## Accepted Manuscript

Title: A stress-associated protein, LmSAP, from the halophyte *Lobularia maritima* provides tolerance to heavy metals in tobacco through increased ROS scavenging and metal detoxification processes

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PII: S0176-1617(18)30657-6

DOI: https://doi.org/10.1016/j.jplph.2018.09.019

Reference: JPLPH 52855

To appear in:

Received date: 12-3-2018 Revised date: 25-9-2018 Accepted date: 26-9-2018

Please cite this article as: Saad RB, Hsouna AB, Saibi W, Hamed KB, Brini F, Ghneim-Herrera T, A stress-associated protein, LmSAP, from the halophyte *Lobularia maritima* provides tolerance to heavy metals in tobacco through increased ROS scavenging and metal detoxification processes, *Journal of Plant Physiology* (2018), https://doi.org/10.1016/j.jplph.2018.09.019

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**Title** 

A stress-associated protein, LmSAP, from the halophyte Lobularia maritima provides tolerance to

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Abstract

Agricultural soil pollution by heavy metals is a severe global ecological problem. We recently

showed that overexpression of LmSAP, a member of the stress-associated protein (SAP) gene

family isolated from Lobularia maritima, in transgenic tobacco led to enhanced tolerance to abiotic

stress. In this study, we characterised the response of LmSAP transgenic tobacco plants to metal

stresses (cadmium, copper, manganese, and zinc). In L. maritima, LmSAP expression increased

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