

**Table S1.** Accession number and information of reference isolates retrieved from GenBank used in phylogenetic analyses.

Species	Strain	Substrate/host	Location	ITS-rDNA
<i>Achroiostachys betulincola</i>	CBS 136397	<i>Betula lutea</i>	Canada	KU845792
<i>Ac. betulincola</i>	CBS 1363401	<i>Triticum aestivum</i>	USA	KU845794
<i>Ac. aurantispora</i>	DAOMC 225565	Straw	Thailand	KU845804
<i>Ac. humicola</i>	CBS 868.73	Unknown	Turkey	KU845779
<i>Ac. humicola</i>	CBS 317.72	Soil	Nederland	KU845797
<i>Ac. levigata</i>	CBS 185.79	Soil	Sudan	KU845805
<i>Ac. phyllophilus</i>	CBS 136181	Plant debris	Spain	KU845807
<i>Ac. saccharicola</i>	CBS 268.76	<i>Saccharum officinarum</i>	Taiwan	KU845808
<i>Aspergillus flavus</i>	CBS 126855	Unknown	Brazil	MH864264
<i>As. niger</i>	CBS 122.55	Unknown	Switzerland	MH857405
<i>C. asperulum</i>	CBS 582.71IT	Soil	Argentina	LN850960
<i>C. cylindricum</i>	UAMH 1348ET	Sorghum seed	USA	LN850965
<i>C. dendrocephalum</i>	CBS 528.85IT	Cultivated soil	Iraq	LN850966
<i>C. guizhouense</i>	CGMCC 3.18330	Air	China	NG_069509
<i>C. gorgonifer</i>	CBS 368.53	Treated wood	South Africa	LN850976
<i>C. hinnuleum</i>	CBS 289.66T	Dung of deer	Australia	LN850985
<i>C. inflatum</i>	HHAUF160201	Soil	China	MF448349
<i>C. laeve</i>	CGMCC 3.18329	limestone	China	NR_154864
<i>C. lignatile</i>	CBS 209.63T	Timber in cave	Belgium	KY249269
<i>C. microsporum</i>	CBS 523.63ET	Wheat field soil	Germany	LN850967
<i>C. nanum</i>	CBS 191.61ET	Dung of deer	UK	LN850969
<i>C. oligotrophicum</i>	CGMCC 3.18328	limestone	China	NR_154863
<i>C. purpureofuscum</i>	CBS 174.68	<i>Zea mays</i> , grain	Unknown	KY249281
<i>C. stemonitis</i>	CBS 103.19NT	Seed	Netherlands	LN850951
<i>C. telluricum</i>	CBS 336.32T	Soil	Cyprus	KY249287
<i>C. tenuissimum</i>	CBS 127792T	Soil	USA	KY249286
<i>C. verrucisporum</i>	CBS 512.72	Agricultural soil	Netherlands	KY249289
<i>Myrmecidium aquaticum</i>	S 1158	Submerged wood	China	MK828656
<i>M. banksiae</i>	CBS 132536	Banksia leaf litter	USA	NR_111762
<i>M. dactyliidis</i>	CBS 148281	<i>Dactylis glomerata</i>	Netherlands	NR_175226
<i>M. flexuosum</i>	CBS 398.76	Soil	China	NR_146238
<i>M. fluviae</i>	CNUFC YR61-1	Fresh water	South Korea	NR_164555
<i>M. hiemale</i>	CBS 141017	Soil	Austria	NR_155370
<i>M. iridis</i>	CBS 139917	leaves of Iris	Netherland	KR476777
<i>M. junci</i>	CPC 41032	<i>Juncus effusus</i>	Netherland	OK664725
<i>M. juncicola</i>	CBS 148316	<i>Juncus effusus</i>	Netherland	NR_175228
<i>M. juncigenum</i>	CPC 40970	Dead culm	Netherland	OK664735
<i>M. montsegurinum</i>	JF 13180	Unknown	Czech Republic	KT991674
<i>M. obovoidium</i>	HGUP 0314	Mycelia	China	KC136140
<i>M. phragmiticola</i>	CPC 36367	<i>Phragmites australi</i>	Ukraine	NR_170826
<i>M. phragmitis</i>	CBS 131311	<i>Phragmites australi</i>	Ukraine	JQ044425
<i>M. pulvericola</i>	DAOM 250405	House dust	Uruguay	NR_155382
<i>M. sambuci</i>	CPC 39959	<i>Sambucus nigra</i>	Netherland	OK664707
<i>M. schulzeri</i>	FMR_12424	Grass leaves	Spain	KY853451
<i>M. schulzeri</i>	CBS 156.63	<i>Homo sapiens</i>	Netherland	EU041771
<i>M. schulzeri</i>	CBS 134.68	Soil	Germany	EU041770
<i>M. schulzeri</i>	CBS 325.74	<i>Triticum aestivum</i>	Netherland	EU041775
<i>M. schulzeri</i>	Dzf10	Unknown	China	EU543253
<i>M. sorbicola</i>	CBS 143433	<i>Sorbus aucuparia</i>	Germany	MH107901
<i>M. spartii</i>	CPC 24953	<i>Spartium junceum</i>	Spain	KR611884
<i>M. thailandicum</i>	CPC 21694	Reed	Thailand	KF777169

**Table 2. (Continued).**

Species	Strain	Substrate/host	Location	ITS-rDNA
<i>Periconia algeriana</i>	CBS 321.79	Unknown	Algeria	MH861212
<i>P. aquatica</i>	MFLUCC 16-0912	Submerged wood	China	KY794701
<i>P. atropurpurea</i>	CBS 381.55	Unknown	Mozambique	MH857524
<i>P. byssoides</i>	MFLUCC 17-2292	<i>Peltophorum</i> sp.	Thailand	MK347751
<i>P. caespitosa</i>	LAMIC 110 16	Unknown	Brazil	MH051906
<i>P.chimonanthei</i>	KUMCC 20-0266	Unknown	China	NG_081512
<i>P. circinata</i>	CBS 263.37	Unknown	UK	MH855906
<i>P. citlaltepetlensis</i>	IOM 325319.1	<i>Citlaltepetl Glacier</i>	Mexico	MH890645
<i>P. citlaltepetlensis</i>	IOM 325319.2	<i>Volcanic Glacier</i>	Mexico	MT649221
<i>P. cortaderiae</i>	MFLUCC 15-0457	<i>Cortaderia</i> sp.	Thailand	KX965732
<i>P. cookei</i>	MFLUCC 17-1399	Submerged wood	China	MG333490
<i>P. cyperacearum</i>	CPC 32138	Cyperaceae	Australia	NG_064549
<i>P. didymosporum</i>	MFLU 15-0058	Unknown	Thailand	KP761734
<i>P. digitata</i>	CBS 510.77	Salt-ash mud	Kuwait	LC014584
<i>P. elaeidis</i>	MFLUCC 170087	<i>Elaeis guineensis</i>	Thailand	MG742713
<i>P. epilithographicola</i>	CBS 144017	Unknown	Costa Rica	NR_157477
<i>P. genistae</i>	CBS 322.79	Unknown	Algeria	MH861213
<i>P. homothallica</i>	KT 916	<i>Phragmites japonica</i>	Japan	AB809645
<i>P. ignaria</i>	CBS 379.86	Unknown	Japan	CBS 379.86
<i>P. ignaria</i>	CBS 298.66	Unknown	South Africa	MH858798
<i>P. ignaria</i>	CBS 45.96		China	FJ795494
<i>P. lateralis</i>	CBS 292.36	Unknown	USA	MH855804
<i>P. macrospinosa</i>	CBS 135663	<i>Festuca vaginata</i>	Hungary	KP183999
<i>P. minutissima</i>	MFLUCC 15-0245	Unknown	China	KY794707
<i>P. neobrittanica</i>	CPC 37903	leaves	USA	NR_166344
<i>P. prolifica</i>	CBS 209.64	Unknown	USA	MH858422
<i>P. pseudobyssoides</i>	H4151	<i>Rodgersia podophylla</i>	Japan	LC014587
<i>P. pseudodigitata</i>	KT1395	<i>Phragmites australis</i>	Japan	LC014591
<i>P. salina</i>	MFLU 19-1235	Unknown	Thailand	MN047086
<i>P. sahariana</i>	CBS 320.79	Unknown	Algeria	MH861211
<i>P. submersa</i>	MFLUCC 16-1098	Submerged wood	China	KY794702
<i>P. thailandica</i>	MFLUCC 17-0065	<i>Declaying bamboo</i>	Thailand	KY753889
<i>P. thysanolaenae</i>	KUMCC 20-0262	<i>Thysanolaena latifolia</i>	China	NR_176751
<i>P. variicolor</i>	SACCR-64	Unknown	Puerto Rico	DQ336713
<i>P. verrucosa</i>	MFLUCC 17-2158	<i>Clematis viticella</i>	Belgium	NG_070659