PlantEd
COST Action CA18111

cost
EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

PROGRAMME
2nd PlantEd conference

Lecce, Italy *20-22 September 2021*

Monday 20 Sept

08:30-09:10	***REGISTRATION***
09:10-09:30	***OPENING OF CONFERENCE***
09:30-12:00	**Genome editing in cereals** *Moderator: Roberto Defez, IBBR-CNR, Italy*
09:30-10:00	*Raffaella Battaglia, CREA, Italy* **Modulating yield components in barley**
10:00-10:20	*Goetz Hensel, Heinrich-Heine-University, Germany* Precise gene editing of barley using ribonucleoprotein complexes
10:20-10:40	*Pouneh Pouramini, Leibniz Institute of Plant Genetics and Crop Plant Research, Germany* Targeted knock out of barley endosperm-specific storage proteins as a prerequisite for molecular farming purposes
10:40-11:20	*Coffee break & posters display*
11:20-11:40	*Stefania Masci, University of Tuscia, Italy* CRISPR-Cas9 genome editing for the development of wheat lines with improved nutritional properties
11:40-12:00	*Sadiye Hayta, John Innes Centre, UK* Extending genome editing into elite wheat cultivars by deploying morphological genes
12:00-13:00	*Lunch*

13:00-15:40	**Genome editing in fruits and vegetables** *Moderator: Angelo Santino, ISPA-CNR, Italy*
13:00-13:30	*Cathie Martin, John Innes Centre, UK* **Engineering vitamin content of tomato by genome editing**
13:30-13:50	*Aurelia Scarano, CNR-ISPA, Italy* CRISPR/Cas9-mediated genome editing on *SIDET1* gene for the nutritional improvement of tomato
13:50-14:10	*Musa Kavas, Ondokuz Mayıs University, Turkey* Generation of male-sterile tomato lines with the CRISPR/Cas9 system
14:10-14:30	*Alessandro Nicolia, CREA-OF, Italy* CRISPR/Cas9-mediated mutagenesis as a strategy to develop resistant tomato plants against Orobanche
14:30-15:00	*Coffee break*
15:00-15:20	*Paola Punzo, CREA-OF, Italy* CRISPR/Cas9 editing of proline metabolism and SOS pathway genes for improving abiotic stress tolerance in tomato
15:20-15:40	*Loredana Moffa, CREA-VE, Italy* Potential of New Plant Breeding Techniques for grapevine breeding
16:00-18:00	**PlantEd Working Groups meetings (WG1-WG5)**
19:00-20:30	*WELCOME COCKTAIL*

Tuesday 21 Sept

08:45-10:25	**Genome editing in plants-** **the latest technological advancements** *Moderator: Isabel Mafra, REQUIMTE-LAQV, Universidade do Porto, Portugal*
08:45-09:05	*William de Martines, Plant Breeding, Wageningen University, Netherlands* New approaches to gene targeting in plants by exploiting the unique characteristics of CRISPR-Cas12a

09:05-09:25	*Fabio D'Orso, CREA-GB, Italy* Effective CRISPR-mediated knockout mutations in plants require translations reinitiation avoidance
09:25-9:45	*Ellen Slaman, Wageningen University, Netherlands* Applying high-throughput technology to identify CRISPR-Cas9 induced off-target mutations in tomato
09:45-10:05	*Isabel Mafra, REQUIMTE-LAQV, Universidade do Porto, Portugal* Are there available tools to trace genome-edited crops in foods?
10:05-10:25	*Agnes E. Ricroch, IDEST, Paris-Saclay University, France* Next biotechnological plants for addressing global challenges: the contribution of transgenesis and New Breeding Techniques
10:25-11:15	*Coffee break – Poster Session*
11:15-12:00	**Joint session with COST Action EPI-CATCH** *Moderator: Dennis Eriksson, SLU, Sweden*
11:15-11:30	*Federico Martinelli, University of Florence, Italy* Transgenerational effects of chromium stress in *Arabidopsis thaliana*
11:30-11:45	*Michal Lieberman-Lazarovich, Agricultural Research Organization, Israel* Epigenetics of heat stress response in tomato
11:45-12:00	*Ueli Grossniklaus, University of Zurich, Switzerland* Standing epigenetic variation is subject to selection and contributes to relevant plant phenotypes
12:00-13:00	*Lunch*
13:00-15:20	**Genome editing in roots and tubers** *Moderator: Guy Smagghe, Ghent University, Belgium*
13:00-13:20	*Erik Andreasson, Swedish University of Agricultural Sciences, Sweden* Mutations in susceptibility genes through CRISPR/Cas9 genome editing confer increased pathogen resistance in potato
13:20-13:40	*Csaba Eva, Centre for Agricultural Research, Hungary* Edition of potato for reduced PPO activity confers resistance to *Ralstonia solanacearum*

13:40-14:00	*Jeny Jose, Centre for Agricultural Research, Hungary* Molecular and metabolomics analysis of resistant potato varieties as a way forward to generate resistance to *Ralstonia solanacearum*
14:00-14:20	*Mario Tavazza, ENEA, Italy* CRISPR-Cas9 targeting of the *eIF4e-1* gene induces resistance to *Potato Virus Y* in *Solanum tuberosum* L. cv. Desirée
14:20-14:40	*Coffee break*
14:40-15:00	*Priscilla Olayide, Swedish University of Agricultural Sciences, Sweden* Identification of suitable targets for gene editing mediated crop improvement: the example of CRISPR/Cas9 directed gene editing in cassava for increased β-carotene accumulation
15:00-15:20	*Guy Smagghe, Ghent University, Belgium* First report on CRISPR/Cas9-targeted mutagenesis in the Colorado potato beetle, *Leptinotarsa decemlineata*
15:30-17:30	**PlantEd 3rd Management Committee meeting**
19:00-23:00	*SOCIAL DINNER*

Wednesday 22 Sept

08:45-10:50	**Genome editing in oilcrops, algae, trees and other plants** *Moderator: Tobias Brügmann, Thünen Institute of Forest Genetics, Germany*
8:45-9:15	*Li-Hua Zhu, Swedish University of Agriculture Sciences, Sweden* **CRISPR-Cas9 editing in rapeseed**
9:15-9:35	*Tobias Brügmann, Thünen Institute of Forest Genetics, Germany* Establishment of genome editing techniques in trees
9:35-09:55	*Vladislava Galovic, University of Novi Sad, Serbia* Gene editing in poplar using CRISPR/Cas to improve tolerance to *Lonsdalea populi* infection
09:55-10:15	*Hilde-Gunn Opsahl-Sorteberg, Norwegian University of Life Sciences, Norway* Navigating possible seaweed industrial development by crucial genomic tools

10:15-10:35	*Charlotte De Bruyn, ILVO, Belgium* Identification of bitterness related biosynthesis genes in *Cichorium* using CRISPR/Cas9 genome editing
10:35-10:55	*Matthias Fladung, Thuenen-Institute of Forest Genetics, Germany* Targeted CRISPR/Cas9-based knock-out of the rice orthologs *TILLER ANGLE CONTROL1 (TAC1)* in poplar induced erect leaf habit and shoot growth
10:55-11:20	*Coffee break*
11:20-12:30	**STSM session** *Moderator: Dennis Eriksson, SLU, Sweden*
11:20-11:30	*Justyna Boniecka, Nicolaus Copernicus University, Poland* Targeted mutagenesis in oilseed rape (*Brassica napus* L.) protoplasts using CRISPR/Cas
11:30-11:40	*Andreja Škiljaica, University of Zagreb, Croatia* Gene editing of *Arabisopsis thaliana* cytosolic/nuckear subclass of Hsp70
11:40-11:50	*Kubilay Yildirim, Ondokuz Mayıs University, Turkey* *Agrobacterium* mediated CRISPR/Cas9 transformative potential to modify abiotic stresses in poplar
11:50-12:00	*Dejan Stojkovic, University of Belgrade, Serbia.* First steps towards bioactivity guided gene editing in chicory for the higher production of targeted sesquiterpene lactones: CHIC project
12:00-12:10	*Melekşen Akin, Igdir University, Turkey* Gene editing in celery: Short Time Scientific Mission at ILVO
12:10-12:20	*André Rosado, Aberystwyth University, UK* Overview of biosafety regulations to support the future regulatory status of precision breeding products in some non-EU countries
12:20-12:30	*Juan Antonio Vives-Vallés, University of the Balearic Islands, Spain* Plant Breeders' Rights in the light of the NPBT
12:30-12:35	**Presentation by EU-SAGE**
12:35-12:45	**POSTER PRIZE ceremony**
12:45-13:00	***OFFICIAL CLOSING OF THE CONFERENCE***
13:00-14:00	*Lunch*

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POSTER SESSION

1. **Wheat cell suspensions as a possible tool for CRISPR/Cas9 constructs evaluation**

   Michalski K., Linkiewicz A.M.

2. **microRNA abundance can be modulated by CRISPR/Cas9 system in polyploids**

   Lukan T., Veillet F., Coll Rius A , Mahkovec Povalej T., Pogačar K., Stare K., Križnik M., Chauvin L., Chauvin J.E., Gruden K.

3. **TILLING-by-sequencing and genome editing for the functional validation of candidate domestication genes in common bean (*Phaseolus vulgaris* L.)**

   Frugis G., Testone G., di Vittori V., Paolo D., Liberatore C., Galbiati M., Locatelli F., Cominelli E., Confalonieri M., Rossato M., Delledonne M., Cortinovis G. Elisa Bellucci E, Bitocchi E., Rodriguez M., Attene G., Aragão F., Papa R., Sparvoli F.

4. **Obtaining potato *Solanum tuberosum* plants that simultaneously express genes *desA* and thaumatinII**

   Kyrpa T., Kuchuk M.

5. **New technologies in achieving heat and drought resilient oilseed production, the case of camelina**

   Marjanovic Jeromela A., Kondić Špika A., Rajković D., Cvejić S., Jocković M., Zanetti F., Vollmann J., Nagl N., Kiprovski B., Čanak P., Kuzmanović B., Mladenov V., Miladinović D.

6. **Functional conservation of nascent polypeptide associated complex in plants**

   Klodová B., Fíla J., Honys D.

7. **Genome editing of *Ocimum basilicum* L. through CRISPR/Cas9 to induce resistance to pathogen *Peronospora belbahrii***

   Laura M., Forti C., Barberini S., Ciorba R., Mascarello C., Cassetti A., Giovannini A., Ruffoni B., Savona M.

8. **Genome editing of wheat - challenges and prospects for tackling changing environment**

   Kondić-Špika A., Mikić S., Mirosavljević M., Takač V., Miladinović D., Marjanović Jeromela A.

9. **Improving perennial ryegrass adaptability and resilience (EditGrass4Food)**

   Sarmiento C., Jaškūnė K., Rognli O.A., Rostoks N.

10. **Engineering haploid inducer lines in chicory**

    Waegneer E., Eeckhaut T., Ruttink T., Van Laere K., De Storme N.

11. **CRISPR-mediated multiple editing of *Becurtovirus* genome enabled curly top disease resistance in sugar beet and inhibited viral mutant escape and formation**

    Yıldırım K., Kavas M., Seçgin Z., Sevgen I.

12. **Organic varieties, a breath of fresh air for plant breeding and plant variety protection in EU, or their trojan horse?**

Vives-Vallés J.A.

13. **Investigation of role of ORA59 transcription factor during *Pyrenophora teres* f. *teres* infection in barley**

Mészáros K., Szakács A., Cséplő M., Kunos V., Bányai J., Bakonyi J., Éva C.

14. **Deciphering rubber biosynthesis using genome editing and artificial miRNA in *Hevea brasiliensis***

Leclercq J., Dessailly F., Martin F., Meunier A.-C., Montoro P., Rio M., Petit J.

15. **Knockout of *CPL-3* gene in tomato using genome editing**

Saeed F., Demirel U., Bakhsh A.