

## CONFERENCE PROGRAM

### Thursday 15 September

08:30 - 09:00 Registration

#### Opening session

- 9:00 Welcome address (Maja Ravnikar, director of National Institute of Biology, Špela Baebler, president of the organizing committee)
- 9:15 **Opening lecture:** Maria J. Pozo: Beneficial microbes enhance plant phenotypic and metabolic plasticity to cope with stress

#### Session 1: Applied plant biology research and agronomy applications (chairs: Alessandra di Francesco & Saša Širca)

- 9:50 Alessandra di Francesco: *Aureobasidium pullulans* as an alternative and sustainable strategy in agriculture (IL1)
- 10:20 Nina Devrnja: Characterization of  $\beta$ -cyclodextrin - fennel and basil essential oil inclusion complexes and effect on Colorado potato beetle growth (SL1)

#### 10:35 - 11:05 Coffee break & posters

- 11:05 Saša Širca: Belatedly - climate changes affects the spread of tropical pests in agriculture (IL2)
- 11:35 Denis Kutnjak: Virome of tomato, weed plants and water in agroecosystems in Slovenia (SL2)
- 11:50 Ana Vučurović: Tomato mottle mosaic virus: newly discovered enemy affecting tomatoes and peppers (SL3)
- 12:05 Ales Lebeda: Wild and crop plant pathosystem interactions and variation: Case study *Lactuca* spp. – *Bremia lactucae* (SL4)
- 12:20 Mojca Juteršek: Growth penalty in *Nicotiana benthamiana* insect sex pheromone biofactories involves transcriptional deregulation of stress-growth balance (SL5)

#### 12:35 – 13:45 Lunch & posters

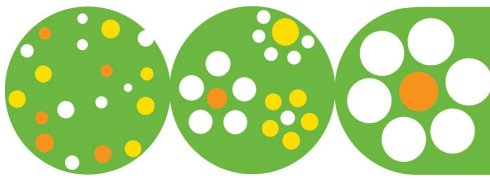
#### Session 2: Plant metabolism, structure and function (chairs: Katarina Vogel-Mikuš & Boris Lazarević)

- 13:45 Katarina Vogel-Mikuš: Application of X-ray-based techniques in plant biology (IL3)
- 14:15 Boris Lazarević: Plant phenotyping using chlorophyll fluorescence and multispectral imaging (IL4)
- 14:45 Maria Müller: Glutathione-mediated plant response to different light intensities and spectra (SL6)
- 15:00 Anna Gasperl: Glutathione concentrations differ in maize bundle sheath cell compartments, depending whether sulfur is supplied via hydrogen sulfide (H<sub>2</sub>S) or sulfate (SL7)

#### 15:15 – 15:45 Coffee break & posters

#### Session 3: Plant interactions with other organisms (chair: Kristina Gruden)

- 15:45 Sarah Lebeis: Identifying chemicals that drive interactions between plants and microbes during microbiome assembly (IL5 - **online**)
- 16:15 Marko Petek: Assembly of potato endophytes using Nanopore and Illumina sequencing (SL8)
- 16:30 Zala Kogej: Epidemiology and diversity of 16SrV phytoplasma group infecting grapevine and hazelnut (SL9)



# PLANTS IN CHANGING ENVIRONMENT

International conference of the Slovenian Society of Plant Biology

2022 September 15-16, Ljubljana, Slovenia



## 17:00 Academy of the Slovenian Society of Plant Biology with lectures of the Society Awardees

Marina Dermastia: Years with my society

Dominik Vodnik: Atmospheric drying and plants

## 18:00 Welcome reception

## 19:00 Conference Dinner (Gostilna Čad, walking distance to the venue)

## Friday 16 September

### Session 3: Plant interactions with other organisms (chair: Maria J. Pozo)

9:00 Kristina Gruden: Study of spatial responses in combination with network analysis reveals mechanisms of potato stress signaling (IL6)

9:30 Maja Križnik: The role of small RNA regulatory networks in tolerance and resistance responses of potato to potato virus Y infection (SL10)

9:45 Anna Coll: The ethylene response factor StERF49 negatively regulates potato immunity (SL11)

10:00 Andrea Schubert: Leaf sucrose controls grapevine susceptibility to Flavescence Dorée (SL12)

10:15 Katarina Šoln: Allelopathy of invasive *Fallopia* plants induced oxidative stress in radish seedlings (SL13)

### 10:30 - 11:30 Coffee break & poster matchmaking

### Session 4: Natural ecosystems in changing environment (chair: Marjana Westergren & Silvio Schueler)

11:30 Marjana Westergren: Evolutionary potential in natural populations of forest trees (IL7)

12:00 Silvio Schueler: Phenotypic plasticity and genetic variation in forests trees: understanding drivers and developing applications for forest adaptation (IL8)

12:30 Tanja Mrak: Response of *Quercus pubescens* ectomycorrhizal fungi to abiotic changes in the Slovenian Sub-Mediterranean (SL14)

12:45 Angela Balzano: Plasticity of wood and phloem formation in tree species from drought-prone environments (SL15)

13:00 Špela Pungaršek: The differentiation and distribution of alpine *Luzula* sect. *Luzula* species in the Eastern Alps (SL16)

### 13:15 – 14:30 Lunch & posters

### Session 5: Plant interactions with environment (chair: Edith Stabentheiner & Mario Pezzotti)

14:30 Edith Stabentheiner: Stressphysiology – the use of stress markers to evaluate oxidative stress (IL9)

15:00 Bekim Gashi: Response of onion plants to oxidative stress induced by heavy metals pollution of soils from industrial areas in Kosovo (SL17)

15:15 Maruša Pompe Novak: Grapevine in changing environment (SL18)

### 15:30 - 16:00 Coffee break

### Closing session

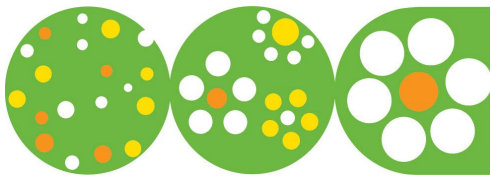
16:00 **Closing lecture:** Mario Pezzotti: Grapevine biology in the post-genomics era

16:35 Concluding remarks



## LIST OF POSTERS

<b>Applied plant biology research and agronomy applications</b>		
<b>P1</b>	Jana Ambrožič-Dolinšek	Corn cockle ( <i>Agrostemma gitago</i> ) preparation exhibit plant growth regulator activity
<b>P2</b>	Jure Mravlje	Cold plasma for effective decontamination of buckwheat grains artificially infected with <i>Fusarium graminearum</i>
<b>P3</b>	Eva Plestenjak	Morphological seed characterization of composite genetic resources of <i>Phaseolus</i> sp.
<b>P4</b>	Eva Praprotnik	Effect of drought and belowground herbivory on maize morphological and physiological features
<b>P5</b>	Jaka Razingar	Effect of root inoculation of strawberry plants with entomopathogenic fungus <i>Metarhizium brunneum</i> : hyperspectral analyses and plant physiology
<b>P6</b>	Jelena Savić	Role of glutathione in potato response to French marigold essential oil
<b>P7</b>	Branka Vinterhalter	In vitro shoot propagation and regeneration of rocket ( <i>Eruca sativa</i> Mill.) using organogenesis and somatic embryogenesis
<b>P8</b>	Sabina Anžlovar	Antifungal activity of selected plant extracts obtained by supercritical fluid extraction using CO <sub>2</sub>
<b>P9</b>	Silvija Gulin	In vitro bioavailability of phenolics from broccoli: Impact of high growing temperature
<b>P10</b>	Emilie Kokić	Influence of temperature stress on the mass share of chlorophyll, lycopene, carotenoids and porphyrins in broccoli
<b>P11</b>	Jelka Šuštar Vozlič	Surveying and inventorying of on-farm conservation of plant genetic resources for food and agriculture in Slovenia
<b>P12</b>	Janja Zajc	From glaciers to refrigerators: biocontrol potential of <i>Aureobasidium subglaciale</i> against pre- and postharvest plant pathogens
<b>Plant metabolism, structure and function</b>		
<b>P13</b>	Tinkara Božič	CEP2 protease expression and activation from the green alga <i>Chlamydomonas reinhardtii</i>
<b>P14</b>	Veno Jaša Grujić	Diversity and Content of Carotenoids and Other Pigments in the Transition from the Green to the Red Stage of <i>Haematococcus pluvialis</i> Microalgae Identified by HPLC-DAD and LC-QTOF
<b>P15</b>	Dijana Krstić Milošević	<i>Gentiana clusii</i> Perr.&Song. cultured in vitro - secondary metabolite profile and evaluation of antioxidant activity
<b>P16</b>	Katarina Petra van Midden	Molecular characterization of <i>Chlamydomonas</i> metacaspases and their detection by activity-based protein profiling
<b>P17</b>	Hana Findurová	Crown reduction alleviates drought stress in sessile oak and Norway spruce seedlings
<b>P18</b>	Valentina Stojilkovič	Imaging of element distribution in whole leaves of hyperaccumulating <i>Noccaea</i> sp. from Slovenia using table-top micro-X-ray fluorescence
<b>P19</b>	Uroš Gašič	Metabolomic evaluation of five <i>Nepeta</i> species (fam. Lamiaceae) using liquid chromatography with multistage mass spectrometry
<b>P20</b>	Valentina Levak	Biosensor of jasmonic acid signaling pathway reveals spatiotemporal patterns of plant's immune response in potato ( <i>Solanum tuberosum</i> L.)
<b>P21</b>	Dunja Šamec	Structural diversity and bioactivity of biflavonoids from ginkgo ( <i>Ginkgo biloba</i> L.), a "living fossil" plant with exceptional adaptability to environmental changes
<b>P22</b>	Špela Tomaž	TGACG-binding (TGA) transcription factors in potato ( <i>Solanum tuberosum</i> L.)
<b>P23</b>	Farzana Sabir	Role of Aquaporins For Water and Nutrients Balance in Cork Oak and Grapevine plants
<b>P38</b>	Klemen Eler	Tracking ecosystem carbon phenology of a karst secondary forest using permanently mounted phenocam



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## Plants interactions with other organisms

<b>P24</b>	Sandra Radić Brkanac	Influence of grapevine leafroll-associated virus 3 on physiological indicators in grapevine
<b>P25</b>	Andreja Urbanek Krajnc	Nutritional Effects of old Slovenian and Hungarian Mulberry Varieties on Silkworm's growth and silk quality
<b>P26</b>	Tjaša Mahkovec Povalej	Localisation studies of the multifunctional protein HCPro from potato virus Y in epidermal leaf cells of <i>Nicotiana clevelandii</i> using confocal microscopy

## Natural ecosystems in changing environment

<b>P27</b>	Mateja Grašič	Conservation of priority grassland habitats in Slovenia through the establishment of seed bank and in situ restoration – project presentation
<b>P28</b>	Eva Kristkova	Phenotype of <i>Lactuca serriola</i> L. from Central Chile and Argentina
<b>P29</b>	Jasmina Nestorović Živković	Chemical constituents and biological activities of two Nepeta species: <i>N. cataria</i> L. and <i>N. nuda</i> L.
<b>P30</b>	Eva Darenova	Stem CO <sub>2</sub> efflux, growth respiration and stem increment of beech and spruce trees
<b>P31</b>	Jožica Gričar	Climatic regulation of leaf and cambial phenology in <i>Quercus pubescens</i> : their interlinkage and impact on xylem and phloem conduits
<b>P32</b>	David Lenarčič	Physiological Changes in Pubescent Oak ( <i>Quercus pubescens</i> ) under Induced Drought Conditions
<b>P33</b>	Nooduan Muangsang	Orchid diversity and conservation in Eastern Thailand

## Plants interactions with environment

<b>P34</b>	Sandra Vitko	Modified BPM expression alters phenotypic traits of Arabidopsis in response to heat stress
<b>P35</b>	Dominik Vodnik	UV-A Stressing of Basil ( <i>Ocimum basilicum</i> L.)
<b>P36</b>	Jana Zekirovski	What happens with antioxidant potential of young broccoli under temperature stress?
<b>P37</b>	Filip Komplet	Content of bioactive substances and potentially toxic elements in wild edible plants in Celje basin