

Revision of the culture of *Acremonium berkeleyanum* CBS 501.81 and its comparison with *Sphaerostilbella berkeleyana*

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Supplementary Table 1. List of ITS rDNA sequences collected in GenBank and used in maximum likelihood analysis with host and geographic origin information.

Original taxonomic assignment (publication or GenBank)	Strain/isolate/clone	Accession number ITS	Accession number TEF	Geographic origin	Source/Host	Reference
<i>Cosmospora aquatica</i> clade:						
<i>Cosmospora aquatica</i>	MFLUCC 13-0884	MK828671		China	submerged wood	Luo et al. 2019
<i>Cosmospora aquatica</i>	MFLUCC 16-0939	MK828672		China	submerged wood	Luo et al. 2019
<i>Cosmospora arxii</i> clade:						
<i>Cosmospora arxii</i>	A.R. 4521	JN995621	KJ676338	France	<i>Hypoxyylon</i> cf. <i>howeanum</i>	Schoch et al. 2012, Herrera 2014
<i>Cosmospora</i> sp.	CBS 125810	MH863735		Switzerland	<i>Hypoxyylon fragiforme</i> , on <i>Fagus</i> sp.	Vu et al. 2019
<i>Cosmospora arxii</i>	CBS 748.69	NR_145062		Germany	<i>Hypoxyylon</i> sp.	Lombard et al. 2015
' <i>Pseudocosmospora vilior</i> '	CIRM-BRFM 1572	PV108525		Ukraine		Navarro et al. 2025, unpublished
' <i>Pseudocosmospora vilior</i> '	CIRM-BRFM 1577	PV108530		Ukraine		Navarro et al. 2025, unpublished
<i>Cosmospora</i> sp.	CIRM-BRFM 1585	PV108538		France	parasited fungi	Navarro et al. 2025, unpublished
<i>Cosmospora</i> sp.	CIRM-BRFM 1729	PV108663		France		Navarro et al. 2025, unpublished
<i>Cosmospora</i> sp.	CIRM-BRFM 1743	PV108677		France		Navarro et al. 2025, unpublished
<i>Cosmospora</i> sp.	CIRM-BRFM 1759	PV108692		France		Navarro et al. 2025, unpublished
<i>Cosmospora arxii</i>	E.R.D. 9302	OP070951			<i>Hypoxyylaceae</i> indet.	Rubio & Pintos (https://www.centrodeestudiosmicológicosasturianos.org/)
<i>Cosmospora arxii</i>	G.J.S. 10-247	JN995629	KC291843	USA	<i>Hypoxyylon fragiforme</i>	Schoch et al. 2012, Herrera 2014
<i>Cosmospora arxii</i>	iNaturalist # 23155660	ON245252		USA		Russell (https://ecuador.inaturalist.org/observations/23155660)
<i>Cosmospora arxii</i>	N1_T16	MH935039		Switzerland	<i>Fraxinus excelsior</i> , asymptomatic, surface-sterilised leaf	Schlegel et al. 2018
<i>Cosmospora butyri</i> clade:						
' <i>Cosmospora viridescens</i> '	32514aDRJ	MF782760		Poland	<i>Salix fragilis</i> , cavity of <i>Picus viridis</i>	Jankowiak et al. 2019
<i>Cosmospora</i> sp. 1	32814bDRJ	MF782759		Poland	<i>Salix fragilis</i> , cavity of <i>Picus viridis</i>	Jankowiak et al. 2019
<i>Cosmospora 'berkeleyana'</i>	CBS 122.70	MH859514		USA	raw milk	Vu et al. 2019
<i>Cosmospora butyri</i>	CBS 301.38	MW827605		Denmark	butter	Crous et al. 2021
<i>Cosmospora</i> sp. 1	IMI 362240	KJ676169	KJ676371		stem tissue of <i>Vitis</i>	Herrera et al. 2015
<i>Cosmospora viridescens</i>	IRNHM-CVOT1	KM433836		Iran	elm tree	Hashemi et al. 2017
<i>Cosmospora coccinea</i> clade:						
<i>Cosmospora coccinea</i>	A.R. 2741, CBS 114050	HM484537	HM484515	Germany	<i>Inonotus nodulosus</i> , dead crust, on fallen branch of <i>Fagus sylvatica</i>	Chaverri et al. 2011
<i>Cosmospora coccinea</i>	A.R. 2743	KJ676141	KJ676335	Germany	<i>Inonotus nodulosus</i>	Herrera et al. 2015
<i>Cosmospora coccinea</i>	BSI 19/62	MW677584		Switzerland	<i>Fagus sylvatica</i>	Senn-Irlet et al. 2021

<i>Cosmospora coccinea</i>	CBS 341.70	HQ897827	KM231947	Germany	<i>Inonotus nodulosus</i> , hymenium, on <i>Fagus sylvatica</i>	Gräfenhan et al. 2011
<i>Cosmospora coccinea</i>	CBS 343.70	MH859704		Germany	<i>Inonotus radiatus</i> , hymenium, on <i>Alnus</i> sp.	Vu et al. 2019
<i>Cosmospora coccinea</i>	CBS 841.70	MH859973		Germany	<i>Inonotus radiatus</i>	Vu et al. 2019
<i>Cosmospora coccinea</i>	CIRM-BRFM 1575	PV108528		Ukraine		Navarro et al. 2025, unpublished
<i>Cosmospora cylindricospora</i> lineage:						
<i>Cosmospora cylindricospora</i>	KUN-HKAS 125785	OP876700		China	submerged decaying wood	Bao et al. 2023
<i>Cosmospora cymosa</i> clade:						
<i>Cosmospora cymosa</i>	CBS 258.70	MH859596		Germany	<i>Inonotus radiatus</i> , on <i>Alnus glutinosa</i>	Vu et al. 2019
<i>Cosmospora cymosa</i>	CBS 762.69	NR_111605	KM231948	Germany	decaying <i>Inonotus radiatus</i>	Schoch et al. 2014
<i>Cosmospora 'berkeleyana'</i>	CBS 763.69	MH859419		Germany	old <i>Inonotus obliquus</i>	Vu et al. 2019
<i>Cosmospora fomiticola</i> lineage:						
<i>Cosmospora fomiticola</i>	G.J.S. 83-194, CBS 137813	KJ676158	KJ676355	New Zealand	<i>Fomes fomentarius</i>	Herrera et al. 2015
<i>Cosmospora inonoticola</i> lineage:						
<i>Cosmospora inonoticola</i>	HMAS 271401	NR_171931		China	<i>Inonotus</i> sp.	Zeng & Zhuang 2016
<i>Cosmospora lavitskæ</i> agg.:						
Uncultured fungus clone	3993_429	MW214970		Lithuania	rhizosphere	Marčiulyrienė et al. 2021
<i>Cosmospora</i> sp.	40790-7W-1K-Fdi	PV156973		Canada	seeds of <i>Pseudotsuga menziesii</i> var. <i>glauca</i>	Feau et al., unpublished
<i>Acremonium</i> sp.	Acremon32 03 18 05	KU987904				Suhr et al. 2017
<i>Cosmospora 'butyri'</i>	ATCC 52620	JQ070093		USSR	soil	Gujjari et al., unpublished
<i>Cosmospora 'butyri'</i>	BC1580	MH971260		USA	<i>Brachygybe lecontii</i> millipede	Macias et al. 2019
<i>Cosmospora 'berkeleyana'</i>	BCK224	PV073922		USA	<i>Frangula alnus</i>	Franke et al. 2025
<i>Cosmospora lavitskæ</i>	CBS 123961	KJ676150	KJ676345	USA	unidentified black pyrenomycete	Herrera et al. 2015
<i>'Acremonium domschii'</i>	CBS 213.70	MH859570		Poland	<i>Fomitopsis pinicola</i>	Vu et al. 2019 (Gräfenhan et al. 2011 as <i>Cosmospora</i> sp.)
<i>Cosmospora 'berkeleyana'</i>	CBS 233.70	MH859579		Germany	<i>Bulgaria inquinans</i>	Vu et al. 2019
<i>Cosmospora lavitskæ</i>	CBS 234.70	OQ429539		Poland	<i>Fomes fomentarius</i>	Hou et al. 2023
<i>Cosmospora lavitskæ</i>	CBS 235.70	OQ429538		Germany	<i>Inonotus radiatus</i>	Hou et al. 2023
<i>Cosmospora lavitskæ</i>	CBS 239.70	OQ429537		Germany	<i>Trametes versicolor</i>	Hou et al. 2023
<i>'Acremonium domschii'</i>	CBS 385.70A	MH859746		Poland	<i>Fomitopsis pinicola</i>	Vu et al. 2019
<i>Cosmospora lavitskæ</i>	CBS 501.81	PX232797	PX353433	Netherlands	<i>Stereum hirsutum</i>	this study
<i>Cosmospora lavitskæ</i>	CBS 530.68		MW834271	Ukraine	plant debris	Crous et al. 2021
<i>Cosmospora</i> sp.	CF-164359	PV835085		South Africa	oak leaf litter	Serrano et al. 2025
<i>Cosmospora</i> sp.	CIRM-BRFM 1737	PV108671		France		Navarro et al. 2025, unpublished
<i>Cosmospora</i> sp.	CIRM-BRFM 1739	PV108673		France		Navarro et al. 2025, unpublished
<i>Cosmospora lavitskæ</i>	CNUFC TKB240	OK285197		South Korea	freshwater	Nguyen et al. 2022
<i>Fusarium</i> sp. ('vilior')	D131 119	KJ921909		USA, Japan	<i>Cornus</i> sp., phyllosphere	Miller et al. 2016

<i>Cosmospora 'butyri'</i>	DK8-7	KP893887		Korea	indoor air of greenhouse for shiitake cultivation	Ahn et al. 2016
<i>Cosmospora lavitskae</i>	F18	PX108372		China	soil	Zhang, unpublished
<i>'Pseudocosmospora vilior'</i>	F61	GU067755		Finland	<i>Picea abies</i> stump	Vasaitis et al. 2016
<i>'Cosmospora vilior'</i>	Guardbridge14	GU726751		United Kingdom	wood samples	Pearman et al. 2010
<i>'Cosmospora vilior'</i>	Guardbridge20	GU726755		United Kingdom	wood samples	Pearman et al. 2010
<i>Cosmospora 'berkeleyana'</i>	HD4-3-4	LC718465		Japan	<i>Elateroides dermestoides</i> , adult mycetangium	Toki 2023
<i>Cosmospora lavitskae</i>	HMAS 252477	KU563624		China	on xylariaceous fungus	Zeng & Zhuang 2016
<i>Cosmospora 'berkeleyana'</i>	IHEM 03150	OW983055		Belgium	<i>Fagus sylvatica</i> , dead leaf of beech	Becker, direct submission
<i>Cosmospora lavitskae</i>	IMI 133984	KJ676167	KJ676369	Ukraine	on undescribed plant substrate	Herrera et al. 2015
<i>Cosmospora lavitskae</i>	IWWIF064	OK623453		South Korea	public drinking water facilities on island area	Cho & Park, direct submission
<i>Cosmospora lavitskae</i>	K.A.S. 1105	KJ676172		Canada	on woodpile	Herrera et al. 2015
<i>Cosmospora</i> sp.	NO 14-1-M	OK173746		USA		Otto et al. 2021
<i>Cosmospora lavitskae</i>	NW-FVA7095	OP023262		Germany	<i>Fraxinus excelsior</i> stem collar wood chips	Peters et al. 2023
<i>Cosmospora</i> sp.	Sib5-9-7	KX100348		Russia, Siberia	wood	Blanchette et al. 2016
<i>Acremonium</i> sp.	YJ75	MN511358		South Korea	sawdust medium of <i>Lentinula edodes</i>	Kim et al. 2019
<i>Cosmospora</i> sp. 1 marked sequences:						
<i>Cosmospora viridescens</i>	CBS 102433	KJ676148	KJ676343	Czech Republic	<i>Tilia</i> sp., dead tree	Herrera et al. 2015
<i>Cosmospora 'berkeleyana'</i>	CBS 497.67	MH859041		United Kingdom	dung of rabbit	Vu et al. 2019
<i>Acremonium</i> sp.	HUA1	KJ777534				Sun & Jiang 2017
<i>Cosmospora viridescens</i>	IRNHM-CVOT1-1	KU058393		Iran	elm tree	Hashemi et al. 2017
<i>Cosmospora</i> sp. 2 clade:						
Uncultured fungus clone	3313A7	KF617333		Alaska	<i>Picea mariana</i> forest soil mineral horizon	Taylor et al. 2014
<i>Cosmospora</i> sp.	414 02-E	MK163750		Greenland	wood	Pedersen et al. 2020
<i>'Acremonium</i> cf. <i>curvulum'</i>	CBS 100551	KM231818		Italy	<i>Olea europaea</i>	Lombard et al. 2015
<i>Cosmospora viridescens</i>	CBS 102430	KJ676147	KJ676342	Czech Republic	<i>Picea abies</i> , dead standing trunk	Herrera et al. 2015
<i>Cosmospora 'berkeleyana'</i>	CBS 133.56	MH857543		unknown	<i>Xylaria polymorpha</i>	Vu et al. 2019
<i>Cosmospora</i> sp.	isolate 1	KJ702026		Finland	<i>Populus tremula</i> : <i>Saperda carcharias</i> infested wood	Linnakoski et al. 2018
<i>Cosmospora</i> sp.	Sib5-4-1	KX100349		Russia, Siberia	wood	Blanchette et al. 2016
<i>'Cosmospora vilior'</i>	ToB.7	FJ824628		Sweden	<i>Ips typographus</i>	Persson et al. 2009
<i>'Pseudocosmospora vilior'</i>	Z1	KT896634		Finland	<i>Picea abies</i> , phoretic mite on <i>Ips typographus</i>	Linnakoski et al. 2016
<i>Cosmospora viridescens</i> s. str.:						
<i>Nectria</i> sp.	06VT10	JX270397		USA	soil from bat hibernaculum	Lorch et al. 2013
<i>Cosmospora viridescens</i>	4 7 4 1	KM044068		Switzerland	<i>Picea abies</i>	Bont et al., unpublished
<i>Cosmospora viridescens</i>	A.R. 2783	KJ676142	KJ676336	Denmark	bone	Herrera et al. 2015
<i>Cosmospora</i> sp.	AFCN604	LC085189		Antarctica	moss	Hirose et al. 2016

<i>Cosmospora viridescens</i>	CBS 152411	PQ484120		Poland	<i>Abies alba</i> , resin	Czachura & Janik 2025
<i>Cosmospora 'berkeleyana'</i>	CBS 382.70B	MH859742		Germany	<i>Picea abies</i> , wood	Vu et al. 2019
<i>Cosmospora 'berkeleyana'</i>	CBS 382.70C	MH859743		Canada	soil under <i>Thuja plicata</i>	Vu et al. 2019
<i>Cosmospora 'berkeleyana'</i>	CBS 492.67	MH859038		United Kingdom	<i>Betula</i> sp.	Vu et al. 2019
<i>Cosmospora viridescens</i>	CCMG4412	MH790411		Antarctica	soil, moss, bird feces, feathers	Albores et al. 2018
<i>Cosmospora viridescens</i>	IMI 73377a	KJ676171	KJ676373	United Kingdom	<i>Ruzenia spermoides</i>	Herrera et al. 2015
<i>Cosmospora</i> sp.	LW30	MH128193		Antarctica	<i>Colobanthus quitensis</i> root-associated soil	Wentzel et al. 2019
<i>Cosmospora viridescens</i>	SM13-8-1-6	MN905775		USA		Held et al. 2020
' <i>Cosmospora vilior</i> '	UFMGCB 5399	HQ533792		Antarctica	lake	Gonçalves et al. 2012

Single sequences:

<i>Cosmospora 'berkeleyana'</i>	CBS 121.70	MH859513		USA	not given	Vu et al. 2019
<i>Cosmospora butyri</i>	IRAN 4322C	PP153528		Iran	leaf necrosis	Bashiri & Abdollahzadeh 2024

Outgroup taxa:

<i>Stylonectria corniculata</i>	CBS 125491	HQ897829		Germany	unidentified ascomycete on <i>Carpinus</i> sp.	Gräfenhan et al. 2011
<i>Cylindrodendrum album</i> var. <i>paralium</i>	CBS 301.83	KM231764	KM231889	Canada	<i>Fucus distichus</i>	Lombard et al. 2015