



**66th ANNUAL CONGRESS
ITALIAN SOCIETY OF
AGRICULTURAL GENETICS**

Bari, 5-8 September 2023

CLIMATE-SMART PLANTS TO FEED THE FUTURE

FIRST ANNOUNCEMENT

The Board of the Italian Society of Agricultural Genetics (SIGA) informs the Members and researchers operating in the field of genetics, breeding and biotechnology of organisms of agricultural interest, that the LXVI Annual SIGA Congress will take place in Bari from Tuesday 5 to Friday 8 September 2023 in the "Aldo Moro" hall of the Law Department of the University of Bari Aldo Moro, Piazza Cesare Battisti, 1. The venue is in the city center near the railway station, connected to the Bari airport through an efficient railway service.

The Congress will include seven oral sessions and corresponding poster sessions, as shown in the attached programme. In each session, there will be invited talks by Italian or foreign researchers, as well as oral communications and posters from the participants in the Congress. Session 2 "Breeding for resilience: addressing climate change in plant genetics", scheduled for the morning of Wednesday 6, is organized by the "Next Generation SIGA" group. Contributions whose first author is no more than 35 years old are invited for this session. The session "Underground genetics: roots and their interactions", scheduled for the afternoon of Wednesday 6 September, will be dedicated to our dear colleague Marina Tucci who passed away last year.

The Annual Members' Meeting will be held in the Congress venue on the afternoon of Wednesday 6 September.

The social event will be held on Thursday 7 September at 21 in the Sala Zonno - Molo San Nicola 3. On this occasion the "SIGA 2023 Congress" awards will be assigned to the best posters, as selected by the SIGA Board.

SCIENTIFIC CONTRIBUTIONS AND SUBMISSION RULES

The SIGA Board, as Scientific Committee of the Congress, invites scientific contributions in the form of oral communication or poster for the following sessions:

- Session 1 - Omics to study and use genetic resources in plant breeding
- Session 2 - Breeding for resilience: addressing climate change in plant genetics
- Session 3 - Innovative methods and tools in plant genetics and breeding
- Session 4 - Underground genetics: roots and their interactions
- Session 5 - Exploring the plant epigenomes
- Session 6 - Fruit and forest trees genomics, genetics and breeding
- Session 7 - Updates and upgrades in genome editing

The description of the contents of each session can be found below.

The Scientific Committee will make a selection among the requests for oral presentations and will communicate its decision to the authors. Contributions not selected for oral presentation will in any case be accepted as posters.

The posters, in printed form, will be available for viewing by the participants in the dedicated room throughout the congress. Authors will be asked to be present at their poster at the times that will be reported in the final programme.

The abstracts, in English, must be sent exclusively online through the Congress website (<http://www.sigaannualcongress.it>). The Abstract submission is open and the deadline is June 15th.

Each communication, oral or poster, must be associated with a single corresponding Author registered at the Congress. The corresponding Author may or may not be the first Author. The corresponding Author of a communication can be co-Author in other communications but not with the qualification of corresponding Author.

The corresponding Author must indicate:

- (a) the identification number of the session to which the scientific contribution should be referred;
- (b) the preferred form of presentation of the work to the Congress, oral or poster.

The Scientific Committee will evaluate the request and will inform the corresponding author of the presentation form by the end of July.

Only the abstracts of the papers actually presented at the Congress, both oral and poster, will be published in the proceedings, which will be available on the SIGA website under an ISBN identifier.

Oral communications to the Congress and the text of the slides and posters must be in English. Poster format should be 70 cm wide x 100 cm high.

The Scientific Committee reserves the right to make any changes to the program that may be necessary for scientific and/or organizational reasons.

REGISTRATION AND FEES

Registration will be only received online through the Congress website: <http://www.sigaannualcongress.it>. The participation fee can be paid by bank transfer or directly at the Congress venue.

Participants' status	Early bird fee (before June 15)	Full fee (after June 15)
Tenured – SIGA Member	€ 340,00	€ 380,00
Tenured – not SIGA Member	€ 390,00	€ 430,00
Non tenured – SIGA Member	€ 150,00	€ 190,00
Non tenured – not SIGA Member	€ 200,00	€ 240,00

The registration fee includes access the Congress venue and the congress folder. Coffee breaks, lunches, the welcome cocktail and the social event will be offered by SIGA.

To take advantage of the fee reserved for Members, the participant must be up-to-date with the payment of the membership fee for the year 2023. For any question concerning your membership please contact the SIGA Secretariat.

To take advantage of the early bird fee, the date of actual payment of the fee (by 15 June) and not that of sending the registration form will be considered.

To encourage participation of young, non tenured researchers, the registration fee was reduced as indicated above. The **“non tenured”** status applies to **students, including PhD students, Post-docs and scholarship holders**. The certification of the applicant's "non tenured" status should be issued in writing by the PI of her/his

research group or by the Director of the department or research institution, and submitted online at registration.

CANCELLATION OF REGISTRATION

In the event of cancellation of registration, the refund of the fee must be requested within 10 days from the closing of the Congress. The refund, minus any applicable bank charges, will be made within a month following the closing of the Congress.

SIGA AWARDS 2023 FOR THE BEST PRESENTATION IN AN INTERNATIONAL SCIENTIFIC JOURNAL

The two winning papers of the SIGA 2023 Award for the best publication in international scientific journals on genetics, genetic improvement and biotechnology of cultivated plants will be presented on Wednesday 6 September at 16:30.

SIGA CONGRESS AWARD 2023

Poster communications by no-tenured participants (as first Author) will be eligible for "SIGA Congress 2023" prizes. The candidates must apply when submitting the abstract and should be registered by 31 July 2023. The posters will be evaluated by the SIGA Board. The prizes (of 200 Euro each) will be awarded during the social event and exclusively to the first Author, if he/she is present at the event.

HOTEL BOOKING

Congress participants will have to make their own hotel reservations by contacting the hotels directly. In order to take advantage of the discounted rates reserved for Congress participants, the Local Organizing Committee recommends to book your accommodation as soon as possible, considering that the Congress will take place during the summer.

In the immediate vicinity of the congress venue, hotels, bed & breakfasts, residences and restaurant services are available, both in the Murat centre (newer part of the city) and in the old city.

The list of facilities for which special rates have been agreed is published on the Congress website (<http://www.sigaannualcongress.it>). To take advantage of special rates, it is necessary to specify participation in the SIGA Congress at booking.

The Local Organizing Committee may update the list of hotels offering discounts to Congress participants; therefore, it is advisable to check the Congress website before hotel reservation.

Il Segretario
Daniele Rosellini

Il Presidente
Edgardo Filippone

IMPORTANT DEADLINES

15 JUNE 2023

- a) last date for early bird registration fee
- b) last date for abstract submission

31 JULY 2023

Last date for registration (at full fee) for candidates to “SIGA Congress prizes 2023” (non-tenured participants)

27 AUGUST 2023

Last date for registration

LXVI ANNUAL CONGRESS OF THE ITALIAN SOCIETY OF AGRICULTURAL GENETICS

CLIMATE-SMART PLANTS TO FEED THE FUTURE

BARI, 5 - 8 SEPTEMBER, 2023

CALL FOR ABSTRACTS

Session 1 - Omics to study and use genetic resources in plant breeding

This section calls for studies addressing the characterization of plant genetic resources by means of genomics, transcriptomics, phenomics, metabolomics and proteomics, aiming to identify genes, molecular mechanisms and genotypes suitable for use in plant breeding.

Session 2 - Breeding for resilience: addressing climate change in plant genetics

This session, held by Next Generation SIGA, preferentially calls for early career scientists who contribute to the development of crops that can withstand climate-linked challenges. Studies utilizing state-of-the-art techniques in genotyping, phenotyping, and envirotyping to uncover and model the genetic regulation of biotic and abiotic stress response traits in the face of climate change are particularly welcome.

Session 3 - Innovative methods and tools in plant genetics and breeding

This session will encompass contributions focusing on: innovative approaches for gene delivery and functional characterization of plant genes of agricultural importance, innovative breeding methods, including marker-assisted and genomic selection, speed breeding and the applications of new sensors, imaging techniques and artificial intelligence.

Session 4 - Underground genetics: roots and their interactions

Variation in root morphological and physiological traits can have a significant impact on crop growth and productivity. Additionally, a better understanding of root genetics and physiology holds great promise to help develop more stress-resilient cultivars and more sustainable cropping systems. This Session welcomes presentations addressing the genetic variation and inheritance of root traits, the investigation of root-associated microbiome, and the interaction between plant roots, microbes, soil physical factors and crop management.

Session 5 - Exploring the plant epigenomes

Epigenetics is proving a major regulator of both gene expression and genome stability. This session calls for contributions focused on epigenetic mechanisms, particularly acting through DNA methylation, histone modifications, small RNAs and mRNA modifications, that regulate plant development, the response of plants to biotic and abiotic stresses, and plant adaptation to changing environmental conditions. In this session, we also aim to bring attention to the emerging field of epibreeding, that is, the use of epigenetic variability for the improvement of crops and their wild relatives.

Session 6 - Fruit and forest trees genomics, genetics and breeding

The session aims at giving an overview of current research on genetic variability, genomics and breeding of fruit and forest trees in Mediterranean areas. The session welcomes any work related to adaptive/resilient responses in modified environment that triggers new-onset and/or exacerbates (biotic and abiotic) stresses. The session is open to research on all perennial tree and shrub species.

Session 7 - Updates and upgrades in genome editing

This session will provide an overview of current progresses achieved in genome editing, with particular interest in the development and application of the CRISPR/Cas9 technology for improving crop resilience and livestock production traits as well. Works providing insight about the main technical bottlenecks in developing and applying genome editing technologies are especially welcome.

LXVI SIGA ANNUAL CONGRESS
Climate-Smart Plants to Feed the Future

BARI, 5 - 8 SEPTEMBER, 2023

PRELIMINARY PROGRAMME

TUESDAY, SEPTEMBER 5

- 13:00 – 14:30** **Registration**
- 14:30 – 15:00** **Opening ceremony**
Chairpersons: Filippone E., Ricciardi L., Lotti C.
Welcome address by Institutional and Local Authorities
- 15:00 – 16:45** **Session 1 - Omics to study and use genetic resources in plant breeding**
Chairpersons: Ambrosone A., Mazzucotelli E.
- 15:00 – 15:30 **Invited Lecture**
Iorizzo M.
Omics approach to uncover the origin of high carotenoid orange carrots
- 15:30 – 16:45 Oral Communications
- 16:45 – 17:15** **Coffee break and poster viewing**
- 17:15 – 18:45** **Session 1 - (cont.)**
- 17:15 – 18:30 Oral Communications
- 18:30 – 18:45 General discussion
- 19:00 – 20:30** **Welcome cocktail**

WEDNESDAY, SEPTEMBER 6

- 09:00 – 10:45** **Session 2 - Breeding for resilience: addressing climate change in plant genetics**
Organized by Next Generation SIGA
Chairpersons: Broccanello C., Di Marsico M.
- 09:00 – 09:30 **Invited Lecture**
Dixon L.
Adapting cereal development to changing climates
- 09:30 – 10:30 Oral Communications
- 10:30 – 10:45 General discussion
- 10:45 – 11:15** **Coffee break and poster viewing**

11:15 – 13:00 Session 3 - Innovative methods and tools in plant genetics and breeding

Chairpersons: Lotti C., Pavan S.

11:15 – 11:45 **Invited Lecture**

Bai Y.

Impaired plant susceptibility genes in resistance breeding:
from concept to cultivars

11:45 – 12:45 Oral Communications

12:45 – 13:00 General discussion

13:00 – 13:15 Communication from Eucarpia

13:15 – 14:30 Lunch break

14:30 – 16:30 Session 4 - Underground genetics: roots and their interactions

Dedicated to Marina Tucci

Chairpersons: Beretta M., Salvi S.

14:30 – 15:00 **Invited Lecture**

Laplaze L.

Targeting root traits to improve tolerance to early drought
episodes in pearl millet (*Pennisetum glaucum* L.)

15:00 – 16:15 Oral Communications

16:15 – 16:30 General discussion

16:30 – 17:00 SIGA Young Research Award 2023

Dedicated to Francesco D'Amato and Gian Tommaso Scarascia Mugnozza

Chairpersons: Filippone E., Rosellini D.

Award ceremony

17:00 – 17:30 Coffee break and poster viewing

17:30 – 19:30 SIGA General Assembly

THURSDAY, SEPTEMBER 7

09:00 – 11:00 Session 5 – Exploring the plant epigenomes

Chairpersons: Comino C., Varotto S.

09:00 – 09:30 **Invited Lecture**

Zilberman D.

Long-term epigenetic inheritance and phenotypic diversity
in natural populations

09:30 – 11:00 Oral Communications

11:00 – 11:30 Coffee break and poster viewing

11:30 – 12:30 Session 5 - (cont.)

11:30 – 12:15 Oral Communications

12:15 – 12:30 General discussion

12:30 – 14:30 Lunch break

- 14:30 – 16:45** **Session 6 – Fruit and forest trees genomics, genetics and breeding**
Chairpersons: Giannino D., Montemurro C.
- 14:30 – 15:00 **Invited Lecture**
Gonzalez Martinez S.
Population vulnerability of a keystone Mediterranean tree under future climate – an ecological genomics approach
- 15:00 – 16:00 Oral Communications
- 16:00 – 16:30 **Invited Lecture**
Decroocq V.
Genetic diversity and use of stone fruit tree wild relatives for a more sustainable fruit production
- 16:30 – 16:45 General discussion
- 16:45 – 17:00** **Coffee break**
- 17:00 – 19:00** **Parallel Poster Sessions**
- 20:30** **Social Event**

FRIDAY, SEPTEMBER 8

- 09:30 – 12:00** **Session 7 – Updates and upgrades in genome editing**
Chairpersons: Lanubile A., Nigro D.
- 09:30 – 10:00 **Invited Lecture**
Cereseto A.
Expanding the CRISPR-Cas toolbox for precise and efficient genome editing
- 10:00 – 11:15 Oral Communications
- 11:15 – 11:45 **Invited Lecture**
Granell A.
Genome editing for tastier, healthier tomatoes
- 11:45 – 12:00 General discussion
- 12:00 – 12:15** **Closing ceremony**
Chairpersons: Filippone E., Salvi S.