

Supplementary Material

Table S1: Library of Screening Fractions. Each strain was extracted using three different solvents (A-Hexane; B-Ethyl Acetate; C-Methanol), creating three chemical fractions per strain. All the fractions were stored in DMSO at a concentration of 10 mg/mL.

LEGE CODE	Strain	Origin	Chemical Fraction	Library Number
LEGE 06077	<i>Nostoc cf. edaphicum</i>	Fresh Water	A	1
			B	2
			C	3
LEGE 07299	<i>Nostoc sp.</i>	Fresh Water	A	4
			B	5
			C	6
LEGE 06158	<i>Nostoc sp.</i>	Marine	A	7
			B	8
			C	9
LEGE 07365	<i>Nostoc sp.</i>	Fresh Water	A	10
			B	11
			C	12
LEGE 13413	<i>Nostoc sp.</i>	Marine	A	13
			B	14
			C	15
LEGE 03282	<i>Cuspidothrix issatschenkoi</i>	Fresh Water	A	16
			B	17
			C	18
LEGE 03285	<i>Cuspidothrix issatschenkoi</i>	Fresh Water	A	19
			B	20
			C	21
LEGE 00234	<i>Dolichospermum sp.</i>	Fresh Water	A	22
			B	23
			C	24
LEGE 04288	<i>Nodularia sp.</i>	Fresh Water	A	25
			B	26
			C	27
LEGE 06071	<i>Nodularia sp.</i>	Marine	A	28
			B	29
			C	30
LEGE 06188	<i>Calenema singularis</i>	Marine	A	31
			B	32
			C	33
LEGE 06123	<i>Gloeocapsopsis crepidinum</i>	Marine	A	34
			B	35
			C	36
LEGE 13421	<i>Gloeocapsopsis sp.</i>	Marine	A	37
			B	38
			C	39

LEGE 06111	<i>Calothrix sp.</i>	Marine	A	40
			B	41
			C	42
LEGE 06122	<i>Calothrix sp.</i>	Marine	A	43
			B	44
			C	45
LEGE 06105	<i>Plectonema cf. radiosum</i>	Marine	A	46
			B	47
			C	48
LEGE 06114	<i>Plectonema cf. radiosum</i>	Marine	A	49
			B	50
			C	51
LEGE 07159	<i>Rivularia sp.</i>	Marine	A	52
			B	53
			C	54
LEGE 06147	<i>unidentified Pleurocapsales</i>	Marine	A	55
			B	56
			C	57
LEGE 10410	<i>unidentified Pleurocapsales</i>	Marine	A	58
			B	59
			C	60
LEGE 11391	<i>Geitlerinema sp.</i>	Marine	A	61
			B	62
			C	63
LEGE 11393	<i>Geitlerinema sp.</i>	Marine	A	64
			B	65
			C	66
LEGE 07176	<i>Jaaginema litorale</i>	Marine	A	67
			B	68
			C	69
LEGE 06100	<i>Lusitaniella coriacea</i>	Marine	A	70
			B	71
			C	72
LEGE 06101	<i>Nodosilinea nodulosa</i>	Marine	A	73
			B	74
			C	75
LEGE 07164	<i>Schizothrix aff. septentrionalis</i>	Marine	A	76
			B	77
			C	78
LEGE 06141	<i>cf. Oculatella sp.</i>	Marine	A	79
			B	80
			C	81
LEGE 10370	<i>cf. Phormidesmis sp.</i>	Marine	A	82
			B	83
			C	84
LEGE 06003	<i>cf. Romeria sp.</i>	Marine	A	85
			B	86
			C	87
LEGE 06208	<i>Tychonema sp.</i>	Marine	A	88
			B	89
			C	90

LEGE 00036	<i>Synechocystis salina</i>	Marine	A	91
			B	92
			C	93
LEGE 00037	<i>Synechocystis salina</i>	Marine	A	94
			B	95
			C	96
LEGE 06106	unidentified <i>Nostocales</i>	Marine	A	97
			B	98
			C	99
LEGE 12447	<i>Geminobacterium atlanticum</i>	Fresh Water	A	100
			B	101
			C	102
LEGE 07459	<i>Myxosarcina sp.</i>	Marine	A	103
			B	104
			C	105
LEGE 06146	<i>Nostoc sp.</i>	Marine	A	106
			B	107
			C	108
LEGE 03284	<i>Cuspidothrix issatschenkoi</i>	Fresh Water	A	109
			B	110
			C	111
LEGE 00248	<i>Dolichospermum sp.</i>	Fresh Water	A	112
			B	113
			C	114
LEGE 00263	<i>Dolichospermum sp.</i>	Fresh Water	A	115
			B	116
			C	117

Table S2: List of qPCR primers used in bioactivity screening.

Gene	Forward primer (5'-3')	Reverse primer (5'-3')
<i>UCP1</i>	AGCCATCTGCATGGGATCAAA	GGGTCGTCCCTTTCCAAAGTG
PPAR γ	CCCTGGCAAAGCATTTGTAT	GAAACTGGCACCCCTTGAAAA
TBP	ACCCTTCACCAATGACTCCTATG	TGACTGCAGCAAATCGCTTGG

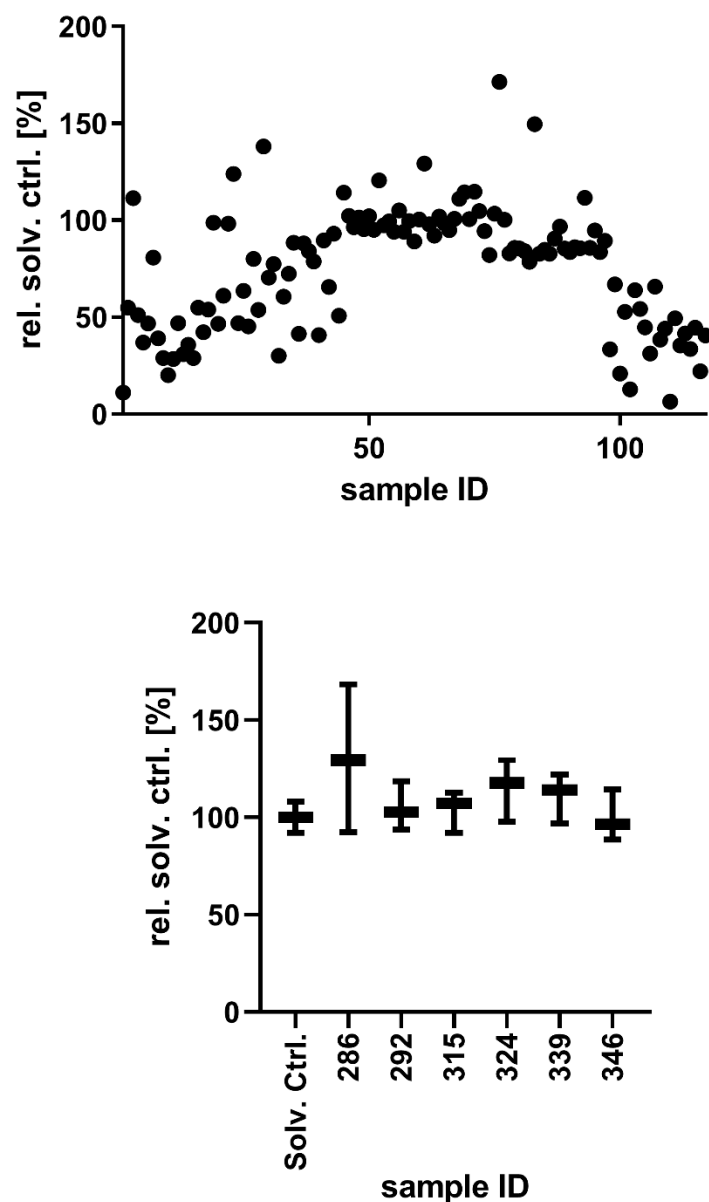


Figure S1: Bioactivity Screening, on the glucose uptake, using HepG2 cell line (top) and bioactivity confirmation of the positive hits (bottom). Data is presented as MFI relative to solvent control (0.5% DMSO) for both graphs. Briefly, 24 hours after seeding, cells were placed under starvation in HBSS for 16 hours. Afterwards, cells were exposed to the fractions and controls for 2 hours followed by 1 hour with 100 μ M 2-NBDG. Cells were washed and fluorescence read.

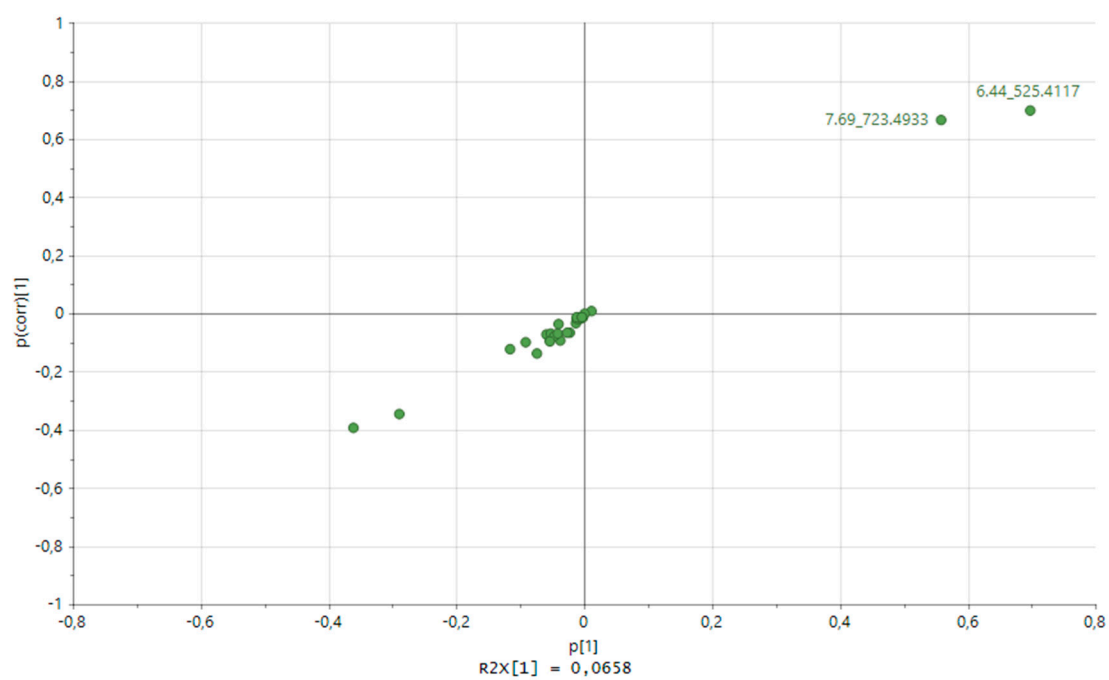


Figure S2: S-plot for fraction C, highlighting 2 potential biomarkers from fraction C with regards to Zf-NR bioactivity.