INTERNATIONAL CONFERENCE ON PLANT SYSTEMS BIOLOGY AND BIOTECHNOLOGY (ICPSBB)
14–17 June 2021
Hotel International*****
Golden Sands Black Sea resort, Bulgaria
Session 1
GWAS-driven discovery of genes involved in rutin metabolism in buckwheat
Meiliang Zhou, Chinese Academy of Agricultural Sciences, Beijing, P.R. China
Phenotypic, biochemical, and genotypic diversity of southwestern U.S. blue maize landrace
Amol Nankar, Center of Plant Systems Biology and Biotechnology, Bulgaria

COFFEE BREAK
Towards understanding plasticity of metabolic phenotypes in model and crop plants
Zoran Nikoloski, Potsdam University, Germany
Rational metabolic engineering strategies to enhance camptothecin production in plant cells of Nothapodytes nimmoniana
Sarayu Murali, Department of Biotechnology, Indian Institute of Technology Madras, Chennai, India
How to investigate plant transcriptome data? Using a shiny-based application called "NORMALIX"!
Francesca Marzorati, Department of Environmental Science and Policy, University of Milan, Italy

Session 2
Yin and Yan in the rhizosphere: interplay between root exudation and microbiome in the tomato underground world
Asaph Aharoni, Weizmann Institute of Science, Rehovot, Israel
Fine-tuning of the host plant communication with arbuscular mycorrhizal fungi and root parasitic plants through differential phytohormone accumulation
Kiril Mishev, Institute of Plant Physiology and Genetics, Bulgarian Academy of Sciences, Sofia, Bulgaria
The Medicago truncatula-rhizobium symbiosis confers drought tolerance to the host plant
Ramadoss Dhanushkodi, Center of Plant Systems Biology and Biotechnology, Bulgaria

COFFEE BREAK
Convergent evolution of desiccation tolerance across land plants
Robert VanBuren, Michigan State University, USA
A common F-box gene regulates the leucine homeostasis of Medicago truncatula and Arabidopsis thaliana
Anelia Iantcheva, AgroBioInstitute, Agricultural Academy, Sofia, Bulgaria
Genetically modified edible plants carrying the colicin M gene
Natalia Shcherbak, Institute of Cell Biology and Genetic Engineering of NAS of Ukraine, Kyiv, Ukraine

Poster Session 1 – All posters with uneven numbers

Welcome Cocktail
SESSION 3

09:00-09:45
Plant stress, metabolism and death: keys to their extreme survival?
Paul Dijkstra, Massey University, New Zealand

09:45-10:05
The potential role of cytosine methylation in leaf senescence
Emil Vatov, Nutritional Crop Physiology, University of Hohenheim, Stuttgart, Germany

10:05-10:25
Developmentally controlled changes during Arabidopsis leaf development indicate causes for loss of stress tolerance with age
Aakansha Kanojia, Center of Plant Systems Biology and Biotechnology, Bulgaria

10:25-10:45
COFFEE BREAK

10:45-11:30
Acquisitions of seed–specific pathways are major determinants of desiccation tolerance in vegetative tissues of resurrection plants
Dorothea Bartels, University of Bonn, Germany

11:30-11:50
Genomic selection of morphometric and colorimetric traits using tomato analyzer in Solanaceae fruits
Hao Tong, Center of Plant Systems Biology and Biotechnology, Bulgaria

11:50-12:10
Gold nanoparticles and electromagnetic irradiation in micropropagation and mutation breeding of Lamprocapnos spectabilis (L.) Fukuhara
Dariusz Kulus, Laboratory of Ornamental Plants and Vegetable Crops, University of Science and Technology in Bydgoszcz, Poland

12:10-13:00
LUNCH

SESSION 4

13:30-14:15
The Solanaceae pan–metabolome
Alisdair Fernie, Max Planck institute of Molecular Plant Physiology, Potsdam-Golm, Germany

14:15-14:35
UHPLC–HRMS as an effective tool for the dereplication of specialized natural products in less known plants: two Asteraceae species (Rhaponticoides iconiensis and Synedrella nodiflora) as a case study
Dimitrina Zheleva-Dimitrova, Department of Pharmacognosy, Medical University-Sofia, Bulgaria

14:35-14:55
UPLC–HRMS identification of cyclo–dopa amides in hydromethanolic extracts of Portulaca oleracea
Yulian Voynikov, Department of Chemistry, Medical University, Sofia, Bulgaria

14:55-15:15
Another view on Senecio hercynicus Herborg, (Asteraceae)
Vessela Balabanova, Department of Pharmacognosy, University of Sofia, Bulgaria

15:15-15:45
COFFEE BREAK

15:45-16:30
Learn from Nature, learn from our ancestors
Robert Verpoorte, Leiden University, The Netherlands

16:30-16:50
Human adipocytes react with browning upon caffeic and chlorogenic acids co–treatment
Liliya Vasileva, Center of Plant Systems Biology and Biotechnology, Bulgaria

16:50-17:10
Cannabidiol and cannabidioil containing hemp extracts have beneficial pharmacotherapeutic potential in human tumor, protozoan and human coronavirus infection models in vitro
Spido Konstantinov, Department of Pharmacology, Pharmacotherapy and Toxicology, Medical University of Sofia, Bulgaria

17:10-17:30
“Arsurat – Plagotrat”, an innovative ointment made from medicinal plants, for burns and wounds therapy
Andrei Zbucnea, Plastic Surgery Department, District Emergency Hospital, Ploiesti, Romania

17:30-18:15
Treatment of hard to heal and chronic wounds – a new approach with natural substances
Momchil Kermedchiev, Institute of Organic Chemistry with Centre of Phytochemistry, Bulgarian Academy of Sciences, Sofia, Bulgaria; University hospital Alexandrovska, Sofia, Bulgaria

18:15-19:45
Poster Session 2 – All posters with even numbers
JUNE 16TH

Session 5

09:00-09:45
Improving drought resistance by engineering tissue-specific responses of brassinosteroids in plants
Ana Caño-Delgado, Centre for Research in Agricultural Genomics, Barcelona, Spain

09:45-10:05
Transcriptome meta-analysis identified potential regulators of chilling stress response in Arabidopsis thaliana
Yana Sizentsova, Institute of Cytology and Genetics, Novosibirsk, Russia; Radboud University, Nijmegen, the Netherlands

10:05-10:25
Abscisic acid responsive novel and known miRNAs identification and their target genes in Arabidopsis
Syed Muhammad Muntazir Mehdi, Department of Biotechnology, Adam Mickiewicz University in Poznan, Poland

10:25-10:55
COFFEE BREAK

10:55-11:40
Post-translational modifications in the oxidative stress response
Frank van Breusegem, Department of Plant Biotechnology and Bioinformatics, Ghent University, Belgium; Center for Plant Systems Biology, Flanders Institute of Biotechnology, Ghent, Belgium.

11:40-12:00
The chloroplastic UGT72A2 glycosylating naringenin is involved in leaf redox homeostasis in poplar
Marc Behr, Laboratory of Plant Biotechnology, Université libre de Bruxelles, Belgium

12:00-13:00
LUNCH

Session 6

13:00-13:20
BioAtlantis SuperFifty®, a proven tool to prime and protect crops from adverse weather induced oxidative damage
John O’Sullivan, BioAtlantis Ltd., Ireland

13:20-13:40
Innovative technologies in bioscience
Elena Kadiyska & Vania Daffova, FOT Ltd, Bulgaria

13:40-14:10
Brilliance in plant biology research: unique 3D imaging systems & techniques for your samples
Anton Tonchev, Carl Zeiss GmbH, Bulgaria

14:10-14:40
Minimize chemicals in your technology: microbes to optimize your plants’ nutrition and stimulate their growth
Volodymyr Krout, BTU-Center, Ukraine

14:40-15:00
Shimadzu Nexera series UHPLC: setting new benchmarks of intelligence, efficiency, and design
Viktor Vodenicharski, Shimadzu, Bulgaria

15:00-15:20
Sustainable ecosystem management through the implementation of monitoring and biological control methods
Boril Nikolov, Opora Zaden, Bulgaria

15:20-15:30
Successful biological practice, more than 17 years of experience
Svilen Smilenov, Amitica Ltd., Bulgaria

15:30-15:40
Ultra low copper dosage – a new effective solution
Paolo Turconi, Agridea Srl., Italy

15:40-16:00
COFFEE BREAK

16:00-18:00
E-poster session – online poster presentations

18:00-18:30
Concluding remarks and closure of the event

19:30-22:30
Conference dinner
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>09:00-14:30</td>
<td>Excursion to the town of Balchik and Kaliakra cape</td>
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<tr>
<td>12:40-12:50</td>
<td>Welcoming speech and introduction to RESIST project</td>
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<td>Tsanko Gechev, Center of Plant Systems Biology and Biotechnology, Bulgaria</td>
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<td><strong>Chairs</strong></td>
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<td>Dr. Veselin Petrov and Ms. Valentina Ivanova</td>
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<tr>
<td>12:50-13:30</td>
<td>How does the cell wall of the desiccation tolerant plant <em>Craterostigma planatagineum</em> adapt to extreme cell shrinkage and expansion?</td>
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<td>Dorothea Bartels, University of Bonn, Germany</td>
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<td>13:30-14:10</td>
<td>Connecting the dots: using lipidomics for gaining insight into the plant response to environmental changes and to key developmental cues</td>
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<td>Yariv Brotman, Department of Life Sciences, Ben-Gurion University of the Negev, Beersheba, Israel</td>
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<td>14:10-14:50</td>
<td>Desiccation tolerance in <em>Xerophyta</em> species - from seeds to seedlings to leaves</td>
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<td>Nicola Illing, Department of Molecular and Cell Biology, University of Cape Town, South Africa</td>
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<td>14:50-15:10</td>
<td>Super Fifty Prime® combats drought stress in tomato plants (cv. Micro-Tom)</td>
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<td>Aakansha Kanojia, Center of Plant Systems Biology and Biotechnology, Bulgaria</td>
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<td>15:10-15:30</td>
<td><strong>COFFEE BREAK</strong></td>
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<td>15:30-15:50</td>
<td>Priming with an <em>Ascophyllum nodosum</em> extract improves fruit-set and yield in non-stressed and heat-stressed tomato plants</td>
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<td>Mihail Angelov, Center of Plant Systems Biology and Biotechnology, Bulgaria</td>
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<td>15:50-16:10</td>
<td>Regulation of vegetative desiccation tolerance in <em>Xerophyta</em></td>
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<td>Rafe Lyall, Center of Plant Systems Biology and Biotechnology, Bulgaria</td>
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<td>16:10-16:50</td>
<td>Induction of abiotic stress tolerance by SuperFifty® in model and crop plants</td>
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<td>Sujeeth Neerakkal, BioAtlan ti, Tralee, Ireland</td>
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<td>16:50-17:30</td>
<td>Comparative genomics of desiccation–tolerant plants</td>
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<td>Robert VanBuren, Michigan State University, USA</td>
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<tr>
<td>17:30-18:00</td>
<td>Discussion and concluding remarks</td>
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</tbody>
</table>
CINNAMON BASIC EXTRACT PROTECTS FIBROBLASTS AGAINST SILVER NANOPARTICLES CYTOTOXICITY
Elena Codrici, Dudau Maria, Simona Mihai, Ionela Daniela Popescu, Lucian Albulescu, Petruta Preda, Diana Stan, Loredana-Andreea Mateescu, Dana Stan, Mariaros Avram, Cristiana Tanase, Ana-Maria Enciu

EP1

PESTICIDES RESIDUES IN NATURAL HERBAL FOOD SUPPLEMENTS
Stanislava Ivanova, Radiana Staynova, Kalin Ivanov

EP2

PLANT-BASED DIET AS A STRATEGY FOR WEIGHT CONTROL AND PREVENTION OF GLOBESITY
Stanislava Ivanova, Kalin Ivanov

EP3

PHYTOCHELATIN PRODUCTION IS ESSENTIAL TO INDUCE THE DNA DAMAGE RESPONSE AND MAINTAIN VEGETATIVE GROWTH IN CADMIUM-EXPOSED ARABIDOPSIS THALIANA
Verena Iven, Sophie Hendrix, Ann Cuypers

EP4

EVALUATION OF BLACKTHORN (PRUNUS SPINOSA L.) FRUITS ACTIVITIES TARGETING MANAGEMENT OF DIABETES AND RELATED COMPLICATIONS USING IN VITRO MODELS
Anna Magiera, Aleksandra Owczarek, Monika Olszewska

EP5

IN VITRO ANTI-INFLAMMATORY ACTIVITY OF BLACKTHORN (PRUNUS SPINOSA L.) FRUITS EXTRACTS IN HUMAN IMMUNE CELLS
Anna Magiera, Monika Czerwińska, Monika Olszewska

EP6

DESIGNING SYNTHETIC TOOLS TO IMPROVE TERPENOID PRODUCTION IN YEAST
Ciaran Ruehmkorff, Bernd Mueller-Roeber, Lena Hochrein

EP7

THE QUALITATIVE AND QUANTITATIVE VARIABILITY OF THE PHENOLIC PROFILE OF SORBUS AUCUPARIA L. FRUITS FROM POLAND
Magdalena Rutkowska, Aleksandra Owczarek, Monika Olszewska

EP8

PROTECTIVE EFFECTS OF SORBUS AUCUPARIA L. FRUITS AGAINST OXIDATIVE/NITRATIVE MODIFICATIONS OF HUMAN FIBRINOGEN IN VITRO
Magdalena Rutkowska, Joanna Kołodziejczyk-Czepas, Monika Olszewska

EP9

THE EFFECT OF COLD STRESS ON BIOMASS PRODUCTION OF MISCANTHUS SINENSIS AND ITS ALCOHOLIC FERMENTATION
Karolina Sobańska, Martyna Przewoźnik, Anna Budka, Magdalena Tomaszewska, Agnieszka Drożdżyńska, Aleksandra Gęsicka, Aleksandra Kulka, Julianna Muszyńska, Agata Klepacka, Joanna Cerazy-Waliszewska, T.omasz Pniewski

EP10

THE COMBINED EFFECT OF BIOCHAR AND NPK FERTILIZER ON TRITICALE YIELD, SOIL PROPERTIES UNDER DIFFERENT TILLAGE SYSTEMS
Luiza Usevičiūtė, Edita Baltrėnaitė-Gedienė

EP11

THE ROOT TIP AS A STRONGLY AFFECTED REGION DURING ACUTE CADMIUM STRESS IN ARABIDOPSIS THALIANA PLANTS
Isabeau Vanbuel, Jana Deckers, Sophie Hendrix, Ann Cuypers

EP12

EVALUATION OF THE INFLORESCENCE LENGTH INFLUENCE ON EMBRYONIC CALLUS FORMATION IN SWEET SORGHUM
Logayn Abushal, Shireen Assem, Walid Fouad

EP13

INVESTIGATION OF THE ROLE OF AtSARK IN COLD AND SALT INDUCED SENESCENCE
Margulan Sandybek, Aigerim Soltabayeva, Dina Turlybekova

EP14

OREGANO OIL ENCAPSULATED IN CHITOSAN-ALGINATE NANOPARTICLES INHIBITS THE FORMATION OF BACTERIAL BIOFILMS
Lyudmila Dimitrova, Krassimira Yoncheva, Martin Berger, Spiro Konstantinov, Hristo Najdenski

EP15

MICELLAR CURCUMIN ENHANCES THE ANTIBACTERIAL ACTIVITY OF THE ALKYLPHOSPHOCHOLINE ERUFOSINE
Maya Zaharieva, Lyudmila Dimitrova, Alexander Kroumov, Ivanka Spassova, Daniela Kovacheva, Hristo M. Najdenski

EP16

CYTOTOXICITY AND MICROBICIDAL ACTIVITY OF ORGANIC SOLVENTS COMMONLY USED FOR STUDYING ANTIMICROBIAL ACTIVITY OF OREGANO OIL ENCAPSULATED OF IN CHITOSAN-ALGINATE NANOPARTICLES
Yana Ilieva, Lyudmila Dimitrova, Alexander Kroumov, Yana Ilieva, Krassimira Yoncheva, Martin Berger, Spiro Konstantinov, Hristo Najdenski

EP17

ANTIMICROBIAL ACTIVITY OF OREGANO OIL ENCAPSULATED OF IN CHITOSAN-ALGINATE NANOPARTICLES
Krassimira Yoncheva, Nikola Benbassat, Lyudmila Dimitrova, Alexander Kroumov, Ivanka Spassova, Daniela Kovacheva, Hristo Najdenski

EP18