JX989890 outgroup for Lactarius
MK564562.1 Lactarius cf fumosus IN
Lactarius pallidoliviaceus (fumosus var occidentalis TYPE OR)
KF386751 L. pallidoliviaceus CA JLF-2013 (as olivaceopallidus == Arcangeliella desjardinii)
EU819483.1 Lactarius cf fumosus WI7 (type NY)
KJ705224.1 Lactarius cf fumosus PQ
JN022500.1 Zelleromyces cf gardneri OR
JQ446104 Lactarius aff fallax (var concolor) WA
JQ446101.1 Lactarius aff (var. fallax) CA
Lactarius fallax S Vanc Isl UDB033239
Lactarius lignyotus UNITE EU unanimous + in paper JQ446115
L. fallax BC, WA (+WA MP 3955411) (=ID JQ446103) (+WA MO #336034)
Lactarius fallax var. concolor TYPE OR (0/0/1)
Lactarius_lignyotus_var._americanus TYPE OR (0/0/0 fallax)
Lactarius fallax (cf var concolor) iNat30319915
Lactifluus volemus EU UNITE overwhelming
Lactarius rufulus CA iNat10383906
iNat 18003682 Lactarius rubidus BTSP 0/0/1
Lactarius_fragilis_var._rubidus TYPE OR
L. rubidus N CAL
iNat#19620030 Lactarius rubidus SSound WA 1/0/1
L. rubidus WA (short) Alan2
EU644700 L. silvae (Arcangeliella camporatus) (candy cap truffle) OR (type WA)
MK982238.1 Lactarius (Arcangeliella claridgei np) ??
L. subvisidus TYPE WA (+ NAMA 2018 OR MycoPortal #6598902) KR090970
Lactarius subvisidus WA iNat #34398299 1/0
L. atrobadius 0/0 boreal BC FJ845420
L. atrobadius 0/0 boreal BC FJ845420
Lactarius atrobadius TYPE OR
Lactarius luc var laetus #2 BC JMK2019104
iNat 35023411 L. luc cf var laetus #2 (3/0/2 ITS1 1/0 ITS2 var luc)
Lactarius luc cf var laetus #2 (0/0-2 others) 39684
L. luc cf var laetus #2 Van Isl KP406548
iNat 18338451 L. luc cf var laetus #2 BTSP
L. luc cf var laetus #2 OR (MP 6598876)
Lactarius luc var laetus #2 0/0 (short) BTSP 84014 iNat 17967631
Lactarius luc var luc WA iNat #34419851
Lactarius luc var luc Buck 856
L. luc var. luc OR Type Locality (+UNITE L. substriatus #2) (+WA MP 3955474) KR090920
Lactarius luculentus var luc iNat#34899857 WA
L. luculentus var. laetus CO type locality KR090923
L. sp. 2 CRIPPS CA DQ974746.1
L. substriatus UNITE #1 S OR (0/0-2 sp. 2) JQ393088
MK982233.1 Lactarius cf substriatus #1 OR JLF6227 iNat78422737
L. substriatus UNITE #3 CAL FJ440912
Lactarius substriatus OR (MP 6598704)
L. subflammeus TYPE OR KR090967
L. substriatus Portland OR Smith Coll (type WA) KR090968
Lactarius substriatus JMK2019101 BC
Lactarius occidentalis (2/0 hand edited cf alpinus) OR (MP 6598885)
Lactarius occidentalis NAMA 2018 OR MP #6598969 (hand edited)
Lactarius occidentalis JMK2018053 BC
Lactarius occidentalis iNat#34663890
Lactarius theiogalus EU (only UNITE) (0/8) UDB002435 (+OR short)
Lactarius tabidus (=theiogalus IF+genbank EU) UNITE EU (96x overwhelming) EF493293
Lactarius rufus OR (MP 6598746)
L. rufus BC (dozens) (+UNITE EU overwh) UDB031836
L. hepaticus GER UNITE overwhelming HM146834
L. cf hepaticus E NA JQ616797
L. xanthogalactus OR
Lactarius xanthogalactus OR JLF9176 iNat68934720
L. cf alpinus Peck Newfoundland (+EU) KX094937 (unanimous dozen)
MT955139.1 Lactarius alpinus AK SAT-09-254-16
L. hysginus UNITE EU unanimous (only in EU) UDB000825
Lactarius representaneus WA (MP 3955462)
FJ607373.1 Lactarius representaneus (UNITE overwhelming EU+)
L. pseudomucidus BC (dozens) 2/0/2 + dirty beginning
Lactarius pseudomucidus TYPE OR
Lactarius pseudomucidus WA (1/0/1) (MP 3955454)
Lactarius pseudomucidus OR NAMA2018 (MP 6598957) 1/1/2
MG677154.1 Lactarius cf mucidus var mucidus TN (type NC)
MG677155.1 Lactarius mucidus var. fuscogriseus TYPE MI
Lactarius_kauffmanii_var._sitchensis TYPE OR
Lactarius kauffmanii #1 WA iNat34666108
Lactarius kauffmanii #1 WA (1/2) (MP 3955431)
Lactarius kauffmanii #1 NAMA2018 OR (MP 6598790)
L. kauffmanii #1 BCx4 (type ID, 4 forms + var. sitchensis type OR) FJ845422
L. cf caespitosus China KX441068
L. cf caespitosus Boreal BC FJ845421
L. glutinopallens=albocarneus UNITE EU unanimous JF908291
L. cf caespitosus BC (+ENA +Japan) EU057101 Hemlock
L. necator #3 GERMANY
L. necator #2 ITALY
L. necator #1 WA Buck#138 0/0
Lactarius necator #1 WA iNat #34443612
L. necator #1 ITALY
L. necator #1 WA iNat34942109 0/0-1
L. vietus UNITE EU+NA unanimous UDB017166
EF218784 Lactarius vietus BC (dozens)
L. olivaceoumbrinus Vancouver BC KC581315
L. lepidotus 2 France (type US)
L. lepidotus 1 France (type US)
KX394277 Lactarius cf alpinus var mitis MT (+CO, type ID)
MK982232.1 Lactarius californiensis OR JLF6208 (type CA) iNat78422454
L. uvidus EU +AK
Lactarius pallescens OR (MP 6598940)
KR090938.1 Lactarius pallescens TYPE ID (+Victoria BCx2)
L. montanus (as pallescens) 4/2/1000 Int. BC EF218785
L. montanus US Rockies KR090924 (=TYPE ID)
L. montanus #2 US Rockies (2/5/1000)
MF955025.1 Lactarius montanus #3 (6/1/1000) Victoria BC (BCx3)
L. pallidomarginatus TYPE CO (Cripps:2/0 aspideus yet distinct mte:1/0 aspideus) KR090939
L. aspideus UNITE EU unanimous+official KJ742390
L. aspideoides (type area ENA +US Rockies)
L. circellatus (UNITE unanimous) KM576493
KJ742400 Lactarius flexuosus 1821 UNITE EU unanimous
DQ421992 L. flexuosus EU unanimous (alleles)
Lactarius flexuosus 1/1 WA 43636 no photo
Lactarius flexuosus 2/2 cf circellatus var borealis NAMA2014 WA (MP 3955388)
Lactarius flexuosus 1/1 cf circellatus var borealis WA Buck752
KJ705207 Lactarius flexuosus PQ (0/0 WA)
MH979282 L. cf pseudoflexuosus WI (4/1 flexuosus)
MH979279 Lactarius cf pseudoflexuosus WI
L. kauffmanii #3 Interior BC DQ097875
L. cf affinis Peck Quebec KT05208
DQ097869.1 Lactarius cf affinis Interior BC (3/0 Quebec)
L. trivialis UNITE EU overwhelming UDB015148
MT955136.1 Lactarius trivialis AK SAT-10-241-04
L. trivialis (Boreal BC)
MT955140.1 Lactarius trivialis AK SAT-10-238-11
MH910571 Lactarius cf sordidus ENA MO#247306
L. cf argillaceifolius Quebec KJ705210
KX358038.1 Lactarius cf argillaceifolius AR
MF773629.1 Lactarius cf argillaceifolius TN
DQ097872.1 Lactarius glyciosmus 1/1/750 interior BC
KR090910.1 Lactarius glyciosmus SWE TYPE LOC
L. aff glyciosmus WA iNat#34941298
EU711685.1 Lactarius aff glyciosmus 6/0/600 Cripps AK (+N BC)
L. aff glyciosmus Italy
MK931348.1 Lactarius pseudodeceptivus PARATYPE WA (longer)
MK931350 Lactarius pseudodeceptivus 2/0 Smith 89282
Lactarius sp WA iNat58307501 cf glutigriseus?
L. controversus #1 ITALY (type EU)
L. controversus #3 Yellowstone (2/0 ITS1 4/0 ITS2 #1, 0 ITS1 3/0 ITS2 #2)
L. controversus #2 (2/0 ITS1 4/0 ITS2 EU #1) WA iNat #34440002
L. controversus #2 NW BC (1/0 ITS1 4/0 ITS2) UDB024061
MK982220.1 Lactarius sp. JLF1339 OR
L. scrobiculatus #3 Yellowstone (as alnicola) = alnicola? (type ID)
L. scrobiculatus #2 EU
L. scrobiculatus #1 BC (dozens + WA MP 3955469) (var canadensis type PQ?)
EU057104.2 Lactarius sp. BC
L. resimus UNITE EU (only few) UDB037176
L. resimus UNITE EU (some as cf alnicola?) +BC
JN652955.1 Lactarius sp. Pemberton, BC
EF458014.1 Lactarius aff resimus OR+AZ (OR)
MK982235.1 Lactarius aff resimus OR+AZ (AZ) JLF6919 iNat78423175
EF411121.1 L. cf alnicola CA live oak
Lactarius olympianus 1979 (=zonarioides) (genbank unanimous) OR MP 6598929 (+OR short MP 6598904)
Lactarius zonarioides 1953 (UNITE EU unanimous) MF152845 (+OR short MP 6598904)
Lactarius dilutisalmoneus 2018 TYPE China NR_156341
KT968581.1 Lactarius crassus ORx3 (truffle?)
KX394295.1 Lactarius cf pseudodelicatus ID
Lactarius cf subvillosus CA CFS iNat14526542
JQ393089.1 Lactarius sp. OR (3/3 cf subvillosus)
EU526007.1 Lactarius cf scrobiculatus OR
L. pubescens UNITE EU overwhelming EU711605
L. pubescens UNITE EU 2/0 UDB037471
Lactarius pubescens WA (4/0 & 2/0) iNat #35318568
L. pubescens #1 Interior BC (4/0 & 2/0) (type EU, var. betulae type US) EF218786
L. pubescens #2 AK (type EU, var. betulae type US)
MF955009 L. aff torminosus (0/0 ITS1 3/1-2 ITS2) Victoria BC
L. torminosus NBC +interior (+EU) (type EU var. nord type US)
EF218789.1 Int BC Betula papyrifera
UDB024039 F17313
NR_152961.1 Lactarius southworthiae TYPE OR (truffle)
KF386762.1 Lactarius aff southworthiae OR
MP 6598850 Lactarius aestivus (3/2) NAMA2018
KJ769670.1 Lactarius aestivus TYPE WA (+NAMA 2018 OR, NAMA 2014 WA)
L. aestivus BC (3/2) EU057107
EF685046 L. barrowsii AZ (dirty)
EF685046 L. barrowsii AZ (cleaned) (type NM)
L. barrowsii WA (3/2 AZ) EF685047
KT875043 Lactarius Mexican cf. sanguifluus MXx7
MT348160.1 Lactarius "vesper" (cf aestivus) OR JLF8245 iNat34216013
EF685057 L. aurantiosordidus (allele 2) WA
MF955005 Lactarius aurantiosordidus 0/0 N Vanc Isl (both alleles)
EF685060 Lactarius cf deterrimus EU Nuytinck
L. deterrimus UNITE EU overwhelming UDB014161616
Lactarius_deliciosus_var._olivaceosordidus TYPE OR (=aurantiosordidus)
Lactarius aurantiosordidus TYPE CA (+OR,BC) EF685094 (allele 1)
EF685049 L. cf chelidonium NY Nuytinck (type NY)
NR_152987.1 Lactarius hengduanensis TYPE China
Lactarius sanguifluus UNITE EU 1% #2 AF249289
Lactarius sanguifluus UNITE EU 1% #3 DQ116905
Lactarius sanguifluus UNITE EU 1% #1 DQ116909
L. deliciosus UNITE EU overwhelming UDB002381
L. rubrilacteus Nuytinck CA (3/0/1) EF685085
L. rubrilacteus Nuytinck CA (+WA,BC) (2/0) KJ769677
L. rubrilacteus Nuytinck CA #1 (4/1/1) EF685084
KM402881.1 Lactarius rubrilacteus (2/0/3) Vancouver BCx2
Lactarius rubrilacteus (2/0) OR (MP 6598751)
Lactarius CA (2/0 Whistler 3/0 sp. WA) iNat14524782
MH718243.1 Lactarius aff chelidonium (=3/2) Whistler (3/1 from other nearest)
MK982230.1 Lactarius cf. deliciosus OR JLF4872
EF685054 L. cf deliciosus var. areolatus CO
EF685055 L. cf deliciosus var. areolatus UT (type ID)
MH038117.1 Lactarius deliciosus sp. E OR (4/0 WA)
MH038122.1 Lactarius deliciosus sp. E OR (3/0 WA)
Lactarius deliciosus sp. WA (2/0) WA iNat #34443307
MH038154.1 Lactarius deliciosus sp. E OR (2/0 WA)
Lactarius deliciosus sp. WA iNat #18082986
MN906110.1 Lactarius cf chelidonium SDR ENAx4 iNat+MO
L. deliciosus var. olivaceosordidus #2 OR EF685058
JN652954.1 (3/0 from both var olivaceosordidus #1+#2
L. sp Nuytinck OR (red milk) aff olivaceosordidus (4/1 from #1, 5/0 from #2) EF685086
MF954993.1 Lactarius cf aestivus Whistler
MF954997.1 Lactarius cf deliciosus Vancouver
MF954998.1 Lactarius torminosus F17313 (error?)
Lactarius deliciosus sensu H+S (3/0) OR (iNat 17457318)
EF685095 Lactarius cf deterrimus CA (type EU)
KJ769673 Lactarius cf deliciosus WA
L. deliciosus sensu H&S consensus WA (=var olivaceosordidus #1 WA) EF685059
L. deliciosus sensu H&S consensus WA (=var olivaceosordidus #1 WA) EF685059
0.01