- 1 Table S3 Genomes for standard phylogenetic analyses
- 2 Aaosphaeria arxii CBS 175.79
- 3 Acanthamoeba castellanii str. Neff
- 4 Acanthisitta chloris
- 5 Achlya hypogyna
- 6 Acidianus hospitalis W1
- 7 Acidilobus saccharovorans 345-15
- 8 Acidomyces richmondensis
- 9 Aciduliprofundum boonei T469
- 10 Acremonium alcalophilum
- 11 Acromyrmex echination
- 12 Acropora digitifera
- 13 Acyrthosiphon pisum
- 14 Acytostelium subglobosum
- 15 Aedes aegypti
- 16 Aegilops tauschii
- 17 Aeropyrum pernix K1
- 18 Agaricostilbum hyphaenes
- 19 Agaricus bisporus var. bisporus H97
- 20 Agaricus bisporus var. burnettii JB137-S8
- 21 Agrobacterium fabrum str. C58
- 22 Ailuropoda melanoleuca
- 23 Ajellomyces capsulatus NAm1
- 24 Ajellomyces dermatitidis ATCC 18188
- 25 Ajellomyces dermatitidis ATCC 26199
- 26 Ajellomyces dermatitidis ER-3
- 27 Ajellomyces dermatitidis SLH14081
- 28 Albugo laibachii
- 29 Alligator mississippiensis
- 30 Alligator sinensis
- 31 Allomyces macrogynus atcc 38327

- 32 Alternaria brassicicola
- 33 Amanita muscaria Koide BX008
- 34 Amanita thiersii Skay4041
- 35 Amborella trichopoda
- 36 Amniculicola lignicola CBS 123094
- 37 Amorphotheca resinae
- 38 Amphimedon queenslandica
- 39 Amycolatopsis mediterranei U32
- 40 Anas platyrhynchos
- 41 Angomonas deanei
- 42 Anolis carolinensis
- 43 Anopheles darlingi
- 44 Anopheles gambiae
- 45 Anthostoma avocetta NRRL 3190
- 46 Antonospora locustae HM-2013
- 47 Antrodia sinuosa
- 48 Apaloderma vittatum
- 49 Aphanomyces astaci
- 50 Aphanomyces invadans
- 51 Apiospora montagnei NRRL 25634
- 52 Apis dorsata
- 53 Apis florea
- 54 Apis mellifera
- 55 Aplanochytrium kerguelense PBS07
- 56 Aplosporella prunicola CBS 121167
- 57 Aplysia californica
- 58 Aptenodytes forsteri
- 59 Aquifex aeolicus VF5
- 60 Aquilegia coerulea
- 61 Arabidopsis halleri
- 62 Arabidopsis lyrata

- 63 Arabidopsis thaliana
- 64 Arachis duranensis
- 65 Arachis ipaensis
- Archaeoglobus fulgidus DSM 4304
- 67 archaeon Loki
- 68 Armillaria mellea DSM 3731
- 69 Arthrobotrys oligospora ATCC 24927
- 70 Arthroderma benhamiae CBS 112371
- 71 Artomyces pyxidatus
- 72 Ascaris suum
- 73 Ascobolus immersus RN42
- 74 Ascocoryne sarcoides NRRL50072
- 75 Ascoidea rubescens NRRL Y17699
- 76 Ashbya gossypii ATCC 10895
- 77 Aspergillus acidus
- 78 Aspergillus aculeatus ATCC 16872
- 79 Aspergillus brasiliensis
- 80 Aspergillus carbonarius ITEM 5010
- 81 Aspergillus clavatus NRRL 1
- 82 Aspergillus flavus NRRL3357
- 83 Aspergillus fumigatus A1163
- 84 Aspergillus fumigatus Af293
- 85 Aspergillus glaucus
- 86 Aspergillus kawachii IFO 4308
- 87 Aspergillus nidulans
- 88 Aspergillus niger ATCC 1015
- 89 Aspergillus niger CBS 513.88
- 90 Aspergillus niger NRRL3
- 91 Aspergillus oryzae RIB40
- 92 Aspergillus sydowii
- 93 Aspergillus terreus FGSC A1156

- 94 Aspergillus terreus NIH2624
- 95 Aspergillus tubingensis
- 96 Aspergillus versicolor
- 97 Aspergillus wentii
- 98 Aspergillus zonatus
- 99 Asterochloris sp. Cgr_DA1phos
- 100 Astyanax mexicanus
- 101 Atractiellales sp. 95
- 102 Atta cephalotes
- 103 Aulographum hederae
- 104 Aurantiochytrium limacinum
- 105 Aureobasidium pullulans
- 106 Aureobasidium pullulans var. melanogenum
- 107 Aureobasidium pullulans var. namibiae
- 108 Aureobasidium pullulans var. pullulans EXF-150
- 109 Aureobasidium pullulans var. subglaciale EXF-2481
- 110 Aureococcus anophagefferens
- 111 Auricularia subglabra
- 112 Azadirachta indica
- 113 Azotobacter vinelandii CA
- 114 Azotobacter vinelandii DJ
- 115 Babesia bovis
- 116 Babesia equi strain WA
- 117 Babesia microti
- 118 Babjeviella inositovora NRRL Y-12698
- 119 Bacillus anthracis str. Ames
- 120 Bacillus anthracis str. Sterne
- 121 Bacillus cereus ATCC 14579
- 122 Bacillus subtilis subsp. subtilis str. 168
- 123 Bacillus thuringiensis serovar konkukian str. 97-27
- 124 Backusella circina FSU 941

125	Bacteroides thetaiotaomicron VPI-5482
126	Bactrocera cucurbitae
127	Bactrocera dorsalis
128	Balaenoptera acutorostrata scammoni
129	Balearica regulorum gibbericeps
130	Bathycoccus prasinos
131	Batrachochytrium dendrobatidis JAM81
132	Baudoinia compniacensis UAMH 10762
133	Beauveria bassiana ARSEF 2860
134	Beta vulgaris subsp. vulgaris
135	Bifidobacterium longum NCC2705
136	Bigelowiella natans
137	Bison bison bison
138	Bjerkandera adusta
139	Blastocladiella emersonii
140	Blastocystis hominis
141	Blumeria graminis
142	Bodo saltans
143	Boechera stricta
144	Boletus edulis
145	Bombus impatiens
146	Bombus terrestris
147	Bombyx mori
148	Bordetella pertussis Tohama I
149	Borrelia burgdorferi B31
150	Bos grunniens
151	Bos mutus
152	Bos taurus
153	Botryobasidium botryosum
154	Botryosphaeria dothidea
155	Botryotinia fuckeliana

156	Botrytis cinerea T4
157	Brachypodium distachyon
158	Bradyrhizobium diazoefficiens USDA 110
159	Branchiostoma floridae
160	Brassica oleracea var. oleracea
161	Brassica rapa
162	Brugia malayi
163	Bubalus bubalis
164	Buceros rhinoceros silvestris
165	Burkholderia cenocepacia
166	Burkholderia dolosa
167	Burkholderia pseudomallei K96243
168	Bursaphelenchus xylophilus
169	Cadophora sp. DSE1049
170	Caenorhabditis brenneri
171	Caenorhabditis briggsae
172	Caenorhabditis elegans
173	Caenorhabditis japonica
174	Caenorhabditis remanei
175	Cajanus cajan
176	Calcarisporiella thermophila
177	Caldisphaera lagunensis DSM 15908
178	Caldivirga maquilingensis IC-167
179	Calliarthron tuberculosum
180	Callithrix jacchus
181	Callorhinchus milii
182	Calocera cornea
183	Calocera viscosa
184	Calypte anna
185	Camelina sativa
186	Camelus bactrianus

187	Camelus dromedarius
188	Camelus ferus
189	Camponotus floridanus
190	Campylobacter jejuni subsp. jejuni NCTC 11168 = ATCC 700819
191	Candida albicans sc5314
192	Candida albicans WO-1
193	Candida arabinofermentans NRRL YB-2248
194	Candida caseinolytica NRRL Y-17796
195	Candida dubliniensis CD36
196	Candida glabrata
197	Candida guilliermondii
198	Candida lusitaniae
199	Candida orthopsilosis
200	Candida parapsilosis
201	Candida tanzawaensis NRRL Y-17324
202	Candida tenuis NRRL Y-1498
203	Candida tropicalis
204	Candidatus Caldiarchaeum subterraneum
205	Candidatus Korarchaeum cryptofilum OPF8
206	Candidatus Micrarchaeum acidiphilum ARMAN-2
207	Candidatus Nanosalina sp. J07AB43
208	Candidatus Nanosalinarum sp. J07AB56
209	Candidatus Nitrosopelagicus brevis
210	Candidatus Parvarchaeum acidophilus
211	Canis familiaris
212	Capitella teleta
213	Capra hircus
214	Caprimulgus carolinensis
215	Capronia coronata CBS 617.96
216	Capronia epimyces CBS 606.96
217	Capsaspora owczarzaki

218	Capsella grandiflora
219	Capsella rubella
220	Capsicum annuum
221	Capsicum annuum L.
222	Capsicum annuum var. glabriusculum
223	Cariama cristata
224	Carica papaya
225	Castanea mollissima
226	Catenaria anguillulae PL171
227	Catharanthus roseus
228	Cathartes aura
229	Caulobacter crescentus CB15
230	Cavia porcellus
231	Cenarchaeum symbiosum A
232	Cenococcum geophilum 1.58
233	Cerapachys biroi
234	Ceratitis capitata
235	Ceratotherium simum
236	Cercospora zeae-maydis
237	Ceriporiopsis subvermispora B
238	Cerrena unicolor
239	Chaetomium globosum
240	Chaetomium thermophilum
241	Chaetura pelagica
242	Chalara longipes BDJ
243	Charadrius vociferus
244	Chelonia mydas
245	Chinchilla lanigera
246	Chlamydia trachomatis 434_Bu
247	Chlamydomonas reinhardtii
248	Chlamydophila pneumoniae CWL029

249 Chlamydotis undulata macqueenii 250 Chlorella variabilis NC64A 251 Chlorella vulgaris C-169 252 Chlorobium tepidum TLS 253 Chlorocebus sabaeus 254 Chloroflexus aurantiacus J-10-fl 255 Choiromyces venosus 120613-1 256 Choloepus hoffmanni 257 Chondrus crispus 258 Chromera velia CCMP2878 259 Chrysemys picta bellii 260 Chrysochloris asiatica 261 Cicer arietinum 262 Cicer arietinum L. 263 Ciona intestinalis 264 Ciona savignyi 265 Citrullus lanatus 266 Citrullus lanatus subsp. Vulgaris 267 Citrus clementina 268 Citrus sinensis 269 Cladonia grayi 270 Cladophialophora carrionii CBS 160.54 271 Cladophialophora psammophila CBS 110553 272 Cladophialophora yegresii CBS 114405 273 Cladosporium fulvum 274 Clonorchis sinensis 275 Clostridium acetobutylicum ATCC 824 276 Clostridium botulinum A str. Hall 277 Clostridium difficile 630 278 Coccidioides immitis H538.4 279 Coccidioides immitis RMSCC 2394

280	Coccidioides immitis RMSCC 3703
281	Coccidioides immitis RS
282	Coccidioides posadasii C735 delta SOWgp
283	Coccidioides posadasii RMSCC 3488
284	Coccidioides posadasii Silveira
285	Cochliobolus carbonum 26-R-13
286	Cochliobolus heterostrophus C4
287	Cochliobolus heterostrophus C5
288	Cochliobolus lunatus m118
289	Cochliobolus miyabeanus ATCC 44560
290	Cochliobolus sativus ND90Pr
291	Cochliobolus victoriae FI3
292	Coemansia reversa NRRL 1564
293	Colius striatus
294	Colletotrichum gloeosporioides Nara gc5
295	Colletotrichum higginsianum IMI 349063
296	Colletotrichum orbiculare MAFF 240422
297	Columba livia
298	Condylura cristata
299	Conidiobolus coronatus NRRL 28638
300	Coniochaeta ligniaria
301	Coniophora puteana
302	Coniosporium apollinis CBS 100218
303	Coprinopsis cinerea
304	Coprinopsis cinerea AmutBmut pab1-1
305	Cordyceps militaris CM01
306	Cortinarius glaucopus AT 2004 276
307	Corvus brachyrhynchos
308	Corvus cornix cornix
309	Corynebacterium glutamicum ATCC 13032
310	Corynespora cassiicola Philippines

311	Coxiella burnetii RSA 493
312	Crassostrea gigas
313	Cricetulus griseus
314	Cronartium quercuum f. sp. fusiforme G11
315	Cryphonectria parasitica EP155
316	Cryptococcus gattii R265
317	Cryptococcus gattii WM276
318	Cryptococcus neoformans var. grubii H99
319	Cryptococcus neoformans var. neoformans B-3501A
320	Cryptococcus neoformans var. neoformans JEC21
321	Cryptococcus vishniacii
322	Cryptosporidium hominis
323	Cryptosporidium muris
324	Cryptosporidium parvum
325	Cuculus canorus
326	Cucumis melo L.
327	Cucumis sativus
328	Cucurbitaria berberidis CBS 394.84
329	Culex quinquefasciatus
330	Cyanidioschyzon merolae
331	Cyanophora paradoxa
332	Cyberlindnera jadinii NRRL Y-1542
333	Cylindrobasidium torrendii
334	Cynoglossus semilaevis
335	Dacryopinax sp. DJM-731 SS1
336	Daedalea quercina
337	Daldinia eschscholzii
338	Danaus plexippus
339	Danio rerio
340	Daphnia pulex
341	Dasypus novemcinctus

342	Debaryomyces hansenii
343	Deinococcus radiodurans R1
344	Dekkera bruxellensis CBS 2499
345	Delitschia confertaspora ATCC 74209
346	Dendroctonus ponderosae
347	Dendrothele bispora CBS 962.96
348	Desulfovibrio vulgaris str. Hildenborough
349	Desulfurococcus fermentans DSM 16532
350	Diaphorina citri
351	Dichomitus squalens
352	Dictyoglomus turgidum DSM 6724
353	Dictyostelium discoideum
354	Dictyostelium fasciculatum
355	Dictyostelium purpureum
356	Didymella exigua CBS 183.55
357	Dioszegia cryoxerica
358	Dipodomys ordii
359	Dissoconium aciculare
360	Dothidotthia symphoricarpi
361	Dothistroma septosporum NZE10
362	Drosophila ananassae
363	Drosophila erecta
364	Drosophila grimshawi
365	Drosophila melanogaster
366	Drosophila mojavensis
367	Drosophila persimilis
368	Drosophila pseudoobscura
369	Drosophila sechellia
370	Drosophila simulans
371	Drosophila virilis
372	Drosophila willistoni

373 Drosophila yakuba 374 Echinococcus granulosus 375 Echinococcus multilocularis 376 Echinops telfairi 377 Ectocarpus siliculosus 378 Edhazardia aedis 379 Egretta garzetta 380 Eimeria acervulina 381 Eimeria brunetti 382 Eimeria maxima 383 Eimeria mitis 384 Eimeria necatrix 385 Eimeria praecox 386 Eimeria tenella 387 Elaeis guineensis 388 Elephantulus edwardii Emiliania huxleyi CCMP1516 389 390 Encephalitozoon cuniculi GB-M1 391 Encephalitozoon hellem ATCC 50504 392 Encephalitozoon intestinalis ATCC 50506 393 Encephalitozoon romaleae SJ-2008 394 Entamoeba dispar 395 Entamoeba histolytica 396 Entamoeba histolytica KU27 397 Entamoeba invadens 398 Entamoeba nuttalli 399 Enterobacter cloacae subsp. cloacae ATCC 13047 400 Enterococcus faecalis V583 401 Enterocytozoon bieneusi H348 402 **Eptesicus fuscus**

403

Equus caballus

404 Equus przewalskii 405 Eremothecium cymbalariae 406 Erinaceus europaeus 407 Escherichia coli IAI39 408 Escherichia coli O104 H4 str. 2011C-3493 409 Escherichia coli O157 H7 str. Sakai 410 Escherichia coli O83 H1 str. NRG 857C 411 Escherichia coli str. K-12 substr. MG1655 412 Escherichia coli UMN026 413 Esox lucius 414 **Eucalyptus grandis** 415 Eurotium rubrum 416 Eurypyga helias 417 Eutrema parvulum 418 Eutrema salsugineum 419 Eutypa lata UCREL1 420 Exidia glandulosa 421 Exobasidium vaccinii MPITM 422 Exophiala aquamarina CBS 119918 423 Exophiala dermatitidis 424 Falco cherrug 425 Falco peregrinus 426 Felis catus 427 Ferroglobus placidus DSM 10642 428 Ferroplasma acidarmanus fer1 429 Fervidicoccus fontis Kam940 430 Fibroporia radiculosa TFFH 294 431 Fibulorhizoctonia sp. CBS 109695 432 Ficedula albicollis 433 Fistulina hepatica 434 Flavobacterium psychrophilum JIP02_86

435 Fomitiporia mediterranea 436 Fomitopsis pinicola FP-58527 SS1 437 Fonticula alba 438 Fopius arisanus 439 Fragaria vesca 440 Fragilariopsis cylindrus 441 Francisella tularensis subsp. tularensis SCHU S4 442 Fukomys damarensis 443 Fulmarus glacialis 444 Fusarium fujikuroi 445 Fusarium fujikuroi IMI 58289 446 Fusarium graminearum PH-1 447 Fusarium oxysporum f. sp. melonis 448 Fusarium oxysporum Fo47 449 Fusarium oxysporum FOL 4287 450 Fusarium oxysporum NRRL 32931 451 Fusarium pseudograminearum CS3096 452 Fusarium verticillioides 7600 453 Fusobacterium nucleatum subsp. nucleatum ATCC 25586 454 Gadus morhua 455 Gaeumannomyces graminis var. tritici R3-111a-1 456 Galdieria sulphuraria 457 Galeopterus variegatus 458 Galerina marginata 459 Gallus gallus 460 Ganoderma sp. 10597 SS1 461 Gasterosteus aculeatus 462 Gavia stellata 463 Genlisea aurea 464 Geobacter sulfurreducens PCA 465 Geomyces destructans

466 Geospiza fortis 467 Giardia intestinalis 468 Giardia lamblia 469 Gibberella zeae 470 Glarea lozoyensis ATCC 20868 471 Gloeobacter violaceus PCC 7421 472 Gloeophyllum trabeum 473 Glomerella acutata 474 Glomerella cingulata 475 Glomerella graminicola 476 Glycine max 477 Gonapodya prolifera 478 Gorilla gorilla 479 Gossypium hirsutum 480 Gossypium raimondii 481 Gregarina niphandrodes 482 Grosmannia clavigera kw1407 483 Guillardia theta 484 Gymnascella aurantiaca 485 Gymnascella citrina 486 Gymnopilus chrysopellus PR-1187 487 Gymnopus luxurians 488 Gyrodon lividus BX 489 Haemophilus influenzae Rd KW20 490 Halalkalicoccus jeotgali B3 491 Haliaeetus albicilla 492 Haliaeetus leucocephalus 493 Haloarcula hispanica ATCC 33960 494 Halobacterium salinarum R1 495 Haloferax mediterranei ATCC 33500 496 Halogeometricum borinquense DSM 11551

Halomicrobium mukohataei DSM 12286
Halopiger xanaduensis SH-6
Haloquadratum walsbyi DSM 16790
Halorhabdus utahensis DSM 12940
Halorubrum lacusprofundi ATCC 49239
Haloterrigena turkmenica DSM 5511
Halovivax ruber XH-70
Hammondia hammondi
Hanseniaspora valbyensis NRRL Y-1626
Haplochromis burtoni
Harpegnathos saltator
Hebeloma cylindrosporum h7
Helicobacter pylori 26695
Heliconius melpomene
Helobdella robusta
Heterobasidion annosum
Heterocephalus glaber
Heterogastridium pycnidioideum ATCC MYA-4631
Histoplasma capsulatum
Homo sapiens
Homoloaphlyctis polyrhiza JEL 142
Hordeum vulgare
Hyaloperonospora arabidopsidis
Hydnomerulius pinastri
Hydra magnipapillata
Hydra vulgaris
Hymenolepis microstoma
Hyperthermus butylicus DSM 5456
Hyphochytrium catenoides
Hyphochytrium catenoides old
Hypholoma sublateritium

528 Hyphopichia burtonii NRRL Y-1933 529 Hypoxylon sp. CI-4A 530 Hypoxylon sp. CO27-5 531 Hypoxylon sp. EC38 532 Hysterium pulicare 533 Ichthyophthirius multifiliis 534 Ictidomys tridecemlineatus 535 Ignicoccus hospitalis KIN4_I 536 Ignisphaera aggregans DSM 17230 537 Ilyonectria radicicola 538 Ixodes scapularis 539 Jaapia argillacea 540 Jaculus jaculus 541 Jatropha curcas 542 Karstenula rhodostoma CBS 690.94 543 Kazachstania africana 544 Kazachstania naganishii 545 Ketogulonicigenium vulgare WSH-001 546 Klebsiella pneumoniae subsp. pneumoniae HS11286 547 Klebsormidium flaccidum 548 Kluyveromyces lactis 549 Komagataella pastoris 550 Laccaria amethystina LaAM-08-1 551 Laccaria bicolor 552 Lachancea kluyveri 553 Lachancea thermotolerans 554 Lachancea waltii 555 Lactobacillus acidophilus NCFM 556 Lactobacillus plantarum WCFS1 557 Lactobacillus salivarius UCC118 558 Lactococcus lactis subsp. lactis Il1403

559	Laetiporus sulphureus var. sulphureus
560	Larimichthys crocea
561	Latimeria chalumnae
562	Leersia perrieri
563	Leishmania braziliensis
564	Leishmania donovani
565	Leishmania infantum
566	Leishmania major
567	Leishmania mexicana
568	Leishmania panamensis
569	Lentinus tigrinus
570	Lentinus tigrinus ALCF2SS1-6
571	Lentinus tigrinus ALCF2SS1-7
572	Lentithecium fluviatile
573	Lepidopterella palustris
574	Lepisosteus oculatus
575	Leptonychotes weddellii
576	Leptosomus discolor
577	Leptosphaeria maculans
578	Leucoagaricus gongylophorus Ac12
579	Leucogyrophana mollusca
580	Lichtheimia corymbifera
581	Lichtheimia hyalospora
582	Linum usitatissimum
583	Lipomyces starkeyi NRRL Y-11557
584	Lipotes vexillifer
585	Listeria monocytogenes EGD-e
586	Loa loa
587	Lodderomyces elongisporus
588	Lophiostoma macrostomum
589	Lophium mytilinum CBS 269.34

590	Lottia gigantea
591	Lotus japonicus
592	Loxodonta africana
593	Lytechinus variegatus
594	Macaca fascicularis
595	Macaca mulatta
596	Macrolepiota fuliginosa
597	Macrophomina phaseolina MS6
598	Macropus eugenii
599	Macroventuria anomochaeta CBS 525.71
600	Magnaporthe grisea
601	Magnaporthe poae ATCC 64411
602	Malassezia globosa
603	Malassezia sympodialis ATCC 42132
604	Malbranchea cinnamomea
605	Malus domestica
606	Manacus vitellinus
607	Manihot esculenta
608	Mastigamoeba balamuthi
609	Maylandia zebra
610	Medicago truncatula
611	Megachile rotundata
612	Megaselia scalaris
613	Melampsora laricis-populina
614	Melanconium sp. NRRL 54901
615	Melanomma pulvis-pyrius
616	Meleagris gallopavo
617	Meliniomyces bicolor E
618	Meliniomyces variabilis F
619	Melitaea cinxia
620	Melopsittacus undulatus

621	Merops nubicus
622	Mesitornis unicolor
623	Mesocricetus auratus
624	Metallosphaera sedula DSM 5348
625	Metarhizium acridum CQMa 102
626	Metarhizium robertsii
627	Metaseiulus occidentalis
628	Methanobacterium formicicum DSM 3637
629	Methanobrevibacter ruminantium M1
630	Methanobrevibacter sp. AbM4
631	Methanocaldococcus fervens AG86
632	Methanocella conradii HZ254
633	Methanococcoides burtonii DSM 6242
634	Methanococcus maripaludis S2
635	Methanocorpusculum labreanum Z
636	Methanoculleus bourgensis MS2
637	Methanofollis liminatans DSM 4140
638	Methanohalobium evestigatum Z-7303
639	Methanohalophilus mahii DSM 5219
640	Methanolobus psychrophilus R15
641	Methanomethylovorans hollandica DSM 15978
642	Methanoplanus limicola DSM 2279
643	Methanopyrus kandleri AV19
644	Methanoregula formicicum SMSP
645	Methanosaeta thermophila PT
646	Methanosalsum zhilinae DSM 4017
647	Methanosarcina acetivorans C2A
648	Methanosphaera stadtmanae DSM 3091
649	Methanosphaerula palustris E1-9c
650	Methanospirillum hungatei JF-1
651	Methanothermobacter marburgensis str. Marburg

652	Methanothermococcus okinawensis IH1
653	Methanothermus fervidus DSM 2088
654	Methanotorris igneus Kol 5
655	Metschnikowia bicuspidata var. bicuspidata NRRL YB-4993
656	Meyerozyma guilliermondii
657	Microbotryum violaceum
658	Microcebus murinus
659	Micromonas pusilla CCMP1545
660	Micromonas pusilla RCC299
661	Microplitis demolitor
662	Microsporum canis
663	Microsporum canis CBS 113480
664	Microsporum gypseum
665	Microtus ochrogaster
666	Millerozyma farinosa
667	Mimulus guttatus
668	Mixia osmundae IAM 14324
669	Mnemiopsis leidyi
670	Monacrosporium haptotylum CBS 200.50
671	Monascus purpureus
672	Monascus ruber NRRL 1597
673	Moniliophthora perniciosa FA553
674	Monocercomonoides sp. PA
675	Monodelphis domestica
676	Monosiga brevicollis
677	Moorella thermoacetica ATCC 39073
678	Morchella conica CCBAS932
679	Mortierella elongata
680	Mortierella verticillata NRRL 6337
681	Mucor circinelloides f. lusitanicus CBS 277.49
682	Mus musculus

Musa acuminata
Musca domestica
Mustela putorius furo
Myceliophthora fergusii
Myceliophthora sepedonium
Myceliophthora thermophila
Mycobacterium bovis AF2122_97
Mycobacterium leprae TN
Mycoplasma mycoides subsp. mycoides SC str. PG1
Mycosphaerella fijiensis
Mycosphaerella graminicola
Myotis brandtii
Myotis davidii
Myotis lucifugus
Myriangium duriaei CBS 260.36
Myriococcum thermophilum
Nadsonia fulvescens var. elongata DSM 6958
Naegleria fowleri
Naegleria gruberi
Naiadella fluitans ATCC 64713
Nannochloropsis gaditana
Nannospalax galili
Nanoarchaeum equitans Kin4-M
Nanorana parkeri
Nasonia vitripennis
Natrialba magadii ATCC 43099
Natrinema pellirubrum DSM 15624
Natronobacterium gregoryi SP2
Natronococcus occultus SP4
Natronococcus occultus SP4 Natronomonas pharaonis DSM 2160

- 714 Naumovozyma dairenensis715 Nectria haematococca
- 716 Nelumbo nucifera
- 717 Nematocida parisii ERTm1
- 718 Nematocida parisii ERTm3
- 719 Nematocida sp. 1 ERTm2
- 720 Nematocida sp. 1 ERTm6
- 721 Nematostella vectensis
- 722 Neofusicoccum parvum UCRNP2
- 723 Neolamprologus brichardi
- 724 Neolentinus lepideus
- 725 Neosartorya fischeri NRRL 181
- 726 Neospora caninum
- 727 Nestor notabilis
- 728 Neurospora crassa OR74A
- 729 Neurospora discreta FGSC 8579
- 730 Neurospora tetrasperma FGSC 2508
- 731 Neurospora tetrasperma FGSC 2509
- 732 Nicotiana benthamiana
- 733 Nicotiana sylvestris
- 734 Nicotiana tomentosiformis
- Nipponia nippon
- 736 Nitrosopumilus maritimus SCM1
- 737 Nomascus leucogenys
- 738 Nosema apis BRL 01
- 739 Nosema bombycis CQ1
- 740 Nosema ceranae BRL01
- 741 Notothenia coriiceps
- 742 Obba rivulosa
- 743 Ochotona princeps
- 744 Octodon degus

- 745 Oculimacula yallundae
- 746 Odobenus rosmarus
- 747 Ogataea angusta NCYC 495 leu1.1
- 748 Oidiodendron maius Zn
- 749 Oikopleura dioica
- 750 Omphalotus olearius
- 751 Onchocerca volvulus
- 752 Ophiobolus disseminans
- 753 Ophiostoma piceae UAMH 11346
- 754 Opisthocomus hoazin
- 755 Orcinus orca
- 756 Oreochromis niloticus
- 757 Ornithorhynchus anatinus
- 758 Orpinomyces sp. C1A
- 759 Orycteropus afer afer
- 760 Oryctolagus cuniculus
- 761 Oryza barthii
- 762 Oryza brachyantha
- 763 Oryza glaberrima
- 764 Oryza glumaepatula
- 765 Oryza meridionalis
- 766 Oryza nivara
- 767 Oryza punctata
- 768 Oryza rufipogon
- 769 Oryza sativa
- 770 Oryza sativa Indica Group
- 771 Oryzias latipes
- 772 Ostreococcus lucimarinus
- 773 Ostreococcus sp. RCC809
- 774 Ostreococcus tauri
- 775 Otolemur garnettii

776 Ovis aries 777 Oxytricha trifallax 778 Pachysolen tannophilus NRRL Y-2460 779 Pan paniscus 780 Pan troglodytes 781 Panicum hallii 782 Panicum virgatum 783 Panthera tigris altaica 784 Pantholops hodgsonii 785 Papio anubis 786 Paracoccidioides brasiliensis Pb01 787 Paracoccidioides brasiliensis Pb03 788 Paracoccidioides brasiliensis Pb18 789 Paramecium biaurelia 790 Paramecium caudatum 791 Paramecium multimicronucleatum 792 Paramecium primaurelia 793 Paramecium sexaurelia 794 Paramecium tetraurelia 795 Pararge aegeria 796 Parastagonospora nodorum SN15 797 Patellaria atrata 798 Patiria miniata Paxillus involutus ATCC 200175 799 Paxillus rubicundulus Ve08.2h10 800 801 Pediculus humanus 802 Pelecanus crispus 803 Pelodiscus sinensis 804 Penicillium bilaiae ATCC 20851 805 Penicillium brevicompactum 806 Penicillium brevicompactum AgRF18

807	Penicillium canescens ATCC 10419
808	Penicillium chrysogenum
809	Penicillium chrysogenum Wisconsin 54-1255
810	Penicillium digitatum PHI26
811	Penicillium expansum ATCC 24692
812	Penicillium fellutanum ATCC 48694
813	Penicillium glabrum DAOM 239074
814	Penicillium janthinellum ATCC 10455
815	Penicillium lanosocoeruleum ATCC 48919
816	Penicillium oxalicum 114-2
817	Penicillium raistrickii ATCC 10490
818	Perkinsus marinus
819	Peromyscus maniculatus bairdii
820	Petromyzon marinus
821	Phaeoacremonium aleophilum UCRPA7
822	Phaeodactylum tricornutum
823	Phaeodactylum tricornutum unmapped
824	Phaeosphaeria nodorum
825	Phaethon lepturus
826	Phalacrocorax carbo
827	Phanerochaete carnosa HHB-10118-Sp
828	Phanerochaete chrysosporium
829	Phanerochaete chrysosporium RP-78
830	Phaseolus vulgaris
831	Phialophora europaea CBS 101466
832	Phlebia brevispora HHB-7030 SS6
833	Phlebiopsis gigantea
834	Phoenicopterus ruber
835	Phoenix dactylifera
836	Phycomyces blakesleeanus
837	Phyllostachys edulis

838	Physcomitrella patens
839	Physeter catodon
840	Phytophthora capsici
841	Phytophthora cinnamomi var. Cinnamomi
842	Phytophthora infestans T30-4
843	Phytophthora kernoviae
844	Phytophthora lateralis MPF4
845	Phytophthora parasitica
846	Phytophthora parasitica P1569
847	Phytophthora ramorum
848	Phytophthora sojae
849	Picea abies
850	Picea sitchensis
851	Pichia membranifaciens
852	Pichia pastoris
853	Pichia sorbitophila
854	Pichia stipitis
855	Picoides pubescens
856	Picrophilus torridus DSM 9790
857	Piedraia hortae
858	Piloderma croceum F 1598
859	Pinctada fucata
860	Pinus taeda
861	Piriformospora indica DSM 11827
862	Piromyces sp. E2
863	Pisolithus microcarpus 441
864	Pisolithus tinctorius Marx 270
865	Plasmodium berghei
866	Plasmodium chabaudi
867	Plasmodium cynomolgi
868	Plasmodium falciparum

869	Plasmodium inui
870	Plasmodium knowlesi
871	Plasmodium reichenowi
872	Plasmodium vinckei petteri
873	Plasmodium vinckei vinckei
874	Plasmodium vivax
875	Plasmodium yoelii
876	Plenodomus tracheiphilus IPT5
877	Pleomassaria siparia
878	Pleurotus ostreatus PC15
879	Pleurotus ostreatus PC9
880	Plicaturopsis crispa
881	Plutella xylostella
882	Pneumocystis jirovecii
883	Pneumocystis murina B123
884	Podiceps cristatus
885	Podospora anserina
886	Podospora anserina S mat+
887	Poecilia formosa
888	Poecilia reticulata
889	Polychaeton citri
890	Polyporus arcularius
891	Polysphondylium pallidum
892	Pongo abelii
893	Populus euphratica
894	Populus trichocarpa
895	Porphyridium purpureum
896	Postia placenta MAD 698-R
897	Postia placenta MAD-698-R-SB12
898	Primula veris
899	Pristionchus pacificus

900	Procavia capensis
901	Prunus mume
902	Prunus persica
903	Pseudo-nitzschia multiseries
904	Pseudomonas aeruginosa PAO1
905	Pseudopoces humilis
906	Pseudozyma antarctica T-34
907	Pseudozyma brasiliensis
908	Pseudozyma flocculosa
909	Pseudozyma hubeiensis SY62
910	Pterocles gutturalis
911	Pteropus alecto
912	Pteropus vampyrus
913	Puccinia graminis
914	Puccinia graminis f. sp. tritici 04KEN156_4
915	Puccinia striiformis
916	Puccinia striiformis f. sp. tritici PST-130
917	Puccinia triticina
918	Punctularia strigosozonata
919	Pundamilia nyererei
920	Pycnoporus coccineus
921	Pycnoporus coccineus BRFM310
922	Pygoscelis adeliae
923	Pyrenophora teres f. teres
924	Pyrenophora tritici-repentis
925	Pyrobaculum arsenaticum DSM 13514
926	Pyrococcus yayanosii CH1
927	Pyrolobus fumarii 1A
928	Pyronema confluens
929	Pyronema confluens CBS100304
930	Pyropia yezoensis

931	Pyrus x bretschneideri
932	Pythium aphanidermatum DAOM BR444
933	Pythium arrhenomanes ATCC 12531
934	Pythium irregulare DAOM BR486
935	Pythium iwayamai DAOM BR242034
936	Pythium ultimum
937	Pythium ultimum var. sporangiiferum BR650
938	Pythium vexans DAOM BR484
939	Python bivittatus
940	Ramaria acris UT-36052-T
941	Rasamsonia byssochlamydoides
942	Rattus norvegicus
943	Reticulomyxa filosa
944	Rhinopithecus roxellana
945	Rhipicephalus pulchellus
946	Rhizoctonia solani AG-1 IB
947	Rhizomucor miehei
948	Rhizomucor pusillus
949	Rhizophagus irregularis DAOM 181602
950	Rhizopogon vinicolor AM-OR11-026
951	Rhizopus delemar RA 99-880
952	Rhizopus microsporus var. chinensis CCTCC M201021
953	Rhizopus microsporus var. microsporus
954	Rhodnius prolixus
955	Rhodobacter sphaeroides 2.4.1
956	Rhodopirellula baltica SH 1
957	Rhodospirillum rubrum ATCC 11170
958	Rhodosporidium toruloides MTCC 457
959	Rhodotorula graminis WP1
960	Rhodotorula minuta MCA 4210
961	Rhytidhysteron rufulum

962	Ricinus communis
963	Rickenella mellea
964	Rickettsia prowazekii str. Madrid E
965	Rozella allomycis CSF55
966	Saccharata proteae CBS 121410
967	Saccharomyces arboricola
968	Saccharomyces bayanus
969	Saccharomyces bayanus var. uvarum
970	Saccharomyces castelli
971	Saccharomyces castellii
972	Saccharomyces cerevisiae M3707
973	Saccharomyces cerevisiae M3836
974	Saccharomyces cerevisiae M3837
975	Saccharomyces cerevisiae M3838
976	Saccharomyces cerevisiae M3839
977	Saccharomyces cerevisiae S288C
978	Saccharomyces cerevisiae YB210
979	Saccharomyces kudriavzevii
980	Saccharomyces kudriavzevii ZP591
981	Saccharomyces mikatae
982	Saccharomyces paradoxus
983	Saccoglossus kowalevskii
984	Saimiri boliviensis
985	Saitoella complicata NRRL Y-17804
986	Salinarchaeum sp. Harcht-Bsk1
987	Salinibacter ruber DSM 13855
988	Salix purpurea
989	Salmonella enterica subsp. enterica serovar Typhi str. CT18
990	Salpingoeca sp. ATCC 50818
991	Saprolegnia declina VS20
992	Saprolegnia parasitica cbs 223.65

993	Sarcophilus harrisii
994	Schistosoma haematobium
995	Schistosoma japonicum
996	Schistosoma mansoni
997	Schizochytrium aggregatum ATCC 28209
998	Schizochytrium limacinum ATCC MYA-1381
999	Schizophyllum commune H4-8
1000	Schizophyllum commune Loenen D
1001	Schizophyllum commune Tattone D
1002	Schizopora paradoxa
1003	Schizosaccharomyces cryophilus
1004	Schizosaccharomyces japonicus
1005	Schizosaccharomyces octosporus
1006	Schizosaccharomyces pombe
1007	Scleroderma citrinum Foug A
1008	Sclerotinia sclerotiorum
1009	Scytalidium thermophilum
1010	Sebacina vermifera MAFF 305830
1011	Selaginella moellendorffii
1012	Septoria musiva SO2202
1013	Septoria populicola
1014	Serinus canaria
1015	Serpula lacrymans var shastensis SHA21-2
1016	Serpula lacrymans var. lacrymans S7.3
1017	Serpula lacrymans var. lacrymans S7.9
1018	Sesamum indicum
1019	Setaria italica
1020	Setosphaeria turcica Et28A
1021	Shewanella oneidensis MR-1
1022	Shigella dysenteriae Sd197
1023	Shigella flexneri 2a str. 301

1024	Sistotremastrum niveocremeum HHB9708
1025	Sistotremastrum suecicum
1026	Sodiomyces alkalinus
1027	Solanum lycopersicum
1028	Solanum pimpinellifolium
1029	Solanum tuberosum
1030	Solenopsis invicta
1031	Sordaria macrospora
1032	Sorex araneus
1033	Sorghum bicolor
1034	Spathaspora passalidarum NRRL Y-27907
1035	Sphaerobolus stellatus
1036	Sphaeroforma arctica jp610
1037	Spirodela polyrhiza
1038	Spizellomyces punctatus daom br117
1039	Sporisorium reilianum SRZ2
1040	Sporobolomyces linderae CBS 7893
1041	Sporobolomyces roseus
1042	Sporormia fimetaria
1043	Sporothrix schenckii
1044	Spraguea lophii
1045	Staphylothermus hellenicus DSM 12710
1046	Stegastes partitus
1047	Stereum hirsutum FP-91666 SS1
1048	Streptococcus pneumoniae R6
1049	Streptococcus suis BM407
1050	Strigamia maritima
1051	Strigomonas culicis
1052	Strongylocentrotus purpuratus
1053	Strongyloides ratti
1054	Struthio camelus

1055	Stylonychia lemnae
1056	Suillus brevipes
1057	Suillus luteus UH-Slu-Lm8-n1
1058	Sulfolobus islandicus M.14.25
1059	Sus scrofa
1060	Symbiodinium minutum
1061	Symbiotaphrina kochii
1062	Taenia solium
1063	Taeniopygia guttata
1064	Takifugu rubripes
1065	Talaromyces aculeatus ATCC 10409
1066	Talaromyces marneffei ATCC 18224
1067	Talaromyces stipitatus ATCC 10500
1068	Taphrina deformans
1069	Tarenaya hassleriana
1070	Tarsius syrichta
1071	Tauraco erythrolophus
1072	Terfezia boudieri S1
1073	Tetrahymena borealis
1074	Tetrahymena elliotti
1075	Tetrahymena malaccensis
1076	Tetrahymena thermophila macronucleus
1077	Tetrahymena thermophila micronucleus
1078	Tetranychus urticae
1079	Tetraodon nigroviridis
1080	Tetrapisispora blattae
1081	Tetrapisispora phaffii
1082	Thalassiosira oceanica
1083	Thalassiosira pseudonana
1084	Thecamonas trahens ATCC 50062
1085	Theileria annulata

1086	Theileria parva
1087	Theobroma cacao
1088	Thermanaerovibrio acidaminovorans DSM 6589
1089	Thermoascus aurantiacus
1090	Thermoascus crustaceus
1091	Thermococcus barophilus MP
1092	Thermodesulfovibrio yellowstonii DSM 11347
1093	Thermofilum pendens Hrk 5
1094	Thermogladius cellulolyticus 1633
1095	Thermomyces dupontii
1096	Thermomyces lanuginosus
1097	Thermoplasma acidophilum DSM 1728
1098	Thermoplasmatales archaeon BRNA1
1099	Thermoproteus uzoniensis 768-20
1100	Thermosphaera aggregans DSM 11486
1101	Thermosynechococcus elongatus BP-1
1102	Thermotoga maritima MSB8
1103	Thielavia antarctica CBS 123565
1104	Thielavia appendiculata CBS 731.68
1105	Thielavia arenaria CBS 508.74
1106	Thielavia australiensis
1107	Thielavia hyrcaniae CBS 757.83
1108	Thielavia terrestris
1109	Thraustotheca clavata
1110	Tilletiaria anomala UBC 951
1111	Tinamus guttatus
1112	Torulaspora delbrueckii
1113	Toxocara canis
1114	Toxoplasma gondii
1115	Trachipleistophora hominis
1116	Trametes cinnabarina BRFM137

1117	Trametes sanguinea
1118	Trametes versicolor
1119	Trematosphaeria pertusa CBS 122368
1120	Tremella mesenterica
1121	Tribolium castaneum
1122	Trichaptum abietinum
1123	Trichechus manatus latirostris
1124	Trichinella spiralis
1125	Trichoderma asperellum CBS 433.97
1126	Trichoderma atroviride
1127	Trichoderma citrinoviride
1128	Trichoderma harzianum CBS 226.95
1129	Trichoderma longibrachiatum ATCC 18648
1130	Trichoderma reesei
1131	Trichoderma reesei RUT C-30
1132	Trichoderma virens
1133	Trichoderma virens Gv29-8
1134	Tricholoma matsutake 945
1135	Trichomonas vaginalis G3
1136	Trichophyton equinum
1137	Trichophyton interdigitale H6
1138	Trichophyton interdigitale MR816
1139	Trichophyton rubrum CBS 118892
1140	Trichophyton rubrum D6
1141	Trichophyton rubrum MR1448
1142	Trichophyton rubrum MR1459
1143	Trichophyton rubrum MR850
1144	Trichophyton tonsurans
1145	Trichophyton verrucosum HKI 0517
1146	Trichoplax adhaerens
1147	Trichosporon asahii var. asahii CBS 2479

1148 Trichosporon asahii var. asahii CBS 8904 1149 Trichosporon oleaginosus 1150 Trichuris muris 1151 Triticum aestivum 1152 Triticum urartu 1153 Tritirachium sp. CBS 265.96 1154 Trypanosoma brucei 1155 Trypanosoma congolense 1156 Trypanosoma cruzi 1157 Trypanosoma vivax 1158 Trypethelium eluteriae 1159 Tuber melanosporum 1160 Tulasnella calospora AL13_4D 1161 Tupaia belangeri 1162 Tupaia chinensis Tursiops truncatus 1163 1164 Tyto alba 1165 Umbelopsis ramanniana AG 1166 Uncinocarpus reesii 1704 1167 Ursus maritimus 1168 Ustilago hordei 1169 Ustilago maydis 1170 Vaccinium corymbosum 1171 Vanderwaltozyma polyspora 1172 Vavraia culicis floridensis Verticillium alfalfae VaMs.102 1173 1174 Verticillium dahliae 1175 Vibrio cholerae O1 biovar El Tor str. N16961 1176 Vibrio fischeri ES114 1177 Vicugna pacos

1178

Vitis vinifera

1179	Vitrella brassicaformis CCMP3155
1180	Vittaforma corneae ATCC 50505
1181	Volvariella volvacea V23
1182	Volvox carteri
1183	Vulcanisaeta distributa DSM 14429
1184	Wallemia ichthyophaga EXF-994
1185	Wallemia sebi
1186	Wickerhamomyces anomalus NRRL Y-366-8
1187	Wilcoxina mikolae CBS 423.85
1188	Wolfiporia cocos MD-104 SS10
1189	Wuchereria bancrofti
1190	Xanthomonas campestris pv. campestris str. ATCC 33913
1191	Xanthoria parietina 46-1-SA22
1192	Xenopus laevis
1193	Xenopus tropicalis
1194	Xiphophorus maculatus
1195	Xylona heveae TC161
1196	Yarrowia lipolytica CLIB122
1197	Yersinia enterocolitica subsp. enterocolitica 8081
1198	Yersinia pestis CO92
1199	Zasmidium cellare ATCC 36951
1200	Zea mays
1201	Zonotrichia albicollis
1202	Zopfia rhizophila
1203	Zygosaccharomyces bailii CLIB 213
1204	Zygosaccharomyces bailii ISA1307
1205	Zygosaccharomyces rouxii
1206	Zymoseptoria tritici