

# FROM SEED TO PASTA 5

## A SUSTAINABLE DURUM WHEAT CHAIN FOR FOOD SECURITY AND HEALTHY LIVES

BARI - ITALY, 24-27 SEPTEMBER 2025



### Chairs

**AGATA GADALETA**  
*University of Bari, Italy*

**ROBERTO TUBEROSA**  
*University of Bologna, Italy*

## PROGRAM

[www.fromseedtopasta.com](http://www.fromseedtopasta.com)

**ORGANIZING  
SECRETARIAT**

 **Avenue media\***  
Conference & Expo

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**International Conference**  
**FROM SEED TO PASTA 5**  
Bari - Italy, 24-27 September 2025

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**ORGANIZING COMMITTEE**

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# International Conference **FROM SEED TO PASTA 5** Bari - Italy, 24-27 September 2025

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Open Fields - Italy

**Gabriella Sonnante**

CNR - Italy

**Steven Xu**

USDA - USA



# International Conference **FROM SEED TO PASTA 5** Bari - Italy, 24-27 September 2025

## PROGRAM

### WEDNESDAY, 24 SEPTEMBER 2025

#### ROOM 1

08:00-08:30 Registration of participants

**08:30-09:10**

#### **WELCOME ADDRESSES**

Chairs: Agata Gadaleta - *University of Bari, Italy*;  
Roberto Tuberosa - *University of Bologna, Italy*

- *Rector of University of Bari*
- *Maria De Angelis - Director DISSPA, University of Bari*
- *CREA Representative*
- *CNR Representative*
- *Stefania Masci - University of Tuscia, President of SIGA*

**09:10-13:00**

#### **Session 1**

#### **SETTING THE FSTP5 SCENE FOR WHEAT BREEDING 5.0**

09:10-09:20

*Title to be announced*  
Maurizio Martina - *FAO Deputy Director General*

09:20-09:40

**Durum wheat role in the Global Drylands Strategy for ICARDA**  
Augusto Becerra - *ICARDA Deputy Director General Research, Rabat, Morocco*

09:40-09:50

**Advancing Mediterranean Agriculture: PRIMA's vision, projects, and opportunities**  
Ali Rhouma - *PRIMA Foundation, Tunisia Agriculture Ministry* - [online](#)

09:50-10:10

**The tetraploid wheat genetic resources for better bridging durum and bread wheat genomics and breeding**  
Marco Maccaferri - *University of Bologna, Italy*

10:10-10:30

**Svevo reference genome 2.0: a comprehensive tool for durum wheat genomics and breeding**  
Luigi Cattivelli - *CREA, Genomic and Bioinformatics, Italy*

10:30-10:50

**Multi-omic strategies for durum wheat improvement**  
Curtis Pozniak - *University of Saskatchewan, Canada*

10:50-11:20

*Coffee break*





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## **WEDNESDAY, 24 SEPTEMBER 2025**

11:20-11:40	<b>Artificial intelligence and machine learning method: enhance prediction accuracy of durum wheat traits</b> José Crossa - <i>CIMMYT, Mexico</i> - <a href="#">online</a>
11:40-12:00	<b>Integrating Molecular Tools into Durum Wheat Breeding for Enhanced Crop Performance</b> Susanne Dreisigacker - <i>CIMMYT - Mexico</i>
12:00-13:00	Q&A and discussion with the speakers
13:00-14:00	<i>Lunch</i>
<b>14:00-17:00</b>	<b>Session 2</b> <b>AGRONOMY, PHYSIOLOGY AND MODELING OF YIELD POTENTIAL TO ENHANCE THE SUSTAINABILITY OF DURUM WHEAT</b> Chairs: Zina Flagella - <i>University of Foggia, Italy</i> ; Nicola Pecchioni - <i>CREA Foggia, Italy</i>
	<i>Invited presentations</i>
14:00-14:20	<b>The transition of durum wheat cultivation from conventional to conservation tillage in Mediterranean conditions</b> Michele Pisante - <i>University of Teramo, Italy</i>
14:20-14:40	<b>Durum wheat spike traits for improving yield potential</b> Nicola Pecchioni - <i>CREA, Cereal and Industrial Crops, Italy</i>
14:40-15:00	<b>Yield potential and adaptation to stress are not mutually exclusive</b> José Luis Araus - <i>University of Barcelona, Spain</i> - <a href="#">online</a>
15:00-15:20	<b>Lessons from global Genotype x Environment x Management (GxExM) systems research to enhance the durum wheat value chain</b> Brian Beres - <i>Agrifood, Alberta, Canada</i> - <a href="#">online</a>
15:20-16:00	Q&A and discussion with the speakers
16:00-16:30	<i>Coffee break</i>
16:30-17:00	<b>Short presentations selected from Abstracts</b>
<b>17:00-19:00</b>	<b>INNOVAR &amp; WHEAT SECURITY</b> Chairs: Fiona Doohan - <i>University of Dublin, Ireland</i> ; Filippo Bassi - <i>ICARDA, Morocco</i>



**International Conference**  
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**THURSDAY, 25 SEPTEMBER 2025**

**ROOM 1**

**08:30-10:35**

**Session 3**

**GENETIC RESOURCES IN TETRAPLOID WHEAT TO BETTER BRIDGE DURUM AND BREAD WHEAT**

Chairs: Marco Maccaferri, *University of Bologna, Italy*;  
Elisabetta Mazzucotelli, *CREA, Genomics and Bioinformatics, Italy*

*Invited presentations*

08:30-08:45

**Transfer and characterization of wild relative introgressions into durum wheat**  
Julie King - *BBSRC Wheat Research Centre, Nottingham, United Kingdom*

08:45-09:00

**Wheat history revealed: insights from ancient grains of southern Israel**  
Assaf Distelfeld - *Institute of Evolution, Haifa, Israel*

09:00-09:12

**Gene bank genomics of *Aegilops* supports introgression breeding of wheat**  
István Molnár - *Hungarian Academy of Sciences, Budapest, Hungary*

09:12-09:24

**Unleashing the potential of tetraploid relatives: from core collections to QTL for introgression breeding**  
Elisabetta Mazzucotelli - *CREA, Genomics and Bioinformatics, Italy*

09:24-09:36

**Resistance to rust diseases in tetraploid wheats**  
Pablo Olivera - *USDA-ARS, St. Paul, USA*

09:36-09:48

**Genomic breeding for dryland durum at ICARDA**  
Filippo Bassi - *ICARDA, Rabat, Morocco*

09:48-10:00

**Holistic approach to develop drought-tolerance of durum wheat**  
Andrés Schwember - *Pontificia Universidad Católica, Santiago, Chile*

10:00-10:12

**New soft spring durum variety release USDA 'Morris' brings novel milling and baking traits from farm to table**  
Jeffrey Boehm - *USDA, Lincoln NE, USA*

10:12-10:24

**Genetic architecture of winter survival in the Global Durum Panel**  
Ahmad Sallam - *USDA-ARS, St. Paul, USA*

10:25-10:50

*Coffee break*



**International Conference**  
**FROM SEED TO PASTA 5**  
Bari - Italy, 24-27 September 2025

**THURSDAY, 25 SEPTEMBER 2025**

**ROOM 1**

<b>10.50-13:00</b>	<b>SPECIAL SESSION “INNOVATIVE APPROACHES FROM THE INDUSTRY”</b> <i>Honorary chair: Paolo De Castro – Economist, Expert of European Policies</i> <i>Moderator: Roberto Ranieri - Open Fields, Parma, Italy</i>
10:50-11:05	<b>Opening lecture</b> <b>Mediterranean diet: a worldwide Italian excellence</b> Paolo De Castro - <i>Economist, expert of European policies</i>
11:05-11:20	<b>Worldwide pasta business overview</b> Margherita Mastromauro - <i>President of the Italia Pasta Makers, Italy</i>
11:20-11:35	<b>AltoGrano: a breakthrough in the milling industry</b> Marcello Miani and Graziano Stasi - <i>Molino Casillo, Bari, Italy</i>
11:35-11:50	<b>Stra Pasta: durum wheat pasta with 19% of protein and 12% of fiber</b> Emidio Mansi - <i>Pastificio Lucio Garofalo, Gragnano, Italy</i>
11:50-12:05	<b>Innovative approaches to make pasta and filled pasta with durum wheat and other raw materials</b> Renato Dall’Agata and Alessio Marchesani - <i>Fava-Storci, Cento, Italy</i>
12:05-12:20	<b>End products from the new perennial grain Kernza developed from intermediate wheatgrass, and looking ahead to a perennial durum-wheatgrass hybrid</b> Timothy Crews - <i>The Land Institute, Salina, Kansas USA</i>
12.20-12.30	<b>Operative millers: how to manage high innovation and future</b> Lorenzo Cavalli – <i>President Italian Association of Operative Millers – Antim</i>
12:30-12:40	Colkim - <i>Title and speaker to be announced</i>
12:40-12:50	Anton Paar - <i>Title and speaker to be announced</i>
12:50-13:00	<b>Open Discussion</b>
13:00-14:00	<i>Lunch</i>



**International Conference**  
**FROM SEED TO PASTA 5**  
Bari - Italy, 24-27 September 2025

**THURSDAY, 25 SEPTEMBER 2025**

**ROOM 1**

**14:00-15:30**

**ROUND TABLE WITH DURUM WHEAT AND PASTA STAKEHOLDERS**

Moderators: Silvia Giuliani - *Assosementi, Bologna, Italy*;  
Roberto Ranieri - *Open Fields, Parma, Italy*

- Maria Caboni - *University of Bologna, Italy*
- Stefano Ravaglia - *Società Italiana Sementi, Italy*
- Andrea Massi - *Produttori Sementi Bologna, Italy*
- Oriana Porfiri - *CGS Sementi, Italy*
- Pierre Devaux - *Florimond Desprez, France*
- Casillo Company, Italy (*TBD*)
- Divella Pasta Company, Italy (*TBD*)

15:30-16:00

**Q&A and discussion with the Round Table Speakers**

16:00-16:30

**Short presentations selected from Abstracts about Pasta Quality**

16:30-17:00

*Coffee break*

17:00-17:30

**Presentation of the commemorative stamp on Nazareno Strampelli**

Roberto Tuberosa - *DISTAL University of Bologna, Italy*

**17:30-19:00**

**CARLOTTA AWARD**

Chairs: Patrizia Galeffi; Giuseppina del Signore - *ENEA, Rome, Italy*

17:30-17:45

**Open Session:**  
**Welcome and Acknowledgements**

**THEMATIC AREA A**

17:45-17:55

**Epigenetics as a new frontier for wheat improvement**

Philippa Borrill - *John Innes Centre, UK*

17:55-18:05

**Genotyping-by-sequencing uncovers a Thinopyrum 4StS-1JvsS Robertsonian translocation linked to multiple stress tolerances in bread wheat**

Klaudia Kruppa - *Biological Resources Dpt., Agriculture Institute, Hungary*

18:05-18:15

**Special Mention A - Title to be defined**

Veronica Guwela - *CIMMYT, Mexico*

**THEMATIC AREA B**





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**FROM SEED TO PASTA 5**  
Bari - Italy, 24-27 September 2025

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**THURSDAY, 25 SEPTEMBER 2025**

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**ROOM 1**

18:15-18:25	<b>Mutagenesis-driven modulation of the carotenoid pathway in durum wheat: nutritional gains and pleiotropic effects</b> Samuela Palombieri - Tuscia University, Italy
18:25-18:35	<b>CRISPR-based editing of the <math>\omega</math>- and <math>\gamma</math>-gliadin gene clusters reduces wheat immunoreactivity without affecting grain protein quality</b> Yu Zitong - Plant Pathology Dpt., Kansas State University, USA
18:35-18:45	<b>Special Mention B</b> <b>Complementing wheat with underutilized grains: A closer look at ancient grains and intermediate wheatgrass in food applications</b> Maneka Malalgoda - Manitoba University, Canada
18:45-19:00	<b>AWARD CEREMONY</b>

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**FRIDAY, 26 SEPTEMBER 2025**

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**ROOM 1**

<b>08:30-10:30</b>	<b>Session 4</b> <b>BREEDING DURUM WHEAT UNDER CLIMATE CHANGE: PROGRESS AND CHALLENGES</b> <i>Session dedicated to the memory of Gian Tommaso Scarascia Mugnozza</i> Chairs: Antonio Blanco - University of Bari, Italy; Stefania Masci - University of Tuscia, Viterbo, Italy
08:30-08:50	<b>Commemoration of Gian Tommaso Scarascia Mugnozza and his research activities</b> Antonio Blanco - University of Bari, Italy
08:50-09:10	<b>Feeding the World through Science: The life and work of Gian Tommaso Scarascia Mugnozza</b> Antonio Bonatesta - University of Bari, Italy
09:10-09:20	<b>Durum Wheat Research at the University of Tuscia: From Creso to Climate Resilience</b> Stefania Masci - University of Tuscia, Viterbo, Italy
09:20-09:30	<b>Gian Tommaso Scarascia Mugnozza and the Green Revolution</b> Roberto Tuberosa - University of Bologna, Italy



**International Conference**  
**FROM SEED TO PASTA 5**  
Bari - Italy, 24-27 September 2025

**FRIDAY, 26 SEPTEMBER 2025**

**ROOM 1**

09:30-09:50	<b>Mediterranean durum wheat in a warming climate: optimizing alleles, phenology, and sowing windows</b> Pasquale De Vita - <i>CREA, Sezione Cerealicoltura, Foggia, Italy</i>
09:50-10:05	<b>Improving durum wheat resilience to climate change: balancing between accelerating genetic gains and relevance to main production environments</b> Karim Ammar - <i>CIMMYT, Mexico</i>
10:05-10:20	<b>Genomic breeding for heat tolerance at ICARDA</b> Hafssa Kabbaj - <i>ICARDA, Rabat, Morocco</i>
10:20-10:30	<b>Conclusions</b> Enrico Porceddu - <i>University of Tuscia, Viterbo, Italy</i>
<b>AWARD IN MEMORY OF GIAN TOMMASO SCARASCIA MUGNOZZA</b>	
10:30-11:00	<i>Coffee break &amp; Posters vision</i>
<b>11:00-13:00</b>	<b>Session 5</b> <b>BREEDING FOR DISEASE RESISTANCE/TOLERANCE IN DURUM WHEAT</b> Chairs: Valentyna Klymiuk - <i>University of Saskatchewan, Canada</i> ; Fiona Doohan - <i>University of Dublin, Ireland</i>
11:00-11:20	<b>Pre-breeding for disease resistance in durum</b> Valentyna Klymiuk - <i>University of Saskatchewan, Canada</i>
11:20-11:40	<b>The long road to Fusarium Head Blight resistance in durum wheat</b> Barbara Steiner - <i>BOKU University, Vienna, Austria</i>
11:40-12:00	<b>Genetics of FHB resistance in barley using a single plant-omics approach: a model for wheat</b> Gurcharn Singh Brar - <i>University of Alberta, Canada</i>
12:00-12:20	<b>The evolutionary battle between <i>Stb</i> resistance genes and <i>Septoria tritici</i> blotch across bread and durum wheats</b> Marcel Thierry - <i>INRAE, Palaiseau, France</i>
12:20-12:40	<b>Genetic dissection of resistance to major diseases and insects in cultivated emmer wheat</b> Steven Xu - <i>USDA, Albany, USA</i>



**International Conference**  
**FROM SEED TO PASTA 5**  
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**FRIDAY, 26 SEPTEMBER 2025**

**ROOM 1**

12:40-13:00 **Short presentations selected from Abstracts**

13:00-14:00 *Lunch*

**14:00-15:30 Session 6**

**QTLOME, CANDIDATE GENES AND EDITING OF THE DURUM WHEAT GENOME**

Chairs: Roberto Tuberosa - *University of Bologna, Italy*; Anna Maria Mastrangelo - *CREA, Cereal and Industrial Crops, Italy*

14:00-14:15 **The durum wheat germplasm panels and genome as resources to unveil the genetic bases of agronomic traits under conservative agriculture**  
Anna Maria Mastrangelo - *CREA, Foggia, Italy*

14:15-14:30 **Three candidate genes in 60 Kb: which one is responsible for leaf rust resistance in *T. dicoccum*?**  
Francesca Desiderio - *CREA, Fiorenzuola D'Arda, Italy*

14:30-14:45 **Characterization of the *Sbm2* QTL, a major QTL for resistance to soil borne cereal mosaic virus (SBCMV) in durum wheat**  
Matteo Bozzoli - *DISTAL, University of Bologna, Italy*

14:45-15:00 **Enhancing durum wheat seed quality and safety through CRISPR gene editing**  
Francesco Camerlengo - *DISTAL, University of Bologna, Italy*

15:00-15:30 Q&A and discussion with the speakers

**15:30-17:00 Session 7**

**QUALITY AND FUNCTIONAL FOODS TRACEABILITY IN THE DURUM WHEAT CHAIN**

Chairs: Agata Gadaleta - *University of Bari, Italy*; Stefania Masci - *University of Tuscia, Viterbo, Italy*

*Invited presentations*

15:30-15:45 **Development of new wheat-derived foods of the Mediterranean diet with improved nutritional and health value**  
Francesco Sestili - *University of Tuscia, Viterbo, Italy*

15:45-16:00 **The expression of the *CsIF6* gene in wheat: a beta-glucan biosynthesis prospective**  
Ilaria Marcotuli - *University of Bari, Italy*



**International Conference**  
**FROM SEED TO PASTA 5**  
Bari - Italy, 24-27 September 2025

**FRIDAY, 26 SEPTEMBER 2025**

**ROOM 1**

16:00-16:15	<b>Genetic variation in semolina yellow colour-associated genes within the Global Durum Panel</b> Carlos Guzman - <i>University of Cordoba, Spain</i>
16:15-16:30	<b>Short presentations selected from Abstracts of Sessions 6 &amp; 7</b>
16:30-17:00	<i>Coffee break &amp; Posters vision</i>
<b>17:00-19:45</b>	<b>Session 8</b> <b>DECODING AND LEVERAGING THE DURUM WHEAT PANGENOME</b> Chairs: Marco Maccaferri, <i>University of Bologna, Italy</i> ; Curtis Pozniak - <i>University of Saskatchewan, Canada</i>
17:00-17:20	<b>Landscape of structural variation in the wheat genome: functional and phenotypic consequences</b> Eduard Akhunov - <i>Department of Agronomy, Kansas State University, USA</i>
17:20-17:40	<b>Uncovering hidden diversity in wheat genomes through k-mer-based analyses</b> Simon Krattinger - <i>KAUST, Thuwal, Saudi Arabia</i>
17:40-18:00	<b>Inflorescence architecture and its relevance for sink capacity</b> Thorsten Schnurbush - <i>IPK, Gatersleben, Germany</i>
18:00-18:20	<b>Decoding and leveraging the durum wheat pangenome</b> Cristian Forestan - <i>University of Bologna, Italy</i>
18:20-18:50	<b>Improving wheat productivity: stories from the source and the sink sides</b> Jorge Dubcovsky - <i>University of California, Davis, USA</i>
18:50-19:10	<b>Closing remarks</b> Agata Gadaleta - <i>University of Bari, Italy</i> ; Roberto Tuberosa - <i>University of Bologna, Italy</i>
20:00-23:00	<b>Social Dinner</b>



**International Conference**  
**FROM SEED TO PASTA 5**  
Bari - Italy, 24-27 September 2025

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**SATURDAY, 27 SEPTEMBER 2025**

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**ROOM 1**

**09:00-11:30**

**EWG durum wheat**

**11:30-12:00**

*Coffee break and Posters vision*

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