	Sequence name	Accesion number (16S rRNA)	Accesion number (16S-23S rRNA ITS)	Location/Culture collection	Authors (direct submission)
1	Gloeobacter violaceus	FR798924	_	Italy: Firenze, Villa La Pietra	Cuzman et al. 2010
2	Gloeobacter violaceus	AF132791	_	Culture collection PCC 8015	Turner et al. 1999
3	Pseudanabaena sp.	AB039019	_	Culture collection PCC 7403	Ishida et al. 2001
4	Phormidium mucicola	AB003165	_	_	Ishida et al. 2001
5	Limnothrix sp.	AJ580008	AJ580008	Netherlands: Lake Loosdrecht	Zwart et al. 2003
6	Pseudanabaena catenata	AB039020	_	Culture collection PCC 7408	Ishida et al. 2001
7	Pseudanabaena sp.	LC016774	_	Japan: Shiga, Lake Biwa	Niiyama et al. 2016
8	Pseudanabaena catenata	KM020005	_	Culture collection SAG 1464-1	Friedl et al. 2014
9	Pseudanabaena catenata	LC016777	_	Culture collection SAG 254	Niiyama et al. 2016
10	Limnothrix sp.	GU935351	GU935351	Germany: drinking water reservoir	Schumann et al. 2010
11	Pseudanabaena minima	HQ132935	HQ132935	USA: Lower Calf Creek Falls, GSE	Bohunicka et al. 2011
12	Pseudanabaena minima	KM386847	KM386847	Wuhan: Lake Donghu	Yu 2014
13	Limnothrix redekei	AJ580007	AJ580007	Germany: Lake Edebergsee	Zwart et al. 2003
14	Trichocoleus desertorum	KF307617	KF307617	Chile: Coastal soil near La Serena	Muhlsteinova et al. 2014
15	Trichocoleus desertorum	KF307618	KF307618	Chile: Coastal soil near La Serena	Muhlsteinova et al. 2014
16	Trichocoleus desertorum	KF307606	KF307606	Chile: Atacama Desert near Chanaral	Muhlsteinova et al. 2014
17	Trichocoleus desertorum	KF307605	KF307605	Chile: Atacama Desert near Chanaral	Muhlsteinova et al. 2014
18	Leptolyngbya scottii	KC463191	_	Southern Africa: Soil Crusts	Dojani et al. 2013
19	Trichocoleus desertorum	KF307609	KF307609	USA: Joshua Tree National Park, Desert soil	Muhlsteinova et al. 2014
20	Tildeniella torsiva	KY498228	KY498228	Slovakia: limestone wall	Grana et al. 2017
21	Tildeniella torsiva	KY498227	KY498227	Slovakia: limestone wall	Grana et al. 2017
22	Jaaginema geminatum	KM019979	_	Culture collection SAG 1459-8	Friedl et al. 2014
23	Leptolyngbya sp.	HM217045	_	Portugal	Lopes et al. 2012

24	Toxifilum mysidocida	KX375342	_	USA: Nueces River, Texas, mysid rearing tank	Zimba et al. 2016
25	Thermoleptolyngbya sp.	FM210757	FM210757	Italy: Euganean thermal mud	Moro et al. 2008
26	Thermoleptolyngbya sp.	FM210758	FM210758	Culture collection PCC 8501	Moro et al. 2008
27	Leptolyngbya sp.	AB668059	_	Japan: Hotspring	Yoon et al. 2011
28	Leptolyngbya sp.	AP017367	_	Japan: Hotspring	Yoon et al. 2011
29	Leptolyngbya frigida	AY493574	AY493643	Antarctic	Taton et al. 2006
30	Pegethrix indistincta	KY078765	KY078765	USA: Lower Calf Creek Falls, GSE	Mai et al. 2018
31	Pegethrix indistincta	KY078766	KY078766	USA: Lower Calf Creek Falls, GSE	Mai et al. 2018
32	Pegethrix convoluta	KY078763	KY078763	USA: Lower Calf Creek Falls, GSE	Mai et al. 2018
33	Leptolyngbya schmidlei	HQ132937	HQ132937	USA: Lower Calf Creek Falls, GSE	Bohunicka et al. 2011
34	Pegethrix bostrychoides	KY078769	KY078769	USA: Drip Tank, Straight Cliff formation, GSE	Mai et al. 2018
35	Pegethrix bostrychoides	KY078768	KY078768	USA: Drip Tank, Straight Cliff formation, GSE	Mai et al. 2018
36	Kaiparowitsia implicata	KY078777	KY078777	USA: Camp Spring Site, Kaiparowitz Plateau, GSE	Mai et al. 2018
37	Kaiparowitsia implicata	KY078776	KY078776	USA: Camp Spring Site, Kaiparowitz Plateau, GSE	Mai et al. 2018
38	Kovacikia muscicola	KU161669	KU161669	USA: Hawaii, Waikapalae Cave wall	Miscoe et al. 2016
39	Kovacikia muscicola	KU161670	KU161670	USA: Hawaii, Waikapalae Cave wall	Miscoe et al. 2016
40	Pantanalinema rosaneae	HM105583	HM105583	Brazil: Brazilian Pantanal, saline-alkaline lake	Fiore et al. 2015
41	Pantanalinema rosaneae	KF246501	KF246501	Brazil: Brazilian Pantanal, saline-alkaline lake	Fiore et al. 2015
42	Chroakolemma opaca	MF685885	MF685885	Mexico: Soil Crust from Semidesert	Becerra-Absalon et al. 2018
43	Chroakolemma pellucida	MF685893	MF685893	Mexico: Soil Crust from Semidesert	Becerra-Absalon et al. 2018
44	Onodrimia javanensis	MG000962	MG000962	Malaysia,Taman Jaya: hot water	Jahodarova et al. 2017

				spring in the rainforest	
45	Onodrimia javanensis	MG000960	MG000960	Malaysia,Taman Jaya: hot water spring in the rainforest	Jahodarova et al. 2017
46	Onodrimia javanensis	MG000961	MG000961	Malaysia,Taman Jaya: hot water spring in the rainforest	Jahodarova et al. 2017
47	Leptolyngbya frigida	AY493577	AY493649	Antarctic	Taton et al. 2006
48	Leptolyngbya frigida	AY493576	AY493654	Antarctic	Taton et al. 2006
49	Stenomitos sp.	EF654082	AM398973	Culture collection SAG 37.90	Pietrasiak et al. 2008
50	Leptolyngbya sp.	KR137608	_	Atlantic forest: phyllosphere	Andreote et al. 2015
51	Leptolyngbya sp.	KR137593	_	Atlantic forest: phyllosphere	Andreote et al. 2015
52	Scytolyngbya timoleontis	KP688588	KP688588	China: Xishui River	Song et al. 2015
53	Scytolyngbya timoleontis	KP688589	KP688589	China: Xishui River	Song et al. 2015
54	Khargia iranica	MK839155	MK839155	Iran, Persian Gulf, Kharg island: rain water basin	Rasouli-Dogaheh et al. 2019
55	Khargia iranica	MK839156	MK839156	Iran, Persian Gulf, Kharg island: rain water basin	Rasouli-Dogaheh et al. 2019
56	Khargia italica	MK839154	MK839154	Culture collection CCALA 945	Rasouli-Dogaheh et al. 2019
57	Pseudanabaena sp.	MK751588	_	India: Ahmednagar, Maharashtra	Thorat et al. 2019
58	Oscillatoriales cyanobacterium	MH683781	_	_	Wubulikasimu et al. 2018
59	Leptolyngbya sp.	FJ933259	_	USA, Yellowstone National Park: hot springs, cone forming mats	Bosak et al. 2009
60	Leptolyngbya sp.	KC182752	_	USA, Yellowstone National Park: microbial mat	Reyes et al. 2013
61	Uncultured cyanobacterium	FJ885896	_	USA,Yellowstone National Park: mesothermic microbial mats	Ross et al. 2009
62	Uncultured cyanobacterium	FJ885782	_	USA,Yellowstone National Park: mesothermic microbial mats	Ross et al. 2009
63	Leptolyngbya sp.	MT488150	MT488150	_	Wang 2020

64	Leptolyngbya sp.	MT488097	MT488097	_	Wang 2020
65	Leptolyngbya sp.	MT488149	MT488149	_	Wang 2020
66	Leptolyngbya sp.	MT488151	MT488151	_	Wang 2020
67	Leptolyngbya sp.	MT488098	MT488098	_	Wang 2020
68	Alkalinema pantanalense	KF246497	KF246497	Brazil: saline-alkaline lake	Andreote et al. 2014
69	Alkalinema pantanalense	KF246495	KF246495	Brazil: saline-alkaline lake	Andreote et al. 2014
70	Phormidesmis priestleyi	AY493579	AY493641	Antarctic	Taton et al. 2006
71	Phormidesmis priestleyi	AY493578	AY493640	Antarctic	Taton et al. 2006
72	Geitleribactron purpureum	KT819293	_	Italy, Lake Tovel: limestone cobble, deep epilithon	Mares 2015
73	Geitleribactron purpureum	KT819294	_	Italy, Lake Tovel: limestone cobble, deep epilithon	Mares 2015
74	Leptolyngbya tenerrima	AF218368	EF429287	Canada	Casamatta et al. 2005
75	Leptolyngbya boryana	ALVM01000010	_	Culture collection PCC 6306	Shih et al. 2013
76	Leptolyngbya boryana	LT600738	_	Culture collection CCALA 1076	Aleksovski et al. 2016
77	Leptolyngbya boryana	LC215287	_	Culture collection NIES-2135	Yamaguchi et l. 2017
78	Arthronema africanum	KM019913	_	Culture collection SAG 1.89	Friedl et al. 2014
79	Leptolyngbya boryana	EF429291	EF429291	Culture collection UTEX B 485	Johansen et al. 2011
80	Leptolyngbya boryana	EF429290	EF429290	Culture collection PCC 6306	Johansen et al. 2011
81	Leptolyngbya boryana	EF429292	EF429292	Culture collection UTEX B 487	Johansen et al. 2011
82	Leptolyngbya corticola	EF429299	EF429299	Culture collection CCALA 085	Johansen et al. 2011
83	Limnolyngbya circumcreta	KR697756	KR697764	China	Li et al. 2015
84	Limnolyngbya circumcreta	KR697753	KR697761	China	Li et al. 2015
85	Limnolyngbya circumcreta	KR697751	KR697759	China	Li et al. 2015
86	Limnothrix redekei	AJ505943	_	Greece, Macedonia: Lake Kastoria	Gkelis et al. 2002
87	Limnothrix planctonica	LT600739	_	Culture collection CCALA 10031	Aleksovski et al. 2016
88	Limnothrix planctonica	JQ004026	_	China	Zhu et al. 2012
89	Limnothrix planctonica	KP726239	KP726239	Lake Kinneret phytoplankton	Kaplan-Levy et al. 2016
90	Limnothrix sp.	KM438179	KM438179	Greece: Platistomo spring	Bravakos et al. 2014

91	Prochlorothrix hollandica	KM019980	_	Culture collection SAG 10.89	Friedl et al. 2014
92	Prochlorothrix hollandica	AM709625	_	Culture collection SAG 10.90	Marin et al. 2007
93	Pinocchia polymorpha	KP640613	KP640613	Viet Nam: plankton and periphyton	Dvorak et al. 2015
94	Pinocchia polymorpha	KP640607	KP640607	Viet Nam: plankton and periphyton	Dvorak et al. 2015
95	Halomicronema sp.	DQ058860	_	Microbial mat	Allen et al. 2005
96	Halomicronema sp.	AF320093	_	Egypt, Sinai: Solar Lake	Abed et al. 2002
97	Nodosilinea sp.	LN849926	_	Himalaya: SW Tibetan Plateau, biological soil	Capkova et al. 2015
98	Nodosilinea sp.	LT600742	_	Himalaya: SW Tibetan Plateau, biological soil	Capkova et al. 2015
99	Leptolyngbya cf. foveolarum	KF417643	_	Culture collection SAG 2413	Brinkmann et al. 2013
100	Nodosilinea nodulosa	KF307598	KF307598	Culture collection UTEX 2910	Muhlsteinova et al. 2014
101	Nodosilinea sp.	KX859298	_	Mexico: subaerial biofilm from stone monument	Vazquez-Martinez et al. 2018
102	Phormidium etoshii	KC014068	_	Namibia	Dadheech et al. 2013
103	Phormidium cf. terebriformis	AY575936	_	Kenyan and Indian waterbodies	Ballot et al. 2004
104	Desertifilum tharense	FJ158997	FJ159001	India: Thar Desert	Dadheech et al. 2012
105	Desertifilum tharense	FJ158994	FJ158998	India: Thar Desert	Dadheech et al. 2012
106	Moorea bouillonii	FJ147302	_	_	Engene & Gerwick 2008
107	Moorea producens	EU315909	_	_	Simmons et al. 2007
108	Lyngbya majuscula	AY599502	_	Panama: Bocas del Toro, Isla Bastimentos	Flatt et al. 2005
109	Coelosphaerium sp.	LC151466	LC151466	Japan: Shimane, Lake Shinji	Godo et al. 2017
110	Snowella litoralis	AJ781039	_	Finland: Lake Tuusulanjarvi	Rajaniemi et al. 2006
111	Geitlerinema carotinosum	AY423710	AY423710	_	Gutu et al. 2003
112	Geitlerinema pseudacutissimum	JQ712617	JQ347245	Italy: Lake Monbino	Hašler et al. 2012
113	Crinalium magnum	AB115965	_	Culture collection SAG 34.87	Chaw et al. 2003
114	Crinalium epipsammum	AB115964	AB115964	_	Gutu et al. 2003

115	Acaryochloris sp.	AM710386	_	Czech Republic: Brezova, freshwater reservoir	Jezberova 2006
116	Albertania skiophila	MH030274	MH030274	Malta: rock surface	Zammit et al.
117	Annamia toxica	HQ658457	_	Viet Nam: Hoamy Reservoir	Nguyen et al. 2013
118	Aphanocapsa muscicola	KP890779	_	_	Silambarasan & Kathiresan 2015
119	Aphanocapsa sp.	EU249123	_	Bahamas: Highborne Cay	Foster et al. 2009
120	Aphanocapsa salina	KM020007	_	Culture collection SAG 33.79	Friedl et al. 2014
121	Arthronema africanum	AB115966	_	Culture collection SAG 12.89	Chaw et al. 2003
122	Arthronema gygaxiana	AF218370	_	Canada: Lake of Bays	Casamatta et al. 2005
123	Arthrospira maxima	AF260509	_	Culture collection UTEX LB 2720	Li et al. 2000
124	Caldora penicillata	KF746600	_	Curaçao, Porto Marie	Engene et al. 2015
125	Cephalothrix komarekiana	KJ994514	KJ994514	Brazil: Pantanal: alkaline lake	da Silva Malone et al. 2015
126	Coelomoron pusillum	KJ746507	_	Romania: fishpond	Mituletu et al. 2014
127	Coleofasciculus chthonoplastes	EF654055	EF654055	Culture collection SAG 2209	Siegesmund et al. 2007
128	Coleofasciculus chthonoplastes	EF654060	EF654060	Culture collection SAG 2209	Siegesmund et al. 2008
129	Drouetiella fasciculata	KY078770	KY078770	USA: Lower Calf Creek Falls, GSE	Mai et al. 2018
130	Geitlerinema cf. acuminatum	EU196627	EU196650	Culture collection CCALA 141	Lokmer et al. 2007
131	Geitlerinema splendidum	JQ712599	JQ347227	Italy: Lake Tovel	Hašler et al. 2012
132	Haloleptolyngbya alcalis	JN712770	JN712771	Kenya: Lake Nakuru	Dadheech et al. 2012
133	Halomicronema hongdechloris	JX089399	_	Australia: Shark Bay	Chen et al. 2012
134	Hydrocoleum lyngbyaceum	EU249124	_	Bahamas: Highborne Cay	Foster et al. 2009
135	Hydrocoleum glutinosum	GU238276	_	Indian Ocean: Mayotte, Comoros Islands	Palinska et al. 2009
136	Jaaginema homogeneum	GQ859646	_	West Africa: Lower Senegal River basin	Thomazeau et al. 2010
137	Jaaginema sp.	KM438182	KM438182	Greece: Apolon spring	Bravakos et al. 2014
138	Jaaginema sp.	KM438189	KM438189	Greece: Platistomo spring	Bravakos et al. 2014

139	Johansenia constricta	KJ140087	_	Epipelic species in muddy sediments, in freshwater	Hašler et al. 2014
140	Kastovskya adunca	KF312344	KF312344	Culture collection CCALA 1025	Muhlsteinova et al. 2014
141	Komarkovaea angustata	KY078775	KY078775	Puerto Rico, El Yunque National Forest: waterfalls	Mai et al. 2018
142	Laspinema thermale	MF360988	MF360988	Iran: hot spring	Heidari et al. 2018
143	Leptolyngbya antarctica	AY493572	_	Antarctic	Taton et al. 2006
144	Leptolyngbya sp.	AY239593	_	USA: Sevilleta LTER, New Mexico	Payne & Johansen 2003
145	Leptolyngbya crispata	AY239598	_	USA: Sevilleta LTER, New Mexico	Payne & Johansen 2003
146	Leptolyngbya sp.	DQ786166	DQ786166	Costa Rica: Las Lilas hot stream, cyanobacterial mat	Finsinger & Hess 2006
147	Leptolyngbya sp.	EU249120	_	Bahamas: Highborne Cay	Foster et al. 2009
148	Leptolyngbya sp.	EU249128	_	Bahamas: Highborne Cay	Foster et al. 2009
149	Leptolyngbya sp.	HM018684	HM018684	USA, Fort Irwin, California: desert soil	Casamatta et al. 2010
150	Leptolyngbya sp.	KC463189	_	Southern Africa: soil crusts	Dojani et al. 2013
151	Leptolyngbya sp.	KC463200	_	Southern Africa: soil crusts	Dojani et al. 2014
152	Leptolyngbya sp.	KP681566	_	_	Grouzdev et al. 2015
153	Leptolyngbyaceae cyanobacterium	KU161656	KU161656	USA, Puerto Rico, El Yunque N.F: waterfall wet wall	Miscoe et al. 2015
154	Leptolyngbya sp.	KY421911	_	India, Karimpur: arsenic contaminated rice field soil	Debnath & Bhadury 2017
155	Leptolyngbyaceae cyanobacterium	KY078757	KY078757	USA: Henville Creek Seep Wall site 2, GSE	Mai et al. 2018
156	Limnococcus limneticus	GQ375048	_	Czech Republic, Svet: eutrophic freshwater fishpond	Komarkova et al. 2009
157	Limnothrix cf. redekei	KF417655	_	Germany, Harz Mountains: freshwater	Brinkmann et al. 2013
158	Cf. Leptolyngbya sp.	DQ431005	_	Greenland: hot spring	Roeselers et al. 2007

159	Cf. Leptolyngbya sp.	DQ431004	_	Greenland: hot spring	Roeselers et al. 2008
160	Leptolyngbya sp.	EU249119	_	Bahamas: Highborne Cay	Foster et al. 2009
161	Leptolyngbya sp.	EU586736	_	_	Rehakova et al. 2008
162	Leptolyngbya sp.	FM177494	_	Italy, Umbria: Lake Trasimeno	Mugnai et al. 2008
163	Leptolyngbya subtilissima	KC463197	_	Southern Africa: soil crusts	Dojani et al. 2013
164	Leptolyngbya sp.	KF246502	_	Brazil: saline-alkaline lake	Andreote et al.2014
165	Leptolyngbya sp.	KJ939100	KJ939100	USA, Joshua Tree National Park: granitic desert soil	Osorio-Santos et al. 2014
166	Leptolyngbya sp.	KR137596	_	Brazil, Picinguaba: phyllosphere	Fiore et al. 2015
167	Leptolyngbyaceae cyanobacterium	KY078759	KY078759	USA: Big Horn Seep by cattle tank, Mt. Carmel Formation, GSE	Mai et al. 2018
168	Leptolyngbyaceae cyanobacterium	KY078761	KY078761	USA: White Oak Sink, GSE	Mai et al. 2018
169	Lyngbya martensiana	JN854141	_	Guatemala: from Lake Atitlan	Komarek et al. 2011
170	Merismopedia glauca	AJ781044	_	Italy: Bubano Basin	Rajaniemi et al. 2006
171	Merismopedia sp.	KY379855	KY379855	Southern Baltic Coast: Eutrophic Coastal Lagoon	Albrecht et al. 2017
172	Merismopedia tenuissima	MF680039	MF680076	Freshwater	Shen et al. 2017
173	Microseira wollei	KM077454	_	North-eastern Australia	McGregor & Sendall 2015
174	Oculatella ucrainica	MG652618	MG652618	Ukraine: growths on the soil with mosses	Vinogradova et al. 2017
175	Oscillatoriales cyanobacterium	KF307599	KF307599	USA, Laie Falls, Oahu, Hawaii: waterfall	Muhlsteinova et al. 2014
176	Oscillatoria princeps	MG255283	MG255283	Culture collection CCALA 1115	Muehlsteinova et al. 2018
177	Oscillatoria duplisecta	AM398647	_	Italy, Veneto, Euganean Thermal Springs: thermal mud	Moro et al. 2007
178	Oxynema thaianum	JF729323	JF729323	Culture collection CCALA 960	Chatchawan et al. 2012
179	Pannus brasiliensis	KF668649	KF668649	Brazil, Mato Grosso do Sul State: greenish biofilm	Malone et al. 2014
180	Persinema komarekii	MF348313	MF348313	Iran: hot spring	Heidari et al. 2018

181	Phormidium lumbricale	AF218375	_	Culture collection UTCC 476	Casamatta et al. 2005
182	Phormidium murrayi	DQ493872	_	Arctic and Antarctic	Comte et al. 2007
183	Phormidium irriguum	FN813342	FN813339	Italy: thermal spring	Sciuto et al. 2012
184	Phormidium sp.	JQ692233	_	Greece: Francthi cave	Lamprinou et al. 2012
185	Planktothricoides raciborskii	AB045960	_	Culture collection NIES-207	Suda et al. 2002
186	Planktothrix pseudagardhii	AB045968	_	Thailand:Bangkok	Suda et al. 2002
187	Planktolyngbya limnetica	KF487299	_	India: water	Sharathchandra et al. 2013
188	Planktothrix agardhii	LC096264	_	Culture collection NIES-205	Yamaguchi et al. 2015
189	Plectolyngbya hodgsonii	AY493583	AY493644	Antarctic	Taton et al. 2006
190	Pleurocapsa minor	AJ344564	_	Culture collection SAG 4.99	Fewer et al. 2002
191	Pseudocapsa sp.	LC325262	_	Japan, Okinawa: a side surface of a concrete bench	Suda et al. 2017
192	Pseudanabaena sp.	LT600740	_	Culture collection CCAP 1464/3	Aleksovski et al. 2016
193	Pseudanabaena sp.	AB039016	_	Culture collection PCC 6802	Ishida et al. 2001
194	Pseudanabaena sp.	FR798944	_	Spain, Granad: green biofilm inside the basin	Cuzman et al. 2010
195	Stenomitos tremulus	AF218371	_	Culture collection UTCC 471	Casamatta et al. 2005
196	Radiocystis sp.	AM710389	_	Czech Republic, Stankovsky rybnik: freshwater reservoir	Jezberova 2006
197	Romeria aff. gracilis	HM217057	_	Portugal: temperate estuaries	Lopes et al. 2012
198	Romeria sp.	JQ819251	JQ819251	Hula Nature Reserve	Alster 2012
199	Schizothrix sp.	EU445293	_	Marine	Engene et al. 2008
200	Snowella sp.	MF680055	_	Finland: Mertalampi	Shishido et al. 2017
201	Stenomitos rutilans	KF417430	KF417430	USA: Kauai, Hawaii, Waikapalae Cave	Miscoe et al. 2016
202	Symploca sp.	GQ402025	_	Australia	Bolhuis et al. 2010
203	Symplocastrum flechtnerii	KF312349	_	USA: desert soil with crusts	Muhlsteinova et al. 2014
204	Synechocystis aquatilis	FM177503	_	Italy, Umbria: Lake Trasimeno	Mugnai et al. 2008

205	Synechocystis sp.	FM177504	_	Italy, Umbria: Lake Trasimeno	Mugnai et al. 2008
206	Synechocystis sp.	GQ375043	_	Culture collection CCALA 700	Komarkova et al. 2010
207	Synechocystis minuscula	KM019989	KT354197	Culture collection SAG 258.80	Friedl et al. 2014
208	Tapinothrix clintonii	HQ132936	HQ132936	Culture collection CCALA 940, UTEX B2962	Bohunicka et al. 2011
209	Thermoleptolyngbya sp.	MF360792	MF360792	Iran: hot spring	Heidari et al. 2018
210	Timaviella obliquedivisa	KY078772	KY078772	USA: Big Horn Seep by cattle tank, Mt. Carmel Formation, GSE	Mai et al. 2018
211	Timaviella circinata	LT634149	LT634152	Italy: rock surface in the Giant Cave	Sciuto et al. 2012
212	Trichocoleus sociatus	EF654080	_	Culture collection SAG 26.92	Siegesmund et al. 2008
213	Trichocoleus desertorum	KF307616	KF307616	USA, alluvial fan of Clark Mountains: desert soil	Muhlsteinova et al. 2014
214	Uncultured bacterium isolate	EF126276	_	Indonesia, Sulawesi: mesophilic terrestrial mat	O'Neill et al. 2006
215	Uncultured bacterium isolate	EF126282	_	Indonesia, Sulawesi: mesophilic terrestrial mat	O'Neill et al. 2006
216	Uncultured bacterium isolate	FJ885984	_	Yellowstone National Park mesothermic microbial mats	Ross et al. 2009

Table S1. Information of sequences within the dataset

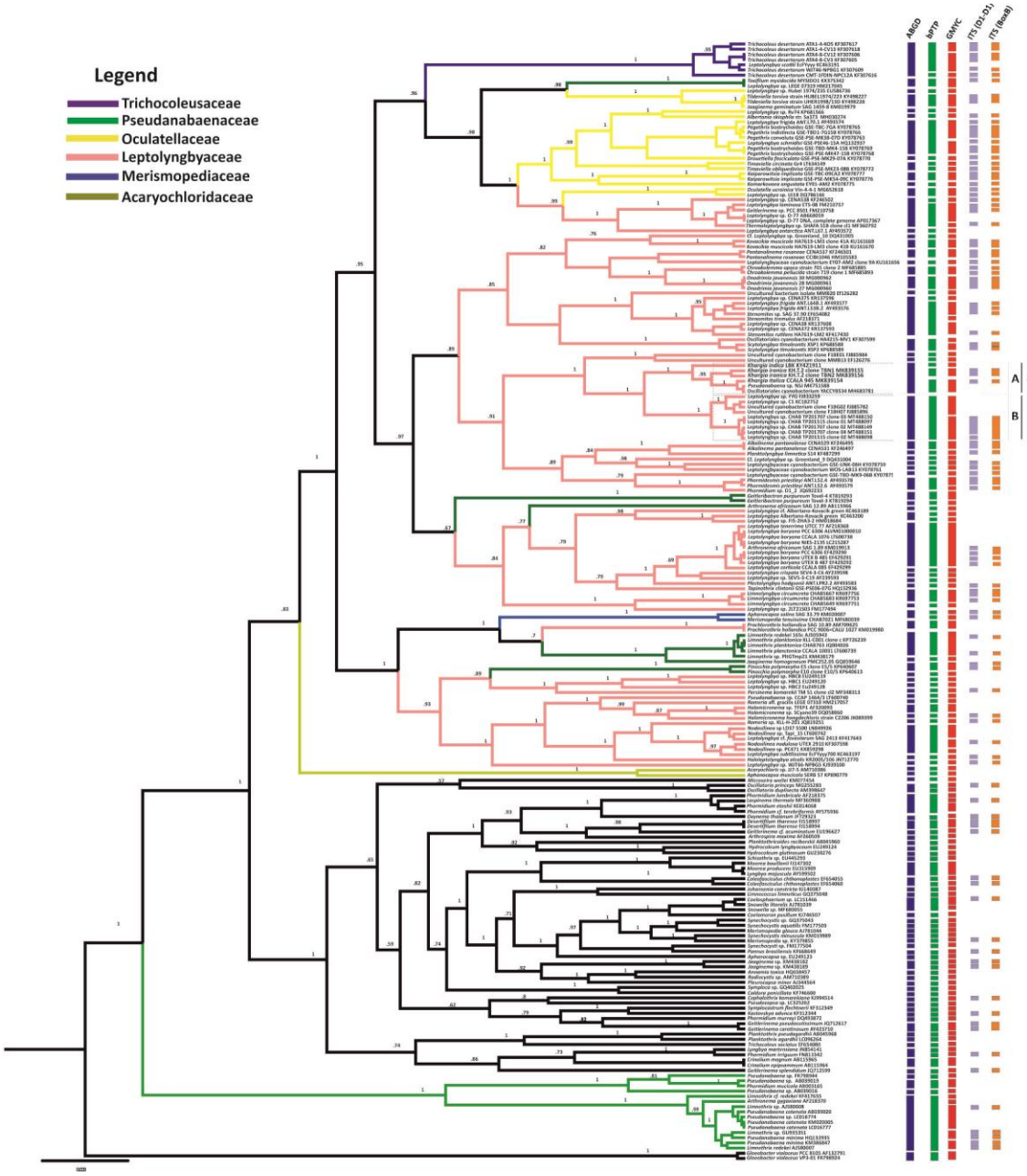

Fig. S1. Phylogenetic tree of 216 sequences of the 16S rRNA gene reconstructed using Beast. The support values illustrate Bayesian posterior probabilities. Each column on the right shows a different species delimitation method, and every single rectangle indicates a separate species. The legend shows the families belong to the order Synechococcales.