

# COST EPI-CATCH Conference

## Epigenetic mechanisms in plant responses to environmental stresses

May 2-3<sup>rd</sup>, 2023 - Parma, Italy

### Organizing Committee

Prof. Nelson Marmioli – Director of  
Consorzio Interuniveritario Nazionale per le  
Scienze Ambientali (CINSA), University of  
Parma

Prof. Federico Martinelli - University of  
Firenze

Dott. Luca Pagano - CINSA, University of  
Parma



**EPI-CATCH** is a COST action with the aim of defining, developing, generating and sharing new breaking knowledge and methodologies for the investigation of epigenetic mechanisms of plant adaptation to environmental stresses driven by climate change.

The Conference will take place in the beautiful city of **Parma** (Italy). The aim is to disseminate new insights into the epigenetic mechanisms of plant development and adaptation to environmental stresses linked to climate change. Other integrated multi-omics approaches with future perspectives of epigenetic analysis are also welcome. The Event, under the patronage of the Italian Society of Agricultural Genetics (**SIGA**), is an extraordinary occasion for researchers to disseminate, discuss, and update the latest research in plant epigenetics.

Two sessions are provided: 1) keynote speakers, 2) junior scientists.

The conference will be carried out as a hybrid event, with physical presence as well as live streaming through an online platform.

# PROGRAMME

## Epigenetic mechanisms in plant responses to environmental stresses

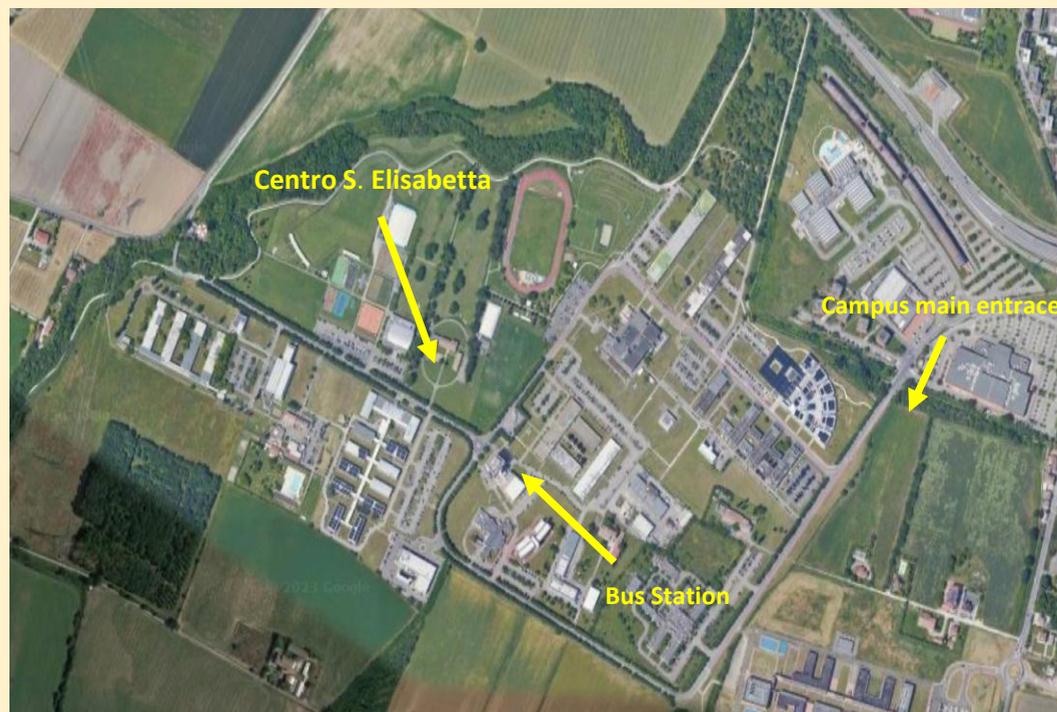
**Tuesday 2<sup>nd</sup> May 2023**

<b>12:30-13:30</b>	<b>REGISTRATION</b>
	<b>OPENING of the CONFERENCE</b>
<b>13:30-14:00</b>	<b>Welcome of Organizing Institutions</b>
<b>14:00-18:10</b>	<b>Plant epigenetic responses to environmental stresses (Keynote session)</b>
<b>14:00-14:20</b>	<i>Frederic Berger</i> A synthetic view of chromatin organization
<b>14:20-14:40</b>	<i>Serena Varotto</i> Epigenetic-mediated cold development of fruit tree buds in the scenario of climate change
<b>14:40-15:00</b>	<i>Aline Probst</i> Role of TELOMERE REPEAT BINDING proteins in fine-tuning gene expression and plant development
<b>15:00-15:20</b>	<i>Roberta Lo Piero</i> The role of biocontrol agent in the onset of mal secco disease: analysis of lemon leaf transcriptome
<b>15:20-15:40</b>	<i>Marta Marmioli</i> miRNA regulation and stress adaptation in plants
<b>15:40-16:10</b>	<b>Coffee break &amp; poster viewing</b>
<b>16:10-16:30</b>	<i>Pagano Luca</i> Metal-based nanomaterials exposure and organellar DNA replication
<b>16:30-16:50</b>	<i>Philippe Gallusci</i> DNA methylation remodelling in grapevine triggered by nutritional and environmental stresses
<b>16:50-17:10</b>	<i>Giorgio Perrella</i> A dual epigenetic brake moderates plant stress responses
<b>17:10-17:30</b>	<i>Gianpiero Marconi</i> Investigating the role of DNA methylation in plant response to abiotic stresses
<b>17:30-17:50</b>	<i>Leonardo Bruno</i> An omics approach to investigate the impact of DNA methylation status on plant growth plasticity
<b>17:50-18:10</b>	<i>Cinzia Comino</i> DNA methylome changes in grafted eggplants
<b>18:10-18:30</b>	<b>Conclusions</b>
	<b>FREE DINNER</b>

**Wednesday 3<sup>rd</sup> May 2023**

<b>08:15-09:00</b>	<b>Welcome coffee</b>
	<b>OPENING of the CONFERENCE</b>
<b>09:00-9:20</b>	<i>Nelson Marmioli</i> Epigenetics: the rise and fall of Lamarck <b>(Keynote speaker)</b>
<b>09:20-13:05</b>	<b>Multi-omics and biochemical analysis for plant epigenetics (Junior session)</b>
<b>09:20-09:35</b>	<i>Anna Fiorillo</i> Salt Tolerance-Related Protein (STRP): a new player involved in cold and salt stress responses in <i>Arabidopsis thaliana</i>
<b>09:35-09:50</b>	<i>Diego Piacentini</i> Nitric oxide and phytohormones interaction in the response of the rice root to toxic metals
<b>09:50-10:05</b>	<i>Miriam Negussu</i> Investigating epigenetic and molecular responses to drought stress in chickpea
<b>10:05-10:20</b>	<i>Emanuela Palomba</i> Arabidopsis thaliana response to extracellular DNA: metabolic profile analyses after exposure to self-DNA
<b>10:20-10:35</b>	<i>Irene Luzzi</i> Stress memory a key player in priming plants in a changing environment
<b>10:35-10:50</b>	<i>Francesco Guarino</i> A comparative analysis of DNA methylation changes through MSAP-NGS
<b>10:50-11:20</b>	<b>Coffee break &amp; poster viewing</b>
<b>11:20-11:35</b>	<i>Mara Cucinotta</i> Modulation of DNA methylation by DRM1/2 improves ovule number and fertility under drought stress
<b>11:35-11:50</b>	<i>Angelo Sicilia</i> The environment effect on the transcriptomic profile of Vitis vinifera: the case study of Aglianico and Cabernet sauvignon grown in southern Italy
<b>11:50-12:05</b>	<i>Lorenzo Salvatore Frisullo</i> How does the parental genome influence the fruit quality of progenies via epigenetics?
<b>12:05-12:20</b>	<i>Weiwei Fang</i> Unravelling the function of a novel epigenetic regulator of photomorphogenesis in plants
<b>12:20-12:35</b>	<i>Alberto Tassinari</i> Insights into the regulatory mechanisms of an important flowering time QTL in maize
<b>12:35-12:50</b>	<i>Elisa Cappetta</i> Dissecting common and divergent molecular pathways involved in plant cell response to abrupt or gradual water deficit in potato
<b>12:50-13:05</b>	<i>Francesca De Marchi</i> Investigating the role of epigenetic variation in eggplant's fruits differing in anthocyanin content
<b>13:05-13:20</b>	<b>Conclusions</b>

*Conference venue:*  
**Centro S. Elisabetta, Università di Parma,**  
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