

Article

Bioremediation of Per- and Poly-Fluoroalkyl Substances (PFAS) by *Synechocystis* sp. PCC 6803: A Chassis for a Synthetic Biology Approach

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Supplementary Material:

Table S1. Candidate *Synechocystis* proteins possibly involved in PFASs transport and/or metabolism. * Found in *Synechocystis* PCC 6803.

Name	Biochemical function	Sequence(s)	Accession	% similarity
Na ⁺ -taurocholate cotransporting polypeptide (NTCP)	Bile acid:sodium symporter	8	WP_028947894.1	27–29% to Human NTCP, NTCP2, NTCP4 and NTCP7
			WP_010872629.1	
			WP_162328214.1	
			MBE9176556.1	
			WP_194071296.1	
			WP_190599003.1	
			WP_194019469.1	
			WP_194014785.1	
ATP binding cassette transporter C family member (ABCC)	ATP-binding cassette domain-containing protein	40	WP_194072738.1	23–42% to <i>Arabidopsis thaliana</i> ABCC2
			WP_194018933.1	
			WP_190596069.1	
			WP_194015207.1	
			WP_162327634.1	
			WP_199303459.1	
			WP_190597748.1	
			WP_162327599.1	
			WP_194018815.1	
			WP_194013374.1	
			WP_194013374.1	
			WP_162327849.1	
			WP_190598847.1	
			WP_194014885.1	
			WP_194018910.1	
			WP_190597363.1	
			WP_194073247.1	
			WP_162329505.1	
			WP_162327719.1	

		WP_194015044.1 WP_162327093.1 WP_194073659.1 WP_194016394.1 WP_028946876.1 WP_194015365.1 WP_194017886.1 WP_194017886.1 WP_162328301.1 WP_194015754.1 WP_194020455.1 WP_190596393.1 WP_194072749.1 WP_190599643.1 WP_162329061.1 WP_190597943.1 WP_162327446.1 WP_194015181.1 WP_190596040.1 MBE9175611.1 WP_194020078.1	
		MBE9175251.1 WP_028948219.1 WP_010871936.1 MBE9174824.1 WP_028948200.1 WP_010871895.1 WP_009633118.1 WP_028947992.1 WP_028947381.1 WP_071822647.1 WP_009630252.1 WP_009632343.1 WP_010873840.1 WP_009632727.1 WP_028954270.1 WP_051738793.1 WP_009632913.1 WP_028949030.1 WP_010871235.1 WP_010872070.1 WP_028947037.1 WP_009632475.1 WP_028949033.1 WP_009631388.1 WP_009632594.1 WP_010871241.1 WP_162329293.1 WP_028947003.1 WP_010874137.1 WP_194020635.1	
ABC transporter ATP-binding protein	44		23–36% to <i>Arabidopsis thaliana</i> ABCC2

			MBE9174726.1 WP_010872849.1 WP_051738954.1 WP_051482607.1 WP_009633356.1 WP_028949247.1 AIE73207.1 WP_009631439.1 MBE9174324.1 WP_028954202.1 WP_009633629.1 WP_028947788.1 WP_010873804.1 WP_009633685.1	
peptidase domain-containing ABC transporter	5		MBE9175630.1 WP_010872887.1 WP_028948277.1 WP_009630782.1 WP_010874249.1	23–27% to <i>Arabidopsis thaliana</i> ABCC2
type I secretion system permease/ATPase	2		WP_194013658.1 WP_162328330.1	25–28% to <i>Arabidopsis thaliana</i> ABCC2
ABC transporter *	3		AGF51262.1 QHV01854.1 ALJ68769.1* AGF51262.1* ALJ69526.1* WP_014407101.1*	27–29% to <i>Arabidopsis thaliana</i> ABCC2
TOBE-like domain-containing protein	2		WP_190598704.1 WP_009631742.1	30–34% to <i>Arabidopsis thaliana</i> ABCC2
Multidrug resistance ABC transporter ATP-binding and permease protein	1		AIE74659.1	36% to <i>Arabidopsis thaliana</i> ABCC2
cyclic nucleotide-regulated ABC bacteriocin/lantibiotic exporter protein	1		AVH79543.1	26% to <i>Arabidopsis thaliana</i> ABCC2
ATP-binding protein of ABC transporter	1		AIE73432.1	31% to <i>Arabidopsis thaliana</i> ABCC2
Aquaporin (aqp)	Aquaporin	8	WP_162328075.1 WP_028946756.1 MBE9176180.1 WP_194015914.1 WP_190599016.1 WP_009631497.1 WP_194073056.1 WP_009633089.1	37–100% to <i>Synechocystis</i> PCC 6803 aqpZ
Laccase	Multicopper oxidase domain-containing protein	1	WP_194014464.1	24% to <i>Pleurotus ostreatus</i> laccase POX1
Fluoroacetate dehalogenase	Alpha/beta hydrolase	19	WP_009633998.1 WP_009634094.1 WP_028949175.1 WP_010872272.1	25–39% to <i>Burkholderia</i> sp. Fac-dex

		WP_028946933.1	
		WP_028954141.1	
		WP_010871769.1	
		WP_106907929.1	
		WP_009634549.1	
		WP_009631931.1	
		WP_038531141.1	
		AIE75980.1	
		WP_010872160.1	
		QHV01713.1	
		WP_009630128.1	
		WP_010873707.1	
		WP_028948001.1	
		WP_038021267.1	
		QHV01001.1	
		WP_194019009.1	
		WP_194072249.1	
		WP_190599725.1	
		WP_162327898.1	
		WP_194013416.1	
		WP_190598114.1	
		WP_194020943.1	
		WP_194017332.1	
		WP_162327504.1	
		WP_038020775.1	
		WP_028947035.1	
		MBE9175246.1	
		WP_009631087.1	
		WP_190598236.1	
		WP_194019539.1	
		WP_162327488.1	
		WP_194073349.1	
		WP_162327505.1	22–40% to <i>Burkholderia</i> sp.
Alpha/beta fold hydrolase	53	WP_009630182.1	Fac-dex
		WP_190598115.1	
		WP_010871750.1	
		WP_010871770.1	
		WP_194020945.1	
		WP_194017334.1	
		WP_194015193.1	
		WP_028947752.1	
		MBE9176742.1	
		WP_194020915.1	
		MBD2655166.1	
		WP_190599431.1	
		WP_194072888.1	
		WP_009630376.1	
		WP_162327789.1	
		WP_194018987.1	
		WP_194014523.1	
		WP_199303425.1	

WP_190599423.1
MBE9176468.1
WP_194072577.1
WP_010872152.1
WP_199303557.1
WP_194018983.1
WP_190599278.1
WP_194013777.1
WP_194019704.1
MBE9175978.1
WP_028946321.1
WP_199309777.1
WP_194014536.1
WP_162327783.1
WP_080504060.1
WP_162329611.1
WP_038530520.1
