

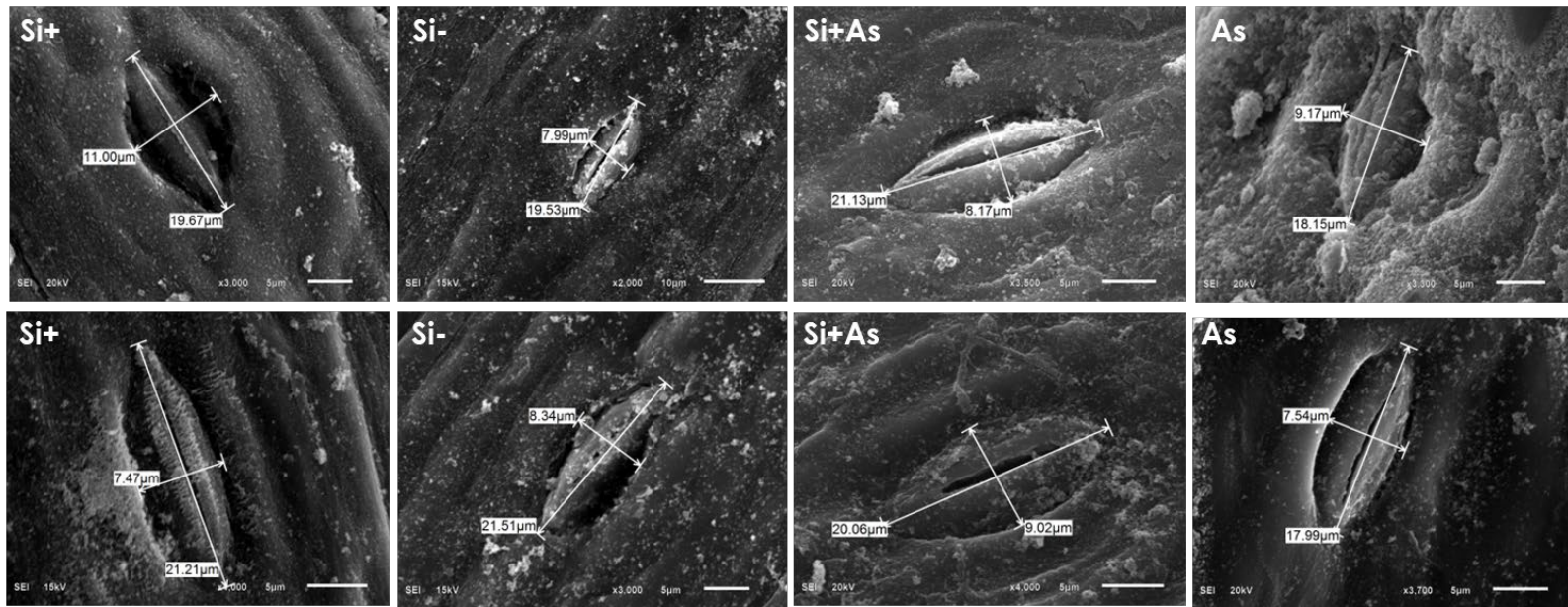
# Silicon Induced Tolerance Against Arsenic Toxicity By Activating Physiological, Anatomical And Biochemical Regulation In *Phoenix dactylifera* (Date Palm)

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Table S1. Details of genes; name, description, product size, reference number, and oligonucleotide sequences used for qRT-PCR.

Gene name	Description	Primer sequence (5'-3')
<i>LSi-1</i>	Low silicon 1 related gene	F: AGTCGATCTCGGTCTCGTCA R: AGCCCCGGAATTAACAGAGC
<i>SOD</i>	Superoxide dismutase [Fe], chloroplastic	F: TGGCTGGCAAAGAGCATGTA R: R: CTCTGAGCCGTTGCTATGTGA
<i>NCED1</i>	9-cis-epoxycarotenoid dioxygenase,	F: GCCTCCTCGCACCCTATTC R: CGGGTCGATGAAGTTGTTGA
<i>ZEP</i>	zeaxanthin epoxidase	F: CCACTCTTTCCTCGCCAATC R: GAATCTGGCAATGGGCTTTC
<i>SDR</i>	Phoenix dactylifera short chain dehydrogenase/reductase	F: GCTGGTGTTGAAGGGAGGAG R: GGTTTTGTCCGGTGACGAAC
<i>ALMT-1</i>	Phoenix dactylifera aluminum-activated malate transporter 1-like	F: CCGGCGAATTAAGAAGCACG R: TAACGGTGGCCTTGGAATC
<i>ALMT2</i>	Phoenix dactylifera aluminum-activated malate transporter 1-like	F: GCTCTTTGGTGGCTCTTTTG R: CGAGAATATGTGGCCATTCC
<i>PPMA-3</i>	Phoenix dactylifera plasma membrane ATPase-3	F: TGGATTTCTGCTCACTCCCAC R: CTTCTCTACTGCGGCTGAGGA
<i>PPMA-4</i>	Phoenix dactylifera plasma membrane ATPase-4	F: TTGAGGTGACGACCAAGAGC R: GAAACCGGCTACAGGACCAA
<i>Act</i>	Phoenix dactylifera actin	F: ATTCTGCAGGACTGGGAAGC R: CGAACAGGTTGGCTGAATTGT

**Supplementary figure S1:** Influence of silicon and arsenic on size of stomata of date palm leaves, screened with Scan Electron Microscope. Silicon treated (Si+) Silicon non-treated (Si-), Silicon and Arsenic (Si+As) and Arsenic treated (As). Three biological replicates were screen for each sample



**Supplementary figure S2:** Influence of silicon and arsenic on leaf morphology and anatomy of date palm leaves, screened with Scan Electron Microscope. Silicon treated (Si+) Silicon non-treated (Si-), Silicon and Arsenic (Si+As) and Arsenic treated (As). Three biological replicates were screened for each sample.

