

## **Journal of Plant Research**

### **Online Resources**

Complex origins of chloroplast membranes with photosynthetic machineries: Multiple transfers of genes from divergent organisms at different times or a single endosymbiotic event?

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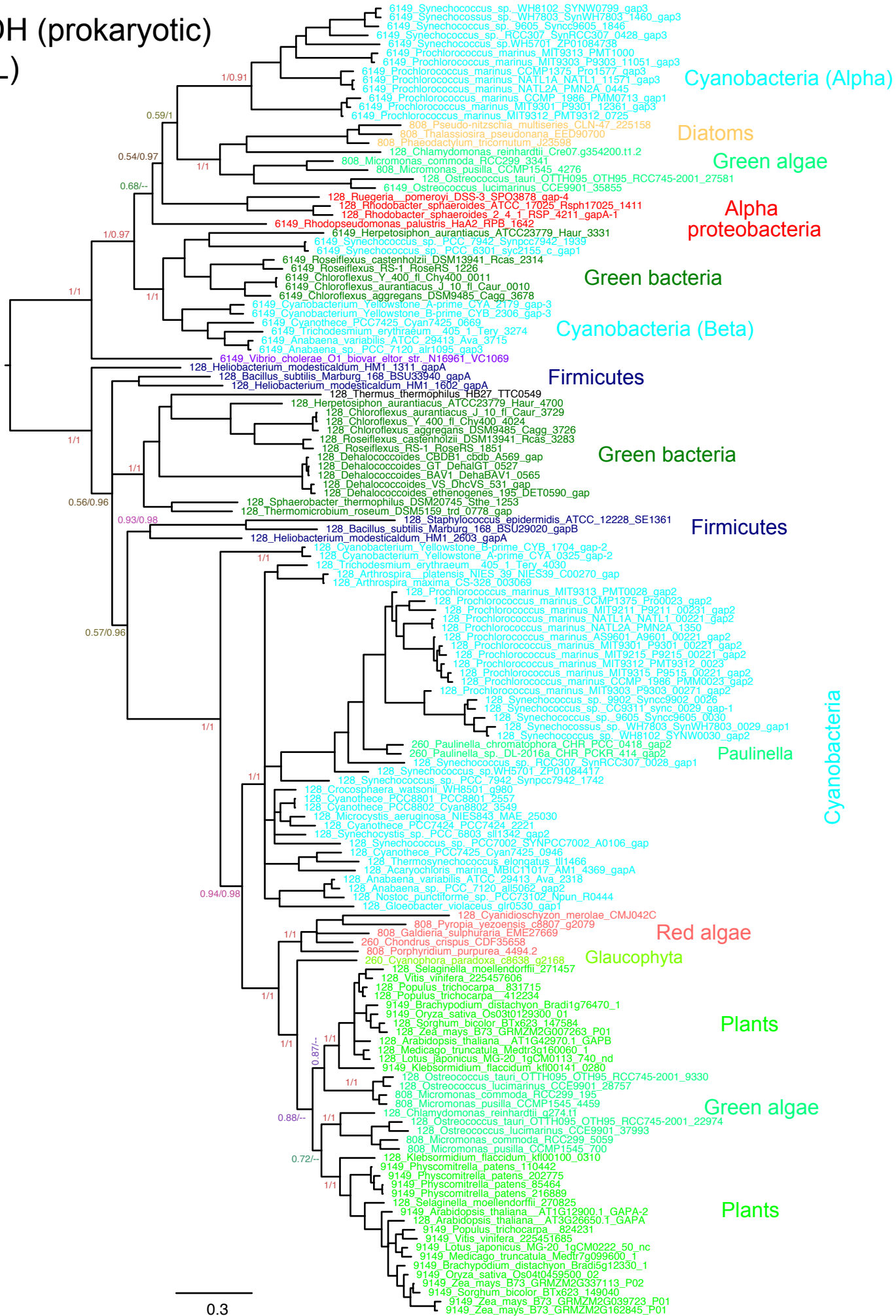
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### **Online Resource 6. Phylogenetic trees of Calvin-Benson Cycle enzymes.**

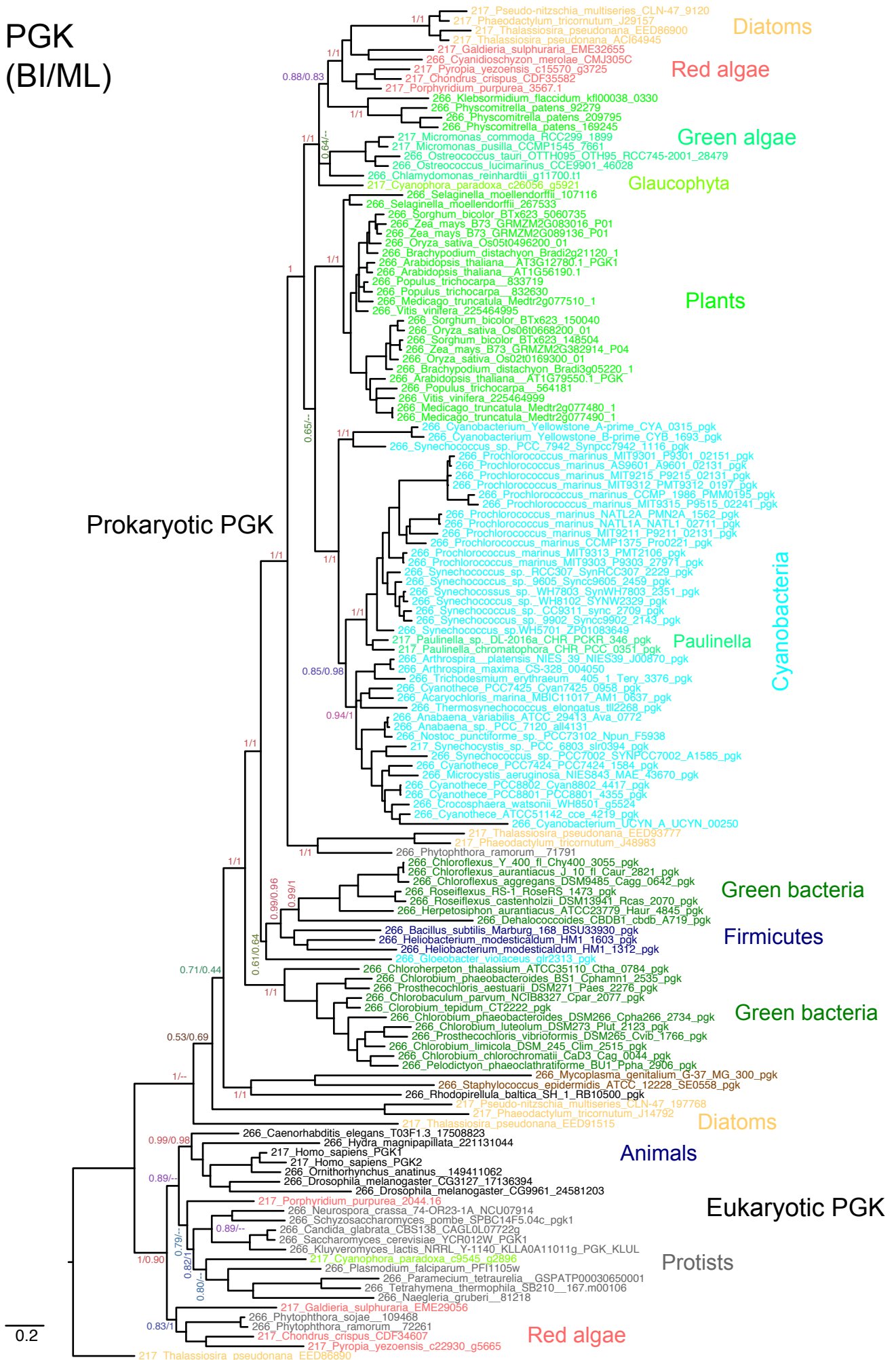
GAPDH, glyceraldehyde 3-phosphate dehydrogenase; PGK, phosphoglycerate kinase; PRK, phosphoribulokinase; RPE, ribose phosphate epimerase; TKL, transketolase. Locate the enzymes in the metabolic pathway in [Fig. 3](#). Other chloroplast enzymes of Calvin-Benson Cycle are originated from eukaryotes, but not prokaryotes ([Matsuzaki et al. 2004](#)), and are not analyzed in the present study.

# GAPDH (prokaryotic) (BI/ML)

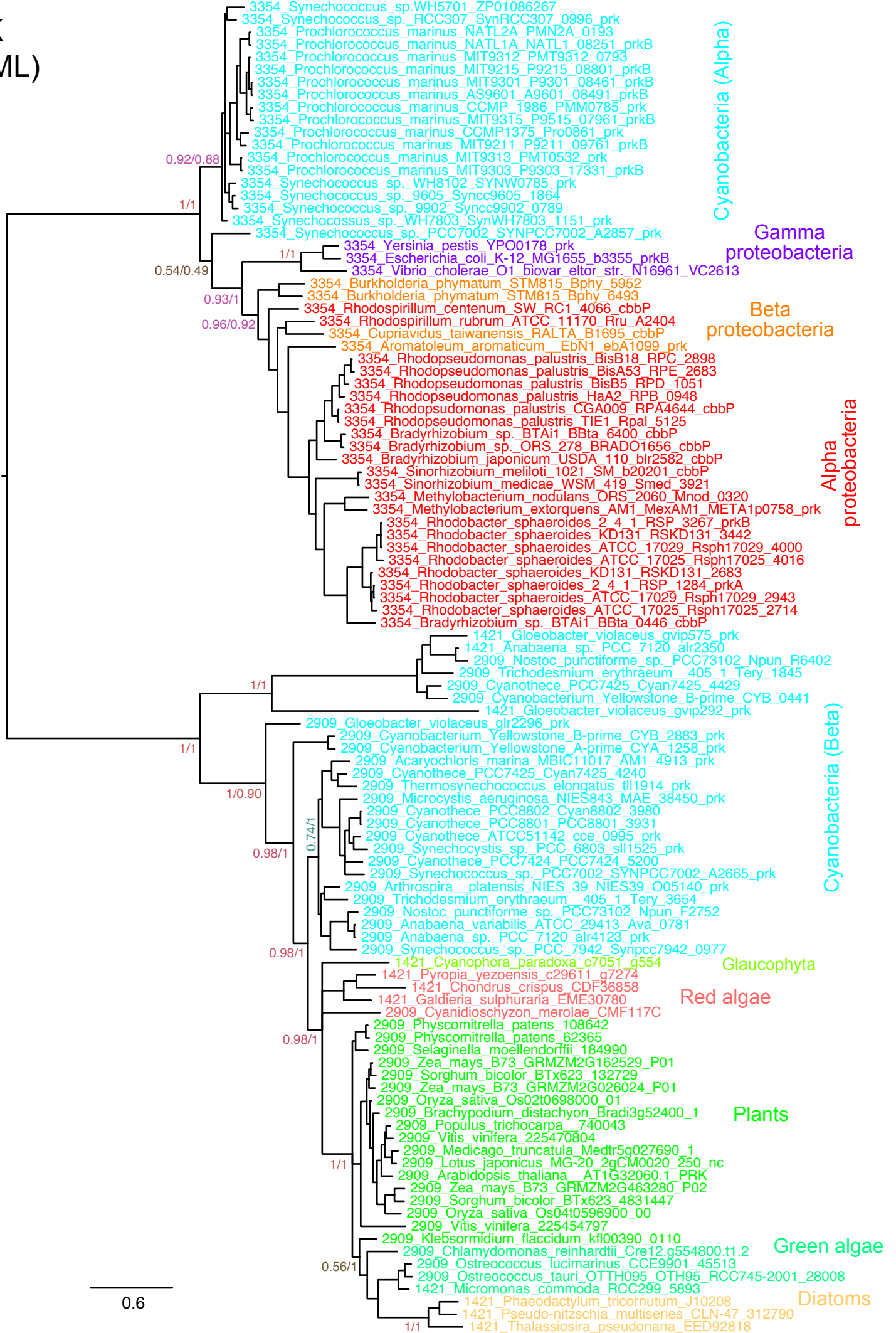


PGK  
(BI/ML)

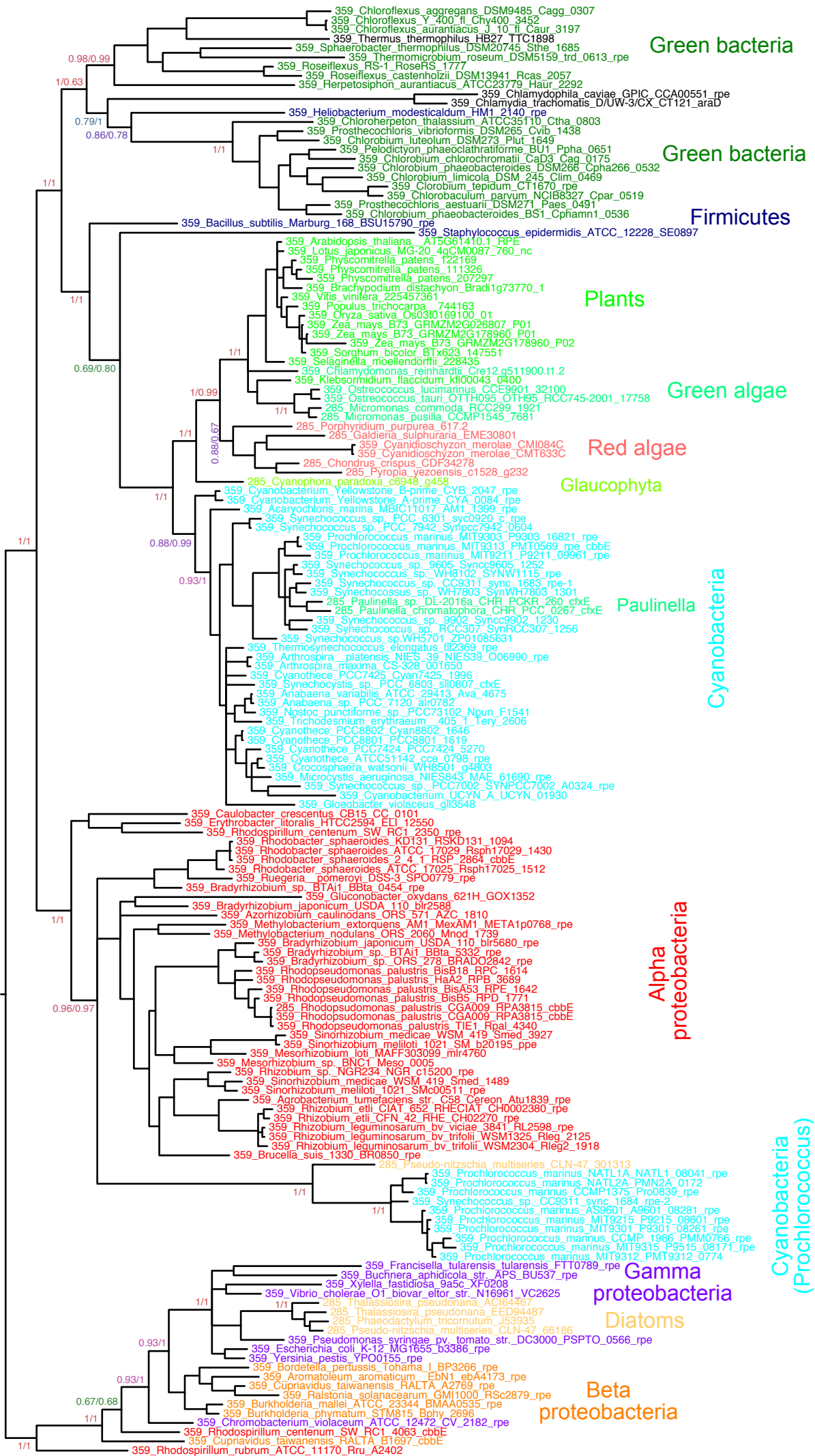
Prokaryotic PGK



PRK  
(BI/ML)



RPE  
(BI/ML)



0.4

# TKL (BI/ML)

