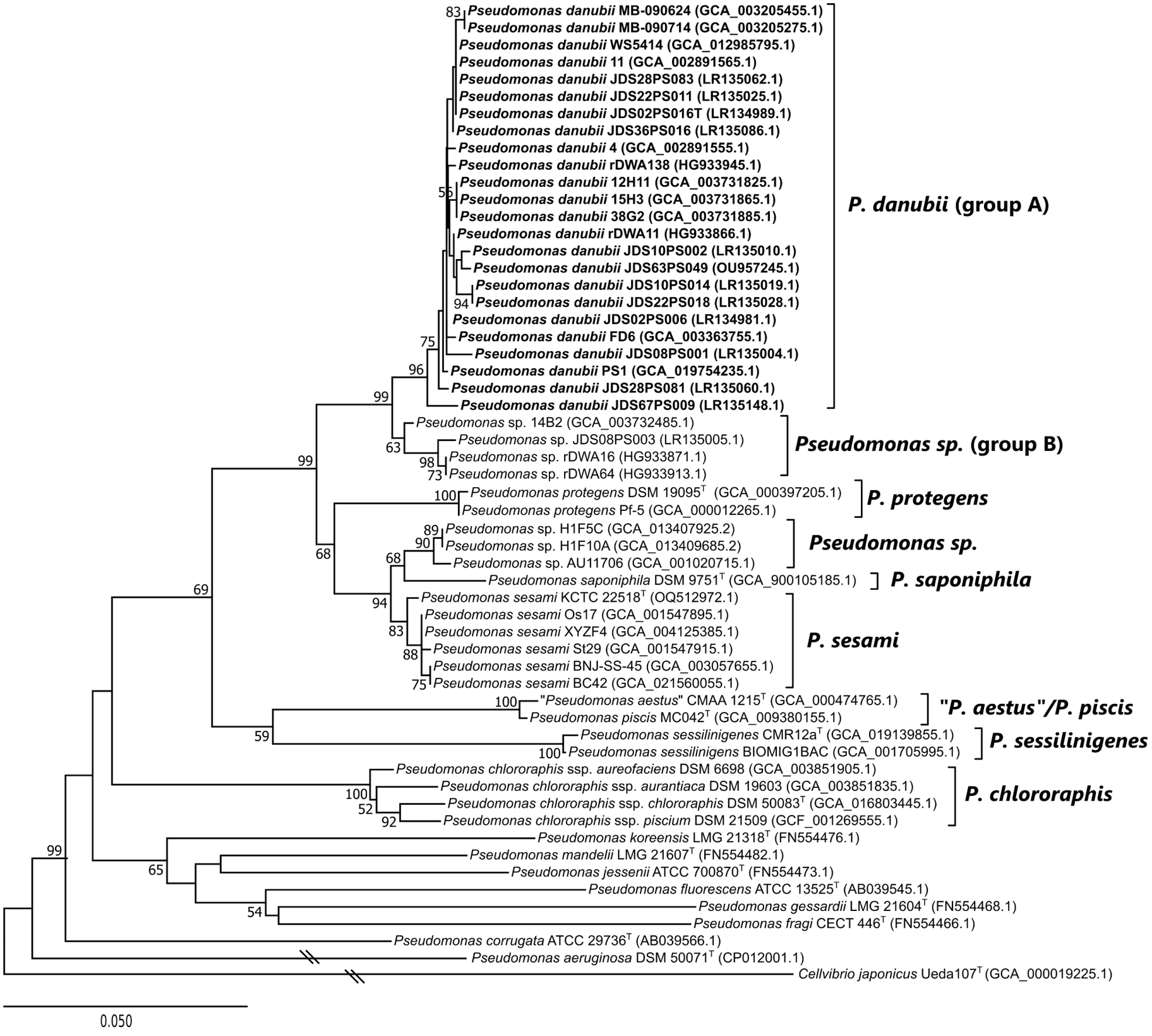


Figure S1. Phylogenetic tree based on the *rpoD* gene sequence (Jukes-Cantor, Maximum Likelihood). Bootstrap values higher than 50 are indicated in the nodes. Bar indicates sequence divergence. Strains assigned to the new species *P. danubii* are highlighted in bold.

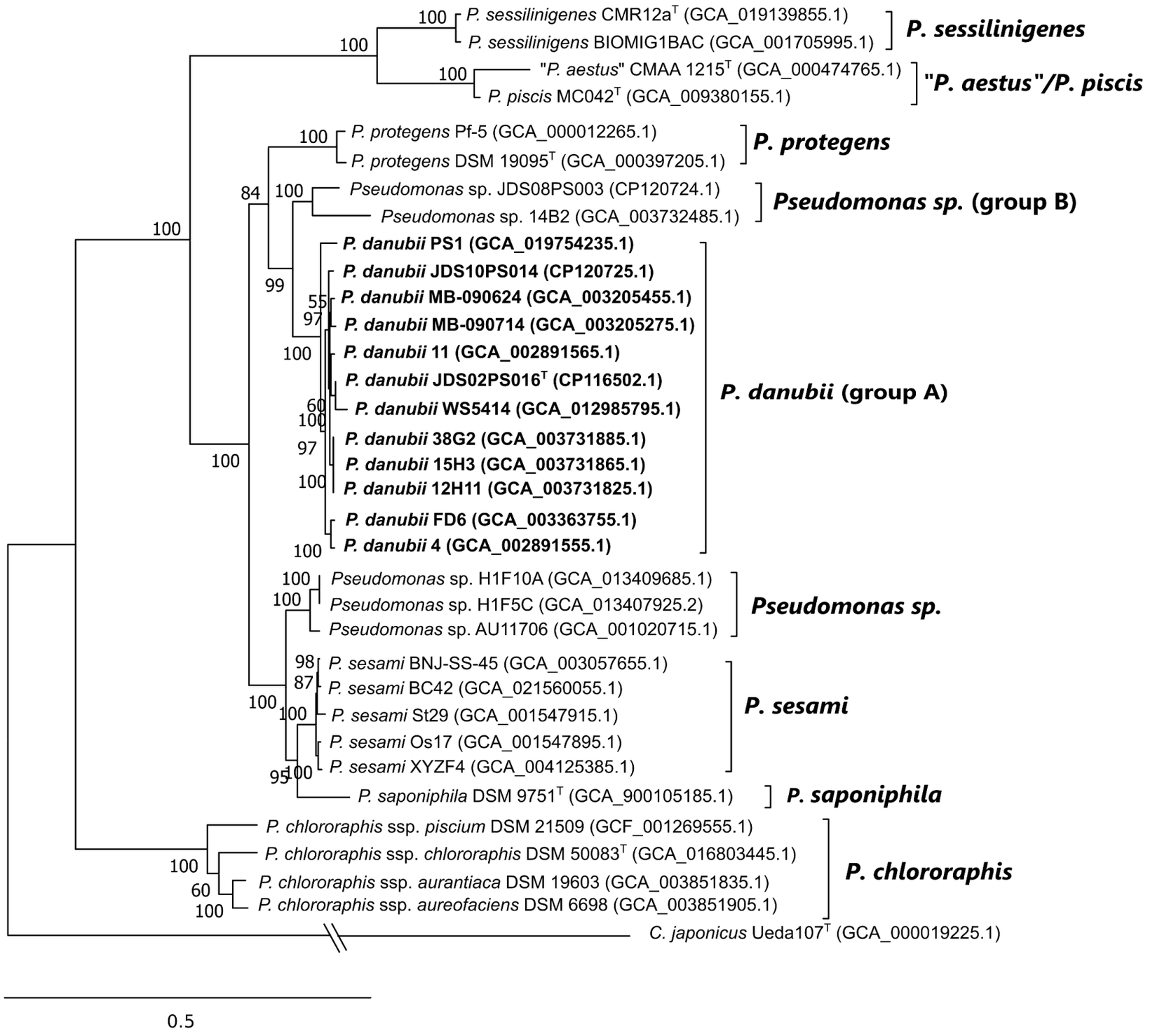


Figure S2. Maximum likelihood phylogenetic tree of strains studied in the *P. chlororaphis* subgroup of species based on the concatenated sequences of 249 core genes. *C. japonicum* was used as an outgroup. Numbers at the nodes indicate bootstrap values from 100 replicates. The bar indicates sequence divergence. Strains assigned to the new species *P. danubii* are highlighted in bold.

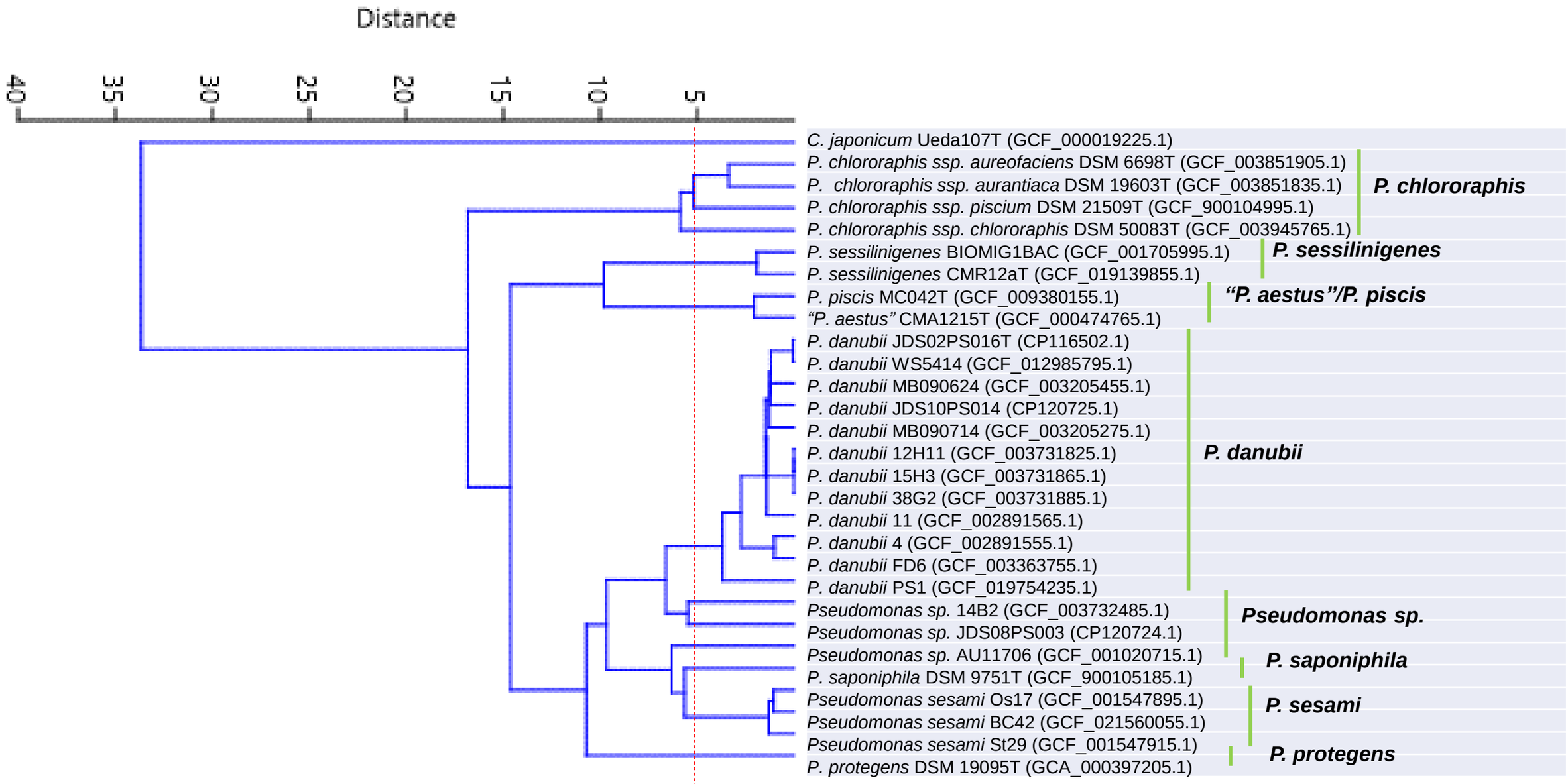


Figure S3. a) Dendrograms of the aggregated ANIb values. The dotted line indicates the 95% species threshold.

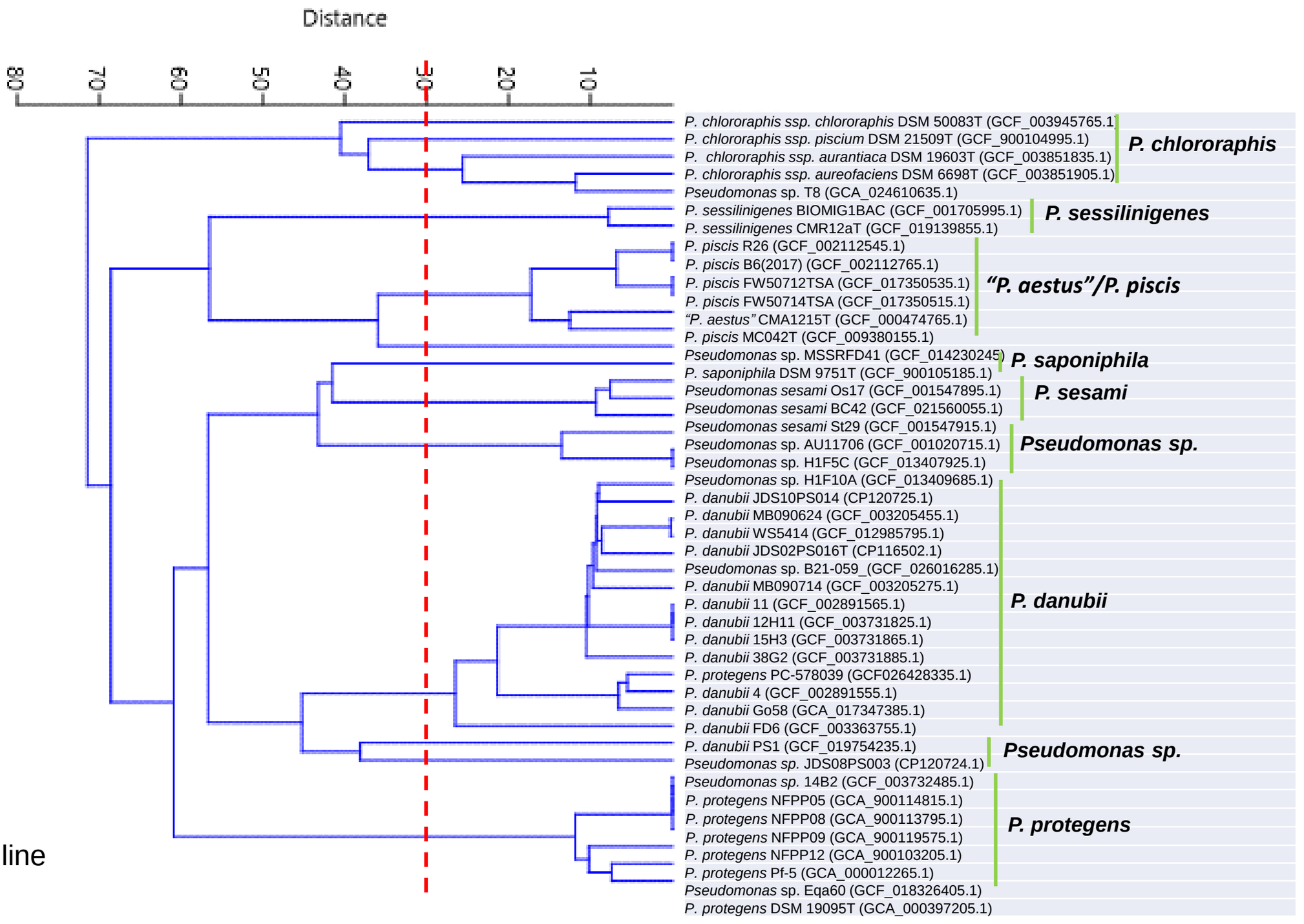


Figure S3. b) Dendrogram of the GGDC similarities among the studied strains. The dotted line indicates the 70% species threshold.

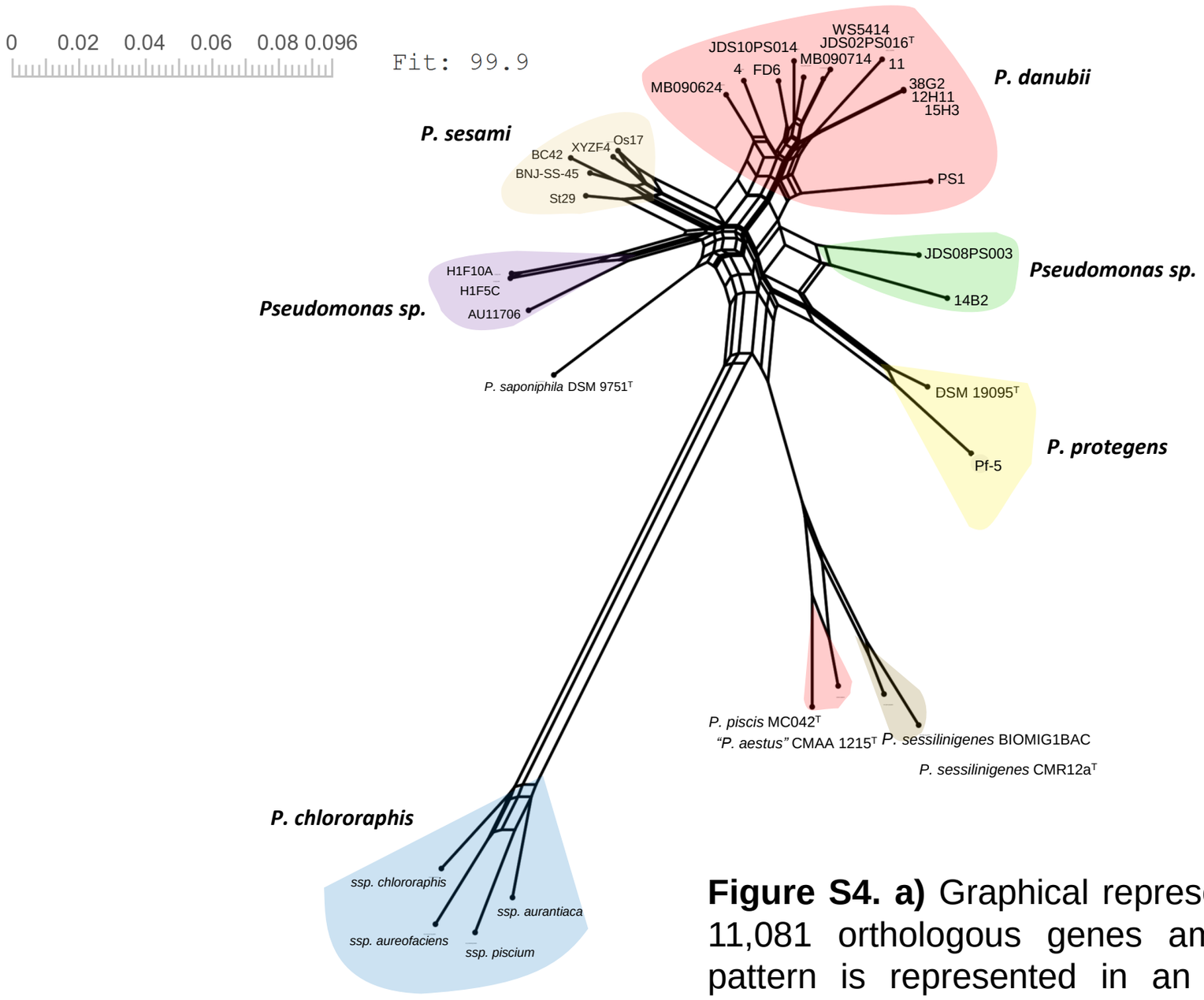


Figure S4. a) Graphical representation of the distribution of the 11,081 orthologous genes among the strains: The phyletic pattern is represented in an unrooted network by the split decomposition method. Strains of the same genomic species are grouped.

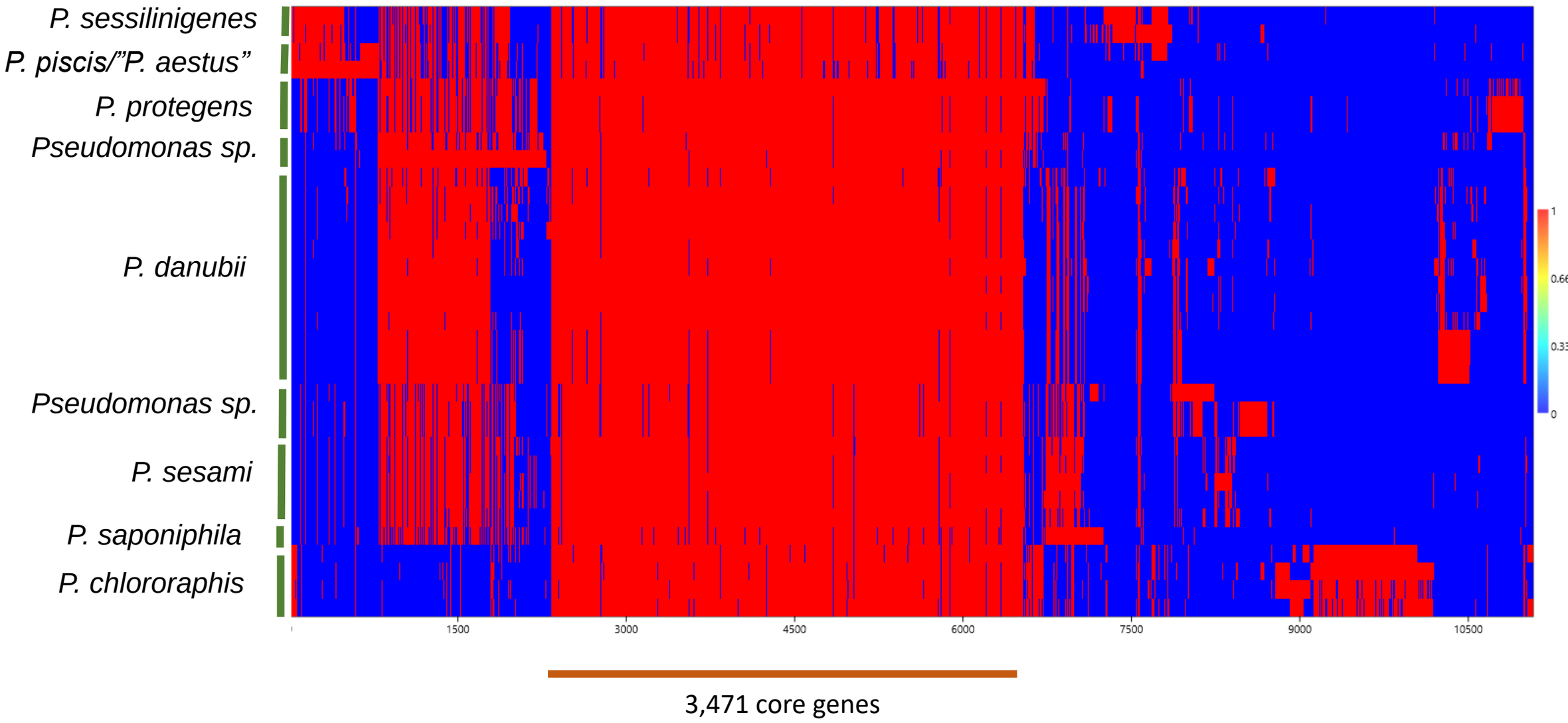
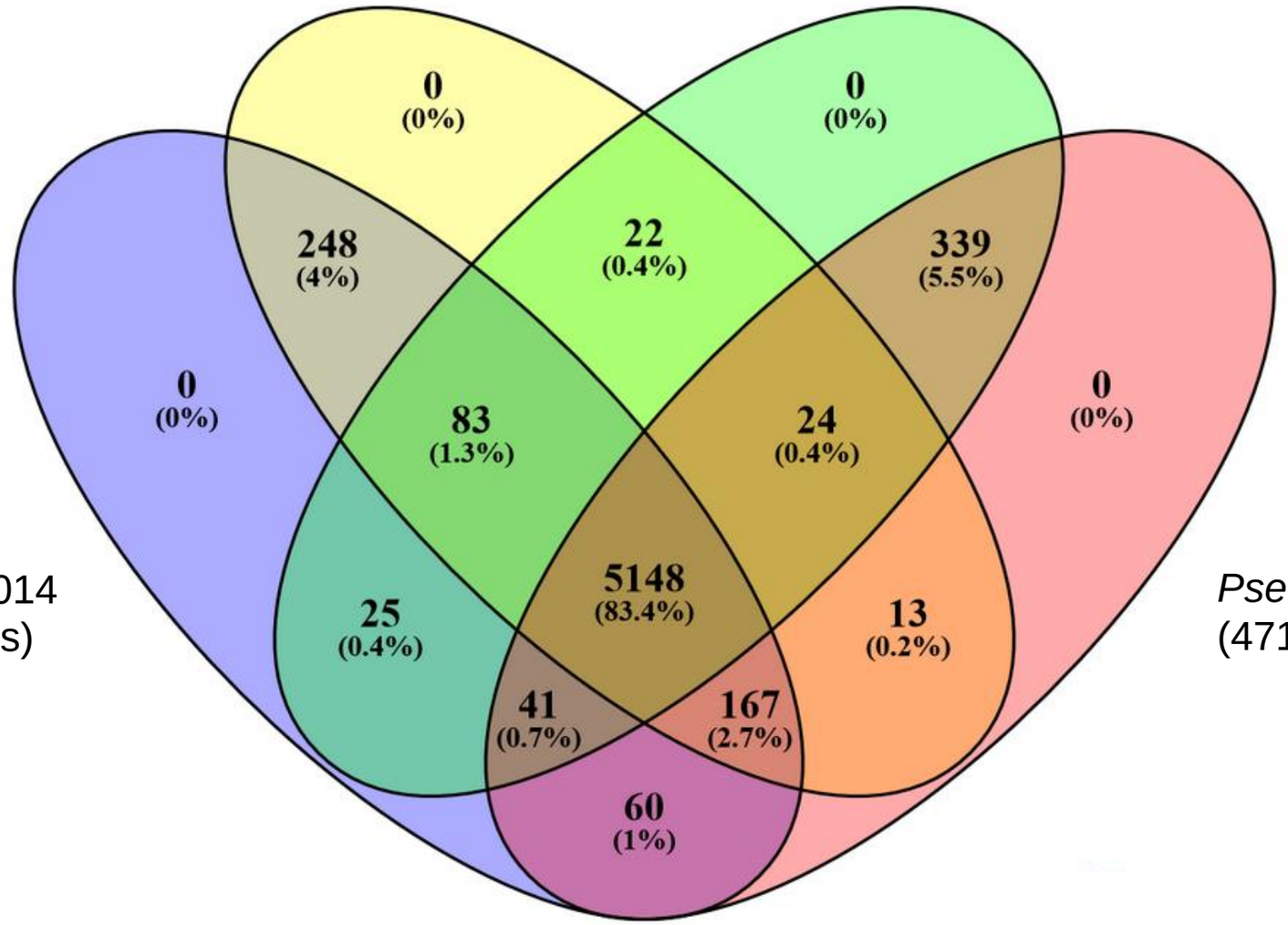


Figure S4. b) Graphical representation of the distribution of the 11,081 orthologous genes among the strains: Heat plot of the phyletic pattern representing the presence (red) or absence (blue) of the orthologous genes.

*P. danubii*JDS02PS016T (185 exclusive genes)

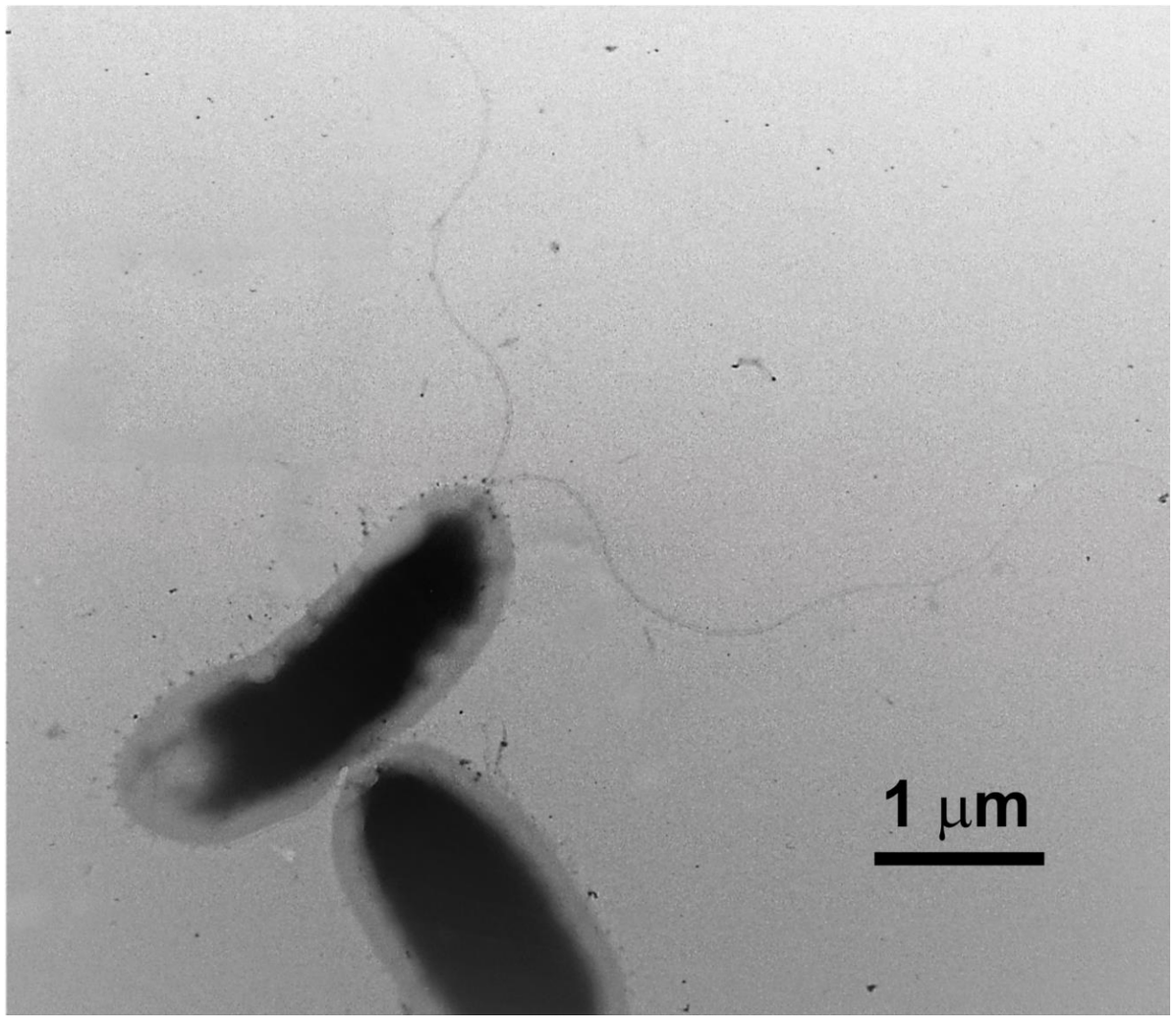
*Pseudomonas*sp. 14B2 (868 exclusive genes)



*P. danubii*JDS10PS014
(159 exclusive genes)

*Pseudomonas*sp. JDS08PS003
(471 exclusive genes)

Figure S5. Venn diagram of the shared orthologous genes of two sequenced strains of *P. danubii* (JDS02PS016T and JDS10PS014) and two closely related strains of Pseudomonas_E protegens_B in the GTDB taxonomy (JDS08PS003 and 14B2).



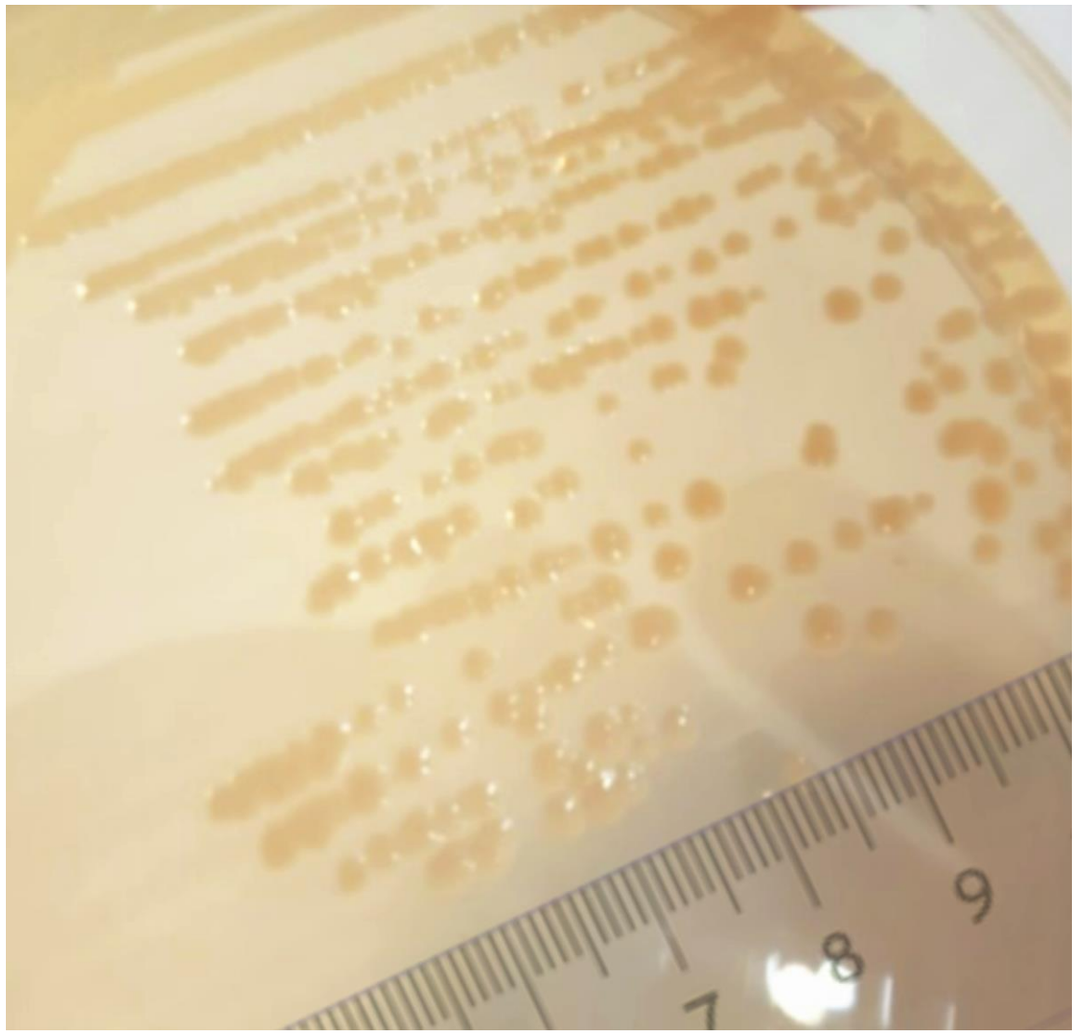


Figure S6. Electron microscopy of negatively-stained flagellated cells of strain JDS02PS016T in the exponential growth phase (left). Colony morphology of strain JDS02PS016T after incubation at 30 °C for 48 h on LB agar (right).

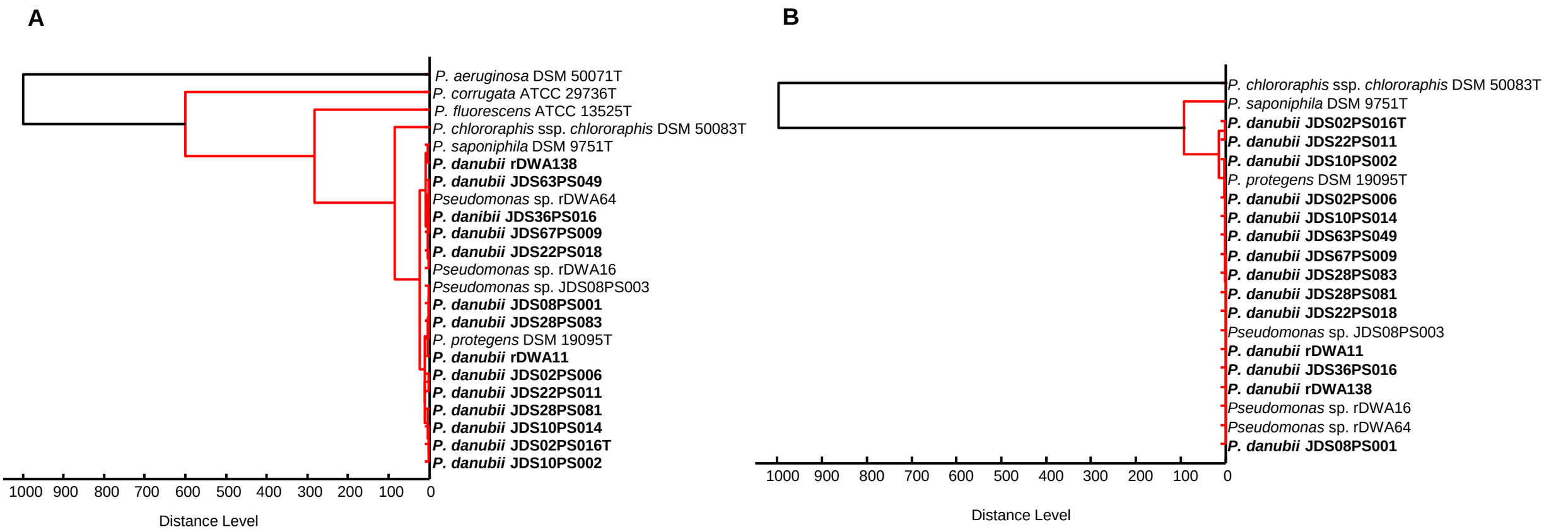


Figure S7. Dendrogram of the main proteins obtained by MALDI-TOF mass spectrometry. A) with outgroups; B) only species in the *P. chlororaphis* subgroup.