Endophytic bacteria colonizing the petiole of the desert plant *Zygophyllum dumosum* Boiss: possible role in mitigating stress

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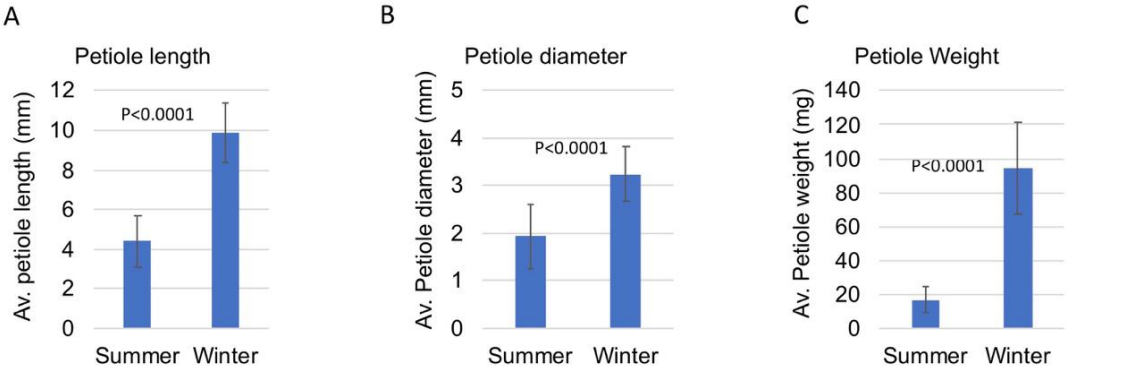
Figure S1. Calculating sodium concentration in winter and summer petioles



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Petiole	Radius (r) (mm)	Length (L) (mm)	Volume (V) (cm^3) $V=\pi r^2 L$	Weight (pW) (mg)	# petioles In gFW	mg Na/ gFW	mg Na/ petiole	Na Conc. (M)
Summer	0.97	4.4	0.013	16.96	59	2.174	0.0368	0.123
Winter	1.62	9.88	0.081	94	10.6	1.561	0.147	0.079

$$\text{Na Conc. (mol/L)} = \frac{\text{Na (g)}}{\text{Volume (L) x Molecular Weight (g/mol)}}$$

Fig. S1.petiole as a cylinder and determined its average volume (Vp=p r2 h) based on the measurements of petiole length (A), radius (B) and calculated sodium concentration based on petiole average weight (C). Statistical differences between treatments was perform by unpaired t test (GraphPad) and the p values are shown. (D) The data and formulas for calculation of Na concentration. Summer and winter petioles refer to petioles collected in October and April of 2010, respectively.

Figure S2. 16S rDNA sequencing

The list of 16S rDNA sequences of isolated endophytes. 16S rDNAs were PCR amplified using 1492-R and 27-F primers and each amplicon was sequenced in forward and reverse using the abovementioned primers. The F and R sequences were aligned and the combined seq data was used for NCBI blast analysis. Note, the sequence of one clone for each identified endophyte is shown.

> *J3 / Domibacillus robiginosus*

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> J6 / *Actinotalea ferrariae*

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> J14 / *Bacillus jeotgali*

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>J18 / *Bacillus licheniformis*

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>J21 / *Brevibacillus halotolerans*

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>J23 / *Brevibacterium frigoritolerans*

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>J25 / *Fictibacillus nanhaiensis*

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>J27 / *Bacillus megaterium*

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>J29 / *Pseudokineococcus basanitobsidens*

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>J33 / *Arthrobacter subterraneus*

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>J36 / *Kocuria rosea*

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GTTCGGATTGAGGTCTGCAACTCGACCTCATGAAGTCGGAGTCGCTAGTAATCGCAGATCAGCAACGCT
GCGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCAAGTCACGAAAGTTGGTAACACCCGAAGC
CGGTGGCCTA

>J37 / *Bacillus thioparans*

ACATGCAAGTCGAGCGGATCTTCATTAGCTTGCTTTTGAAGATCAGCGGCGGACGGGTGAGTAACACGT
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CGGAGTAACTGCCGGTACCTTGACGGTACCTGACCAGAAAGCCACGGCTAACTACGTGCCAGCAGCCGC
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CATAAATCCATTCTCAGTTCGGATTGCAGGCTGCAACTCGCCTGCATGAAGCCGGAATCGCTAGTAATCG
CGGATCAGCATGCCGCGGTGAATACGTTCCCGGGCCTTGTACACACCGCCCGTCACACCACGAGAGTTTG
TAACACCCGAAGTCGGTGGGGTAACCTTTTGGAGCCAGCCGC

>J40 / *Bacillus sinesaloumensis*

ATACATGCAAGTCGAGCGGATCTTTGGGAGCTTGCTCCCAAAGGTTAGCGGCGGACGGGTGAGTAACAC
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CCACATGGTCTTATATTAAAAGGTGGCTTTTAGCTACCACTTACAGATGGACCCGCGGCGCATTAGCTAG
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GACGGAGCAACGCCGCGTGAGCGATGAAGGCCTTCGGGTCGTAAAGCTCTGTTGTTAGGGAAGAACAA
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TCCCATAAAACCATTCTCAGTTCGGATTGCAGGCTGCAACTCGCCTGCATGAAGCCGGAATCGCTAGTAA
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>J42 / *Arthrobacter agilis*

GCAGAAGAAGCGCCNGGCTAACTACGTGCCAGCAGCCGCGGTAATACGTAGGGCGCAAGCGTTATCCG
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GCCGGTACAAAGGGTTGCGATACTGTGAGGTGGAGCTAATCCCAAAAAGCCGGTCTCAGTTCGGATTGA
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CCCTTGTGGGAGGGAGCCGTCG

>J43 / *Dietzia lutea*

CATGCAGTCGAACGGTAAGGCCCTTACAGGGGTACACGAGTGGCGAACGGGTGAGTAACACGTGGGTA
ATCTGCCCTGCACTTCGGGATAAGCCTGGGAAACTGGGTCTAATACCGGATATTCAACTTTCGCCGCATG
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AGAGGGCTGCGATACCGTGAGGTGGAGCGAATCCCTTAAAGCTGGTCTCAGTTCGGATTGGGGTCTGCA
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GCCTTGTACACACCGCCCGTCACGTCATGAAAGTCGGTAACACCCGAAGCCGGTGGCCTAACCCCCNTGT
GGGGAGGAGCCGT

>J45 / *Georgenia satyanarayanai*

GTCGAACGATGAAGCCCAGCTTGCTGGGTGGATTAGTGGCGAACGGGTGAGTAACACGTGAGTAACCT
GCCCCTGACTTCGGGATAACTACGAGAAATCGTGGCTAATACCGGATATGACACGTGCCTGCATGGGTG
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GGGATCCATTCCACGGGTTCCGTGCCGCAGCTAACGCATTAAGTGCCCCGCCTGGGGAGTACGGCCGCA
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GAAGGTGGGGATGACGTCAAATCATCATGCCCCTTATGTCTTGGGCTTCACGCATGCTACAATGGCCGGT
ACAAAGGGCTGCGATACCGCGAGGTGGAGCGAATCCCAAAAAGCCGGTCTCAGTTCGGATTGGGGTCT
GCAACTCGACCCCATGAAGTCGGAGTCGCTAGTAATCGCAGATCAGCAACGCTGCGGTGAATACGTTCTC

GGGCCTTGTACACACCGCCCGTCACGTCATGAAAGTCGGTAACACCCGAAGCCGGTGGCCCAACCCCTTG
TGGGAGGGAGCTG

>J46 / *Bacillus fermenti*

ATACATGCAGTCGAGCGGACTTTTAAAAGCTTGCTTCTCAAAAGTTAGCGGCGGACGGGTGAGTAACAC
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CTCATGAGGGAATGCTGAAAGACGGTTTCGGCTGTCACTTACAGATGGGCCCGCGGCGCATTAGCTAGT
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>J50 / *Fictibacillus phosphorivorans*

TCGAGCGNATCGACGAGGAGCTTGCTCCTCTGATTTACGGCGGACGGGTGAGTAACACGTGGGTAATCT
GCCTGTAANACGGGGATAACTCCGGGAAACCGGGGCTAATACCGGATAACAAGAGAAGATGCATATCTT
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TGTAACTGACGCTGAGGCGCGAAAGCGTGGGGAGCAAACAGGATTAGATACCCTGGTAGTCCACGCCG
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TGGGGAGTACGACCGCAAGGTTGAAACTCAAAGGAATTGACGGGGGCCCGCACAAGCAGTGGAGCATG
TGGTTTAATTCGAAGCAACGCGAAGAACCTTACCAGGTCTTGACATCCTCTGACCACTCTAGAGATAGAG

>J52 / *Salinibacterium xinjiangense*

GAACGATGAAGCTGGAGCTTGCTCTGGTGGATTAGTGGCGAACGGGTGAGTAACACGTGAGTAACCTG
CCCCTGACTCTGGGATAAGCGCTGGAAACGGCGTCTAATACCGGATACGAGCTTCCACCGCATGGTGAG
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AGGGAGCTT

> *J53 / Arthrobacter oryzae*

CATGCAGTCGAACGATGATCCCCAGCTTGCTGGGGTGATTAGTGGCGAACGGGTGAGTAACACGTGAGT
AACCTGCCCTTAACTCTGGGATAAGCCTGGGAAACTGGGTCTAATACCGGATATGACTTCTCATCGCATG
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CCCCTTGTGGGAGGGAGCTGT

>J56 / *Paenisporosarcina indica*

ATACATGCAAGTCGAGCGGAATGATGAAGAAGCTTGCTTCTTCTGATTTTAGCGGCGGACGGGTGAGTA
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