Accepted Manuscript

Title: Characterization of salicylic acid-mediated modulation of the drought stress responses: Reactive oxygen species, proline, and redox state in *Brassica napus*

Authors: Van Hien La, Bok-Rye Lee, Md. Tabibul Islam, Sang-Hyun Park, Ha-il Jung, Dong-Won Bae, Tae-Hwan Kim

PII: S0098-8472(18)30743-3

DOI: https://doi.org/10.1016/j.envexpbot.2018.09.013

Reference: EEB 3574

To appear in: Environmental and Experimental Botany

Received date: 17-5-2018 Revised date: 12-9-2018 Accepted date: 14-9-2018

Please cite this article as: La VH, Lee B-Rye, Islam MT, Park S-Hyun, Jung H-il, Bae D-Won, Kim T-Hwan, Characterization of salicylic acid-mediated modulation of the drought stress responses: Reactive oxygen species, proline, and redox state in *Brassica napus*, *Environmental and Experimental Botany* (2018), https://doi.org/10.1016/j.envexpbot.2018.09.013

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Research article

Characterization of salicylic acid-mediated modulation of the drought stress responses:

Reactive oxygen species, proline, and redox state in Brassica napus

Van Hien La^{a,†}, Bok-Rye Lee^{a,b,†}, Md. Tabibul Islam^a, Sang-Hyun Park^{a,c}, Ha-il Jung^d, Dong-Won Bae^e, Tae-Hwan Kima,*

^a Department of Animal Science, Institute of Agricultural Science and Technology, College of Agriculture & Life

Science, Chonnam National University, Buk-Gwangju P.O. Box 205, Gwangju, 61186, Korea

^b Korea Pear Research Organization, Chonnam National University, Gwangju, 61186, Korea

^c Environmentally-Friendly Agriculture (IEFA), Chonnam National University, Buk-Gwangju P.O. Box 205,

Gwangju, 61186, Korea

^dDivision of Soil and Fertilizer, National Institute of Agricultural Science, RDA, Wanju, 55365, Korea

^eBiomaterial Analytical Laboratory, Central Instruments Facility, Gyeongsang National University, Jinju, 52828,

Korea

*Corresponding author. Tel: +82-62-530-2126; fax: +82-62-530-2129

E-mail address: grassl@chonnam.ac.kr

† These authors have contributed equally to this work

Highlights

• Salicylic acid pretreatment alleviates drought-induced stress symptom.

• Drought enhanced endogenous level of ABA and JA, as well as their signaling genes.

• SA-mediated modulation coincided with antagonistic depression of ABA-signaling genes.

• SA-mediated NPR1-dependent proline synthesis involves in redox control under drought.

1

Download English Version:

https://daneshyari.com/en/article/11016759

Download Persian Version:

https://daneshyari.com/article/11016759

<u>Daneshyari.com</u>