

Supplementary Material S1. Mixed-strain cultures of cyanobacteria isolated from BLC.

Table S1. Mixed-strain cultures of cyanobacteria isolated from BLC samples from China. Genera in the table are the predominant genera in the mixed culture (assessment based on visual inspection); genera in bold denote the strains used in the PCR analyses. CTs: cyanotoxins analysed in each culture.

China										
SAMPLE NAME	GP1	GP2	GP3	GP4	GP5	GP6	GP7	GP8	GP9	GP10
GENERA	<i>Nostoc</i> <i>Nostoc</i>	<i>Nostoc</i>	<i>Nostoc</i>	<i>Nostoc</i> <i>Leptolyngbya</i>	<i>Leptolyngbya</i> <i>Chlorogloeopsis</i>	<i>Leptolyngbya</i> <i>Nostoc</i> <i>Chlorogloeopsis</i>	<i>Leptolyngbya</i> <i>Calothrix</i>	<i>Leptolyngbya</i> <i>Nostoc</i>	<i>Leptolyngbya</i> <i>Tolypothrix</i> <i>Trichormus</i>	cf. <i>Mojavia</i>
CTs	MCs	MCs	MCs	MCs	MCs	MCs	MCs	MCs	MCs	MCs

SAMPLE NAME	GP11	GP12	GP13	GP14	GP15	GP16	GP17	GP18	GP19	GP20
GENERA	<i>Nostoc</i> <i>Leptolyngbya</i>	<i>Leptolyngbya</i> <i>Nostoc</i>	<i>Nostoc</i>	<i>Nostoc</i>	<i>Nostoc</i> <i>Leptolyngbya</i>	<i>Leptolyngbya</i> <i>Nostoc</i>	<i>Leptolyngbya</i> <i>Chlorogloeopsis</i>	<i>Leptolyngbya</i>	<i>Leptolyngbya</i> <i>Chlorogloeopsis</i>	<i>Chlorogloeopsis</i>
CTs	MCs	MCs	MCs	MCs	MCs	MCs	MCs	MCs	MCs	MCs

SAMPLE NAME	LR1	LR2	LR3	LR4	LR5	LR6	LR7	LR8	LR9	LR10
GENERA	<i>Leptolyngbya</i>	<i>Leptolyngbya</i> <i>Symploca</i>	n.d.	<i>Symploca</i> <i>Leptolyngbya</i>	<i>Nostoc</i> <i>Symploca</i>	<i>Nostoc</i>	<i>Symploca</i> <i>Nostoc</i>	<i>Desmonostoc</i>	<i>Leptolyngbya</i> <i>Nostoc</i>	<i>Chlorogloeopsis</i> <i>Leptolyngbya</i>
CTs	MCs	MCs	MCs	MCs	MCs	MCs	MCs	MCs	MCs	MCs

*table continues

SAMPLE NAME	LR11	LR12	LR13	LR14	MC1	MC2	MC3	MC4	MC5	MC6
GENERA	<i>Nostoc Leptolyngbya Chroococcus</i>	<i>Leptolyngbya Nostoc</i>	<i>Nostoc Leptolyngbya Chlorogloeopsis</i>	<i>Nostoc Chlorogloeopsis</i>	<i>cf. Mojavia</i>	<i>Nostoc Symploca</i>	<i>Leptolyngbya</i>	<i>Leptolyngbya Nostoc</i>	<i>Nostoc</i>	<i>Nostoc Leptolyngbya Tolypothrix</i>
CTs	MCs	MCs	MCs	MCs	MCs CYN	MCs CYN	MCs CYN	MCs CYN	MCs CYN	MCs CYN

SAMPLE NAME	MC7	MC8	MC9	MC10	MC11	MC12	LP1	LP2	LP3	LP4
GENERA	<i>Nostoc Leptolyngbya Tolypothrix</i>	<i>Nostoc Leptolyngbya Tolypothrix</i>	<i>Nostoc Leptolyngbya Tolypothrix</i>	<i>Nostoc Leptolyngbya Tolypothrix</i>	<i>Nostoc Leptolyngbya Tolypothrix</i>	<i>Nostoc Tolypothrix</i>	<i>Leptolyngbya Nostoc</i>	<i>Nostoc</i>	<i>Nostoc Trichormus</i>	<i>Trichormus</i>
CTs	MCs CYN	MCs CYN	MCs CYN	MCs CYN	MCs CYN	MCs CYN	MCs	MCs	MCs	MCs

SAMPLE NAME	LP5	LP6	LP7	LP8	XFU	XFU1	XFU3	ZJ1	ZJ2	ZJ3
GENERA	<i>cf. Mojavia</i>	<i>Leptolyngbya Nostoc cf. Mohavia</i>	<i>Leptolyngbya Nostoc cf. Mohavia</i>	<i>Nostoc</i>	<i>Nostoc Scytonema Calothrix</i>	<i>Leptolyngbya Symploca Nostoc</i>	<i>Tolypothrix</i>	<i>Leptolyngbya Nostoc</i>	<i>Leptolyngbya</i>	<i>Scytonema</i>
CTs	MCs	MCs	MCs	MCs	MCs	MCs	MCs	MCs CYN	MCs CYN	MCs CYN

SAMPLE NAME	ZJ4	ZJ5	ZJ6	ZJ7	ZJ8	ZJ9
GENERA	<i>Nostoc</i> <i>Leptolyngbya</i> <i>Scytonema</i>	<i>Leptolyngbya</i>	<i>Nostoc</i>	<i>Nostoc</i>	<i>Symploca</i>	<i>Nostoc</i>
CTs	MCs CYN	MCs CYN	MCs CYN	MCs CYN	MCs CYN	MCs CYN

Table S1.2. Mixed-strain cultures of cyanobacteria isolated from BLC samples from Iran. Genera in the table are the predominant genera in the mixed culture (assessment based on visual inspection); genera in bold denote the strains used in the PCR analyses. CTs: cyanotoxins analysed in each culture.

Iran											
SAMPLE NAME	IRN1A	IRN1B	IRN2	IRN3	IRN4	IRN5A	IRN5B	IRN5C	IRN5D	IRN5E	IRN5F
GENERA	<i>Tolypothrix</i>	<i>Nostoc</i> <i>Leptolyngba</i>	<i>Nostoc</i>	<i>Nostoc</i>	<i>Nostoc</i> <i>Trichormus</i>	<i>Nostoc</i> <i>Nostoc</i>	<i>Leptolyngbya</i> <i>Nostoc</i>	<i>Leptolyngbya</i> <i>Scytonema</i>	<i>Nostoc</i>	<i>Chlorogloeopsis</i>	<i>Chlorogloeop.</i>
CTs	MCs CYN	MCs CYN	MCs CYN	MCs CYN	MCs CYN	MCs CYN	MCs CYN	MCs CYN	MCs CYN	MCs CYN	MCs CYN

SAMPLE NAME	IRN5G	IRN5H	IRN5I	IRN5J	IRN5K	IRN6	IRN7	IRN8	IRN9A	IRN9B
GENERA	<i>Desmonostoc</i>	<i>Nostoc</i>	<i>Desmonostoc</i> <i>Nostoc</i>	<i>Leptolyngbya</i> <i>Tolypothrix</i> <i>Chlorogloeopsis</i>	<i>Desmonostoc</i>	<i>Leptolyngbya</i> <i>Nostoc</i> <i>Pseudophormidium</i>	<i>Leptolyngbya</i> <i>Scytonema</i>	<i>Nostoc</i>	<i>Chlorogloeopsis</i>	<i>Nostoc</i>
CTs	MCs CYN	MCs CYN	MCs CYN	MCs CYN	MCs CYN	MCs	MCs	MCs	MCs	

Table S1.3. Mixed-strain cultures of cyanobacteria isolated from BLC samples from Serbia. Genera in the table are the predominant genera in the mixed culture (assessment based on visual inspection); genera in bold denote the strains used in the PCR analyses. CTs: cyanotoxins analysed in each culture.

Serbia									
SAMPLE NAME	SSS1	SSS2	SSS4	SSS5	R1	R3	R4	R5	R6
GENERA	<i>Leptolyngbya</i> <i>Nostoc</i>	<i>Nostoc</i> <i>Leptolyngbya</i>	<i>Nostoc</i>	<i>Nostoc</i> <i>Symplocastrum</i>	<i>Nostoc</i> <i>Chlorogloeopsis</i>	<i>Nostoc</i> <i>Chlorogloeopsis</i>	<i>Scytonema</i> <i>Nostoc</i>	<i>Nostoc</i> <i>Chlorogloeop.</i>	<i>Scytonematopsis</i> <i>Symplocastrum</i>
CTs	MCs	MCs	MCs	MCs	MCs	MCs	MCs	MCs	MCs
SAMPLE NAME	M1	M2	LES1	LES2	LES3	LES4	LES5	LES6	LES7
GENERA	<i>Leptolyngbya</i> <i>Nostoc</i>	<i>Nostoc</i>	<i>Chroococidiopsis</i>	<i>Nostoc</i>	<i>Scytonema</i> <i>Nostoc</i>	<i>Scytonema</i> <i>Chroococcus</i> <i>Nostoc</i>	<i>Nostoc</i> <i>Scytonema</i>	<i>Scytonema</i> <i>Nostoc</i>	<i>Leptolyngbya</i> <i>Nostoc</i>
CTs	MCs	MCs	MCs STX GTX2/3	MCs STX GTX2/3	MCs STX GTX2/3	MCs STX GTX2/3	MCs STX GTX2/3	MCs STX GTX2/3	MCs STX GTX2/3
SAMPLE NAME	LES8	V	SL	R2	LES5-1	TLP VIL	SSSu	RUMA	IRIG

GENERA	<i>Nostoc Leptolyngbya</i>	<i>Leptolyngbya Oculatella</i>	<i>Nostoc Pseudanabaen a</i>	<i>Nostoc Scytonema</i>	<i>Scytonema</i>	<i>Chroococcus</i> <i>Nostoc</i>	<i>Leptolyngbya</i> <i>Nostoc</i>	<i>Chlorogloeopsis</i> <i>Leptolyngbya</i>	<i>Leptolyngbya Nostoc</i>
CTs	MCs STX GTX2/3	MCs	MCs	STX GTX2/3	STX GTX2/3				