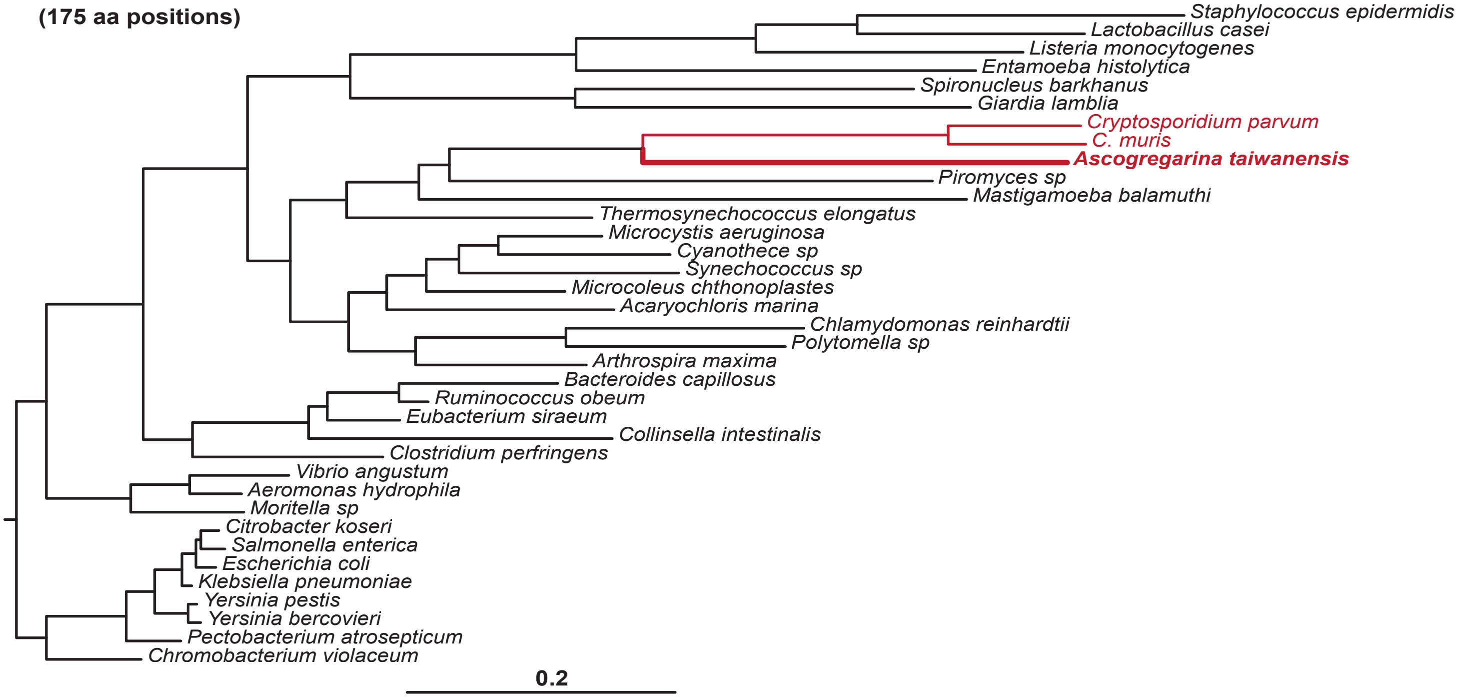
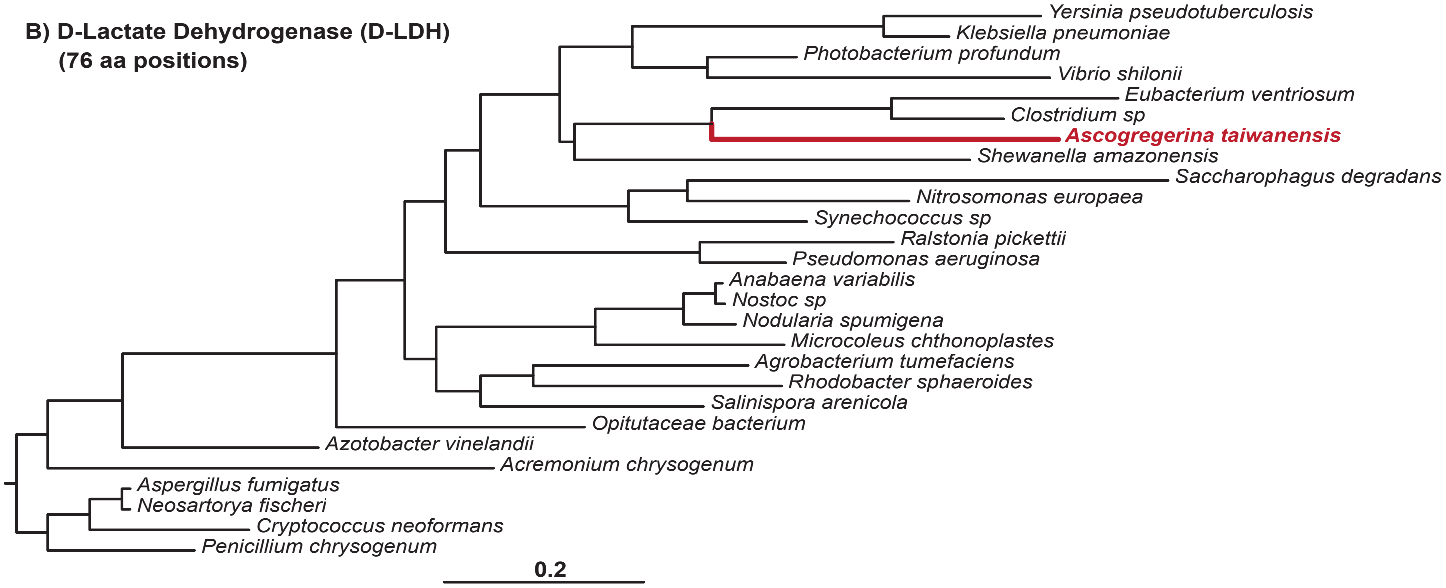
Figure S1 (A-F). Bacterial-affinity of selected Ascogregarina proteins as inferred by maximum likelihood (ML) analysis (with PROML in the PHYLIP package). Best ML trees are inferred using a JTT amino acid substitution model with the consideration of fraction of invariance (Finv) and 4-rate gamma distribution. Sequences were added randomly with 10 jumps of searches and enabled global rearrangement.



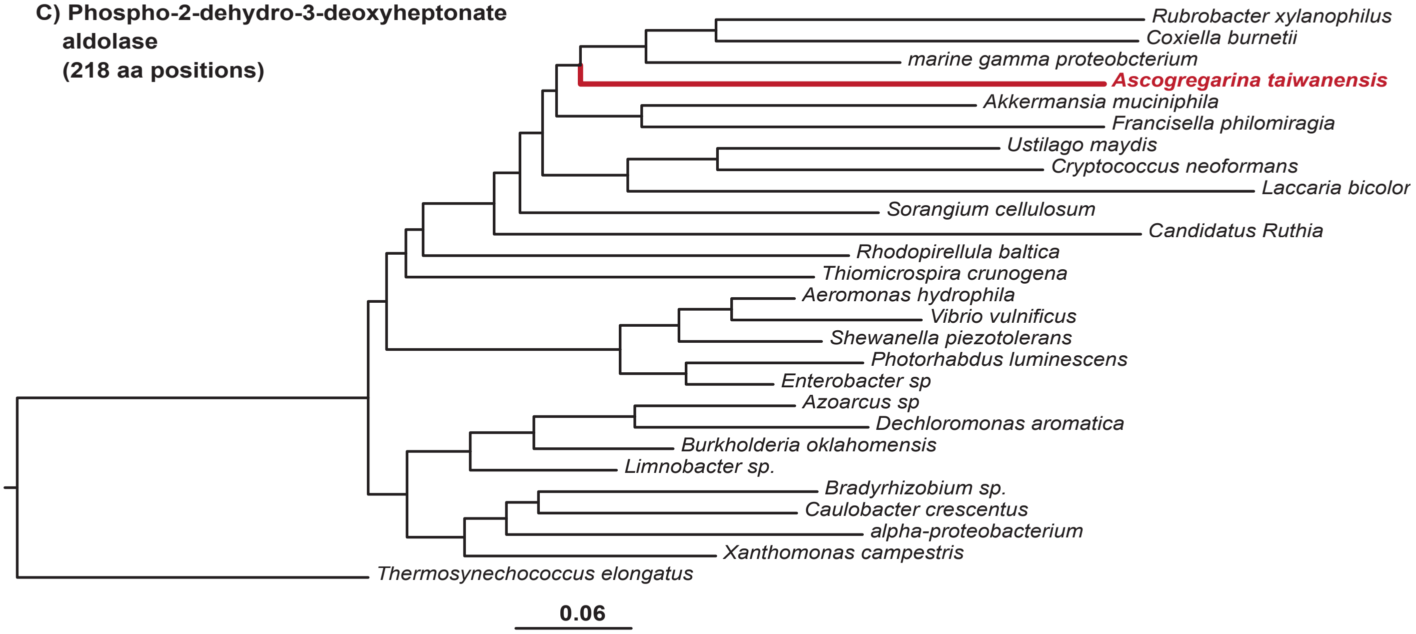
A) Type-E Alcohol Dehydrogenase (adh-E)
(175 aa positions)



B) D-Lactate Dehydrogenase (D-LDH)
(76 aa positions)

Figure S1 (A-F). Bacterial-affinity of selected Ascogregarina proteins.

C) Phospho-2-dehydro-3-deoxyheptonate aldolase
(218 aa positions)



D) Tryptophan synthase
(242 aa positions)

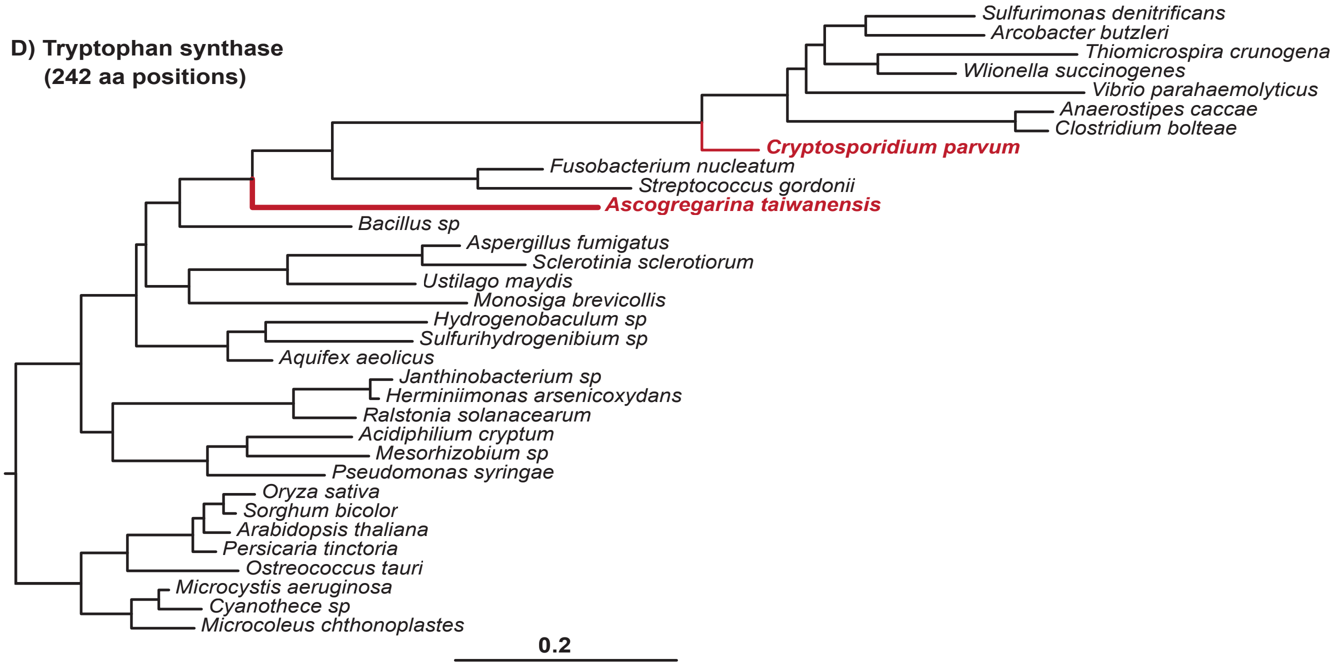


Figure S1 (A-F). Bacterial-affinity of selected Ascogregarina proteins.

E) Indole-3-glycerol-phosphate synthase (I3GPS) (93 aa positions)

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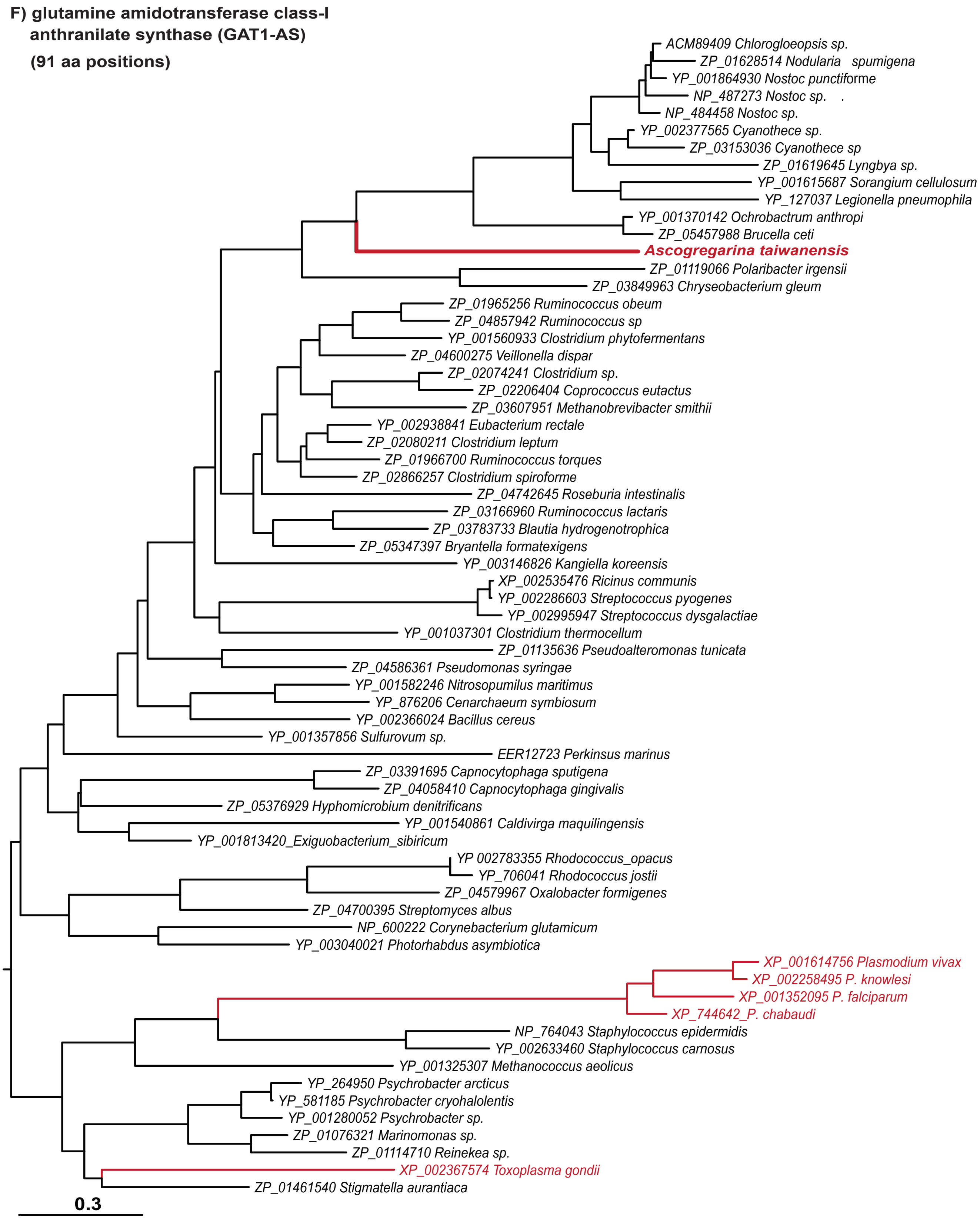
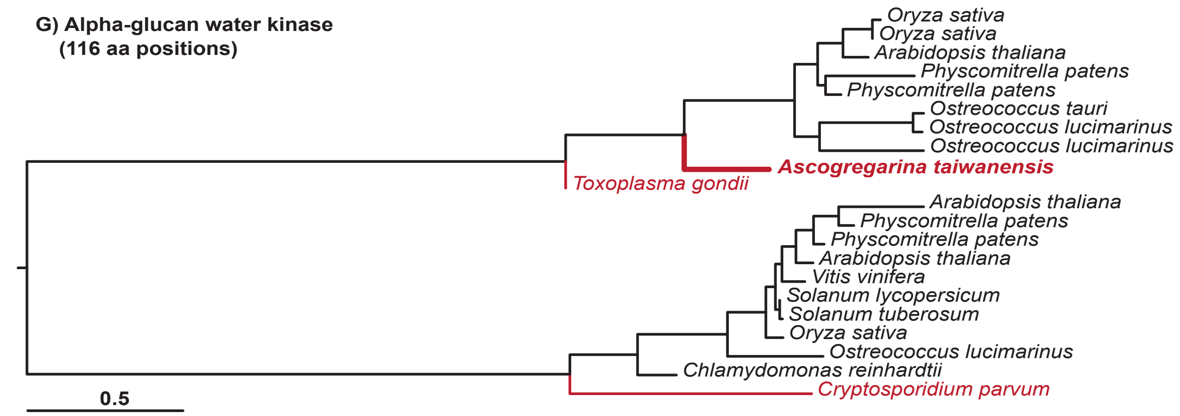
Figure S1 (A-F). Bacterial-affinity of selected Ascogregarina proteins.

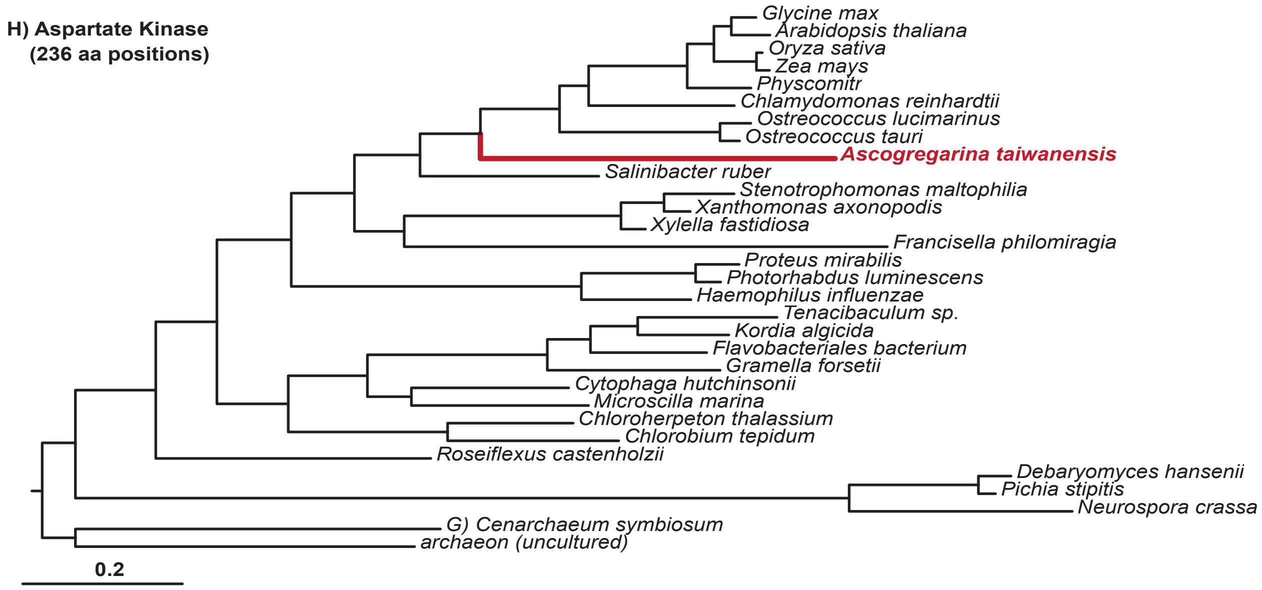


F) glutamine amidotransferase class-I anthranilate synthase (GAT1-AS)

(91 aa positions)

Figure S1 (G-J). Plant-affinity of selected Ascogregarina proteins as inferred by maximum likelihood (ML) analysis (with PROML in the PHYLIP package). Best ML trees are inferred using a JTT amino acid substitution model with the consideration of fraction of invariance (Finv) and 4-rate gamma distribution. Sequences were added randomly with 10 jumps of searches and enabled global rearrangement.


G) Alpha-glucan water kinase
(116 aa positions)


H) Aspartate Kinase
(236 aa positions)

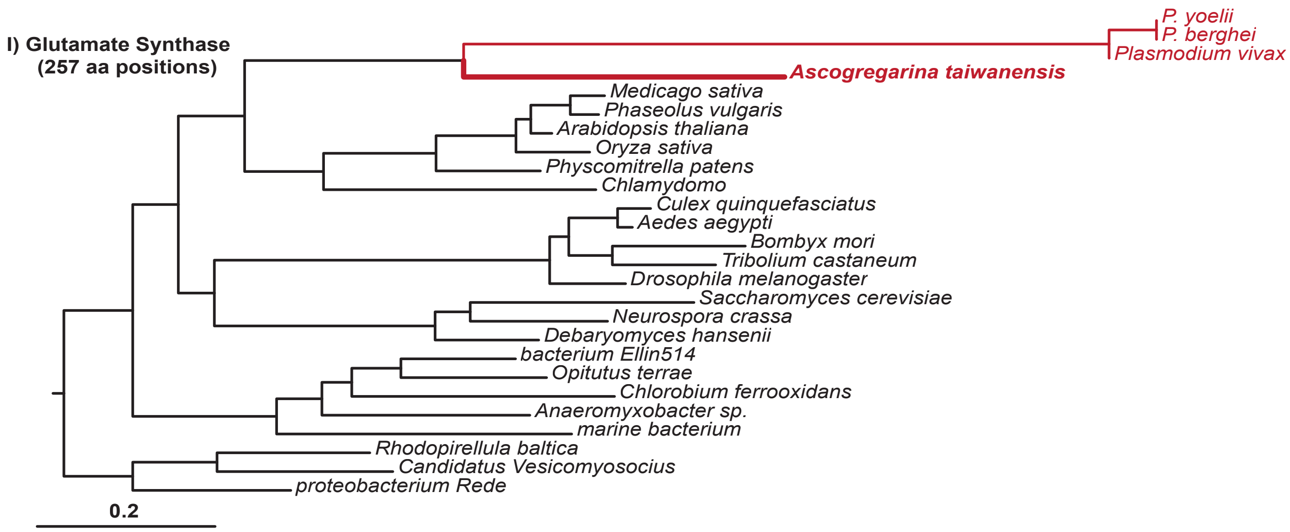

I) Glutamate Synthase
(257 aa positions)

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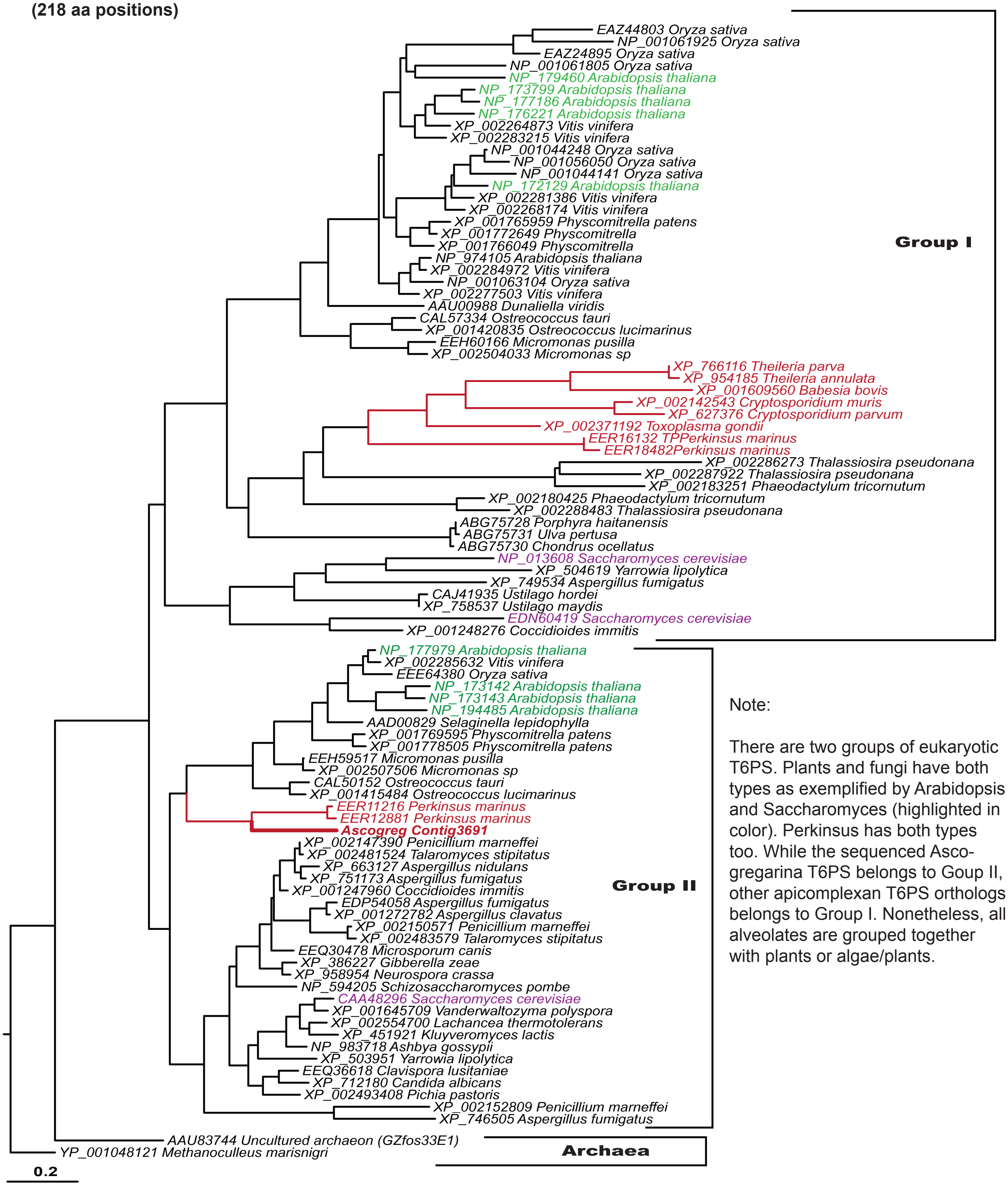
Figure S1 (G-J). Plant-affinity of selected Ascogregarina proteins

J) Trehalose-6-P synthase (218 aa positions)



Note:

There are two groups of eukaryotic T6PS. Plants and fungi have both types as exemplified by Arabidopsis and Saccharomyces (highlighted in color). Perkinsus has both types too. While the sequenced Ascogregarina T6PS belongs to Goup II, other apicomplexan T6PS orthologs belongs to Group I. Nonetheless, all alveolates are grouped together with plants or algae/plants.