Supplementary Materials

Table S1. Identification of all fungal isolates retrieved in this study.

Isolate	Sample	Culture Medium	Isolate ID	Similarity (%)	Accession Nr.	Reference Sequence(s)	Notes
PL001	L1	PDA	*Cladosporium tenuissimum*	–	–	–	b
PL002	L1	PDA	*Hansfordia pulvinata*	99	OP315770	KP772241.1	a
PL003	L1	CZ	*Cladosporium tenuissimum*	99,6	OP359020	NR_119855.1	a
PL004	L1	DG18	*Penicillium brevicompactum*	–	–	–	b
PL005	L1	DG18	*Cladosporium tenuissimum*	–	–	–	b
PL006	L2	CZ	*Epicoccum nigrum*	99,6	OP315769	MF509753.1	a
PL007	L2	CZ	*Aspergillus fumigatus*	–	–	–	b
PL008_A	L2	CZ	*Cladosporium herbarum*	–	–	–	b
PL008_B	L2	CZ	*Cladosporium floccosum*	100	OP315759	MN313285.1	a
PL009	L2	CZ	–	–	–	–	e
PL010	L2	CZ	–	–	–	–	e
PL011	L2	CZ	*Parengyodontium album*	–	–	–	b
PL012	L2	CZ	–	–	–	–	e
PL013	L2	DG18	**UnID 3**	–	–	–	d
PL014	L2	DG18	*Penicillium brevicompactum*	–	–	–	b
PL015	L2	DG18	*Cladosporium sphaerospermum*	–	–	–	b
PL016	L2	DG18	*Cladosporium sphaerospermum*	–	–	–	b
PL017	L2	PDA	*Cladosporium sphaerospermum*	–	–	–	b
PL018	L2	PDA	*Aspergillus fumigatus*	–	–	–	b
PL019	L2	PDA	*Parengyodontium album*	–	–	–	b
PL020	L2	MEA+NaCl 10%	*Parengyodontium album*	–	–	–	b
PL021	L2	MEA+NaCl 10%	*Penicillium brevicompactum*	–	–	–	b
PL022	L2	RB	*Parengyodontium album*	100	OP315768	JQ781846.1	a
PL023	L2	RB	*Penicillium brevicompactum*	–	–	–	b
PL024	L2	HM NaCl 10% pH6	*Cladosporium cladosporioides*	100	OP315758	MT466517.1	a

PL025	L2	HM NaCl 10% pH6	*Penicillium brevicompactum*	–	–	–	b
PL026	L2	HM NaCl 10% pH6	*Parengyodontium album*	–	–	–	b
PL027	L2	HM NaCl 10% pH6	*Arthrinium marii*	99,5	OP315752	KX611002.1	a
PL028	L3	RB	*Phlebiopsis gigantea*	99,8	OP315779	MF476067.1	a, c
PL029	L3	RB	*Penicillium echinulatum*	100	OP381494	CBS 317.48	a
PL030	L3	RB	*Cladosporium psychrotolerans*	99,8	OP315763	MF473224.1	a
PL031	L3	RB	*Penicillium corylophilum*	99,8	OP315776	MF475910.1	a
PL032	L3	RB	*Cladosporium cladosporioides*	–	–	–	b
PL033	L3	RB	*Cladosporium sphaerospermum*	–	–	–	b
PL034	L3	RB	**UnID 1**	–	–	–	d
PL035	L3	PDA	*Penicillium olsonii*	100	OP315777	MW077708.1	a
PL036	L3	PDA	–	–	–	–	e
PL037	L3	PDA	*Aspergillus fumigatus*	–	–	–	b
PL038	L3	PDA	*Cladosporium dominicanum*	98,6	OP315761	MF472969.1	a
PL039	L3	PDA	*Parengyodontium album*	–	–	–	b
PL040	L3	PDA	*Cladosporium sphaerospermum*	–	–	–	b
PL041	L3	MEA+NaCl 10%	*Parengyodontium album*	–	–	–	b
PL042	L3	MEA+NaCl 10%	**UnID 2**	–	–	–	d
PL043	L3	MEA+NaCl 10%	*Neophysalospora eucalypti*	99,8	OP315771	MN161925.1	a
PL044	L3	MEA+NaCl 10%	*Cladosporium sphaerospermum*	–	–	–	b
PL045	L3	MEA+NaCl 10%	**UnID 2**	–	–	–	d
PL046	L3	MEA+NaCl 10%	*Toxicocladosporium irritans*	99,6	OP315791	MH063028.1	a
PL047	L3	CZ	*Cladosporium sphaerospermum*	99,8	OP315764	MT733840.1	a
PL048	L3	CZ	*Parengyodontium album*	–	–	–	b
PL049	L3	CZ	*Cladosporium cladosporioides*	–	–	–	b
PL050	L3	HM NaCl 10% pH6	**UnID 3**	–	–	–	d
PL051	L3	HM NaCl 10% pH6	*Parengyodontium album*	–	–	–	b
PL052	L3	HM NaCl 10% pH6	*Circumfusicillium cavernae*	–	–	–	b
PL053_A	L3	HM NaCl 10% pH6	*Acremonium charticola*	–	–	–	b
PL053_B	L3	HM NaCl 10% pH6	*Alternaria infectoria*	–	–	–	b

PL054	L3	HM NaCl 10% pH6	*Cladosporium tenuissimum*	–	–	–	b
PL055	L3	HM NaCl 10% pH6	*Cladosporium tenuissimum*	–	–	–	b
PL056	L4	RB	*Cladosporium sphaerospermum*	–	–	–	b
PL057	L4	RB	*Parengyodontium album*	–	–	–	b
PL058	L4	PDA	*Cladosporium cladosporioides*	–	–	–	b
PL059	L4	PDA	*Parengyodontium album*	–	–	–	b
PL060	L4	MEA+NaCl 10%	*Parengyodontium album*	–	–	–	b
PL061	L5	HM NaCl 10% Ph6	*Cladosporium tenuissimum*	–	–	–	b
PL062	L4	HM NaCl 10% pH6	*Parengyodontium album*	–	–	–	b
PL063	L5	PDA	*Stachybotrys chartarum*	99,8	OP315789	AF081468.2	a
PL064	L5	PDA	*Cladosporium* sp.	–	–	–	b
PL065	L5	PDA	*Aspergillus fumigatus*	–	–	–	b
PL066	L4	DG18	*Cladosporium sphaerospermum*	–	–	–	b
PL067	L5	CZ	*Cladosporium tenuissimum*	–	–	–	b
PL068	L5	CZ	*Aspergillus fumigatus*	–	–	–	b
PL069	L5	CZ	*Alternaria infectoria*	99,7	OP315753	KT898627.1	a
PL070	L5	RB	*Aspergillus fumigatus*	–	–	–	b
PL071	L5	MEA+NaCl 10%	*Aspergillus fumigatus*	–	–	–	b
PL072	L5	MEA+NaCl 10%	–	–	–	–	e
PL073	L5	MEA+NaCl 10%	*Aspergillus fumigatus*	–	–	–	b
PL074	L5	PDA	**UnID 4**	–	–	–	d
PL075	L5	DG18	*Cladosporium tenellum*	99,8	OP315766	MH205932.1	a
PL076	L5	DG18	–	–	–	–	e
PL077	L4	DG18	*Parengyodontium album*	–	–	–	b
PL078	L4	RB	*Parengyodontium album*	–	–	–	b
PL079	L4	CZ	*Aspergillus fumigatus*	100	OP315755	KX090325.1	a
PL080	L4	CZ	*Parengyodontium album*	–	–	–	b
PL081	L3	HM NaCl 10% pH6	**UnID 5**	–	–	–	d
PL082	L3	PDA	*Parengyodontium album*	100	OP315773	JQ781846.1	a
PL083	L3	RB	–				e

PL084	L3	DG18	*Cladosporium dominicanum*	–	–	–	b
PL085	L3	DG18	*Cladosporium cladosporioides*	–	–	–	b
PL086	L3	MEA+NaCl 10%	*Parengyodontium album*	–	–	–	b
PL087	L3	MEA+NaCl 10%	*Parengyodontium album*	–	–	–	b
PL088	L3	CZ	*Cladosporium sphaerospermum*	–	–	–	b
PL089	L3	CZ	*Parengyodontium album*	–	–	–	b
PL090	L2	PDA	*Parengyodontium album*	–	–	–	b
PL091	L2	PDA	–	–	–	–	e
PL092	L2	PDA	*Parengyodontium album*	–	–	–	b
PL093	L2	MEA+NaCl 10%	*Parengyodontium album*	–	–	–	b
PL094	L2	MEA+NaCl 10%	*Parengyodontium album*	–	–	–	b
PL095	L2	MEA+NaCl 10%	*Parengyodontium album*	–	–	–	b
PL096	L2	HM NaCl 10% pH6	*Penicillium brevicompactum*	100	OP315774	MF687191.1	a
PL097	L2	HM NaCl 10% pH6	–	–	–	–	e
PL098	L2	RB	*Parengyodontium album*	–	–	–	b
PL099	L2	RB	*Microascus cirrosus*	99,8	OP315772	LN850763.1	a
PL100	L1	DG18	*Cladosporium ramotenellum*	99,6	OP315765	MF473247.1	a
PL101	L1	DG18	*Aspergillus conicus*	98,6	OP315754	OW985408.1	a
PL102	L2	DG18	*Parengyodontium album*	–	–	–	b
PL103	L2	DG18	*Talaromyces purpureogenus*	99,8	OP315790	KY977598.1	a
PL104	L2	MEA+NaCl 10%	–	–	–	–	e
PL105	L2	MEA+NaCl 10%	*Acremonium charticola*	99,6	OP315750	MT786421.1	a
PL106	L2	PDA	*Acremonium charticola*	–	–	–	b
PL107	L2	RB	*Cyphellophora olivaceae*	99,3	OP315767	OW988160.1	a
PL108	L3	DG18	*Parengyodontium album*	–	–	–	b
PL109	L3	DG18	*Toxicocladosporium irritans*	–	–	–	b
PL110	L3	RB	Teratosphaeriaceae	–	–	–	b
PL111	L3	CZ	Teratosphaeriaceae	–	–	–	b
PL112	L3	CZ	Teratosphaeriaceae	–	–	–	b
PL113	L3	MEA+NaCl 10%	*Ustilago cynodontis*	99,2	OP315792	ON182024.1	a, c

PL114	L4	CZ	–	–	–	–	e
PL115	L5	CZ	*Microscypha* sp.	98,6	OP339492	MT535809.1	a
PL116	L5	PDA	*Aspergillus fumigatus*	–	–	–	b
PL117	L2	DG18	*Parengyodontium album*	–	–	–	b
PL118	L2	DG18	*Parengyodontium album*	–	–	–	b
PL119	L2	DG18	*Parengyodontium album*	–	–	–	b
PL120	L2	DG18	*Circumfusicillium cavernae*	99,3	OP315757	MT012540.1	a
PL121	L2	DG18	*Talaromyces purpureogenus*	–	–	–	b
PL122	L2	DG18	–	–	–	–	e
PL123	L3	DG18	*Aspergillus conicus*	–	–	–	b
PL124	L4	DG18	*Parengyodontium album*	–	–	–	b
PL125	L4	DG18	*Aeminium ludgeri*	99,8	OP339490	MG938054.1	a
PL126	L5	DG18	*Acremonium alternatum*	–	–	–	b
PL127	L3	DG18	**UnID 6**	–	–	–	d
PL128	L1	DG18	*Alternaria alternata*	99,8	OP315751	MT786421.1	a
PL129	L5	DG18	*Acremonium alternatum*	98,8	OP315718	NR_144913.1	a
PL130	L5	DG18	*Acremonium alternatum*	–	–	–	b
PL131	L5	DG18	*Acremonium alternatum*	–	–	–	b
PL132_A	L4	RB	**UnID 7**	–	–	–	d
PL132_B	L4	RB	**UnID 7**	–	–	–	d

UnID - Unidentified isolate.

[a] Morphological analysis in accordance with the molecular hypothesis.

[b] Consensus identification obtained based on culture and morphological characteristics.

[c] Identification based solely on molecular data.

[d] No consensus identification obtained. Under further molecular and morphological characterization.

[e] Filamentous *Actinobacteria*.

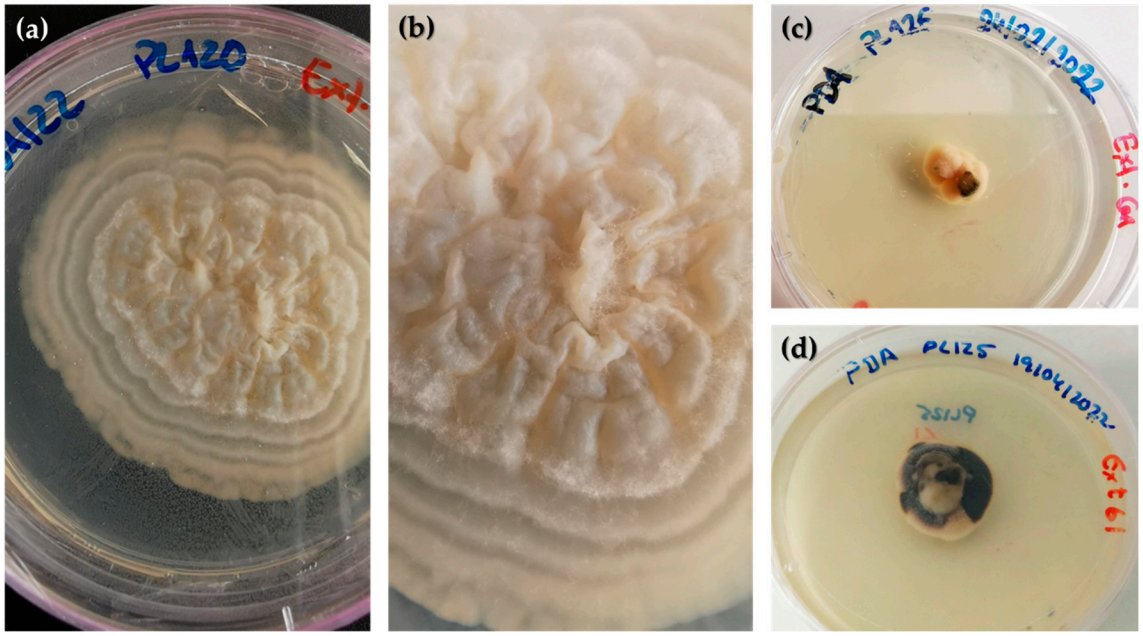


Figure S1. Isolates of two newly described species (**a**) *Circumfusicillium cavernae* (*Bionectriaceae*), (**b**) *C. cavernae* colony in detail and (**c**) *Aeminium ludgeri (Aeminiaceae)*, (**d**) *A. ludgeri* colony appearance after starting maturing, on PDA, first described in deteriorated limestone in Coimbra (Portugal) and isolated in the present study [63,64].