

D7DA23 – *Staphylothermus hellenicus*

-A4IYU5 – *Francisella tularensis* subsp. *tularensis*

F0P224 – Weeksella virosa

-F6D3W4 – *Methanobacterium* sp.

-A9UVM9 – *Monosiga brevicollis*

E7F349 – *Danio rerio*

H2MI97 – *Oryzias latipes*

G3PRJ4 – *Gasterosteus aculeatus*

H0UU28 – Cavia porcellus

F6RFR8 – *Ornithorhynchus anatinus*

B4IZL0 – *Drosophila grimshawi*

FBgn0199295

B4LHN4 – *Drosophila virilis*

B4KW89 – *Drosophila mojavensis*

B4PJZ5 – *Drosophila yakuba*

B3NDE4 – *Drosophila erecta*

D8SE45 – *Selaginella moellendorffii*

D8QXE0 – *Selaginella moellendorffii*

I1LJM2 – Glycine max

4
98 A9T397 – *Physcomitrella patens* subsp. *patens*

-Q54JS8 – *Dictyostelium discoideum*

-B8C8Q2 – *Thalassiosira pseudonana*

G4YHT5 – *Phytophthora sojae*

-Q0SMG5 – *Borrelia afzelii*

– A3N6Y5 – *Burkholderia pseudomallei*

–D0NF20 – *Phytophthora infestans*

-Q0RTM7 – *Frankia alni*

F4P1N4 – *Batrachochytrium dendrobatidis*

O94653 – *Schizosaccharomyces pombe*

B6K577 – *Schizosaccharomyces japonicus*

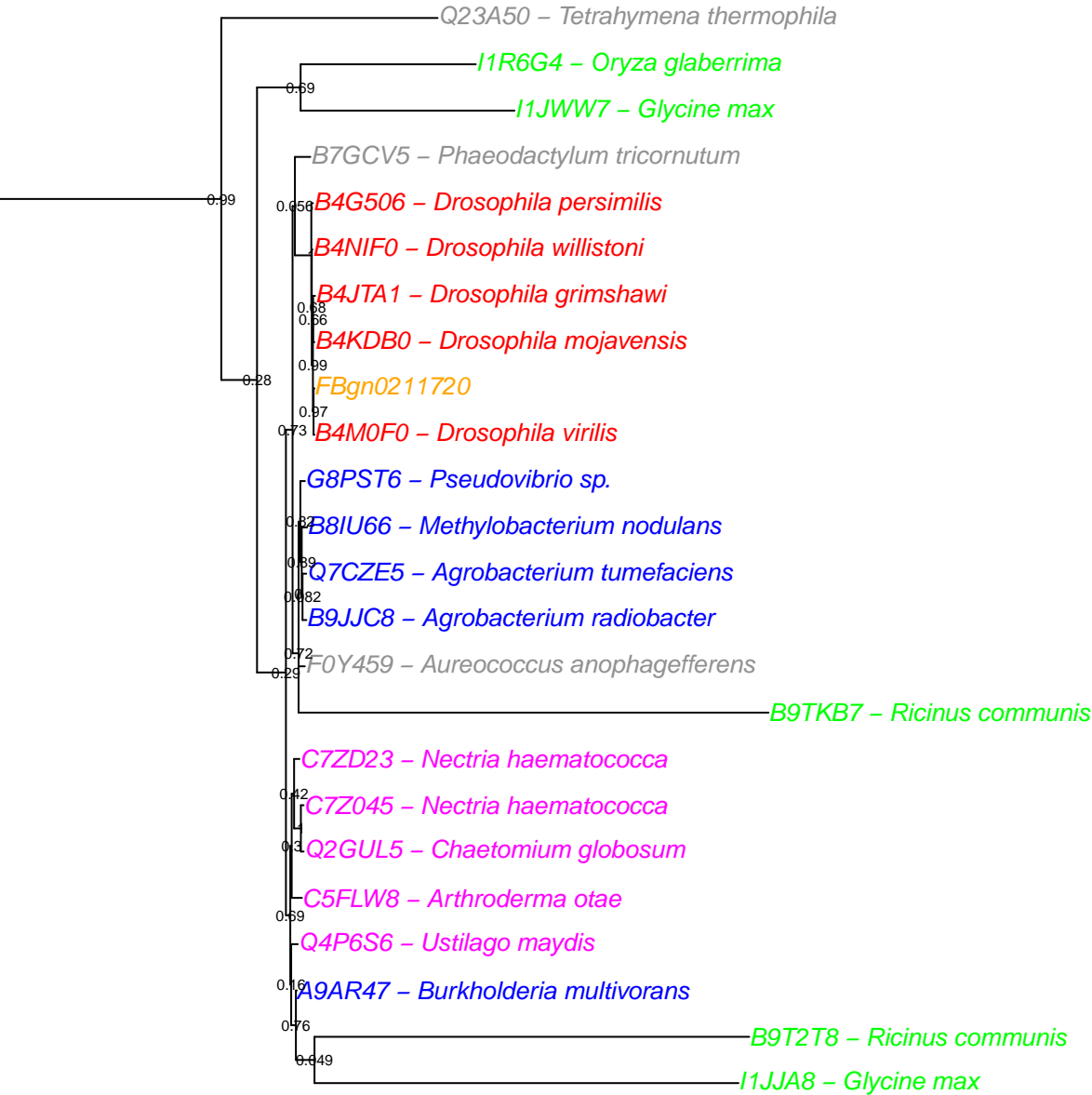
B0CWZ5 – *Laccaria bicolor*

E6R377 – *Cryptococcus gattii* serotype B

-I1MIM2 – Glycine max

G1QYW3 – *Nomascus leucogenys*

H2P9M1 – *Pongo abelii*





FBgn0211218

B4M111 – *Drosophila virilis*

Q9VB78 – *Drosophila melanogaster*

B4N8E0 – *Drosophila willistoni*

B5DS62 – *Drosophila pseudoobscura pseudoobscura*

B4JHF9 – *Drosophila grimshawi*

C9SXZ4 – *Verticillium alfalfae*

G2XH68 – *Verticillium dahliae*

Q1GKY8 – *Ruegeria sp.*

F9G6L4 – *Fusarium oxysporum*

G4LUK9 – *Schistosoma mansoni*

D2VED4 – *Naegleria gruberi*

D2W009 – *Naegleria gruberi*

C9YZH5 – *Streptomyces scabies*

G8WJ05 – *Klebsiella oxytoca*

B1I6M7 – *Desulforudis audaxviator*

D2VUI9 – *Naegleria gruberi*

G3PSR3 – *Gasterosteus aculeatus*

H3ADH5 – *Latimeria chalumnae*

H0X157 – *Otolemur garnettii*

H0V4M1 – *Cavia porcellus*

C5C4Q4 – *Beutenbergia cavernae*

A9V702 – *Monosiga brevicollis*

F2UI85 – *Salpingoeca rosetta*

0.18

0.97

0.92

0.56

0.46

0.98

0.58

0.62

0.94

0.35

0.96

0.96

0.94

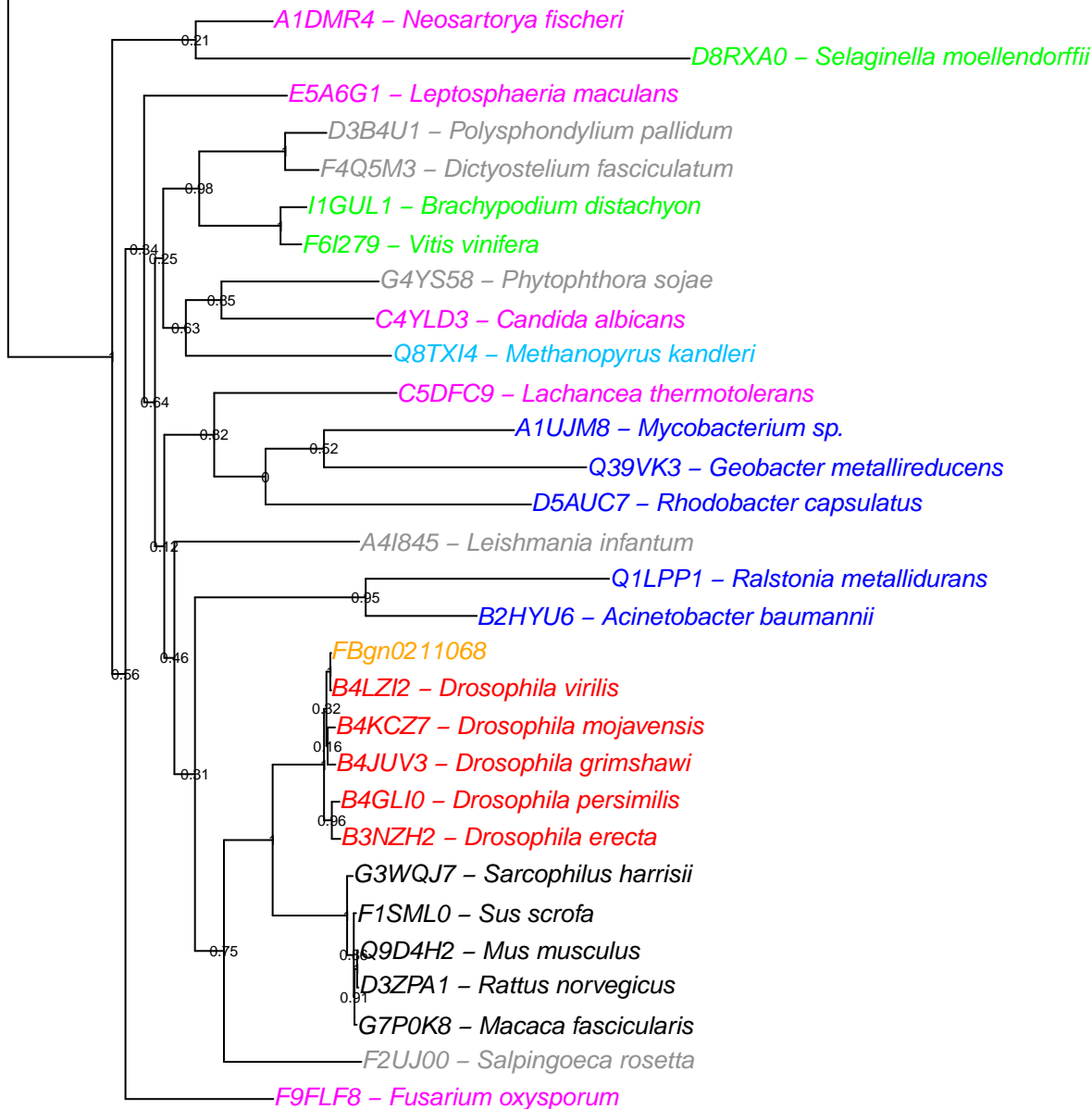
0.32

0.92

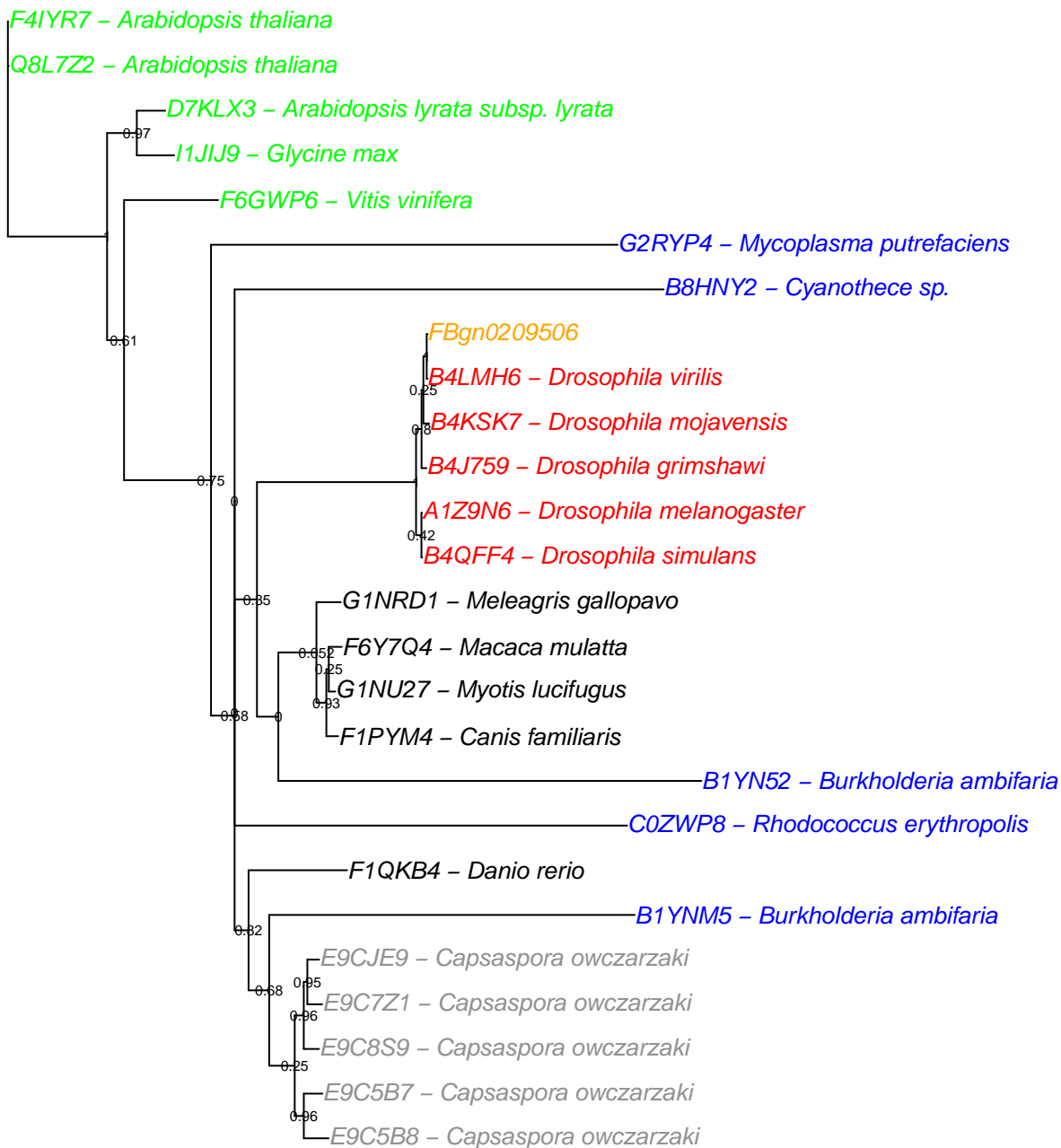
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I1J1T5 – *Brachypodium distachyon*

I1J1T4 – *Brachypodium distachyon*







F8W2E1 – *Danio rerio*

E7F1X7 – *Danio rerio*

B6AGL4 – *Cryptosporidium muris*

Q380Z7 – *Trypanosoma brucei brucei*

D0AAT3 – *Trypanosoma brucei gambiense*

E0T3P2 – *Edwardsiella tarda*

D0ZB20 – *Edwardsiella tarda*

C5B8N3 – *Edwardsiella ictaluri*

G9NWM6 – *Hypocrea atroviridis*

H3B4I2 – *Latimeria chalumnae*

G0MTI7 – *Caenorhabditis brenneri*

H9KKA0 – *Apis mellifera*

Q178P1 – *Aedes aegypti*

Q16JR7 – *Aedes aegypti*

H9KPX4 – *Apis mellifera*

F8I9R6 – *Sulfobacillus acidophilus*

A0LPK6 – *Syntrophobacter fumaroxidans*

D8M294 – *Blastocystis hominis*

G1XEY7 – *Arthrotrys oligospora*

G4ZSQ2 – *Phytophthora sojae*

FBgn0209397

B4LL51 – *Drosophila virilis*

D8UH79 – *Volvox carteri*

D8UM12 – *Volvox carteri*

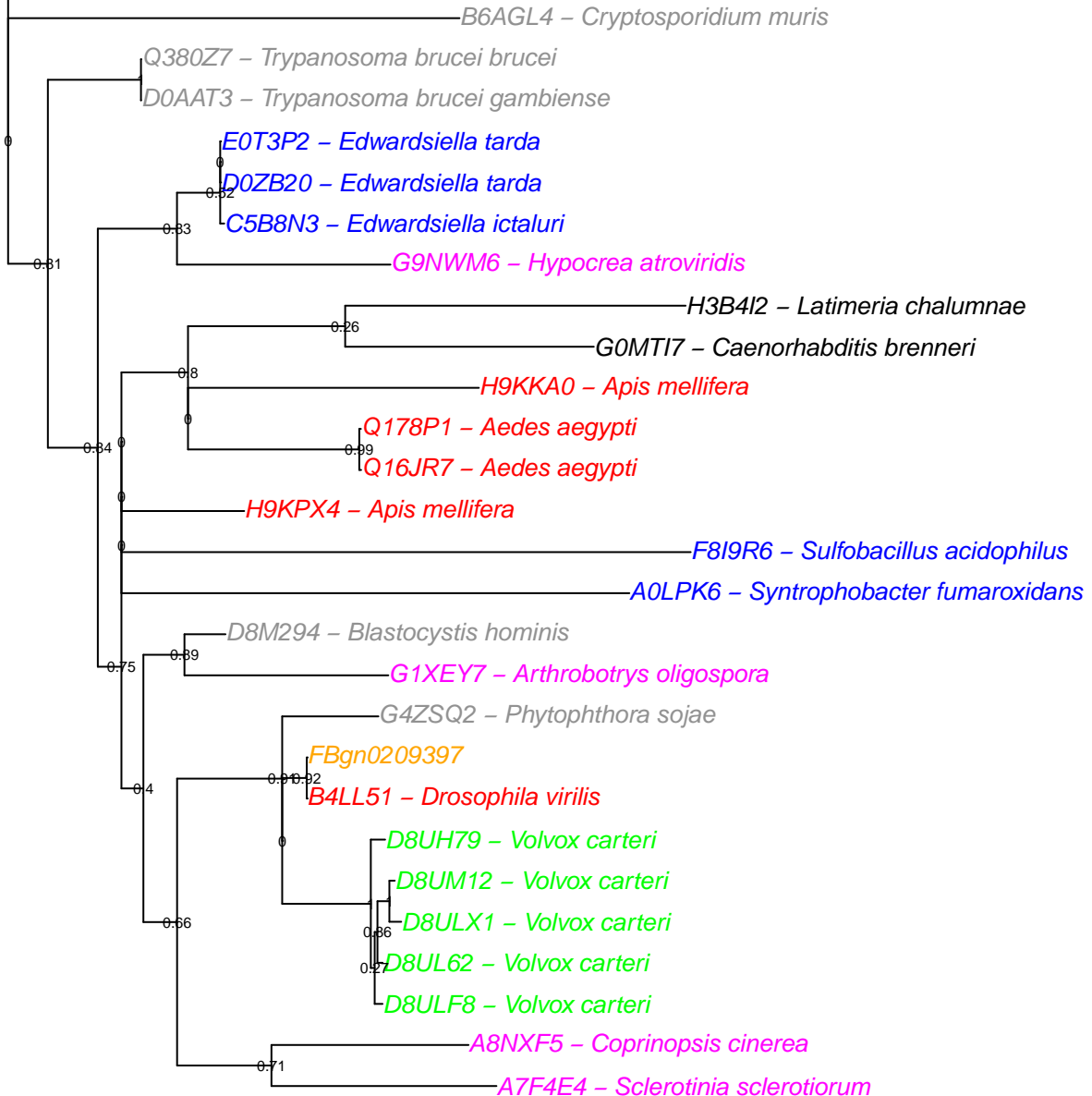
D8ULX1 – *Volvox carteri*

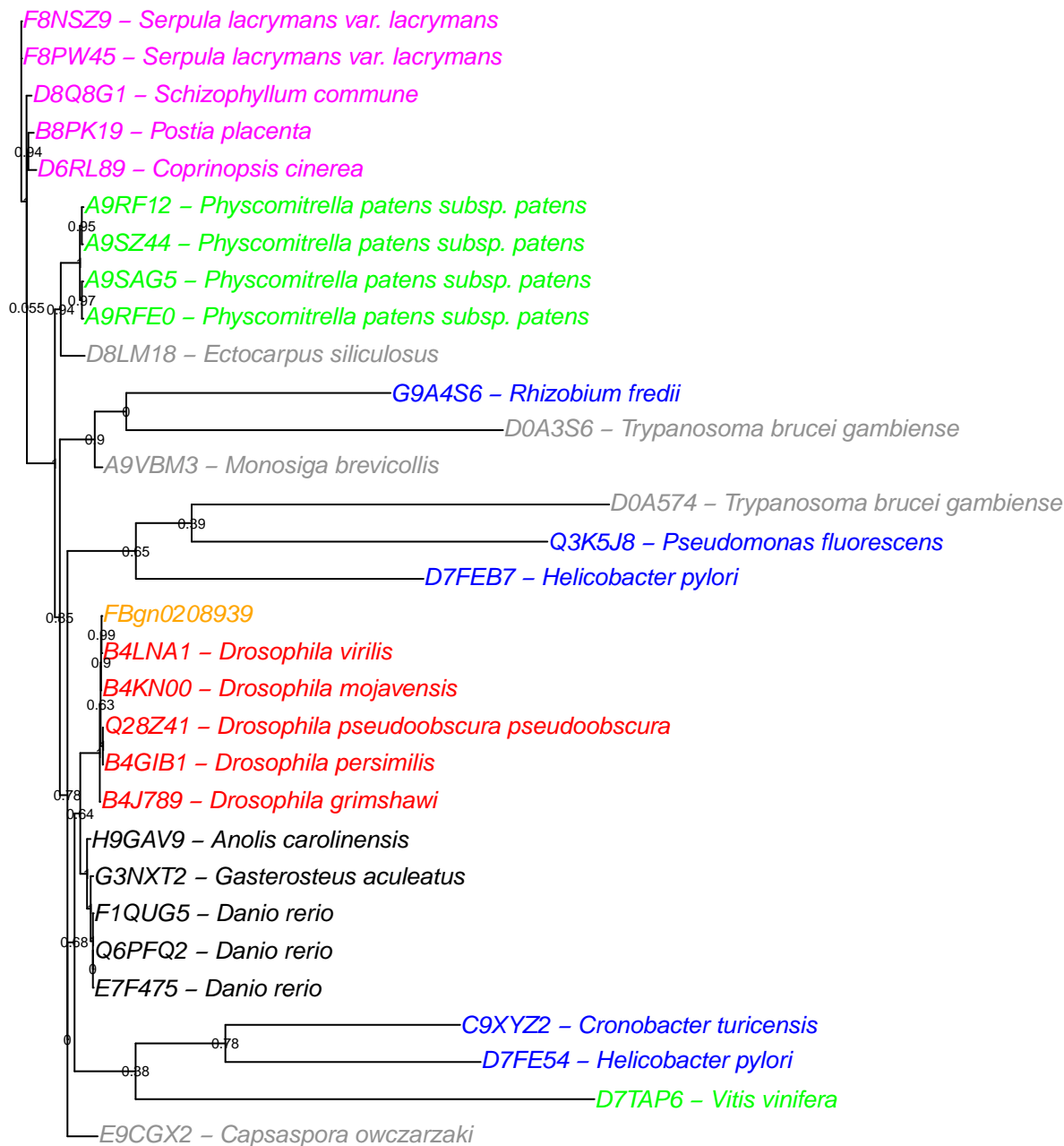
D8UL62 – *Volvox carteri*

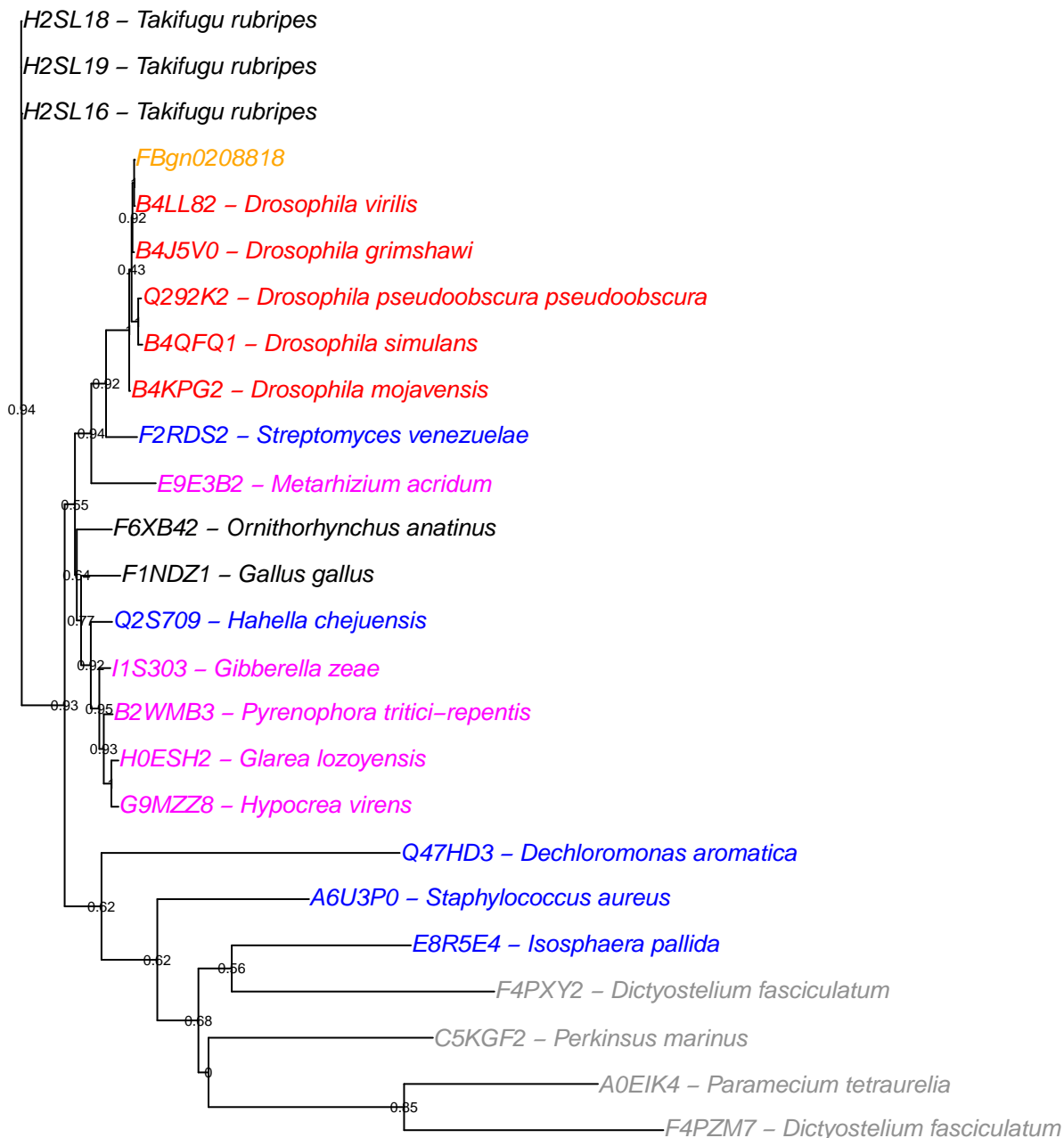
D8ULF8 – *Volvox carteri*

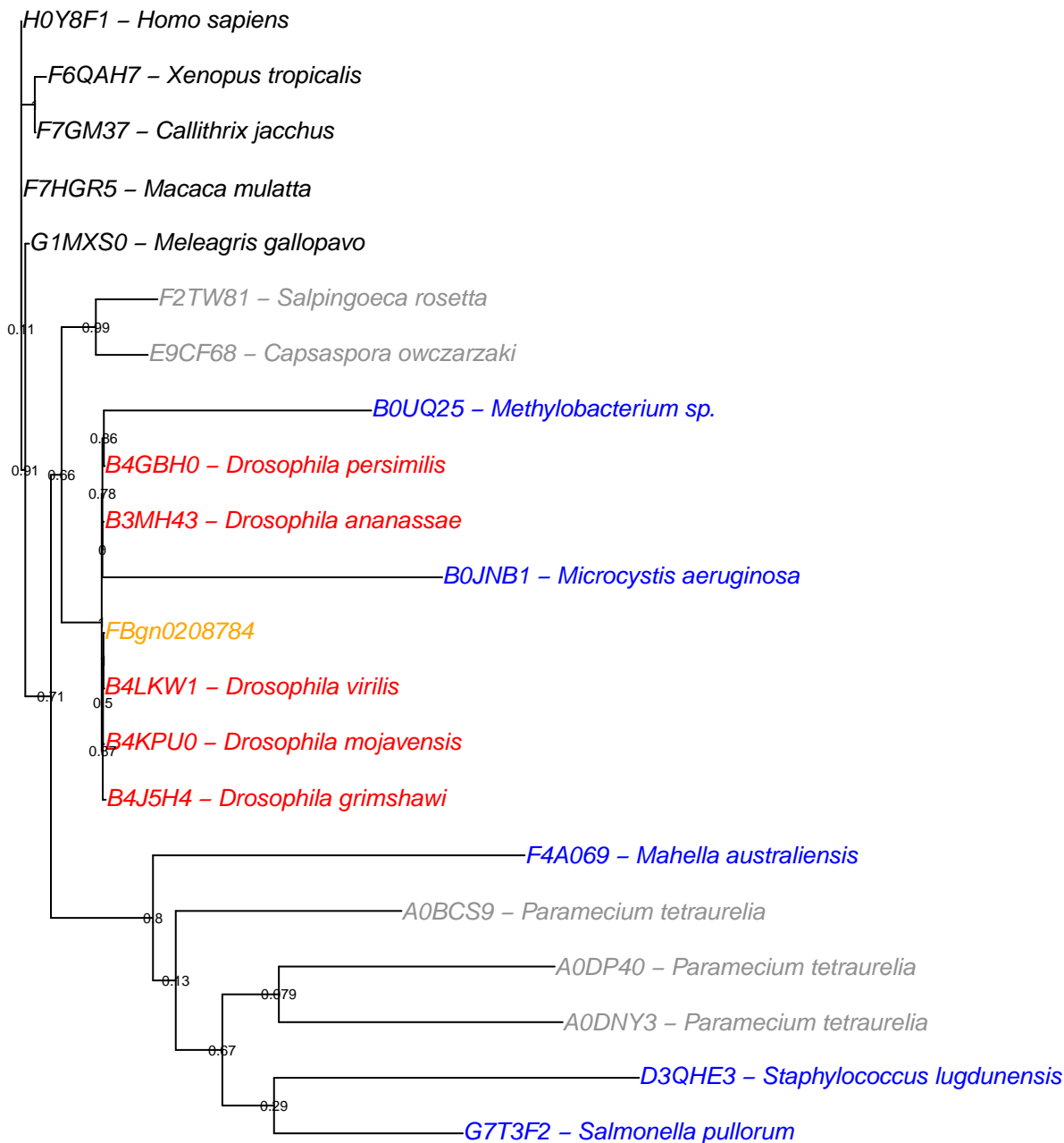
A8NXF5 – *Coprinopsis cinerea*

A7F4E4 – *Sclerotinia sclerotiorum*









F7IN47 – *Callithrix jacchus*

G3S2E1 – *Gorilla gorilla gorilla*

E6NHP6 – *Helicobacter pylori*

A8Y3H6 – *Caenorhabditis briggsae*

A8W1X1 – *Caenorhabditis briggsae*

A5GS84 – *Synechococcus* sp.

Q21A21 – *Rhodopseudomonas palustris*

D2RBV0 – *Gardnerella vaginalis*

A5K454 – *Plasmodium vivax*

B3KYY2 – *Plasmodium knowlesi*

A5KA44 – *Plasmodium vivax*

A9U0J4 – *Physcomitrella patens subsp. patens*

G0SYC5 – *Rhodotorula glutinis*

E6R145 – *Cryptococcus gattii* serotype B

Q5KMI7 – *Cryptococcus neoformans* var. *neoformans* serotype D

B3L0F6 – *Plasmodium knowlesi*

D8TF47 – *Selaginella moellendorffii*

C5YIF2 – *Sorghum bicolor*

B3NA09 – *Drosophila erecta*

B4NS40 – *Drosophila simulans*

B4P1M8 – *Drosophila yakuba*

B3MI65 – *Drosophila ananassae*

C1GJM5 – *Paracoccidioides brasiliensis*

FBgn0208205

B4LN71 – *Drosophila virilis*

F1QWM4 – *Danio rerio*

B8GAA9 – *Chloroflexus aggregans*

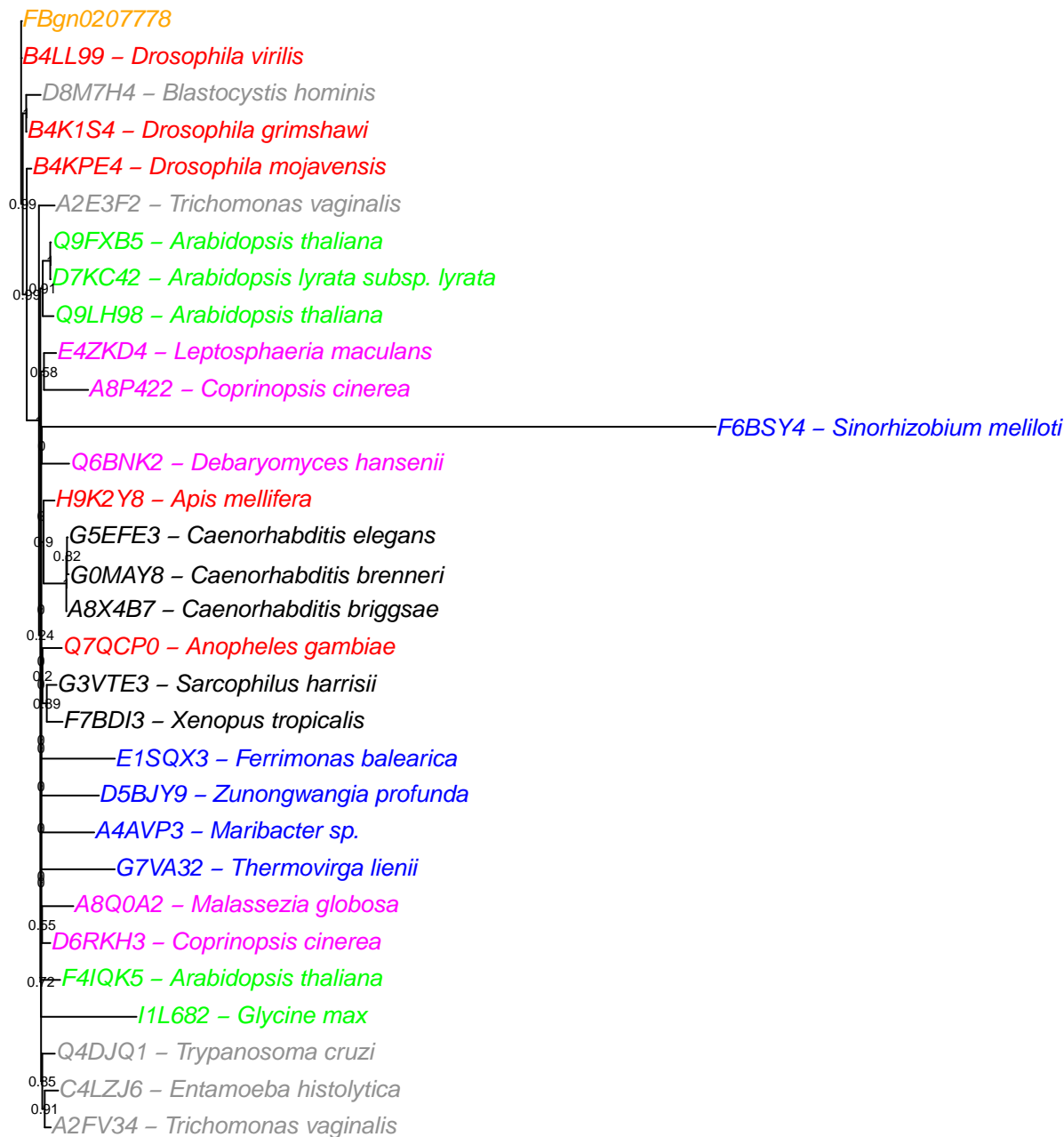
A2EAZ3 – *Trichomonas vaginalis*

A9U2F3 – *Physcomitrella patens subsp. patens*

A9S9C8 – *Physcomitrella patens subsp. patens*

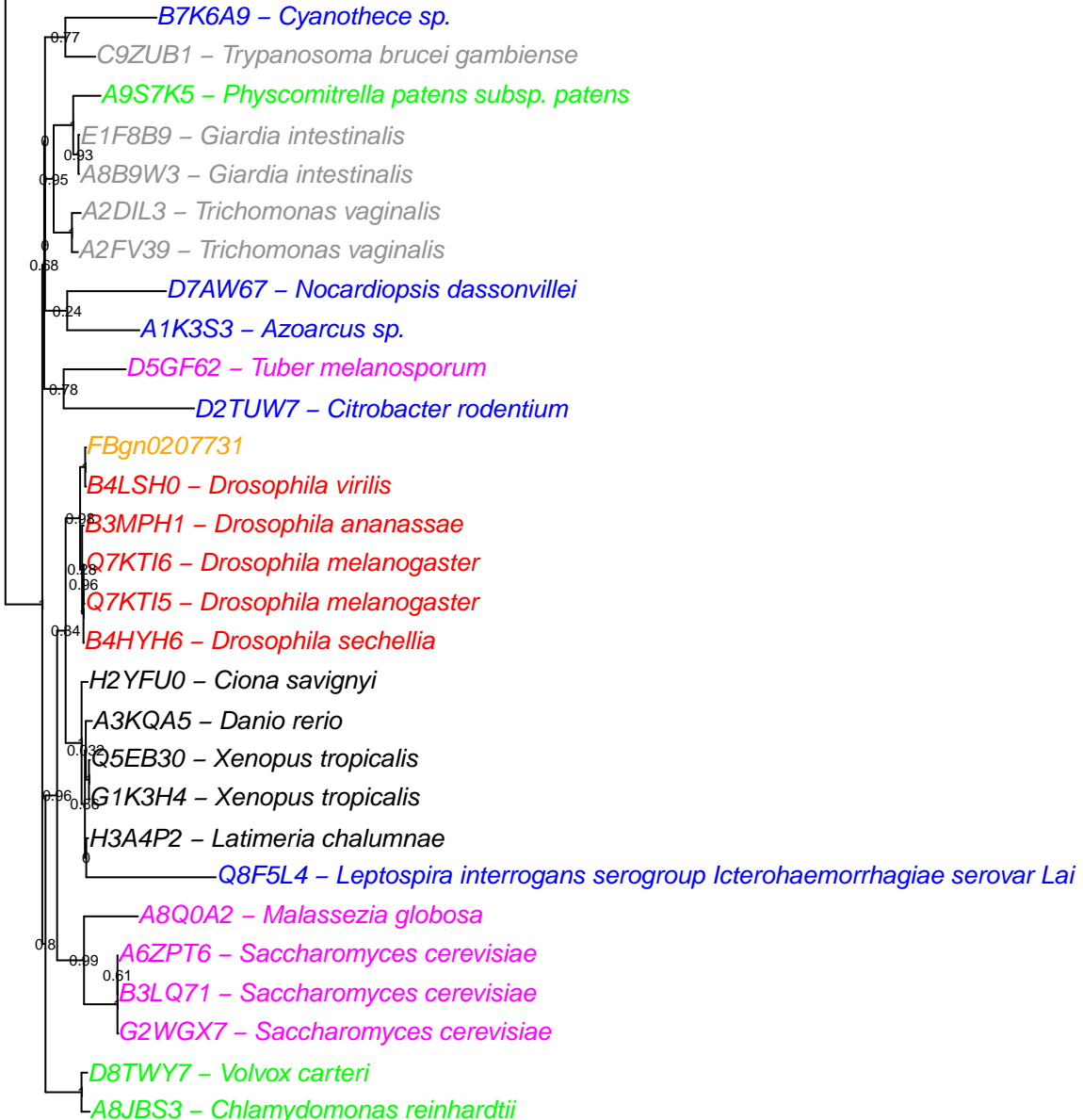
E2LW77 – *Moniliophthora perniciosa*





D8T0W0 – *Selaginella moellendorffii*

D8TD24 – *Selaginella moellendorffii*



Q9ZUC3 – *Arabidopsis thaliana*

Q9LJK0 – *Arabidopsis thaliana*

E1SL85 – *Ferrimonas balearica*

C3L6G9 – *Bacillus anthracis*

C4LA70 – *Tolomonas auensis*

B0JW17 – *Microcystis aeruginosa*

D8UER7 – *Volvox carteri*

A0RYC6 – *Cenarchaeum symbiosum*

D5GF62 – *Tuber melanosporum*

H2Y769 – *Ciona savignyi*

H2Y770 – *Ciona savignyi*

H9GQ93 – *Anolis carolinensis*

H2KVI8 – *Clonorchis sinensis*

H3EN95 – *Pristionchus pacificus*

FBgn0207202

B4LLE5 – *Drosophila virilis*

B4J7M0 – *Drosophila grimshawi*

A1Z9M5 – *Drosophila melanogaster*

B3MCY8 – *Drosophila ananassae*

C6XG38 – *Liberibacter asiaticus*

Q7PMG7 – *Anopheles gambiae*

C1E1D0 – *Micromonas* sp.

G2QIE2 – *Thielavia heterothallica*

G2Q360 – *Thielavia heterothallica*

C1E801 – *Micromonas* sp.

C7YRX8 – *Nectria haematococca*

I1SA19 – *Gibberella zeae*

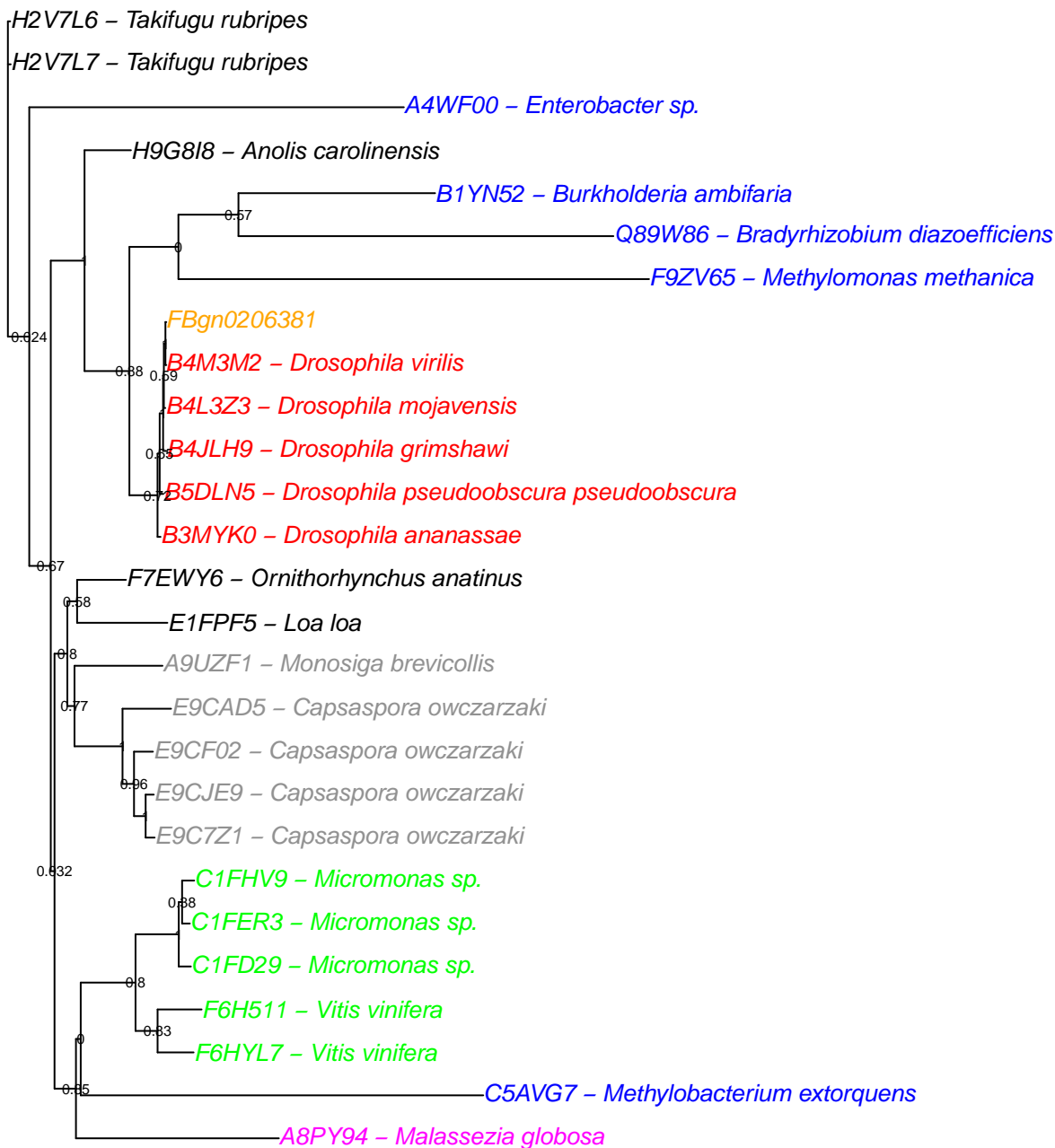
Q7RGG0 – *Plasmodium yoelii yoelii*

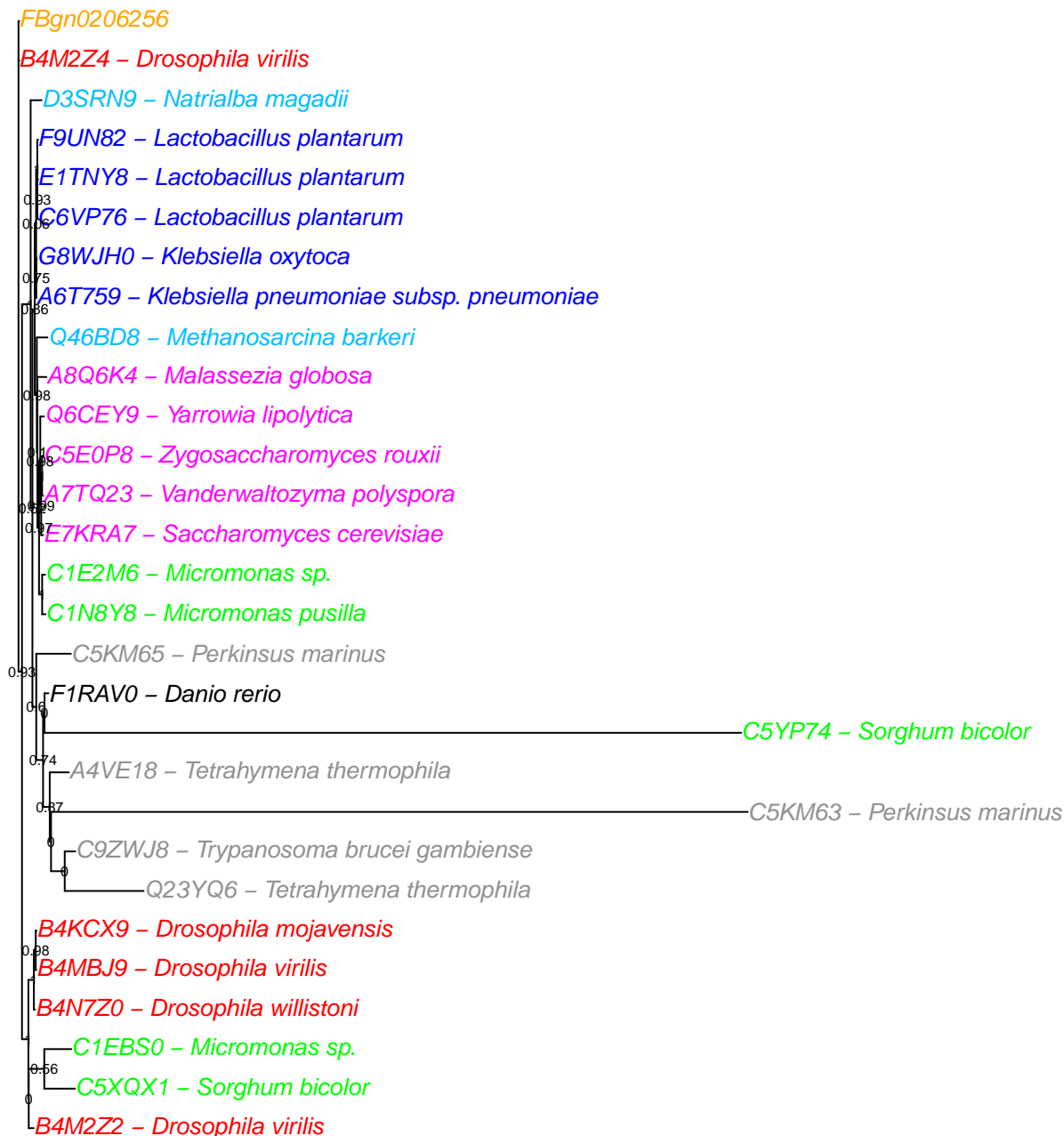
F2UL53 – *Salpingoeca rosetta*

A0BFH1 – *Paramecium tetraurelia*

A2EUH6 – *Trichomonas vaginalis*

A2E5Y7 – *Trichomonas vaginalis*



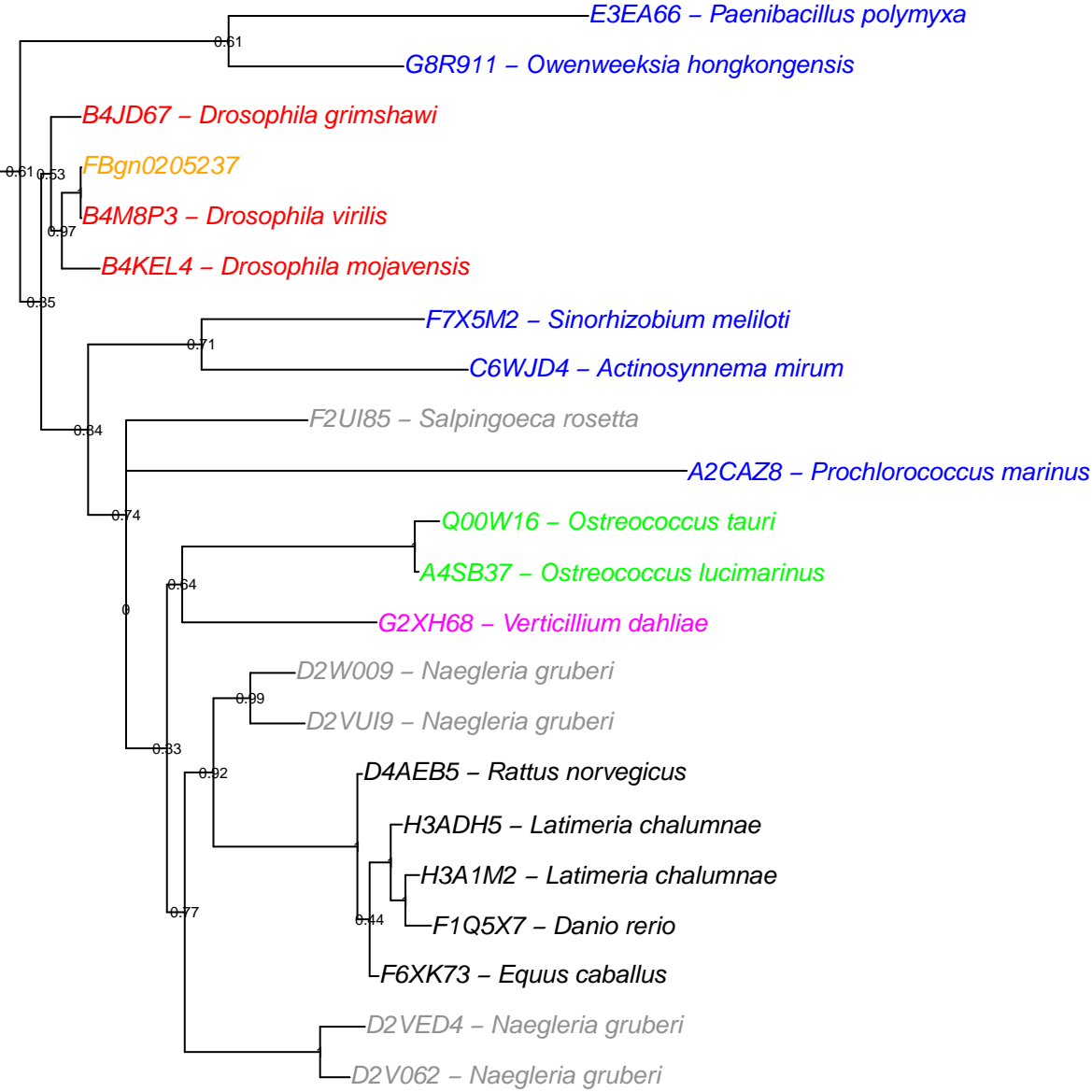


—A9NCQ3 – *Coxiella burnetii*

Phylogenetic tree showing relationships between various species, with bootstrap values indicated at the nodes. The tree is rooted at the top left and branches downwards. Species names are color-coded: magenta for *C9SXZ4* and *G2XH68*, blue for *C6WJD4*, *G8UM55*, *A2CAZ8*, *E3EA66*, *G8R911*, *D2W009*, *D2VUI9*, *D2UYS4*, and *D2VED4*, red for *B4MVN4*, *B4M8P5*, *B4KEL3*, *B4JD68*, and *B4GX47*, green for *Q00W16*, and orange for *FBgn0205327*. Bootstrap values are shown at the nodes: 0.72, 0.56, 0.51, 0.8, 0.98, 0.23, 0.99, 0.89, 0.87, 0.45, and 0.72.

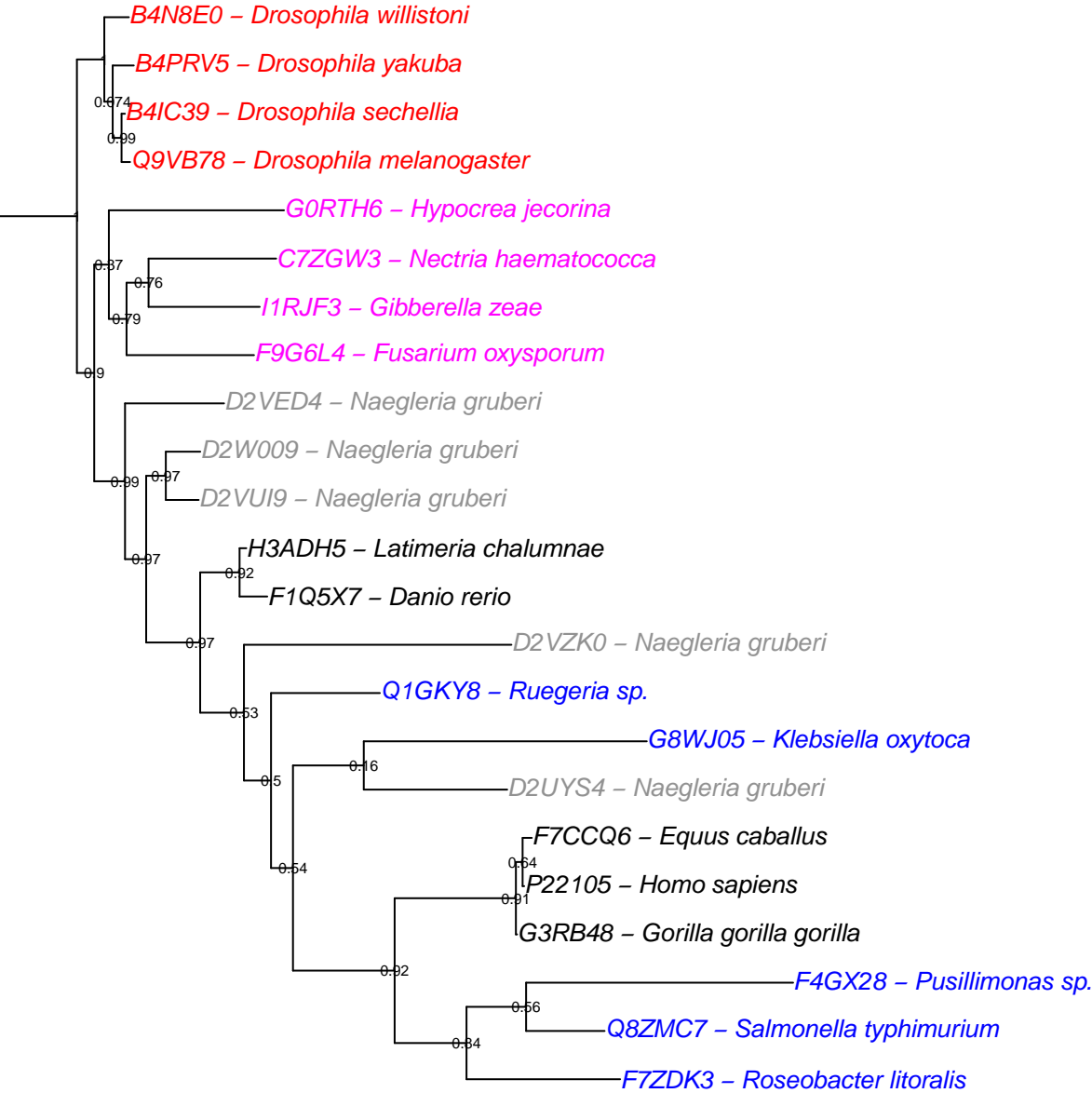
B4GX46 – *Drosophila persimilis*

Q29K96 – *Drosophila pseudoobscura pseudoobscura*



FBgn0205236

B4M8P4 – *Drosophila virilis*



FBgn0205105

B4M9D3 – *Drosophila virilis*

Q0IGY6 – *Drosophila melanogaster*

B4HWG0 – *Drosophila sechellia*

B3N924 – *Drosophila erecta*

G6DIG7 – *Danaus plexippus*

A9UVT5 – *Monosiga brevicollis*

G4VTB8 – *Schistosoma mansoni*

G7YV01 – *Clonorchis sinensis*

D7G144 – *Ectocarpus siliculosus*

B8CFK9 – *Thalassiosira pseudonana*

B7G7P2 – *Phaeodactylum tricornutum*

F2UAQ2 – *Salpingoeca rosetta*

Q018Y6 – *Ostreococcus tauri*

A4RXL7 – *Ostreococcus lucimarinus*

B0JXF0 – *Microcystis aeruginosa*

Q3MBH4 – *Anabaena variabilis*

B5I9J4 – *Aciduliprofundum boonei*

O29473 – *Archaeoglobus fulgidus*

B9TAQ7 – *Ricinus communis*

Q0C3S0 – *Hyphomonas neptunium*

A9N2U3 – *Salmonella paratyphi B*

F211F4 – *Pelagibacter sp.*

Q58618 – *Methanocaldococcus jannaschii*

F8D446 – *Halopiger xanaduensis*

D2RT99 – *Haloterrigena turkmenica*

G2WCA2 – *Saccharomyces cerevisiae*

A6ZXR7 – *Saccharomyces cerevisiae*

H2AYA2 – *Kazachstania africana*

A9KRR3 – *Clostridium phytofermentans*

0.65
B7K8Y7 – *Cyanothece* sp.

B4J8T7 – *Drosophila grimshawi*

0.99
B3ME60 – *Drosophila ananassae*

0.99
B4MQ42 – *Drosophila willistoni*

0.68
Bgn0202254

0.99
B4MFI2 – *Drosophila virilis*

0.9
B4KR96 – *Drosophila mojavensis*

0.67
E2R200 – *Canis familiaris*

0.84
F1M789 – *Rattus norvegicus*

0.8
H2R6B2 – *Pan troglodytes*

0.8
Q8TXI4 – *Methanopyrus kandleri*

0.8
F2MUN1 – *Pseudomonas stutzeri*

B1JX57 – *Burkholderia cenocepacia*

A3M8A9 – *Acinetobacter baumannii*

Q2HH82 – *Chaetomium globosum*

0.53
C1FE31 – *Micromonas* sp.

0.08
A9SXI2 – *Physcomitrella patens* subsp. *patens*

E3QLQ5 – *Colletotrichum graminicola*

0.75
A4RR72 – *Ostreococcus lucimarinus*

E9AI64 – *Leishmania braziliensis*

0.45
A4I9N9 – *Leishmania infantum*

0.89
E9B4N8 – *Leishmania mexicana*

0.89
Q4Q3D8 – *Leishmania major*

0.38
Q4QFM2 – *Leishmania major*

0.64
I1NTD7 – *Oryza glaberrima*

Q016R1 – *Ostreococcus tauri*

E1EWJ8 – *Giardia intestinalis*

A8BK39 – *Giardia intestinalis*

Q29IH6 – *Drosophila pseudoobscura pseudoobscura*

B4H2H6 – Drosophila persimilis

B4JKR6 – *Drosophila grimshawi*

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B4MEE0 – *Drosophila virilis*

B4L2F8 – Drosophila mojavensis

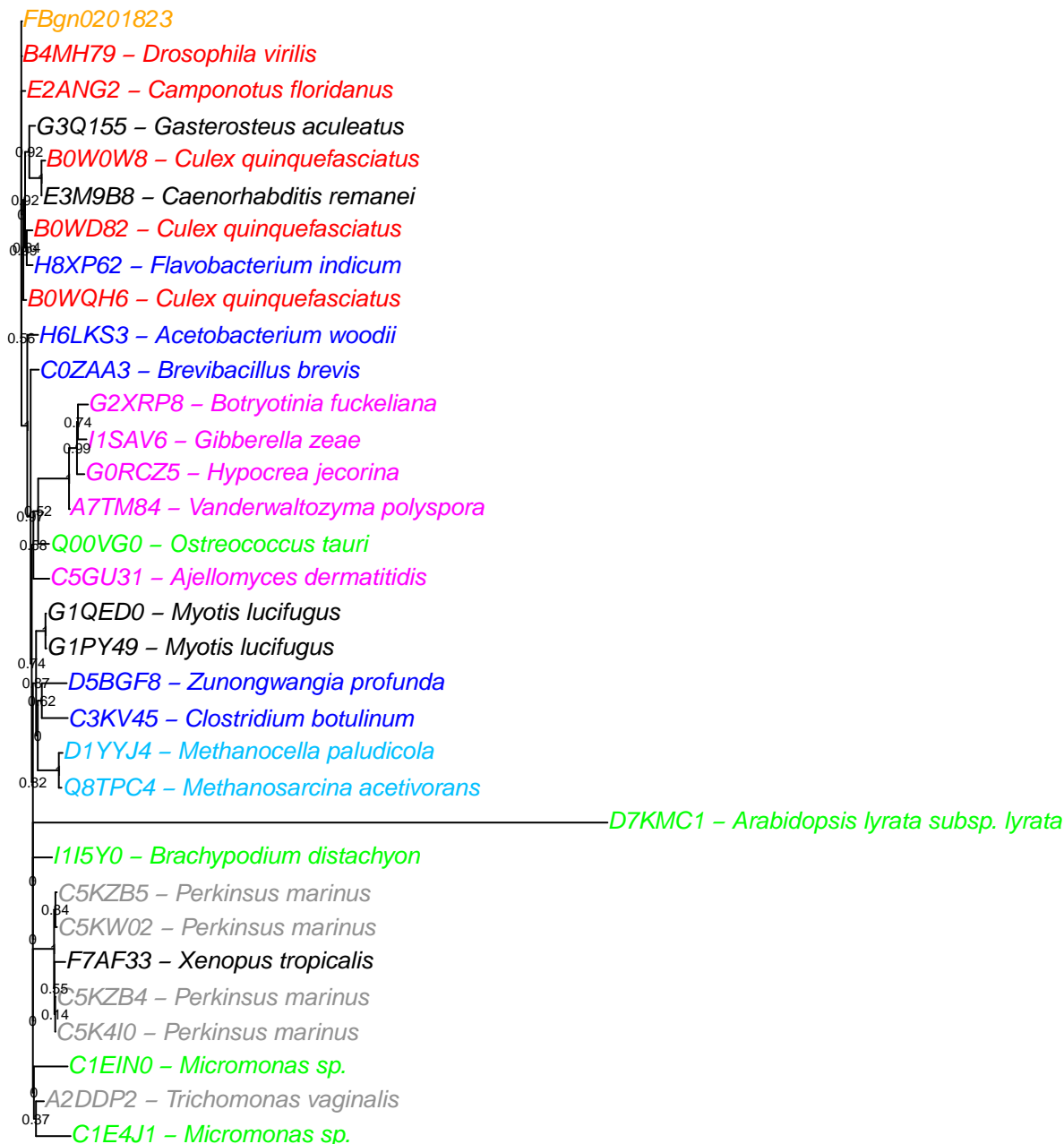
-F2EYM1 – *Pantoea ananatis*

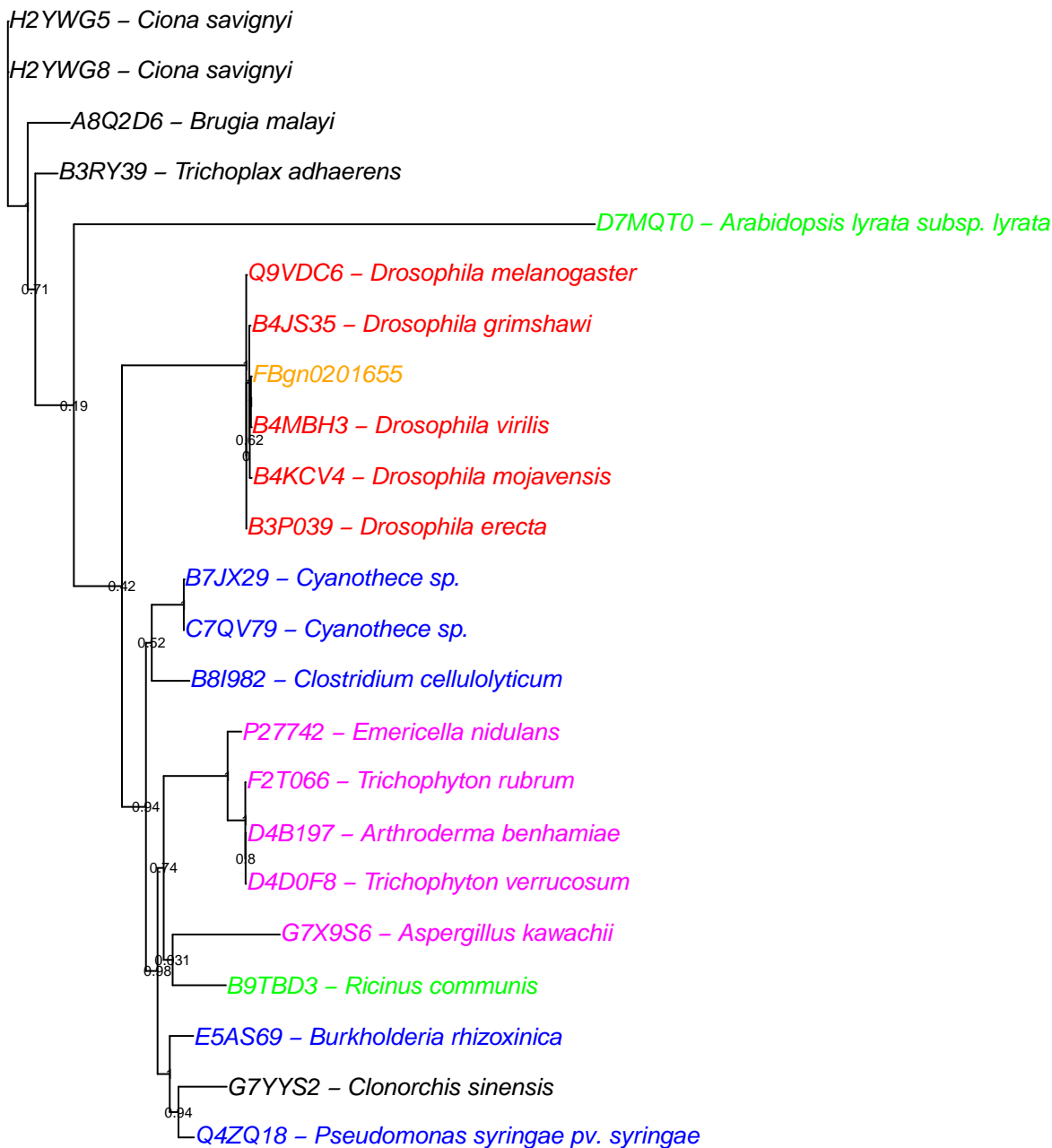
-F1PE67 – *Canis familiaris*

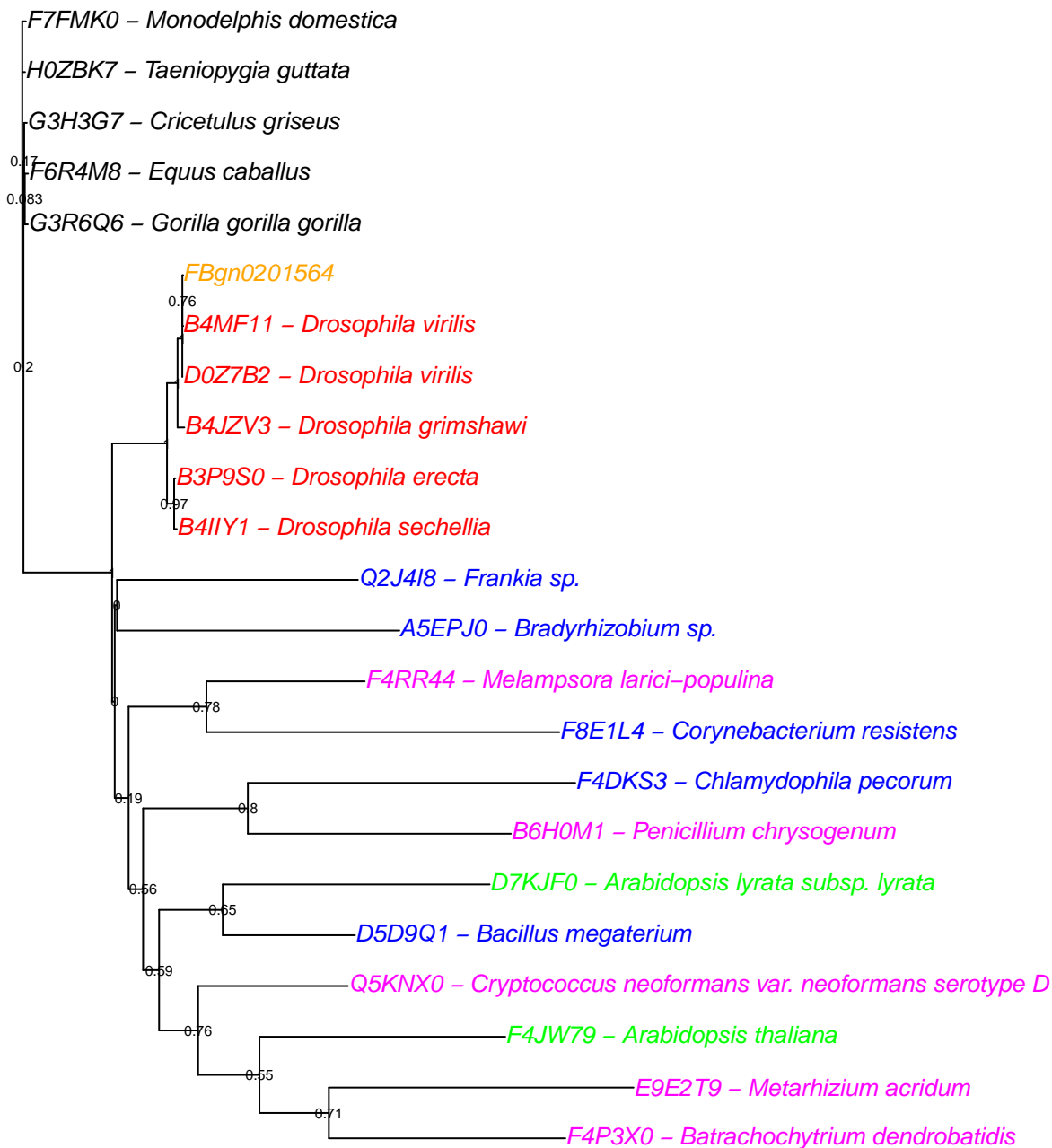
-F7Y5X4 – *Mesorhizobium opportunistum*

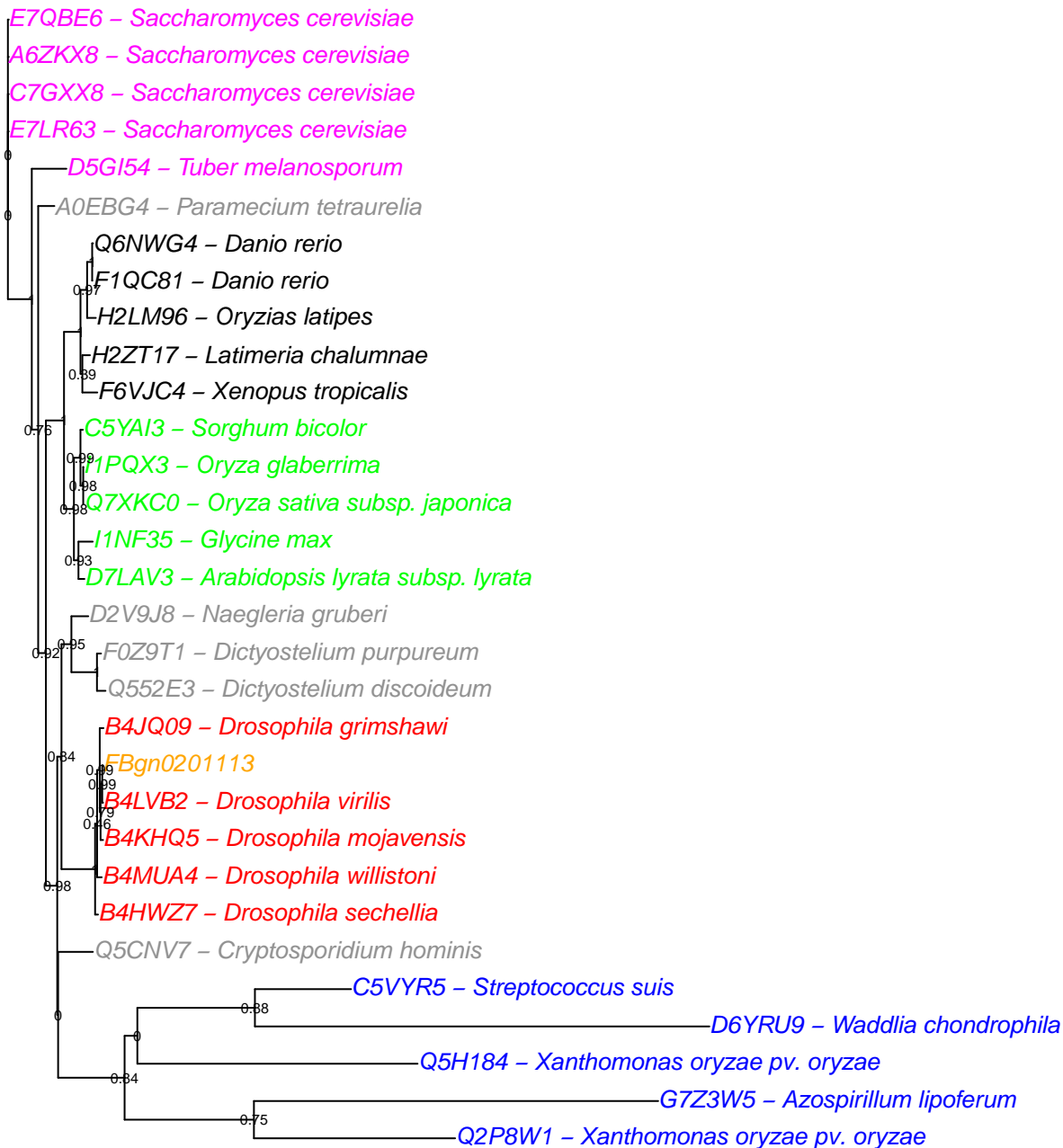
-C5XYK9 – *Sorghum bicolor*

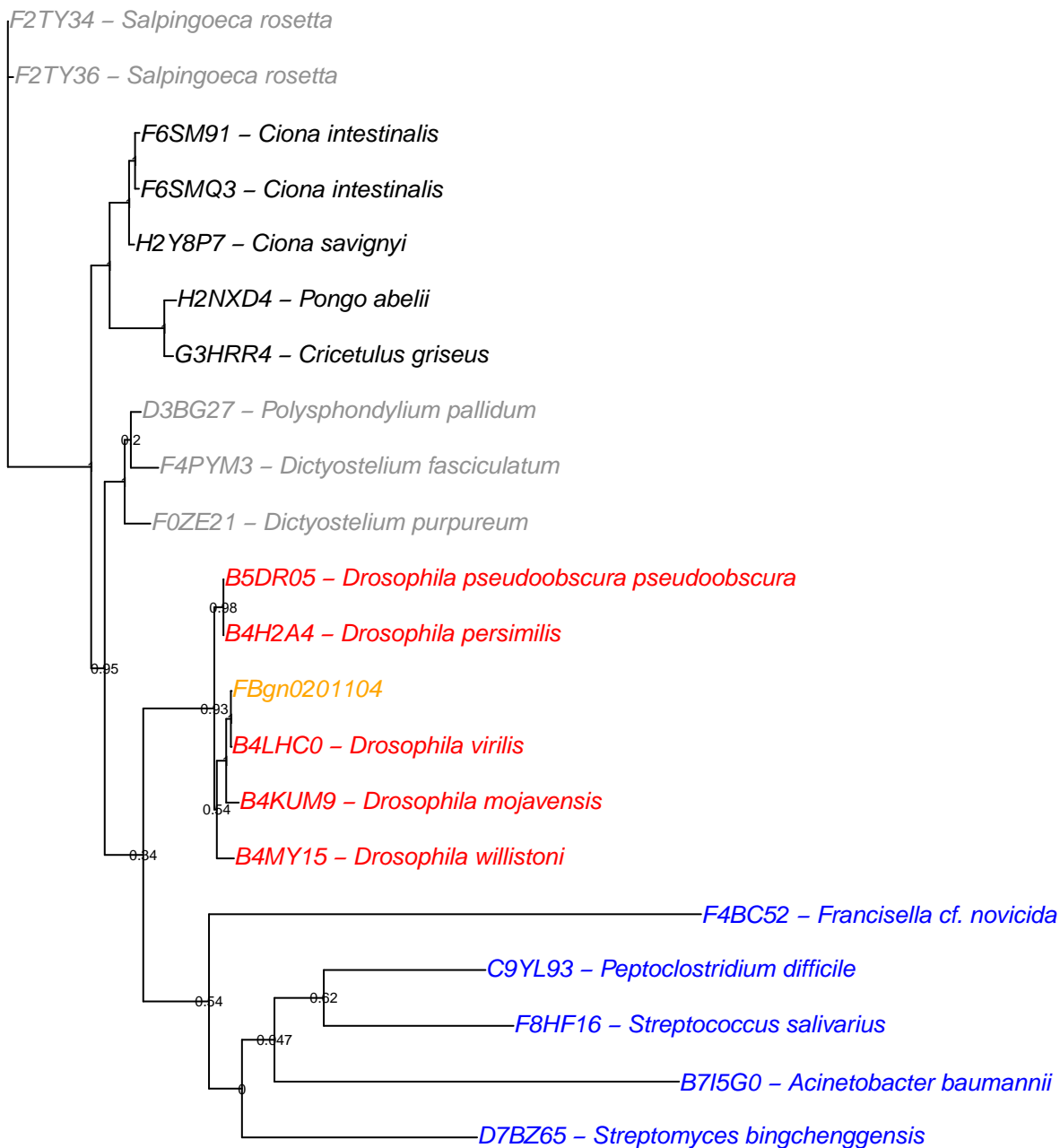
-F6FZT8 – *Ralstonia solanacearum*

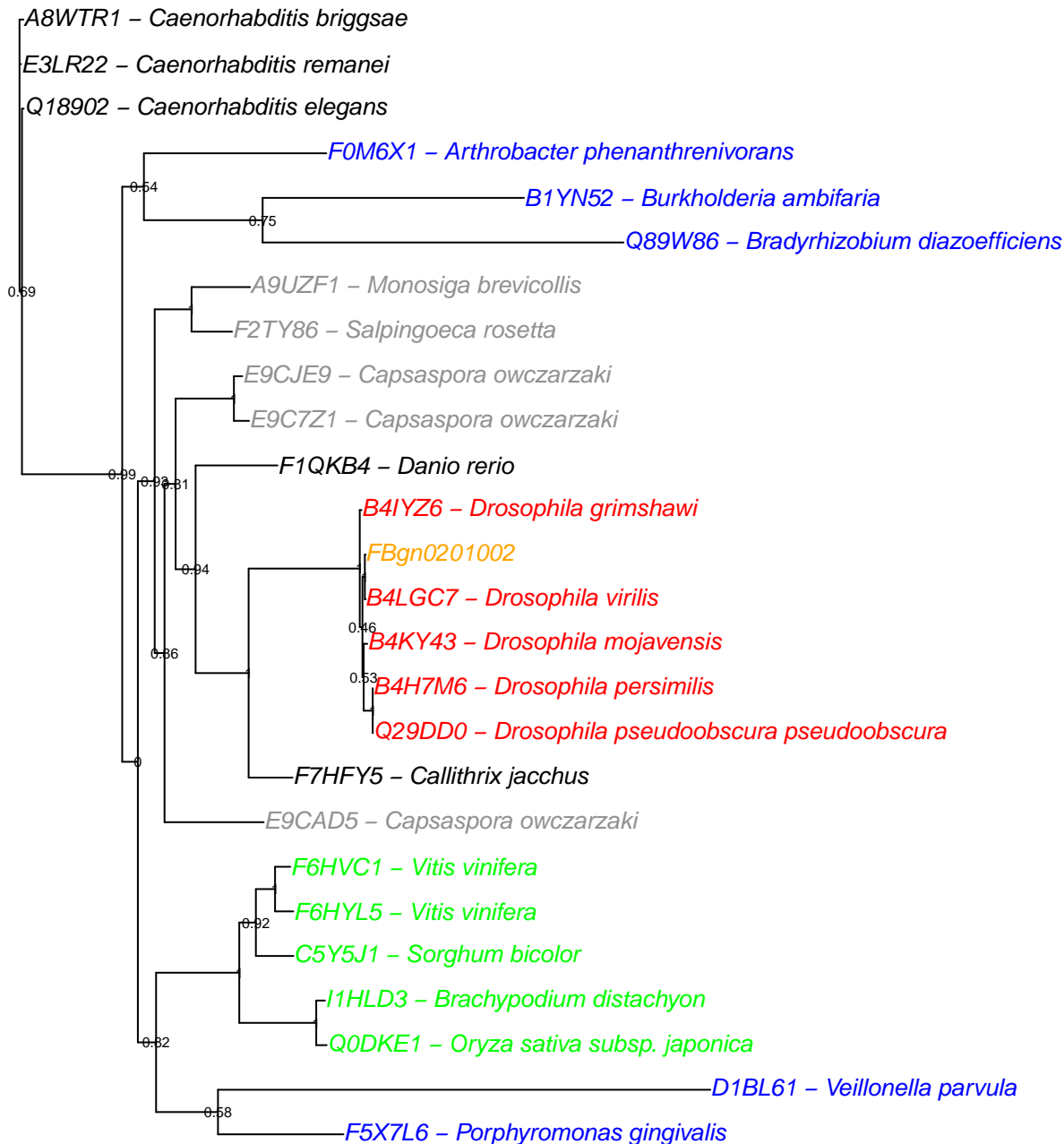






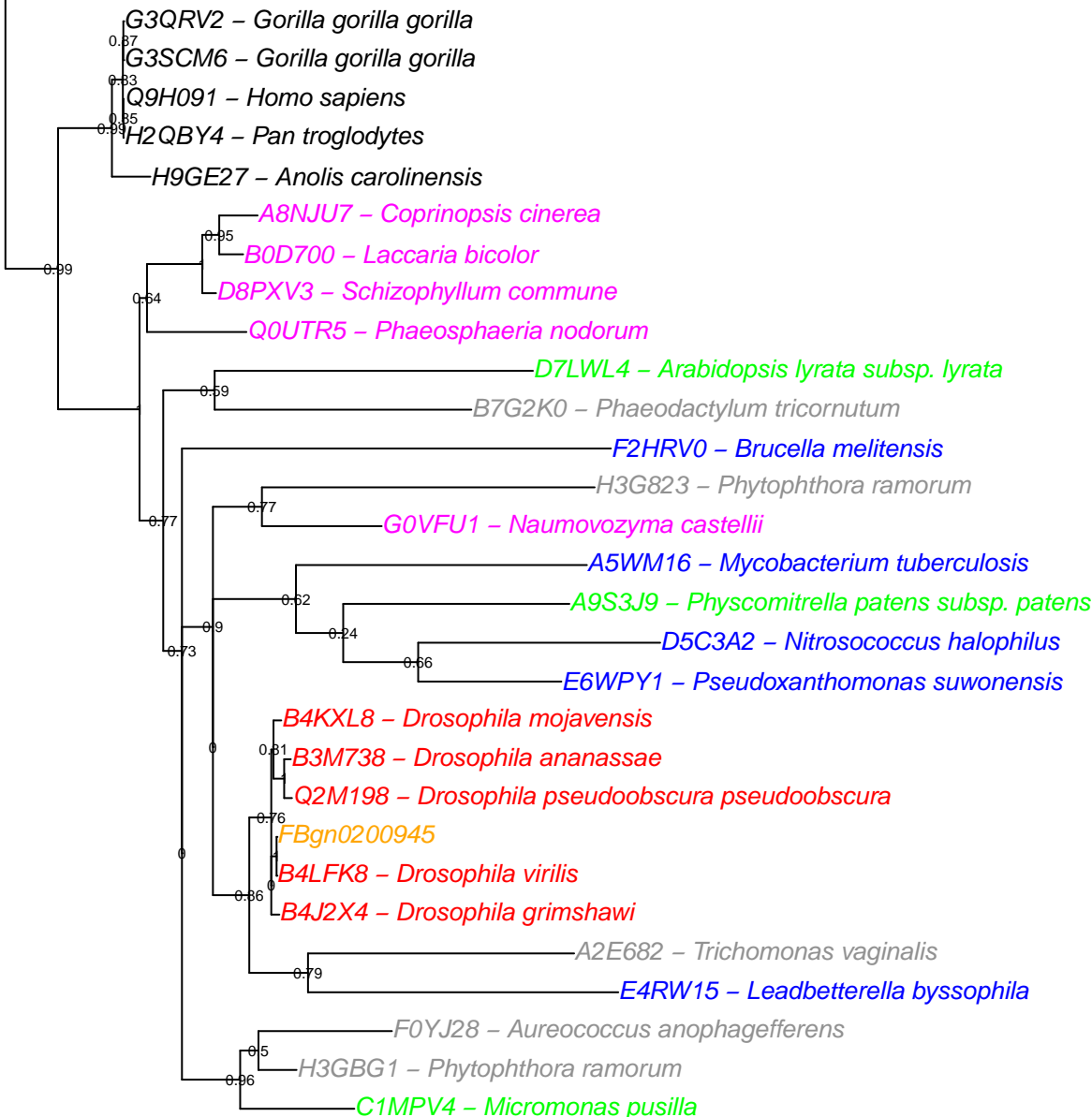


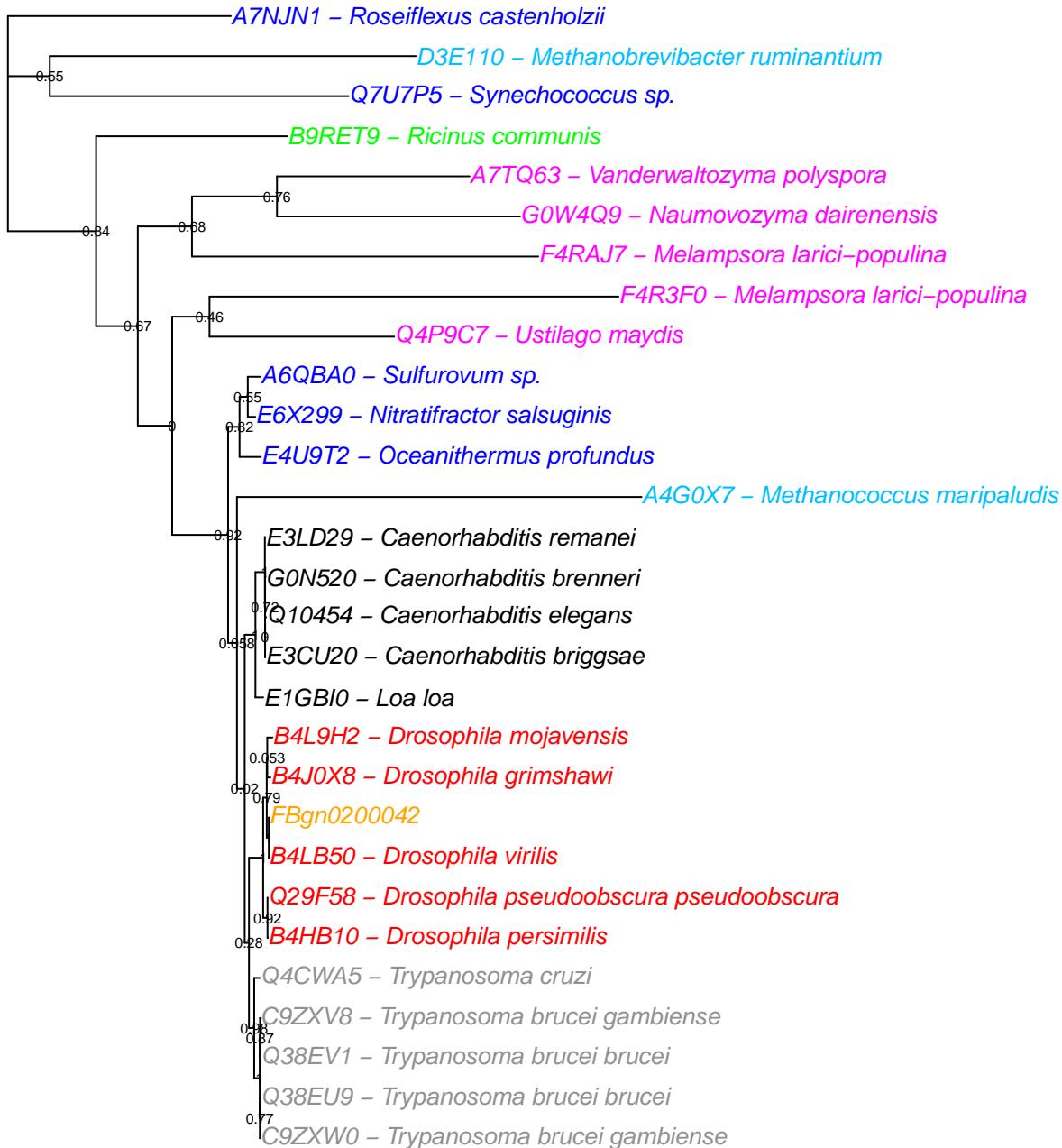


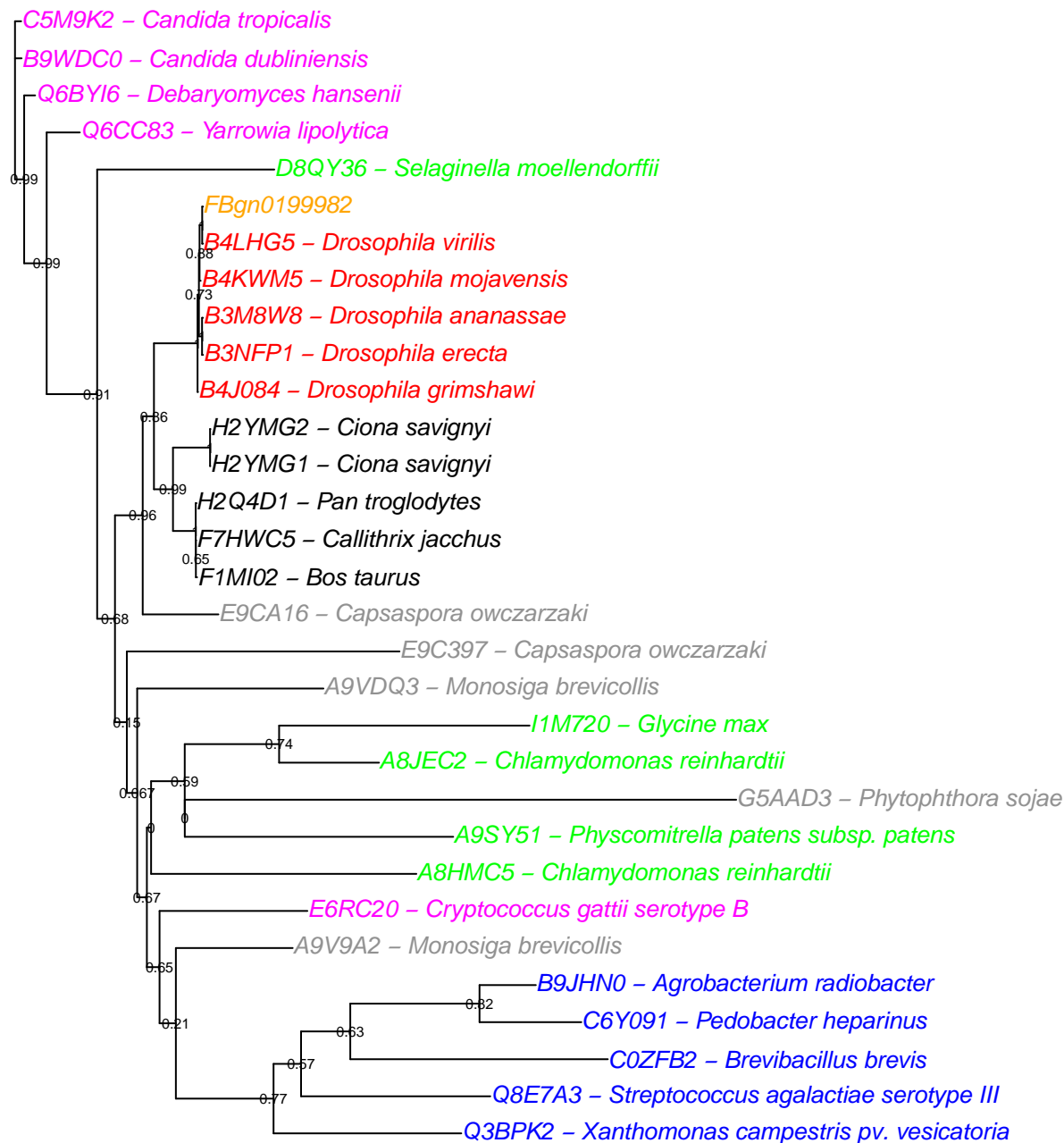


D8TE26 – *Selaginella moellendorffii*

D8T786 – *Selaginella moellendorffii*







F2S6I0 – Trichophyton tonsurans

-Q1WVE7 – *Lactobacillus salivarius*

–F8EUF2 – *Zymomonas mobilis* subsp. *pomaceae*

-Q7U7P5 – *Synechococcus* sp.

– Q4P456 – *Ustilago maydis*

– I1C780 – *Rhizopus delemar*

E6X299 – Nitratifractor salsuginis

E4U9T2 – *Oceanithermus profundus*

FBgn0199837

B4LB51 – *Drosophila virilis*

B4L9H1 – *Drosophila mojavensis*

B4N6X4 – Drosophila willistoni

Q29F59 – *Drosophila pseudoobscura pseudoobscura*

B4HB11 – *Drosophila persimilis*

E1GBI0 - Loa loa

⁸⁵
E3LD29 – *Caenorhabditis remanei*

E3CU20 – *Caenorhabditis briggsae*

H2WQP8 – *Caenorhabditis japonica*

A8WWH2 – *Caenorhabditis briggsae*

Q4CWA5 – *Trypanosoma cruzi*

Q38EV2 – *Trypanosoma brucei brucei*

C9ZXV5 – *Trypanosoma brucei gambiense*

C9ZXW0 – *Trypanosoma brucei gambiense*

Q38EV1 – *Trypanosoma brucei brucei*

