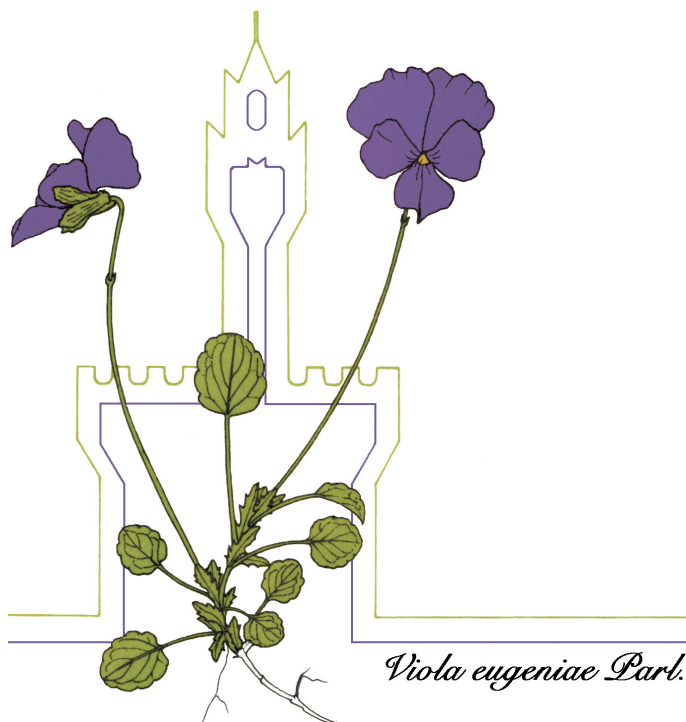


# Società Botanica Italiana

## 114° Congresso



*Viola eugeniae* Parl.

### VI International Plant Science Conference (IPSC)

con l'11° Congresso Annuale della Società Italiana di Biologia Vegetale

Padova, 4 - 7 September 2019

## Scientific Committee

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**114° Congresso della Società Botanica Italiana**  
VI INTERNATIONAL PLANT SCIENCE CONFERENCE

Padova, Orto Botanico, 4 - 7 September 2019

**XI Congresso della Società Italiana di Biologia Vegetale**

Padova, Orto Botanico, 4 - 6 September 2019

**Programme**

**Wednesday 4 September 2019**

**Auditorium**

11.00-11.30 Registration SIBV

**11.30-12.30 SIBV Lecture** (Chairperson: A. Schubert)

**Ralph Reski**, University of Freiburg, Germany  
*"Developmental novelties that facilitated the conquest of land by plants 500 MYA"*

12.00-13.30 Registration SBI

12.30-13.30 Welcome lunch

13.30-14.00 **Opening ceremony**

**Symposium 1**

**JOINT SESSION SIBV - SBI**

**PLANTS IN AND FOR THE FUTURE**

(Chairpersons: B. Baldan, T. Morosinotto, P.D. Perata)

**14.00-14.40 Christine Raines**, University of Essex, Colchester, United Kingdom

*"Improving future plant productivity through manipulation of photosynthesis"*

- 14.40-15.00 **Francesca Sparla**, Università di Bologna, Italy  
*"The crystal structures of Arabidopsis and Chlamydomonas phosphoribulokinase complete the redox structural proteome of the Calvin-Benson cycle"*
- 15.00-15.20 **Zeno Guardini**, Università di Verona, Italy  
*"Single-generation genome editing of Arabidopsis thaliana to isolate complex mutants defective in the PSII antenna system"*
- 15.20-15.40 **Claudio Varotto**, Fondazione Edmund Mach, San Michele all'Adige (TN), Italy  
*"Evolution and functional differentiation of recently diverged phytochelatin synthase genes from Arundo donax L."*
- 15.40-16.00 **Gian Pietro Di Sansebastiano**, Università del Salento, Italy  
*"Plant cell downstream control of conventional and unconventional membrane traffic contribution to the tonoplast"*
- 16.00-16.30 Coffee Break
- 16.30-17.10** **Christian Hardtke**, University of Lausanne, Switzerland  
*"Developing phloem – orchestrating plant organ formation"*
- 17.10-17.30 **Cristina Votta**, Università di Torino, Italy  
*"The heterologous expression of the Rhizophagus irregularis RiPEIP1 gene in rice plants leads to enhanced growth and mycorrhizal colonization"*
- 17.30-17.50 **Antonella Muto**, Università della Calabria, Italy  
*"Comparative transcriptomic profiling of peach and nectarine cultivars to elucidate chilling injury mechanisms"*
- 17.50-18.10 **Beatrice Giuntoli**, Università di Pisa, Italy  
*"Synthetic tools for the genetic control of plant responses to oxygen"*
- 18.10-18.30 **Raffaella Zampieri**, Università di Padova, Italy  
*"Released polysaccharides from cyanobacteria of the Euganean thermal mud have an in vivo antioxidant and anti-inflammatory activity"*

18.30-20.30 Drinks and appetizers (possibility of visiting the Botanical Garden)

**Thursday 5 September 2019**

**Symposium 2 SBI**

**Auditorium**

**FOREST BIODIVERSITY AND FUNCTIONING IN A CHANGING WORLD:  
CHALLENGES AND OPPORTUNITIES**

(Chairpersons: S. Casavecchia and G. Filibeck)

- 9.00-9.35** **Jean-Luc Dupouey**, INRA, Champenoux, France  
*"Forest ecological history for the future"*
- 9.35-9.55 **Gabriele Casazza**, University of Avignon, Marseille, France  
*"Combining historical ecology, species distribution modelling and instrumental climate reconstruction to infer causes of change in forest distribution: the case of Monte Pisano"*
- 9.55-10.15 **Andrea Coppi**, Università di Firenze, Italy  
*"Tree species diversity versus identity effects on understorey phylogenetic diversity in thermophilous deciduous forests"*
- 10.15-10.35 **Chiara Lelli**, Università di Bologna, Italy  
*"Signs from the past: long-term changes in Italian mountain forests under changing management"*
- 10.35-11.00 Coffee Break
- 11.00-11.35** **Tommaso Anfodillo**, Università di Padova, Italy  
*"The simple structure of forests: an allometric approach for assessing the degree of old-growthness"*
- 11.35-11.55 **Claudia Angiolini**, Università di Siena, Italy  
*"Are the effects of the overstorey on herb and shrub layers important in forest habitat monitoring? The case of Quercus suber woodlands"*

- 11.55-12.15 **Silvia Assini**, SBI-4RH, Working group of SBI, Italy  
*"An overview of the Italian forest biodiversity and its conservation level, based on the first outcomes of the 4<sup>th</sup> Habitat Report ex-Art. 17"*
- 12.15-12.35 **Simone Pesaresi**, Università Politecnica delle Marche, Ancona, Italy  
*"NDVI temporal pattern as functional responses of Mediterranean forest plant associations"*
- 12.35-14.00 Lunch and posters

### **Symposium 3 SBI**

#### **Auditorium**

#### **HERBARIA: STILL RELEVANT IN THE 21<sup>TH</sup> CENTURY?**

(Chairpersons: L. Peruzzi and S. Martellos)

- 14.00-14.35** **Alexey P. Seregin**, M.V. Lomonosov Moscow State University, Russia  
*"Moscow Digital Herbarium: global approach through regional actions"*
- 14.35-14.55 **Maria Zardini**, Università di Padova, Italy  
*"Digitization of the Lichenotheca Veneta"*
- 14.55-15.15 **Simone Orsenigo**, Università di Pavia, Italy  
*"Plant de-extinction: the importance of herbaria for recovering genetic diversity back to the wild"*
- 15.15-15.35 **Moreno Clementi**, Università di Padova, Italy  
*"A cross-disciplinary study of the work and collections by Roberto de Visiani (1800-1878)"*
- 15.35-16.10** **Charles Davis**, University of Harvard, USA  
*"Leveraging a global online herbarium to understand plant phenological response to climate"*

- 16.10-16.30 **David Dolci**, Università di Pisa, Italy  
*"Back to the future: assessing the effectiveness of Species Distribution Models temporal projection through herbarium data"*
- 16.30-16.50 **Niccolò Forin**, Università di Padova, Italy  
*"Importance of molecular studies involving nomenclatural types: the case of the Saccardo mycological collection"*
- 16.50-17.10 **Ilaria Colzi**, Università di Firenze, Italy  
*"Assessing metal hyperaccumulation using herbarium specimens: the case of *Odontarrhena sibirica* (Brassicaceae)"*
- 17.10-18.00 Joint SIBV-SBI Poster Session
- 18.00-19.30 General Meeting of the Italian Botanical Society  
(Auditorium, members only)  
During the General Meeting an agreement with Society of Azerbaijan Botanists and the "Code of Conduct - Life ASAP" will be signed

## **Symposium 2 SIBV**

### **Aula Emiciclo**

#### **PLANT CELL SIGNALS**

(Chairpersons: M. Zottini and F. Sparla)

- 9.00-9.40** **Jorg Kudla**, University of Münster, Germany  
*"The interplay of calcium and ROS signaling in plant development and stress responses"*
- 9.40-10.00 **Simone Ferrari**, Sapienza Università di Roma, Italy  
*"Role of the Arabidopsis LysM-containing receptor-like kinase AtLYK2 in chitin signaling and in priming of defense responses"*
- 10.00-10.20 **Annalisa Paradiso**, Università di Bari, Italy  
*"Genetic buffering of cAMP impairs heat stress response in tobacco BY-2 cells"*

- 10.20-10.40 **Matteo Grenzi**, Università di Milano, Italy  
*"Flowers on Alert: GLRs based long-distance Ca<sup>2+</sup> waves in Arabidopsis inflorescence"*
- 10.40-11.00 **Edoardo Andrea Cutolo**, Università di Verona, Italy  
*"Differential protein phosphorylation in the thylakoid involves crosstalk between calcium and light signals"*
- 11.00-11.30 Coffee Break

### **Symposium 3 SIBV**

#### **Aula Emiciclo**

#### **PLANTS FACING STRESS**

(Chairpersons: S. Esposito and F. Secchi)

- 11.30-12.10** **Michel Havaux**, Centre CEA Cadarache, France  
*"Signaling apocarotenoids and key regulators involved in the chloroplast retrograde response to photo-oxidative stress"*
- 12.10-12.30 **Elide Formentin**, Università di Padova, Italy  
*"A ROS and hormones tight regulation confers salt tolerance in rice"*
- 12.30-14.00 Lunch
- 14.00-14.20 **Chiara Pucciarello**, Scuola Superiore Sant'Anna, Pisa, Italy  
*"Coleoptile elongation study in japonica rice under submergence through integrated genome wide association mapping and transcriptional analyses"*
- 14.20-14.40 **Martina Tomasella**, Università di Trieste, Italy  
*"The influence of stem non-structural carbohydrates on hydraulic dynamics under drought and recovery in Populus nigra L."*
- 14.40-15.00 **Alessio Aprile**, Università del Salento, Italy  
*"Physiological strategies for cadmium compartmentalization in durum wheat roots"*



- 15.00-17.00** Elevator Pitch Session  
Lecture **Franca Rasi**
- 17.00-18.00 Joint SIBV-SBI Poster Session
- 18.00-20.00 General Meeting of SIBV (Aula Emiciclo, members only)
- 20.30-23.30 **Congress social dinner (SBI+SIBV), caffè Pedrocchi**

**Friday 6 September 2019**

**Symposium 4 SBI**  
**Auditorium**

**PLANT-ANIMAL INTERACTIONS: FROM MOLECULES TO LANDSCAPE**  
(Chairpersons: M. Galloni and G. Aronne)

- 9.00-9.35** **Lilach Hadany**, University of Tel Aviv, Israel  
*"Can plants hear their pollinators?"*
- 9.35-9.50 **Massimo Nepi**, Università di Siena, Italy  
*"Effects of non-protein amino acids of floral nectar on survival and locomotion of pollinators"*
- 9.50-10.05 **Luca Pegoraro**, Queen Mary University of London, UK  
*"Pollinator monitoring in a mixed-ploidy population of *Senecio doronicum* in Alpes maritimes"*
- 10.05-10.20 **Angela Etcheverry**, Universidad Nacional de Salta, Argentina  
*"Asymmetrical flowers of Papilionoideae: functional morphology, morphometrics, and interactions with its pollinators"*
- 10.20-10.35 **Edy Fantinato**, Università Ca' Foscari, Venezia, Italy  
*"Using pollination networks to detect tourism sustainability"*

- 10.35-10.50 **Giovanna Aronne**, Università Federico II, Napoli, Italy  
*"Aerial seed bank benefits *Primula palinuri* Petagna in avoiding seed predation and run-off"*
- 10.50-11.05 **Stefano Vitti**, Università di Trieste, Università di Udine, Italy  
*"Seagrass - waterbirds interactions in a lagoon ecosystem of the northern Adriatic Sea"*
- 11.05-11.25 Coffee Break

### **Symposium 5 SBI**

#### **Auditorium**

#### **PLANT SPECIALIZED METABOLISM: CHEMISTRY AND BIOLOGICAL FUNCTIONS**

(Chairpersons: R. Caniato and L. Pistelli)

- 11.25-12.00** **Oliver Kayser**, TU Dortmund University, Germany  
*"Understanding cannabinoid biosynthesis by learning lessons from *Cannabis sativa*, *Helichrysum umbraculigerum* and *Radula marginata*"*
- 12.00-12.15 **Manuela Mandrone**, Università di Bologna, Italy  
*"NMR-based metabolomics approach to detect frauds and adulterations of oregano samples"*
- 12.15-12.30 **Laura De Martino**, Università di Salerno, Italy  
*"Chemical composition and biological activities of the essential oils of two different cultivars of *Citrus medica* L."*
- 12.30-12.45 **Daniela De Vita**, Sapienza Università di Roma, Italy  
*"Antifungal activity of amaranth seed extract in combination with known antifungal drugs"*
- 12.45-13.00 **Giuseppe Malfa**, Università di Catania, Italy  
*"Anti-adipogenic and anti-oxidant effects of a standardized extract of *Citrus sinensis* (L.) Osbeck 'Moro' (Rutaceae) during adipocyte differentiation of 3T3-L1 pre-adipocytes"*

- 13.00-13.15 **Giuseppina Chianese**, Università Federico II, Napoli, Italy  
*"Discovery of a selective and potent gametocytocidal antimalarial agent from Lophira lanceolata"*
- 13.15-13.30 **Roberta Ascrizzi**, Università di Pisa, Italy  
*"Phytochemical and physiological evaluations of four Citrus species from the horti simplicium of the Charterhouse of Pisa over one year of analyses"*
- 13.30-14.00 **Congress Closure**

### **Symposium 4 SIBV**

#### **Aula Emiciclo**

#### **PLANT MICRO AND MACRONUTRIENTS**

(Chairpersons: I. Murgia and A. Pompa)

- 9.00-9.40** **Stanislav Kopriva**, University of Cologne, Germany  
*"Control of sulfur partitioning between primary and secondary assimilation"*
- 9.40-10.00 **Andrea Tagliani**, Scuola Superiore Sant'Anna, Italy  
*"A Calcineurin  $\beta$ -Like Interacting Protein Kinase regulates potassium homeostasis under hypoxia"*
- 10.00-10.20 **Monirul Islam**, Università di Torino, Italy  
*"Near null magnetic field (NNMF) affects metals homeostasis in plants"*
- 10.20-10.40 **Ivan Visentin**, Università di Torino, Italy  
*"The regulation of phosphate starvation responses by strigolactones in Solanum lycopersicum"*
- 10.40-11.00 **Piero Morandini**, Università di Milano, Italy  
*"A. thaliana Gulono-1,4  $\gamma$ -lactone oxidase 2 (GULLO2) is involved in iron transport from endosperm into developing embryos"*
- 11.00-11.30 Coffee Break

## Symposium 5 SIBV

Aula Emiciclo

### PLANT DEVELOPMENT IN A CHANGING ENVIRONMENT

(Chairpersons: A. Nardini and M.C. De Pinto)

- 11.30-12.10**    **Jordi Martínez -Vilalta**, Universitat Autònoma de Barcelona, Spain  
*"Advances and challenges in predicting drought-induced forest mortality"*
- 12.10-12.30    **Matteo Ballottari**, Università di Verona, Italy  
*"Effect of CO<sub>2</sub> concentration on photosynthetic and respiratory pathways in different green algal species"*
- 12.30-12.50    **Claudio Lovisolo**, Università di Torino, Italy  
*"Two integrated platforms to detect source-sink carbon movements in grapevine"*
- 12.50-13.10    **Francesco Petruzzellis**, Università di Trieste, Italy  
*"Novel insights into the physiology of plant invasions"*
- 13.10-13.30    **Barbara Molesini**, Università di Verona, Italy  
*"Novel insights on the role of tomato cystine-knot proteins in the regulation of fruit set"*
- 13.30-14.00    **Congress Closure**

## Simposio Post Congresso SBI

### Aula Emiciclo

#### GLI ORTI BOTANICI UNIVERSITARI: NUOVE OPPORTUNITÀ DI COORDINAMENTO E INDIRIZZO

(a cura del Gruppo di Lavoro per gli Orti Botanici e i Giardini Storici)

**The university botanical gardens:  
new opportunities for coordination and common objectives**  
(Symposium organized by The Working Group on Botanical and  
Historical Gardens)

(Moderatore: F. Pedrotti)

- 15.00-15.05 Apertura dei lavori e indirizzi di saluto del presidente della Società Botanica Italiana, del coordinatore del Gruppo di Lavoro per gli Orti Botanici e i Giardini Storici, del prefetto dell'Orto Botanico di Padova
- 15.05-15.15 **Annalena Cogoni**, Università di Cagliari  
*"Le piante aliene invasive e il riscatto degli Orti Botanici: da siti di introduzione e acclimatazione a promotori di buone pratiche. Gli Orti Botanici Italiani aderiscono al Codice di Condotta - Life ASAP"*

#### Comunicazioni, parte prima: Gli Orti botanici in una prospettiva internazionale

- 15.15-15.45 **Gerda van Uffelen**, Hortus botanicus Leiden, The Netherlands  
*"Hortus botanicus Leiden: 429 years of stability and change"*
- 15.45-16.15 **Brian Lainoff**, Botanic Gardens Conservation International, Kew, United Kingdom  
*"The largest global network of Botanic Gardens and setting international standards for Botanic Gardens through accreditation"*

#### Comunicazioni, parte seconda: Esperienze italiane

- 16.15-16.25 **Barbara Baldan**, Università di Padova  
*"L'Orto Botanico di Padova: dal 1545 al futuro"*

- 16.25-16.35 **Gianluigi Bacchetta**, A. Caddeo, G. Iriti, F. Meloni, M. Porceddu, Università di Cagliari  
*"Hortus Botanicus Karalitanus: un Orto Botanico universitario in cammino verso la sostenibilità sociale e ambientale"*
- 16.35-16.45 **Alessandro Chiarucci**, U. Mossetti, Università di Bologna  
*"Il rinnovamento dell'Orto Botanico di Bologna, dalla gestazione dell'idea alla gestione"*
- 16.45-16.55 **Lorenzo Peruzzi**, Università di Pisa  
*"La sottile linea tra divulgazione e snaturamento, ovvero dell'importanza che degli Orti Botanici si occupino i Botanici. Evoluzione recente dell'Orto e Museo Botanico di Pisa"*
- 16.55-17.05 **Consolata Siniscalco**, Università di Torino  
*"Gli Orti Botanici oggi tra priorità di comunicare la conoscenza delle piante e... mille altre richieste e necessità. Una Rete per condividere le scelte"*
- 17.05-17.15 **Mauro Mariotti**, L. Minuto, Università di Genova  
*"I Giardini Botanici Hanbury: un orto botanico di frontiera con ruolo transdisciplinare nella formazione, nella ricerca scientifica e nella gestione del territorio"*
- 17.15-18.00 Discussione e conclusioni

### **Saturday 7 September 2019**

- 8.00-17.00 Escursione sociale al Bosco del Cansiglio e al Giardino Botanico Alpino G. Lorenzoni  
 (Social excursion to the Cansiglio Wood and Orto Botanico G. Lorenzoni)

*Timetable may be modified*

## Elenco poster

n.  
poster

**Autori**

**Titolo**

### 1. PLANTS IN AND FOR THE FUTURE

#### 1.1 Cell biology

- |   |  |   |
|---|--|---|
| 1 | Ferroni Lorenzo, Brestič Marian, Cantelli Riccardo, Zeri Alex, Carassiti Tommaso, Pancaldi Simonetta | Long-term photoacclimation of photosynthetic limitations and related morpho-anatomical determinants in the microphylls of <i>Selaginella martensii</i> Spring |
| 2 | Petraretti Mariagioia, Del Mondo Angelo, De Natale Antonino, Pinto Gabriele, Pollio Antonino         | <i>In vitro</i> microcosms as a tool for the study of ecological interactions in microbial biofilms   |

#### 1.2 Signal transduction

- |   |   |  |
|---|---|--|
| 3 | Cortese Enrico, Pettiti Francesca, Giletta Alice, Genre Andrea, De Stefani Diego, Negro Alessandro, Navazio Lorella | Establishment and evaluation of novel fluorescent reporters for the analysis of calcium-mediated communication in the arbuscular mycorrhizal symbiosis |
|---|---|--|

#### 1.3 Plant development

- |   |   |  |
|---|---|--|
| 4 | Balzano Angela, Čufar Katarina, Gričar Jožica, de Luis Martin, De Micco Veronica            | Intra-seasonal variations in the genesis of phloem in Mediterranean pines  |
| 5 | Betti Camilla, Houbert Anaxi, Russinova Eugenia   | Polarity-driven cell divisions: the case study of stomata development  |
| 6 | Cerri Martina, Bocchini Marika, Rosati Adolfo, Albertini Emidio, Famiani Franco, Reale Lara | From ovaries to fruit in plum species  |
| 7 | Giovannetti Marco, Göschl Christian, Andersen Stig U., Kopriva Stanislav, Busch Wolfgang    | Identification of novel genes involved in phosphate accumulation in <i>Lotus japonicus</i> through Genome Wide Association mapping of root system architecture and anion content |

- |    |   |  |
|----|---|--|
| 8  | Izzo Luigi Gennaro, Mickens Matthew, Aronne Giovanna, Gómez Celina  | Leaf structural responses help explain single-leaf gas exchange, but not overall growth responses to narrow-band lighting                                    |
| 9  | Moschin Silvia, Nigris Sebastiano, Bruno Leonardo, Chiappetta Adriana, Bitonti Maria Beatrice, Casadoro Giorgio, Baldan Barbara | MADS-box genes expressed in floral buds of <i>Trithuria submersa</i>   |
| 10 | Nigris Sebastiano, Moschin Silvia, Tessari Chiara, Dell'Aquila Cheyenne, Casadoro Giorgio, Baldan Barbara                       | Genetic and molecular pathways regulating the development of fleshy structures involved in the reproduction of <i>Taxus baccata</i> and <i>Ginkgo biloba</i> |
| 11 | Reale Lara, Cerri Martina, Rosati Adolfo, Benincasa Paolo   | Influence of nitrogen supply to wheat caryopsis development  |
| 12 | Sgarbi Elisabetta, Ranieri Raffaella, Santunione Giulia   | Effect of Temporary Immersion System on <i>in vitro</i> development of <i>Himantoglossum robertianum</i> (Loisel.) P. Delforge (Orchidaceae)                 |

#### 1.4 Stress responses

- |    |  |  |
|----|--|--|
| 13 | Amitrano Chiara, Pannico Antonio, Rouphael Youssef, De Pascale Stefania, Arena Carmen, De Micco Veronica                             | Anatomical and eco-physiological responses of Salanova Green and red lettuce ( <i>Lactuca sativa</i> L.) Plants under different VPD conditions |
| 14 | Bellini Erika, Rugnini Lorenza, Andreucci Andrea, Ruffini Castiglione Monica, Saba Alessandro, Bruno Laura, Sanità di Toppi Luigi    | Metal detoxification and homeostasis: the key role of phytochelatin synthase from cyanobacteria to land plants                                 |
| 15 | Ceccarini Chiara, Antognoni Fabiana, Biondi Stefania, Fraternali Alessandra, Verardo Giancarlo, Gorassini Andrea, Scoccianti Valeria | Growth and stress-related biochemical parameters respond to biostimulant activity of spelt husk extracts in maize plants subjected to salinity |
| 16 | De Agostini Antonio, Hernández Antonio, Esteban Raquel, Cortis Pierluigi, Vacca Andrea, Cogoni Annalena                              | Bryophytes in mining areas: the case of study of "Barraxiutta", South-West Sardinia (Italy)  |



- 17 Giacinti Valentina, Cimini Sara, Locato Vittoria, De Gara Laura Redox-dependent molecular responses activated in rice under salt stress exposure: a focus on roots and leaves
- 18 Guarino Francesco, Cicatelli Angela, Lingua Guido, Ruiz Karina B., Vigliotta Giovanni, Oliva Gianmaria, Maietta Fatima, Castiglione Stefano Effects on nutrient uptake and rhizo-microbiome in quinoa grown on compost amended soil irrigated with saline water
- 19 Iovane Maurizio, Izzo Luigi Gennaro, Aronne Giovanna High temperatures affect pollen viability of micro-tom: a model crop for seed-to-seed cycle in space
- 20 Palm Emily, Guidi Nissim Werther, Azzarello Elisa, Mancuso Stefano A split root investigation of the physiological response to heterogenous elevated Zn exposure in poplar and willow
- 21 Roccotiello Enrica, Rosatto Stefano, Cecchi Grazia, Di Piazza Simone, Vezzulli Luigi, Zotti Mirca, Mariotti Mauro Rhizosphere response to Ni stress in the facultative hyperaccumulator *Alyssoides utriculata* (L.) Medik.
- 22 Salinitro Mirko, Zappi Alessandro, Melucci Dora, Tassoni Annalisa Polyphenol, antioxidant, flavonoid and chlorophyll content as a tool for heavy metal stress assessment
- 23 Santunione Giulia, Boni Giulio, Muscio Alberto, Sgarbi Elisabetta Effects of abiotic stress induced by a standard mix of atmospheric pollutants in *Chlorella mirabilis* (Chlorophyceae)
- 24 Scippa Gabriella S., De Zio Elena, Montagnoli Antonio, Terzaghi Mattia, Chiatante Donato, Ljung Karin, Trupiano Dalila Cambial zone-specific hormonal profiles of woody poplar root under bending stress
- 25 Spanò Carmelina, Bottega Stefania, Sorce Carlo, Bartoli Giacomo, Ruffini Castiglione Monica The aquatic fern *Azolla filiculoides* can partially overcome cadmium injuries in co-treatment experiments with TiO<sub>2</sub> nanoparticles
- 26 Tedeschini Emma, Frenguelli Giuseppe Air pollution modifies IgE binding of the main allergens of *Hesperocyparis (Cupressus) arizonica* (GREEN) Bartel pollen

## 1.5 Biotechnology

- |    |   |  |
|----|---|--|
| 27 | Baldisserotto Costanza, Accoto Ornella, Benetti Linda, Marchesini Roberta, Maglie Michele, Pancaldi Simonetta             | Nitrogen and phosphorous removal by microalgae isolated from sludge supernatants of a urban wastewater treatment plant                               |
| 28 | Ceci Andrea, Spinelli Veronica, Massimi Lorenzo, Guadagnino Samuele, Canepari Silvia, Persiani Anna Maria                 | Fungi and arsenic: tolerance and bioaccumulation by soil saprotrophic strains  |
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