

Volume 171, issue 5, 1 March 2014, ISSN 0176-1617

Volume 171



5

2014

# JOURNAL OF PLANT PHYSIOLOGY

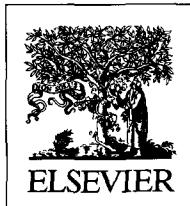
Biochemistry, Physiology, Molecular Biology and Functional Biotechnology of Plants



In Affiliation with FESPB

◆ [www.elsevier.com/locate/jplph](http://www.elsevier.com/locate/jplph)





## Contents

### BIOCHEMISTRY

**Phosphoenolpyruvate carboxylase, NADP-malic enzyme, and pyruvate, phosphate dikinase are involved in the acclimation of *Nicotiana tabacum* L. to drought stress**

V. Doubnerová Hýsková, L. Miedzińska, J. Dobrá, R. Vankova, H. Ryšlavá 19

**The inter-monomer interface of the major light-harvesting chlorophyll a/b complexes of photosystem II (LHCII) influences the chlorophyll triplet distribution**

L. Zhang, T.B. Melø, H. Li, K.R. Naqvi, C. Yang 42

### PHYSIOLOGY

**Mycorrhizal symbiosis effects on growth of chalk false-brome (*Brachypodium pinnatum*) are dependent on the environmental light regime**

A. Füzy, H. Bothe, E. Molnár, B. Biró 1

**Light and nitrogen nutrition regulate apical control in *Rosa hybrida* L.**

P.-M. Furet, J. Lothier, S. Demotes-Mainard, S. Travier, C. Henry, V. Guérin, A. Vian 7

**Mitogen-activated protein kinase 6 controls root growth in *Arabidopsis* by modulating Ca<sup>2+</sup>-based Na<sup>+</sup> flux in root cell under salt stress**

S. Han, C.-w. Wang, W.-l. Wang, J. Jiang 26

**How do background ozone concentrations affect the biosynthesis of rosmarinic acid in *Melissa officinalis*?**

A.S. Döring, E. Pellegrini, M. Della Batola, C. Nali, G. Lorenzini, M. Petersen 35

**Root phosphoenolpyruvate carboxylase and NAD-malic enzymes activity increase the ammonium-assimilating capacity in tomato**

I. Setién, I. Vega-Mas, N. Celestino, M.E. Calleja-Cervantes, C. González-Murua, J.M. Estavillo, M.B. González-Moro 49

**Intrinsic water use efficiency controls the adaptation to high salinity in a semi-arid adapted plant, henna (*Lawsonia inermis* L.)**

N. Fernández-García, E. Olmos, E. Bardisi, J. García-De la Garma, C. López-Berenguer, J.S. Rubio-Asensio 64

**The phenolic content and its involvement in the graft incompatibility process of various pear rootstocks (*Pyrus communis* L.)**

M. Hudina, P. Orazem, J. Jakopic, F. Stampar 76

**Selenium alleviates cadmium toxicity by preventing oxidative stress in sunflower (*Helianthus annuus*) seedlings**

I. Saidi, Y. Chtourou, W. Djebali 85

**The circadian clock gene regulatory module enantioselectively mediates imazethapyr-induced early flowering in *Arabidopsis thaliana***

H. Qian, X. Han, X. Peng, T. Lu, W. Liu, Z. Fu 92

**Modification of catalase and MAPK in *Vicia faba* cultivated in soil with high natural radioactivity and treated with a static magnetic field**

N. Haghighat, P. Abdolmaleki, F. Ghanati, M. Behmanesh, A. Payez 99

### MOLECULAR BIOLOGY

**Glutamine synthetase I-deficiency in *Mesorhizobium loti* differentially affects nodule development and activity in *Lotus japonicus***

S. Chungopast, P. Thapanapongworakul, H. Matsuura, T. Van Dao, T. Asahi, K. Tada, S. Tajima, M. Nomura 104

### SHORT COMMUNICATION

**GIP1 may act as a coactivator that enhances transcriptional activity of LBD18 in *Arabidopsis***

H.W. Lee, J.H. Park, M.Y. Park, J. Kim 14

Table of Contents also available via e-mail by free-of-charge ToC Alert Service.

Register: [www.elsevier.com/locate/jplph](http://www.elsevier.com/locate/jplph)

### Abstracted/Index in

Biochemistry & Biophysics Citation Index; Bioscience Information System (BIOSIS); CAB Abstracts; Cambridge Scientific Abstracts (CSA); Chemical Abstracts Service (CAS); Current Awareness in Biological Sciences (CABS); Current Contents/Life Sciences; Current Contents/Agriculture, Biology & Environmental Sciences; Engineering Information/Compendex (CPX); Food Science and Technology Abstracts (FSTA); MEDLINE; Reference Update; Research Alert; Science Citation Index; SciExpanded; SciSearch. Also covered in the abstract and citation database Scopus®. Full text available on ScienceDirect®.