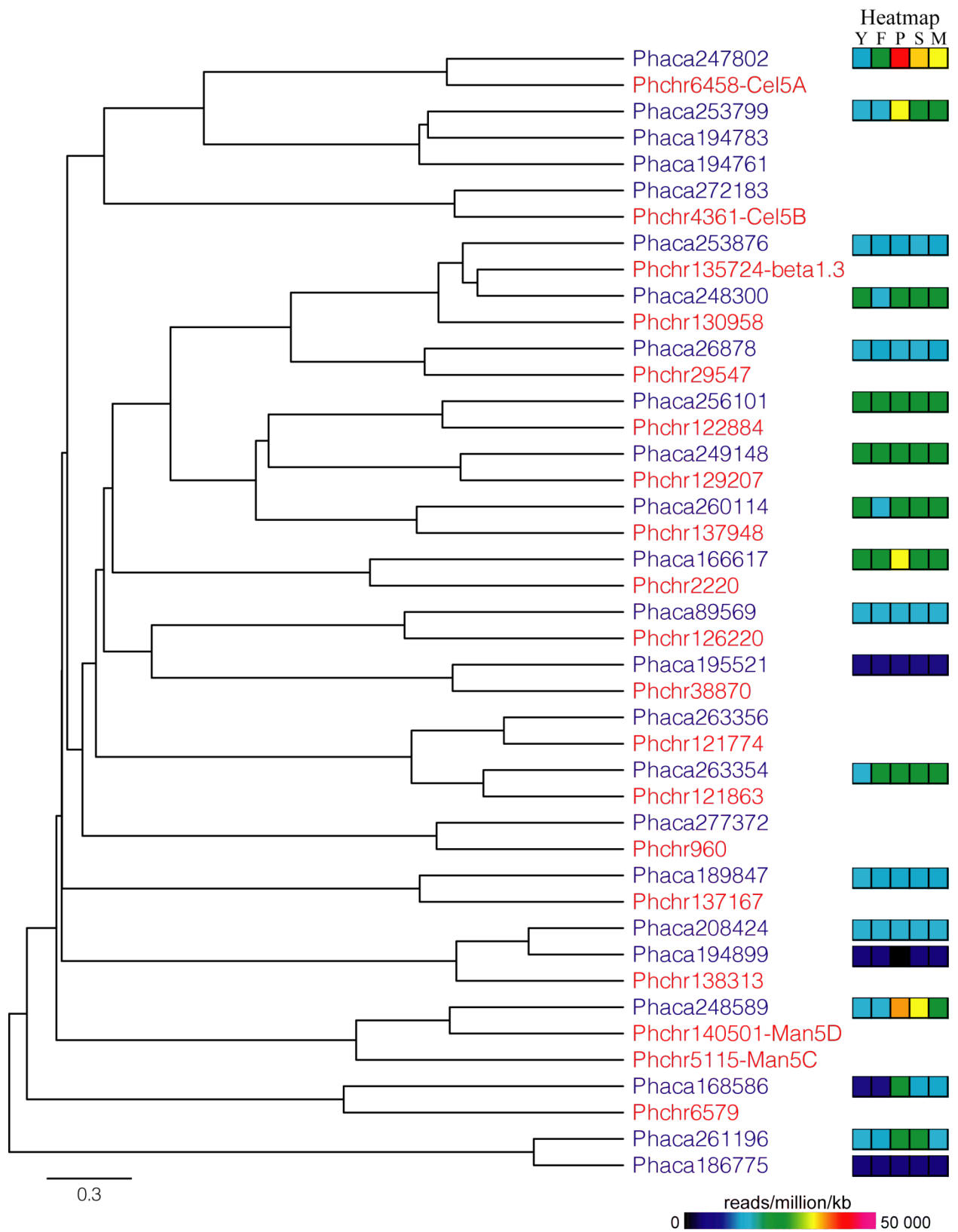
± ++ +++ ++ +++ ++ + -

Raffinose  
Birchwood xylan  
Guar gum  
Apple pectin  
Wheat bran  
Cotton seed pulp  
Casein  
No carbon source

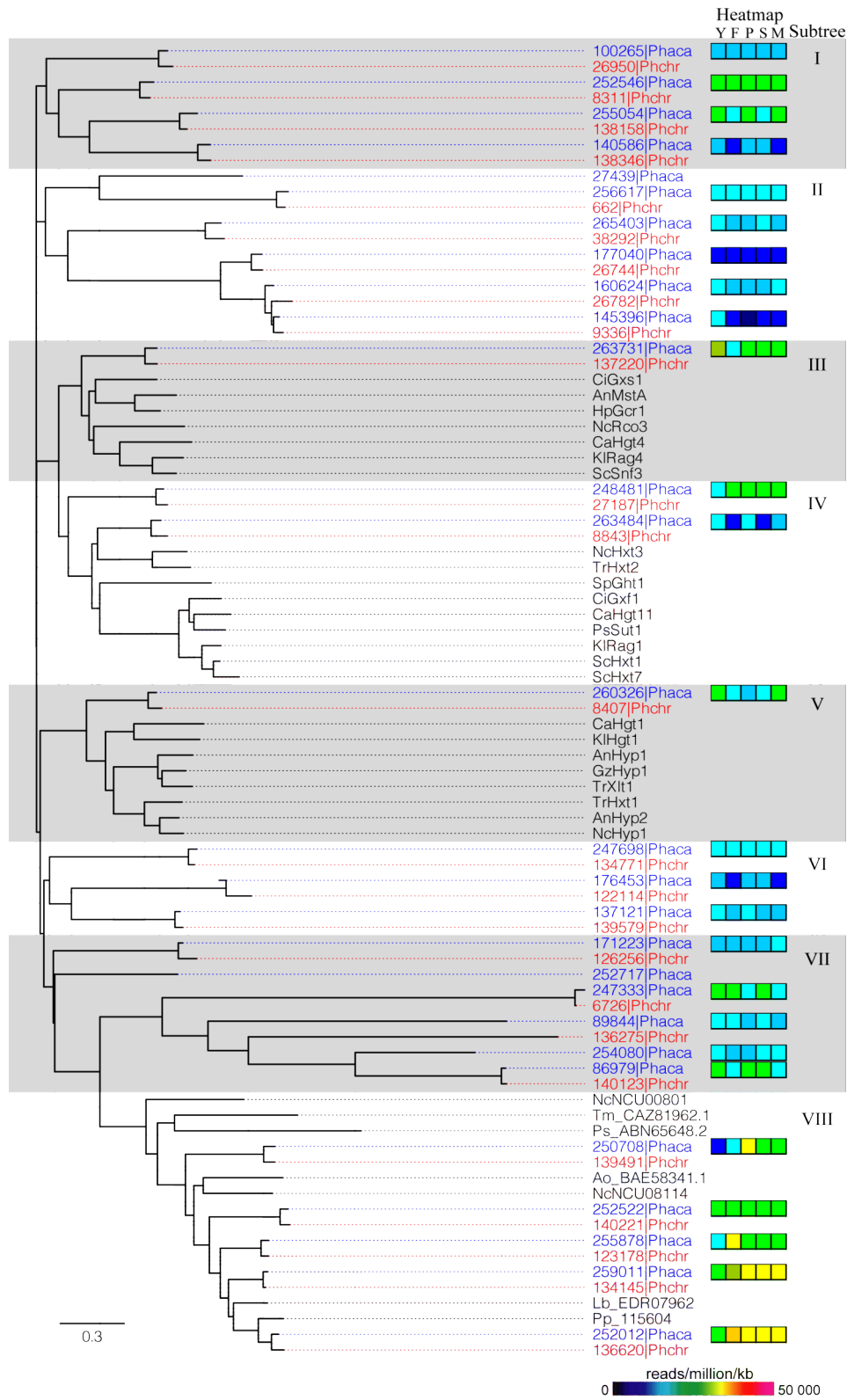
**Fig. S1.** Pictures of *P. carnos* and *P. chrysosporium* grown on various carbon sources.



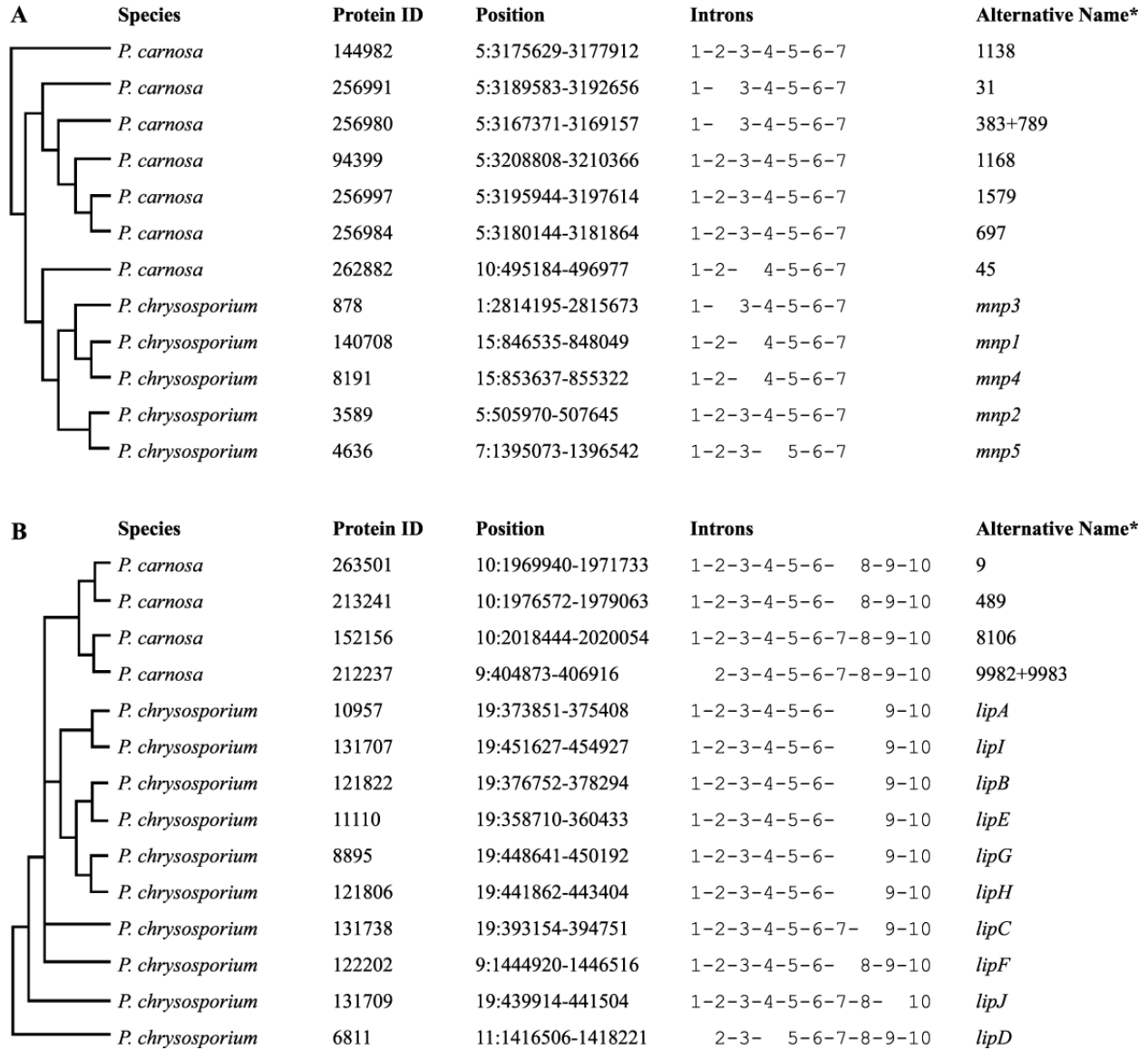
**Fig. S2. Phylogenetic tree of GH61 enzymes from *P. carnosus* and *P. chrysosporium*.**



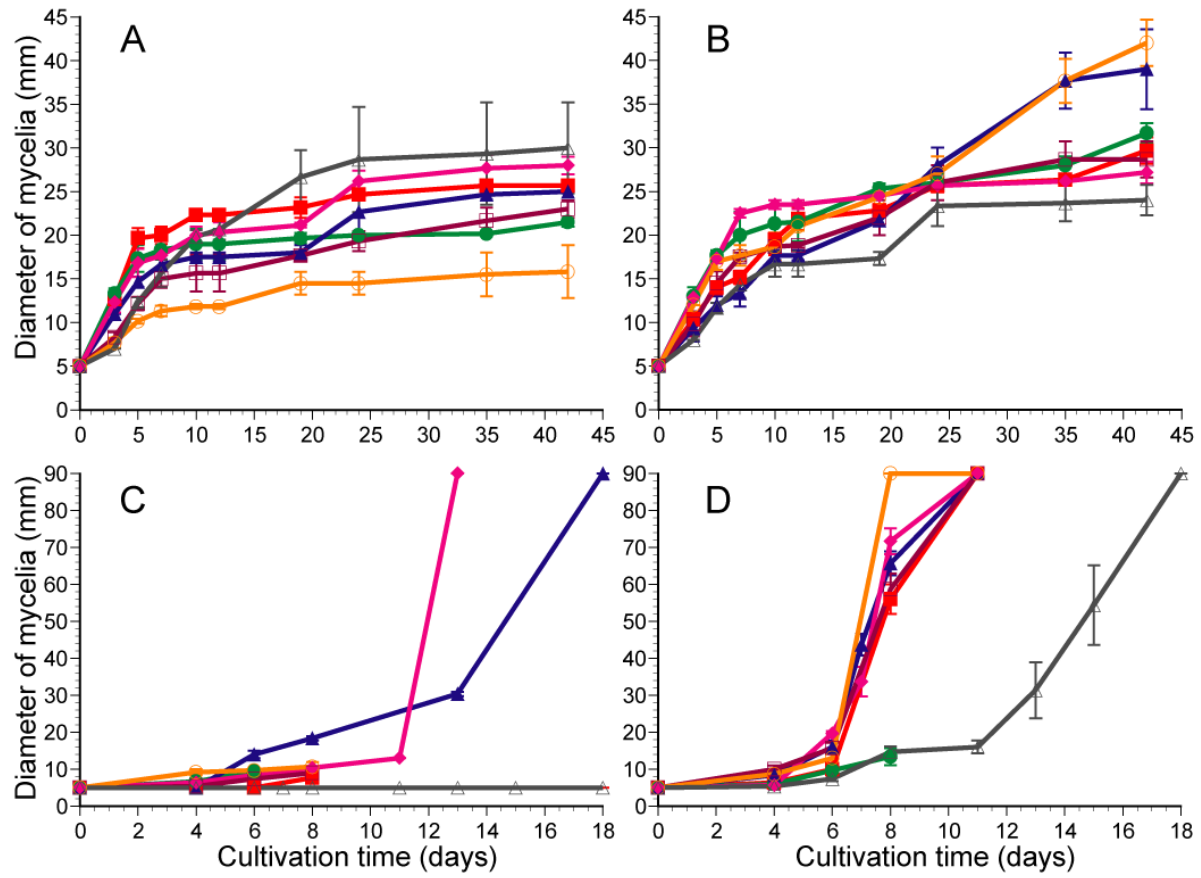
**Fig. S3. Phylogenetic tree of GH5 enzymes in *P. carnosus* and *P. chrysosporium*.**



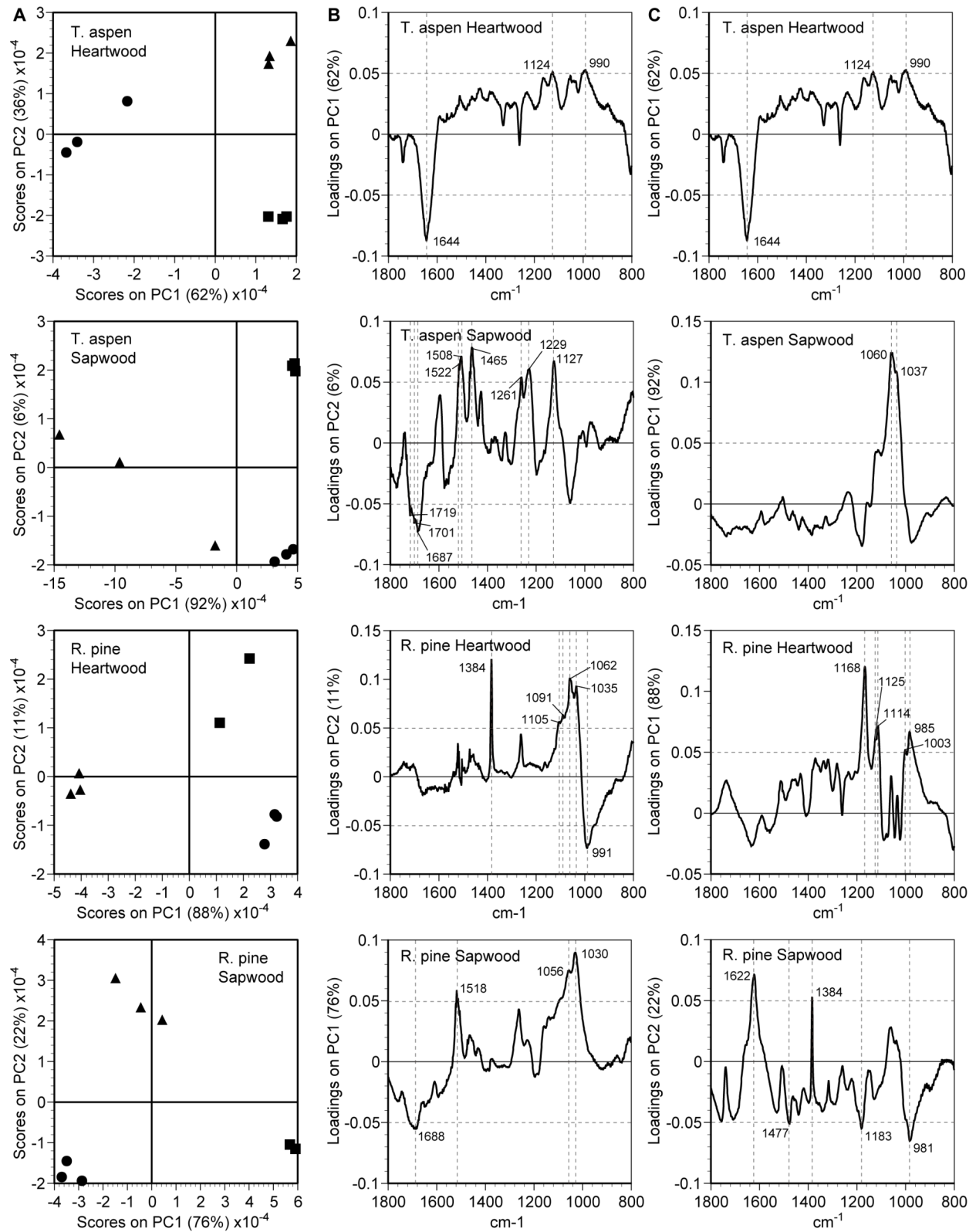
**Fig. S4. Phylogenetic tree of predicted sugar transporters and permeases from genomes of *P. carnosus* and *P. chrysosporium*.**



**Fig. S5. Phylogeny, genome position, and intron distribution of genes encoding manganese peroxidases and lignin peroxidases.**



**Fig. S6. Mycelial growth of *P. carnosus* and *P. chrysosporium* on different hardwood and softwood species.**



**Fig. S7. Different mode of wood decay described by FT-IR analysis.**