

BOOK OF ABSTRACTS

3rd International Conference on Plant Biology (22nd SPPS Meeting)



**9-12 JUNE 2018
BELGRADE**

Serbian Plant Physiology Society

Institute for Biological Research "Siniša Stanković", University of Belgrade

Faculty of Biology, University of Belgrade

**3rd International Conference
on Plant Biology
(22nd SPPS Meeting)**



9-12 June 2018, Belgrade

.....

CIP - Каталогизacija у публикацији - Народна библиотека Србије, Београд
581(048)(0.034.2)

INTERNATIONAL Conference on Plant Biology (3 ; 2018 ; Belgrade)

[Book of Abstracts] [Електронски извор] / 3rd International Conference on Plant Biology [and] 22nd SPPS Meeting, 9-12 June 2018, Belgrade ; [organized by] Serbian Plant Physiology Society [and] Institute for Biological Research "Siniša Stanković", University of Belgrade [and] Faculty of Biology, University of Belgrade ; [editor Branka Uzelac]. - Belgrade : Serbian Plant Physiology Society : University, Institute for Biological Research "Siniša Stanković" : University, Faculty of Biology, 2018 (Beograd : Društvo za fiziologiju biljaka Srbije). - 1 USB fleš memorija ; 1 x 3 x 8 cm

Tiraž 230. - Registar.

ISBN 978-86-912591-4-3 (SPPS)

1. Društvo za fiziologiju biljaka Srbije. Sastanak (22 ; 2018 ; Beograd)

2. Institut za biološka istraživanja "Siniša Stanković" (Beograd)

а) Ботаника - Апстракт

COBISS.SR-ID 264421900

3rd International Conference on Plant Biology
(22nd SPPS Meeting)
9-12 June, Belgrade

Organizing Committee

Marijana Skorić-President, Dragana Matekalo, Tatjana Ćosić, Milan Borišev, Branislav Šiler, Neda Aničić, Jelena Božunović, Milica Milutinović, Ljiljana Tubić, Nina Devrnja, Suzana Živković, Jasmina Nestorović Živković, Mihailo Jelić, Vladan Jovanović

Scientific Committee

Adisa Parić (Sarajevo, Bosnia and Herzegovina)
Alain Tissier (Halle, Germany)
Angelina Subotić (Belgrade, Serbia)
Angelos Kanellis (Thessaloniki, Greece)
Antonio Granell Richart (Valencia, Spain)
Autar Mattoo (Beltsville, USA)
Daniel Chamovitz (Tel Aviv , Israel)
Danijela Mišić (Belgrade, Serbia)
Dragana Miladinović (Novi Sad, Serbia)
Guido Grossmann (Heidelberg, Germany)
Hrvoje Fulgosi (Zagreb, Croatia)
Ivana Dragičević (Belgrade, Serbia)
Ivana Maksimović (Novi Sad, Serbia)
Jasmina Glamočlija (Belgrade, Serbia)
Jelena Aleksić (Belgrade, Serbia)
Jelena Savić (Belgrade, Serbia)

Jovanka Miljuš- Đukić (Belgrade, Serbia)
Jules Beekwilder (Wageningen, The Netherlands)
Ljiljana Prokić (Belgrade, Serbia)
Marko Sabovljević (Belgrade, Serbia)
Milan Borišev (Novi Sad, Serbia)
Milka Brdar-Jokanović (Novi Sad, Serbia)
Miroslav Nikolić (Belgrade, Serbia)
Mondher Bouzayen (Castanet-Tolosan Cedex, France)
Pavle Pavlović (Belgrade, Serbia)
Peđa Janačković (Belgrade, Serbia)
Roque Bru Martínez (Alicante, Spain)
Sokol Abazi (Tirana, Albania)
Stevan Avramov (Belgrade, Serbia)
Václav Motyka (Prague, Czech Republic)
Vuk Maksimović (Belgrade, Serbia)
Živoslav Tešić (Belgrade, Serbia)

Publishers

Serbian Plant Physiology Society
Institute for Biological Research "Siniša Stanković", University of Belgrade
Faculty of Biology, University of Belgrade

Editor

Branka Uzelac

Graphic design

Dejan Matekalo

Prepress

Marija G. Gray

Electronic edition

230 pcs

tomato cultivars were used to determine whether grafting could prevent decrease of K concentration under salt stress conditions. The cultivars Buran F1 and Berberana F1 were grafted onto rootstock “Maxifort” and grown under three levels of elevated soil salinity (S1- EC 3.80 dS m⁻¹, S2- 6.95 dS m⁻¹ and S3- 9.12 dS m⁻¹). Salt stress at the third salinity level (EC 9.12 dS m⁻¹) induced the highest alteration of K concentration of both grafted and non-grafted plants (about 11%) in comparison to the control. The possibility of grafting tomato plants to improve influx of potassium in salt stress conditions is discussed.

Keywords: tomato, grafting, potassium

Response of antioxidative enzymes to drought and salicylic acid application in *Impatiens walleriana* grown *ex vitro*

PP2-36

Dragana AntoniĆ, Snežana Milošević, Danijel Pantelić, Ana Simonović,
Milena Trajković, Ivana Momčilović, Angelina Subotić
(dragana.antonic@ibiss.bg.ac.rs)

Institute for Biological Research, University of Belgrade, Bulevar despota Stefana 142, 11060 Belgrade, Serbia

Impatiens walleriana is one of the most popular *Impatiens* species characterized by fleshy, succulent leaves and a variety of flower colours. The major problem in production and sale of this ornamental species is related to its tendency to quickly wilt when drought stressed. Since one of the most devastating consequences of drought is the onset of oxidative stress, we have studied the responses of antioxidative enzymes to drought and applied salicylic acid (SA) as a potential stress-alleviating regulator. The *I. walleriana* seeds were germinated in a growth chamber under controlled conditions. Plants (8 weeks old) were divided into four groups: (1) regularly watered plants (W), (2) regularly watered plants with single application of 2 mM SA (WS), (3) plants exposed to drought (D), and (4) drought-exposed plants with single application of 2 mM SA (DS). The activities of antioxidative enzymes including superoxide dismutase (SOD), catalase (CAT) and guaiacol peroxidase (POX) were assessed in all four groups. Our results show that drought and SA (WS, D, and DS) increase activity of Cu/ZnSOD and MnSOD in comparison to control (W). Total CAT activity was increased in D, but not in WS and DS groups; however additional CAT isoforms were observed in these groups. POX activity was generally high in D and especially in DS group. It can be concluded that SA improves drought tolerance in *I. walleriana* grown *ex vitro* probably by modulating the activity of antioxidative enzymes and can be used as a drought-ameliorating agent.

Keywords: drought, salicylic acid, antioxidative enzymes

This research was sponsored by Ministry of education, Science and Technological Development of the Republic of Serbia (Grant Nos. TR31019 and TR31049).