

Scientific Programme, XX EUCARPIA Meeting of the Tomato Working Group,
Valencia, Spain

Tuesday 31st of May 2022

Inaugural conference and reception at Botanical Garden of Valencia (<http://www.jardibotanic.org/>). Google Maps location: <https://tinyurl.com/3r4454t6>.

18:00-19:00	Registration
19:00-19:45	<u>MJ Díez, R. Fernández-Muñoz</u> <i>Inaugural conference: Tomato genetic resources in Spain: conservation and use</i>
19:45	Visit to tomato materials garden exhibition in the Botanical Garden and welcome cocktail dinner

Wednesday 1st of June 2022

Meeting venue: Paraninfo UPV.

Carrer Jean Dausset, 46022 Valencia (<https://eucarpia2022.webs.upv.es/venue/>).

Google Maps location: <https://tinyurl.com/yckjs8md>

8:30 – 9:30	Registration and poster set up
9:30 – 9:45	Welcome and Opening of the Meeting

Session 1: Genetic resources

Chairpersons: Roger Chetelat and María José Díez

9:45-10:15	<u>R. Chetelat</u> <i>Keynote talk: The molecular basis of pollen rejection in tomato wide crosses</i>
10:15-10:35	<u>J. Blanca et al.</u> <i>American and European Tomato History unveiled using haplotype and GBS analyses</i>
10:35-10:55	<u>C. Pons et al.</u> <i>Unlocking the European traditional tomato genetic resources</i>
10:55-11:15	<u>Aprèa et al. (presenter: M.J. Díez)</u> <i>SPET genotyping of over 15,000 accessions of tomato reveals the genetic structure of the tomato germplasm at world level</i>
11:15-11:45	Coffee break + Poster session

Session 2: Breeding for morphological and quality traits

Chairpersons: Mondher Bouzayen and Antonio Monforte

11:45-12:15	<u>J. Benejam</u> <i>Keynote talk: Genetic control of tomato fruit quality: from GWAS to breeding</i>
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12:15-12:45	<u>M. Bouzayen</u>	<i>Keynote talk: Uncoupling fruit softening from fruit ripening or “Give to Caesar what is Caesar’s”</i>
12:45-13:05	<u>E. Bineau et al.</u>	Improving tomato quality in hybrid varieties: inheritance and gene expression of key compounds
13:05-13:25	<u>D. Alonso et al.</u>	Phenotypic and metabolomic characterization of the G2P-SOL tomato core collection
13:25-13:45	<u>Mellidou et al (presenter: A. Kanellis)</u>	Transcriptome profiles of tomato fruit enriched in vitamin C through overexpressing PG-GDP-L-galactose phosphorylase1 (GGP1)
13:45-15:00	Lunch at venue hall or garden + Poster session	

Session 3: Breeding for abiotic stresses

Chairpersons: Amalia Barone and María José Asins

15:00-15:30	<u>A. Barone</u>	<i>Keynote talk: Enhancing tolerance to abiotic stresses: a multi-combined approach to face high temperatures in tomato</i>
15:30-15:50	<u>Bashary et al. (presenter: M. Lieberman-Lazarovich)</u>	Characterization of <i>Solanum pimpinellifolium</i> Backcross Inbred Lines as a resource for heat stress tolerance in tomato
15:50-16:10	<u>Ruggiero et al.</u>	Tomato responses to combined water and nutrient stress: a view from transcriptomic and splicing analyses
16:10-16:30	<u>Fang et al. (presenter: K. Chen)</u>	Genetic characterization of tomato pollen viability and pollen number under heat stress
16:30-17:00	Coffee break + Poster session	

Session 4: EU-funded projects on tomato

Chairpersons: Antonio Granell

17:00-17:10	<u>A. Granell</u>	TRADITOM
17:10-17:20	<u>A. Granell</u>	HARNESSTOM
17:20-17:30	<u>G. Giuliano</u>	G2P-SOL
17:30-17:40	<u>T. Cardi</u>	BRESOV
17:40-17:50	<u>M. Bouzayen</u>	TOMGEM
17:50-18:00	<u>A. Schubert</u>	TOMRES
18:00-18:10	<u>F. Sunseri</u>	SOLNUE
18:10-18:20	<u>M. Lapidot</u>	VIRTIGATION
18:20-19:00	General discussion on synergies	

Thursday 2nd of June 2022

Meeting venue: Paraninfo UPV.

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Session 5: Breeding for biotic stresses

Chairpersons: Moshe Lapidot and Yuling Bai

9:00-9:30	<u>M. Lapidot</u>	Tolerance and resistance to tomato brown rugose fruit virus (ToBRFV)
9:30-9:50	<u>Schol et al.</u>	Predicting <i>R</i> gene durability through virulence studies with CRISPR-Cas9-generated effector mutants of the tomato leaf mold pathogen <i>Cladosporium fulvum</i>
9:50-10:10	<u>D'Esposito et al.</u> <u>(presenter: M. Ercolano)</u>	Integrated omic approaches for dissecting the tolerance to <i>Tuta absoluta</i> in tomato
10:10-10:30	<u>Fonseca et al.</u>	Tomato hairplus mutation induces changes in the epigenome and increases glandular trichome density
10:30-11:00	Coffee break + Poster session	

Session 6: Tools and materials for breeding and genomics

Chairpersons: Lukas Mueller and Aureliano Bombarely

11:00-11:30	<u>L. Mueller</u>	Breedbase, a digital ecosystem for plant breeding
11:30-11:50	<u>Ziarsolo et al</u> <u>(presenter: J. Cañizares)</u>	K-seq, a reliable and low-cost genotyping technology
11:50-12:10	<u>Vidavski et al</u> <u>(presenter : A. Eybishitz)</u>	Old Battle and New War - Resistance Sources and Markers against TOBRFV
12:10-12:30	<u>Nieuwenhuis et al</u> <u>(presenter: S. Diaz-Trivino)</u>	Tandem gene breeding in tomato
12:30-12:40	<u>Guayson et al</u> <u>(presenter: M. Zouine)</u>	High-quality de novo genome assembly of the <i>Solanum pimpinellifolium</i> TO-937 genome using PacBio HiFi Long Read technology
12:40-12:50	Group picture outside the Meeting hall	
12:50-16:00	Departure by bus for El Palmar (Albufera Lake Natural Park) and lunch	

Technical visit

Fundación Ruralcaja Experimental Farm (Paiporta, Valencia)

16:00-19:00	Technical visit: Demonstration trial of tomato diversity and modern cultivars	
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Meeting social dinner

Restaurant “La Hípica de Valencia”, Calle Jaca 23, Valencia. Google Maps location:
<https://tinyurl.com/2p98as24>

21:00	Meeting social dinner
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Friday 3rd of June 2022

Meeting venue: Paraninfo UPV.

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Session 7: New Plant Breeding Technologies

Chairpersons: Hiroshi Ezura and Diego Orzáez

9:30-10:00	H. Ezura	The world’s first CRISPR tomato launched to a Japanese market: its impact on the implementation of genome editing technology
10:00-10:30	<u>D. Orzáez</u>	From intragenesis to genome editing: new breeding techniques and their use for improving fruit composition
10:30-10:50	<u>Sevi et al.</u>	Editing Tomato for Low Allergenicity and Improved Nutritional Composition
10:50-11:10	Nicolia et al (Presenter: T. Cardi)	CRISPR/Cas9-mediated mutagenesis in tomato: application to parasitic plant resistance, technical developments, and future perspectives
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11:10-12:00	Coffee break + Posters	

Session 8: Round Table on challenges in tomato breeding

Chairperson: Jaime Prohens

12:00-13:00	J. Prohens	Round Table with seed companies
13:00-13:15	Closure and next meeting announcement	
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13:15-15:30	Lunch and removal of posters	
