



FSTP4

FROM SEED TO PASTA IV

INTERNATIONAL CONFERENCE

A SUSTAINABLE DURUM WHEAT CHAIN
FOR FOOD SECURITY AND HEALTHY LIVES

BOLOGNA - ITALY

26-29 OCTOBER 2022

Conference Center, Emilia-Romagna Region
Tower 3 - Viale della Fiera, 8 - Bologna



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International Conference
FROM SEED TO PASTA IV
Bologna - Italy, 26-29 October 2022



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CIMMYT - Mexico

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University of Bologna - Italy

Patrizia Brigidi
University of Bologna, Italy

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Wheat Initiative, Germany

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Hebrew University, Israel

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CNR, Italy

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Wednesday, 26th October 2022

08:15 - 09:00 Registration of participants

09:00 - 09:40 **Opening session and welcome addresses**

Chairs: Karim Ammar, Roberto Tuberosa

- Paolo de Castro - EU Committee on Agriculture and Rural Development
- Rosalba Lanciotti - Delegate of the Rector of the University of Bologna and Director of DISTAL
- Alessio Mammi - Dept. Agriculture Emilia-Romagna Region
- Representative of MIPAAF
- Stefano Vaccari - General Manager of CREA
- Aldo Ceriotti - Director of IBBA, CNR
- Silvio Salvi - Vice President SIGA and delegate of AISSA

09:40 - 10:10 **Opening keynote lecture**

Importance of science and collaboration in addressing food security: Role of the Wheat Initiative

Peter Langridge - Wheat Initiative, Germany

10:10 - 12:35 **Session 1. Genomics of durum wheat**

Chairs: Luigi Cattivelli, Agata Gadaleta

Invited presentations

10:10 - 10:40 *Leveraging modern genomic resources to identify adaptive variants and optimize breeding strategies in wheat*

Eduard Akhunov - Kansas State University, USA

10:40 - 11:00 *Svevo v2: A Platinum quality assembly of the durum wheat reference genome*

Luigi Cattivelli (CREA, Italy) and Curtis Pozniak (University of Saskatchewan, Canada)

Presentations selected from abstracts

11:00 - 11:15 ***Carlotta award special mention***

Speed genomic selection scheme for better adapted durum wheat to CWANA and West Africa regions

Hafssa Kabbaj - ICARDA, Rabat, Morocco

11:15 - 11:30 *Recreating adaptive traits in exotic wheat germplasm*

Dhouha Kthiri - National Research Council, Canada



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Wednesday, 26th October 2022

- 11:30 - 11:45 Use of optimized hexaploidy wheat SNP arrays for durum genotyping
Martin Ganai - *SGS Institut Fresenius GmbH, TraitGenetics, Germany*
- 11:45 - 12:00 Illuminating the genomic landscapes of wheat evolution and domestication
Yael Lev-Mirom - *University of Haifa, Israel*
- 12:00 - 12:15 Application of molecular and cytogenetic markers to improve Hessian fly resistance and grain quality in durum wheat (*Triticum turgidum*) in Morocco
Moha Ferrahi - *INRA, Morocco*
- 12:15 - 12:30 Defining the genetics of spike colour and variation underlying awn and glume pigmentation in tetraploid wheat
Teketel Haile - *University of Saskatchewan, Canada*
- 12:30 - 14:00 Lunch
- 14:00 - 17:05 **Session 2. Leveraging tetraploid wheat genetic resources for a concerted improvement of durum and bread wheat**
Chairs: Haile Jemanesh, Marco Maccaferri
- Invited presentations**
- 14:00 - 14:25 Using the tetraploid *Triticum timopheevii* to increase the genetic variation of wheat
July King - *University of Nottingham, UK*
- 14:25 - 14:50 Genomics collaborative tools developed by the durum wheat community
Marco Maccaferri - *University of Bologna, Italy*
- 14:50 - 15:15 The Global Durum wheat Panel (GDP): An open access collection for durum wheat breeding
Elisabetta Mazzucotelli - *CREA, Italy*
- 15:15 - 15:40 Illuminating the history of domesticated tetraploid wheat along space and time
Sariel Hübner - *Tel Hai Academic College, Israel*
- 15:40 - 16:05 Metabolomics contribution in the evaluation of tetraploid wheats diversity. Leveraging tetraploid wheat genetic resources for a concerted improvement of durum and bread wheat
Romina Beleggia - *CREA, Italy*



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Wednesday, 26th October 2022

Presentations selected from abstracts

- 16:05 - 16:20 The role of polyphenol oxidase genes during the domestication and breeding of *T. turgidum* ssp.
Francesca Taranto - CNR, Italy
- 16:20 - 16:35 A nested association mapping (NAM) panel of Durum Wheat to identify wild loci contributing to drought adaptation
Jabbour Yaman - Aleppo University, Syria
- 16:35 - 16:50 Development of wild emmer wheat diversity panel for GWAS and population genetics
Sela Hanan - University of Haifa, Israel
- 16:50 - 17:05 Hidden hunger and the role of ZIP family in tetraploid wheat
Muhammad Waqas Ali - John Innes Centre, UK
- 17:05 - 19:15 **Session on InnoVar project**
Chairs: Fiona Doohan, Roberto Tuberosa
- 17:05 - 17:15 Introduction to InnoVar
Lisa Black - Afbi, Ireland
- 17:15 - 17:35 GWAS for DUS examination
Julio Sanchez (UPM, Spain) and Matteo Bozzoli (University of Bologna, Italy)
- 17:35 - 17:55 Multi-environmental field trials for next generation variety testing
Elena Prats - CSIC, Spain
- 17:55 - 18:15 Machine learning and the InnoVar database
Danilo Sarti - NUIM, Ireland
- 18:15 - 18:35 InnoVar communications and outreach
Dina Lopes - CONSULAI, Portugal
- 18:35 - 18:55 *External talk*
Uncovering the regulatory landscape of the wheat genome and its role in yield components variation
Eduard Akhunov - Kansas State University, USA
- 18:55 - 19:15 *External talk*
The vision of seed companies on the future of official listing tools
Silvia Giuliani - Assosementi, Italy
- 19:15 - 19:20 Final remarks
Hazel Brown - AFB, Ireland
- Close of the day



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Thursday, 27th October 2022

08:45 - 10:25 Session 3. Towards disease- and pest-resistant durum wheat

Chairs: Elisabetta Mazzucotelli, Tzion Fahima

Invited presentations

08:45 - 09:10 Identification of rust resistance genes in wild emmer (*Triticum turgidum* ssp. *dicoccoides*)

Pablo Oliveira Firpo - *University of Minnesota St. Paul, USA*

09:10 - 09:35 **Carlotta Award winner**

Cloning of a novel stripe rust resistance gene Yr84 using BSA-Seq and low-coverage PacBio assembly

Valentyna Klymiuk - *University of Saskatchewan, Canada*

09:35 - 10:00 Fusarium head blight resistance in durum wheat: Identification of key genes for breeding innovations

Agata Gadaleta - *University of Bari, Italy*

10:00 - 10:25 The challenges of gene cloning in complex genomes: The winding road leading to the cloning of *Pm69* from tetraploid emmer wheat

Tzion Fahima - *University of Haifa, Israel*

Presentations selected from abstracts

10:25 - 10:40 Fine mapping of a leaf rust resistance gene derived from emmer wheat (*Triticum turgidum* ssp. *dicoccum*)

Francesca Desiderio - *CREA, Italy*

10:40 - 10:55 Loci harboring genes with significant role in FHB resistance in durum wheat revealed by multiple GWAS models

Jemanesh K. Haile - *University of Saskatchewan, Canada*

10:55 - 11:10 Metabolic profiling of rachis and grain tissues of durum wheat-*Thinopyrum* germplasm harboring *Fhb7E*, a major Fusarium head blight resistance locus from *Thinopyrum elongatum*

Kuzmanović Ljiljana - *University of Tuscia, Italy*

11:10 - 11:25 Characterization of *sbm2*, a locus for soil-borne cereal mosaic virus (SBCMV) resistance in durum and bread wheat

Matteo Bozzoli - *University of Bologna, Italy*



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Thursday, 27th October 2022

11:25 - 12:45

Carlotta Awards

Chairs: Margherita Venturi, Patrizia Galeffi

11:30 - 11:45

Winners: Caixia Lan, Ilaria Marcotuli, Valentyna Klymiuk, Jyoti S. Sharma

Special mentions: Hafssa Kabbaj, Paula Silva, Divya Ambati, Meryem Zaim

11:45 - 12:00

1st classified thematic area A

Rapid cloning and functional gene analysis for a leaf rust resistance locus in durum wheat

Caixia Lan - *Huazhong Agricultural University, Henan, China*

12:00 - 12:15

1st classified thematic area B

Beta-glucan in durum wheat: The road towards new genotypes for a healthier wheat-pasta production

Ilaria Marcotuli - *University of Bari, Italy*

12:15 - 12:30

2nd classified thematic area B

Identification and characterization of stem rust resistance genes in tetraploid wheat

Jyoti Saini Sharma - *University of Minnesota, USA*

12:30 - 12:45

Special mention

Untapping the blast resistance from the D-sub genome progenitor of wheat

Paula Silva - *INIA, Uruguay*

12:45 - 14:00

Lunch

14:00 - 14:50

Session 4. Enhancing yield potential and yield stability of durum wheat

Chairs: Eduard Akhunov, Anna Maria Mastrangelo

Invited presentations

14:00 - 14:25

Breeding for yield potential and stability, the CIMMYT approach

Karim Ammar - *CIMMYT, Mexico*

14:25 - 14:50

Genetic analysis of stable yield component QTL in tetraploid wheat

Amanda R. Peters Haugrud - *North Dakota State University, USA*



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Presentations selected from abstracts

- 14:50 - 15:05 Enhancing yield potential and yield stability in durum wheat using crop wild relative crosses, and participatory assessment of Moroccan farmers preferences
Nouredine El Haddad - ICARDA, Morocco
- 15:05 - 15:20 Uncovering the basis of wheat adaptation to the canopy environment
Guy Golan - IPK, Germany
- 15:20 - 15:35 Multivariate conditional QTL analysis of complex traits in durum wheat
Andrii Fatiukha - University of Saskatchewan, Canada
- 15:35 - 15:50 Unravelling the genetics of grain yield potential in wheat
Ragavendran Abba - IPK, Germany
- 15:50 - 16:05 Fine mapping and characterization of Grain Number Increase-2 locus (GNI-A2) in durum wheat
Francesco de Sario - University of Bologna, Italy
- 16:05 - 16:20 Q&A - Discussion
- 16:20 - 16:50 Short presentations selected from Posters**
Chair: Luigi Cattivelli
- 16:20 - 16:23 Eco-geographic and genomic imprints on Emmer wheat phenotypic performance under Mediterranean climate
Aviya Fadida - Myers - ARO, Israel
- 16:23 - 16:26 Towards the identification of Purple Pericarp 1 (Pp1) in Triticum durum
Esposito Salvatore - CREA, Italy
- 16:26 - 16:29 Is heritage wheat bread tastier?
Roi Ben-David - Institute of Plant Sciences, Agricultural Research Organization, Volcani Institute, Israel
- 16:29 - 16:32 QTL mapping of seedling and field resistance to stem rust in DAKIYE/Reichenbachii durum wheat population
Shitaye Megerssa - Ethiopian Institute of Agricultural Research, Ethiopia
- 16:32 - 16:35 Evaluation of durum (Triticum durum Desf.) global panels, gdp v 1.0-2018/2019 and gdp v 2.0-2019/2020 for earliness and yield in north western and north central, Nigeria
Mala Kachalla - Lake Chad Research Institute, Nigeria



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- 16:35 - 16:38 Durum wheat (*Triticum turgidum* ssp. *durum* Desf.) breeding program in Tunisia: Current status and future prospects
Ayed Sourour - *National Institute of Agronomic Research of Tunisia*
- 16:38 - 16:41 Durum wheat quality assessment: Influence of genotype and environment
Mounira Azouz - *INRAA, Algeria*
- 16:41 - 16:44 Durum wheat adaption to heat along the Senegal river valley
Amadou Tidiane Sall - *Institut Sénégalais de Recherches Agricoles, Senegal*
- 16:44 - 16:47 Digital phenotyping applications for high-throughput evaluation of durum wheat breeding field trials
Adam Carter - *University of Saskatchewan, Canada*
- 16:47 - 16:50 Q&A - Discussion
- 16:50 - 19:00 **Session 5. Durum around the world**
Chairs: Filippo Bassi, Amanda Peters
- Presentations selected from abstracts**
- 16:50 - 17:00 From the land to the table, pasta is from Emilia-Romagna
Cristina Pacifico - *Emilia-Romagna Region, Italy*
- 17:00 - 17:10 Queule-Inia, spring durum wheat variety for Chile
Iván Matus-Tejos - *Instituto de Investigaciones Agropecuarias, Chile*
- 17:10 - 17:20 Durum wheat global changes in cultivated area and breeding activities from 1800 to the present: A historical review
Fernando Martinez-Moreno - *University of Seville, Spain*
- 17:20 - 17:30 A status update on fusarium head blight and ergot on canadian durum
Sean Walkowiak - *Canadian Grain Commission, Grain Research Laboratory, Canada*
- 17:30 - 17:40 Evaluation of yield, biomass and grain quality of Moroccan multilocation trials of durum wheat lines from different origins
Amamou Ali - *INRA, Rabat, Morocco*
- 17:40 - 17:50 Revisiting the Tunisian durum wheat: From landraces to modern varieties "Towards global assessment for full picture"
Ines Yacoubi - *Plant Biotechnology and Improvement laboratory, Tunisia*



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Thursday, 27th October 2022

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|---------------|--|
| 17:50 - 18:00 | Ancient and novel Ethiopian durum cultivars: What future for their cultivation?
Wasihun Legesse - <i>Ethiopian Institute of Agricultural Research, Ethiopia</i> |
| 18:00 - 18:10 | Durum wheat in Syria: Current status of research despite all
Jabbour Yaman - <i>Aleppo University, Syria</i> |
| 18:10 - 18:20 | On-farm multi-locations trials and promotion of traditional and modern durum
wheat genotypes in Lebanon
Rola El Amil - <i>LARI, Lebanon</i> |
| 18:20 - 18:30 | Diversity analysis of <i>Aegilops</i> species of different origin using SSR markers
Merahj Abbasov - <i>Genetic Resources Institute, Germplasm bank, Azerbaijan</i> |
| 18:30 | Discussion and closing remarks by Filippo Bassi |
| 19:00 | Close of the day |



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Friday, 28th October 2022

08:30 - 09:45

Session 6. The durum wheat-pasta value chain: Healthier durum wheat for healthier lives

Session dedicated to the memory of Craig Morris

Chairs: Stefania Masci, Peter Shewry

Invited presentations

08:30 - 08:55

Improving the health benefits of wheat

Peter Shewry - *Rothamsted Research, UK*

08:55 - 09:20

Improving the nutritional value in durum wheat: New genotypes biofortified in resistant starch, provitamin A and minerals

Francesco Sestili - *University of Tuscia, Italy*

09:20 - 09:45

Pasta optimization for the production of pasta enriched with functional ingredients

Alessandra Marti (*University of Milano, Italy*) and
Mike Sisson (*Tamworth Agricultural Institute, Australia*)

09:45 - 10:10

A DNA-based toolbox to meet the traceability needs of the pasta supply chain

Valeria Terzi - *CREA, Italy*

10:10 - 12:30

Round Table

Designing the future for a healthier durum wheat chain

Jointly organized by the Italian Pasta makers Association and the PLAN'EAT project

Chairs: Roberto Ranieri, Maria Caboni, Patrizia Brigidi

10:10 - 10:25

The PLAN'EAT project as related to the From Seed To Pasta chain

Maria Caboni - *DISTAL, University of Bologna, Italy*

10:25 - 10:50

Status of the art of the worldwide pasta business

Cristiano Laurenza - *Secretary of Italian Pasta makers Association (AIDEPI), Italy*

10:50 - 11:05

The benefit of whole grain pasta for a healthier diet

Yan De Vries - *Board member and communication manager of the Health Grain Forum, the Netherlands*

11:05 - 11:20

Innovative approaches in the New Product (Pasta) Development

Francesco Pantò - *Vice President of the Pasta and Sauces R&D (Barilla G.e R. F.Ili)*

11:20 - 11:35

High Amylose Pasta, more than prototype

Michael Gusko - *Innovation Director (Goodmills group), USA*



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Friday, 28th October 2022

- 11:35 - 11:50 Durum wheat milling co-products valorization
Marcello Greco Miani - *R&D (Molino Casillo), Italy*
- 11:50 - 12:25 Q&A and discussion on the future for a healthier durum wheat chain
Coordinated by the Chairs
- 12:20 - 12:30 Closing remarks by Roberto Ranieri
- 12:30 - 14:00 Lunch
- 14:00 - 14:30 **Technical session: Meet the pasta technology companies**
Chair: Roberto Ranieri
- 14:00 - 14:10 Smart sensors meet spaghetti
Andrea Palmieri - Paola Rametta - *RAM ELETTRONICA, Italy*
- 14:10 - 14:20 Automated multi-plex mycotoxin control for safe raw material intake
Claus Holm - *FOSS, Denmark*
- 14:20 - 14:30 Q&A - Discussion
- 14:30 - 15:45 **Session 6. (continued). The durum wheat-pasta value chain: Healthier durum for healthier lives**
Session dedicated to the memory of Craig Morris
Chairs: Valeria Terzi, Francesco Sestili
- Presentations selected from abstract**
- 14:30 - 14:45 WHEATUCO: Breeding for durum wheat quality
Carlos Guzman - *University of Córdoba, Spain*
- 14:45 - 15:00 Renewing traditional Mediterranean durum wheat based products
Barbara Laddomada - *ISPA, CNR, Italy*
- 15:00 - 15:15 North African traditional durum dishes: From end-use traits to their genomic control
Houda Bousselham - *ICARDA, Morocco*
- 15:15 - 15:30 Selection of high-yellow color durum wheat lines by using effective molecular markers
Maria Itria Ibba - *Global Wheat Program, CIMMYT, Mexico*
- 15:30 - 15:45 Nutritional and industrial quality assessment in Spanish durum wheat commercial cultivars
Virginia Garcia-Calabres - *University of Córdoba, Spain*



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Friday, 28th October 2022

15:45 - 18:00 **Session 7. Breeding durum wheat to face the climate crisis**

Chairs: Nicola Pecchioni, Dolors Villegas

Invited presentations

15:45 - 16:05 **Genotype vs. environment: The ICARDA durum wheat breeding program for dryland cultivation**
Filippo Bassi - ICARDA, Morocco

16:05 - 16:25 **Towards improving durum wheat breeding programs to face climate changes**
Pasquale De Vita - CREA, Foggia, Italy

16:25 - 16:45 **Increasing durum wheat yield and yield stability in the Mediterranean region**
Dolors Villegas - IRTA, Sustainable Field Crops Program Lleida, Spain

Presentations selected from abstracts

16:45 - 17:00 *Carlotta award special mention*
Loci controlling moisture conversion of durum wheat productivity
Meryem Zaïm - ICARDA, Morocco

17:00 - 17:15 *Carlotta award special mention*
Assessment of Indian wheat genotypes for drought tolerance under two water regimes
Divya Ambati - ICAR, India

17:15 - 17:30 **DRF1 gene expression profiles of durum wheat grown in field under full- and reduced-irrigation**
Arianna Latini - ENEA, Casaccia Research Center, Italy

17:30 - 17:45 **Exploring the molecular bases of root growth angle and its regulation in durum wheat**
Cristian Forestan - University of Bologna, Italy

17:45 - 18:00 **Q&A - Discussion**

18:00 **Close of the day**

20:00 **Social Dinner**
Sydney Hotel, Bologna



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Saturday, 29th October 2022

09:00 - 11:00 **Session 8. Managing a sustainable durum production for food security**

Chairs: Curtis Pozniak, Allison Bentley

Invited presentations

09:00 - 09:25 Unlocking the potential of Genotype x Environment x Management (GxExM) synergies to enhance durum wheat production systems
Brian Beres - *Agriculture and Agri-Food Canada*

09:25 - 09:50 Decision Support Systems to increase farm sustainability and resilience
Pierluigi Meriggi - *HORTA, Italy*

09:50 - 10:15 Smart farming tools for sustainable production chain: The Barilla durum wheat case study
Marco Silvestri - *Barilla G.e R. F.lli, Italy*

Presentations selected from abstracts

10:15 - 10:30 Prediction of durum wheat diseases using reflectance spectroscopy
Dalma Castillo - *INIA, Quillamapu, Chile*

10:30 - 12:30 **Closing session**

Chairs: Peter Langridge, Roberto Tuberosa

Invited presentations

10:30 - 11:00 Acquired inheritance in weeds and wheat and its plant breeding potential
Bikram Gill - *Kansas State University, USA*

11:00 - 11:30 Wheat breeding as a DNA-assembly problem
Cristobal Uauy - *John Innes Centre, UK*

11:30 - 12:00 **Closing keynote lecture**
What's next for global wheat?
Alison Bentley - *CYMMIT, Mexico*

12:00 - 12:30 **Closing remarks**
Karim Ammar, Luigi Cattivelli, Curtis Pozniak, Roberto Tuberosa

Lunch (on your own)

14:00 - 16:00 **Meeting of the Expert Working Group in Durum Wheat & Genomics and Breeding**
Chair: Luigi Cattivelli



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POSTERS' LIST

Session 1. Genomics of durum wheat

- P1 Transcriptional reprogramming activated by Wheat Tandem Kinase 1 in response to stripe rust infection
Liubov Govta - *University of Haifa, Israel*
- P2 Transcriptome analysis of the response to nitrogen stress at the seedling stage, in wheat introgression of GPC-QTL from wild emmer wheat
Nikolai Govta - *University of Haifa, Israel*
- P3 Study of gliadin-coding loci of the hybrid generation of durum wheat varieties of Azerbaijan
Gulshen Polado - *Institute of Genetic Resources of ANAS, Azerbaijan*
- P4 The ratio of yield and content of nucleic acids in heterotic hybrids of wheat (*T. durum* Desf.)
Afet Mammadov - *Genetic Resources Institute, Azerbaijan*
- P5 Development and validation of molecular markers for high molecular weight glutenins (HMW-GS) in durum wheat
Laura Pascual - *Politécnica de Madrid, Spain*
- P6 Influence in yellowness of allelic variation in *PSY-1A* gene in a durum wheat recombinant population
Naima Bouabdellah - *Universidad Politécnica de Madrid, Spain*
- P7 Effect of major genes (*Rht-B1*, *Ppd-A1*, *Vrn-A1*) and loci identified by association mapping on yield and morfo-phenological traits in durum wheat
Pablo Federico Roncallo - *CERZOS and UNS-CONICET, Bahía Blanca, Argentina*
- P8 Association study and multivariate genomic prediction for simultaneous improvement of grain yield and grain protein content in durum wheat
Paolo Vitale - *CREA, Italy*

Session 2. Leveraging tetraploid wheat genetic resources for a concerted improvement of durum and bread wheat

- P9 Generation of an EMS mutant collection for isolation and characterization of genes of agronomic interest in durum wheat
Patricia Giraldo - *Universidad Politécnica de Madrid, Spain*



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POSTERS' LIST

- P10 Identification of diverse set of genotypes for grain quality-related traits in wheat
Maria Anna Russo - *CREA, Italy*
- P11 Evaluation of genetic diversity of Sicilian autochthonous tetraploid wheat varieties by gluten protein analysis
Marco Bonarrigo - *University of Tuscia, Italy*
- P12 Exploiting the potential of Global Durum Panel for plant and human health
Elena Baldoni - *CNR/IBBA, Italy*
- P13 Exploring the genetic diversity of wheat landraces of Campania region using SNP and SSR markers
Giuseppina Angione - *CREA, Italy*
- P14 Genetic loci involved in resistance to six races of stem rust in a wild emmer wheat panel assessed at seedling stage
Elisabetta Mazzucotelli - *CREA, Italy*
- P15 The effect of different wheat genotypes and species on rhizospheric and endospheric bacterial communities
Armin Shahpari - *University of Bologna, Italy*
- P16 A Tetraploid Core Collection (TCC) from the global durum genomic resource assessed for resilience traits including root system architecture, stem anatomy and developmental traits
Xinying Zeng - *University of Bologna, Italy*

Session 3. Towards disease- and pest-resistant durum wheat

- P17 Improvement of tritordeum, the durum wheat × wild barley amphiploid
Sergio Atienza - *IAS-CSIC, Spain*
- P18 Pyramiding of powdery mildew and yellow rust resistance genes introgressed from wild emmer wheat into cultivated wheat
Li Yinghui - *University of Haifa, Israel*
- P19 Genome-wide association mapping of Septoria Tritici blotch resistance in a collection of Mediterranean durum wheat landraces via high-density marker arrays
Meriam Nefzaoui - *University of Bologna, Italy*



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- P20 Production of durum wheat lines with improved durable resistance to multiple fungal diseases
Daniela Marone - *CREA, Italy*
- P21 Identification of a set of wide untapped diversity for reaction to tan spot in durum wheat
Anna Maria Mastrangelo - *CREA, Italy*
- P22 Effect of *Fusarium culmorum* on grain and pasta quality of Tunisian durum wheat varieties
Dorra Sfayhi Terras - *INRAT, Tunisia*
- P23 QTL mapping of stem rust resistance in bi and multi- parental populations of durum wheat
Elisabetta Mazzucotelli - *CREA, Italy*
- P24 Evaluation of the global durum genomic resource for resistance to yellow rust in a multienvironment phenotypic evaluation and GWAS
Jad B Novi - *University of Bologna, Italy*
- P25 Multi-environmental genome-wide association study for response to fusarium head blight in durum wheat panels
Ambra Viviani - *University of Bologna, Italy*
- P26 Molecular approaches for identifying sources of resistance to Fusarium wilt as the main pathogen causing wheat quality degradation
Labhilili Mustapha - *Regional Center for Agronomic Research of Rabat, INRA, Morocco*

Session 4. Enhancing yield potential and yield stability of durum wheat

- P27 Selecting desirable durum wheat elite lines for diversification of genetic base and release of varieties in Pakistan
Waqar Sundas - *National Agriculture Research Centre, Pakistan*
- P28 Identification and mapping of quantitative trait loci for kernel-related traits in a durum wheat x *T. dicoccum* segregating population
Francesca Desiderio - *CREA, Italy*
- P29 Specific adaptation: The key to overcoming the effects of terminal drought on durum wheat in Chile
Christian Alfaro - *INIA Rayentué, Chile*



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- P30 Comprehensive assessment of tetraploid germplasm for plant developmental traits related to grain yield including spike fertility and grain size and shape
Matteo Campana - *University of Bologna, Italy*

Session 5. Durum around the world (no posters)

Session 6. The durum wheat-pasta value chain: Healthier durum wheat for healthier lives

- P31 Carotenoid biofortification of durum wheat through inter-specific breeding
María Dolores Requena Ramírez - *Instituto de Agricultura Sostenible (CSIC), Spain*
- P32 Filigrano: Innovation in the cereal supply chain, from high quality sustainable production to differentiated storage
Laura Gazza - *CREA, Italy*
- P33 Innovative processing plants: Technological and nutritional quality of unrefined durum wheat air-classified fractions
Alessandro Cammerata - *CREA, Italy*
- P34 Development of new wheat-derived foods of the Mediterranean diet with improved nutritional and health value: MEDWHEALTH project
Samuela Palombieri - *University of Tuscia, Italy*
- P35 Biofortification in microelements by modulating the accumulation of phytic acid in durum wheat grain
Arianna Frittelli - *University of Tuscia, Italy*
- P36 Variability of lipid composition in a *Triticum turgidum* collection
Giovanni Maria Poggi - *University of Bologna, Italy*
- P37 Toxic and potentially toxic element uptake and translocation in durum wheat (*Triticum turgidum* L. subsp. *durum*) cultivars under real field conditions
Emilia Pucci - *ENEA, Casaccia Research Center, Italy*

Session 7. Breeding durum wheat to face the climate crisis

- P38 Absciscic acid-stress-ripening (ASR) gene modulates response to high salinity and water deficit in durum and common wheat
Angelica Giancaspro - *University of Bari, Italy*



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- P39 An attempt to convert multi-traits into quality index for describing quality in durum wheat breeding program
Mouna Taghouti - *INRA, Morocco*
- P40 Identification of the quantitative trait loci controlling spike-related traits in durum wheat
Francesca Desiderio - *CREA, Italy*
- P41 Yield and technological value of spring *T. durum* cultivars grown in Poland
Elżbieta Suchowilska - *University of Warmia and Mazury, Poland*
- P42 Next generation variety testing for improved durum wheat
Gracia Montilla - Bascon - *Institute for Sustainable Agriculture, Cordoba, Spain*
- P43 Allelic variation at *Vrn-1* and *Ppd-1* loci and their effects on agronomic traits on Italian durum wheat germplasm
Sanaz Afshari-Behbahanzadeh - *CREA-CI, University of Foggia, Italy*
- P44 The modulation of cell cycle progression and of histone H3 acetylation in response to salt stress in durum wheat-*Thinopyrum* spp. recombinant lines analysed by a flow cytometric approach
Debora Giorgi - *ENEA, Italy*
- P45 Performance of locally adapted durum wheat germplasm in the Mediterranean basin and recombinant lines with *Thinopyrum* spp. introgressions across Algerian and Italian environments with different water availability
Carla Ceoloni - *University of Tuscia, Italy*
- P46 Assessing yield and quality traits of durum wheat varieties, landraces and recombinant lines with alien introgressions in Turkish and Italian environments under rainfed and irrigated conditions
Roberto Ruggeri - *University of Tuscia, Italy*
- P47 The response to salt stress application of durum wheat-*Thinopyrum* spp. recombinant lines based on morpho-physiological and biochemical parameters
Sana Tounsi - *Centre of Biotechnology of Sfax, Tunisia*
- P48 Exploitation of the *Thinopyrum* genus to enhance durum wheat heat tolerance: Chromosomally engineered recombinant lines perform remarkably under stress application at flowering time
Gloria Giovenali - *University of Tuscia, Italy*



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- P49 Root system analysis of durum wheat under drought stress using high-throughput phenotyping method
Ieva Urbanavičiūtė - *University of Tuscia, Italy*
- P50 Genome wide association study uncovers the QTLome for osmotic adjustment and related drought adaptive traits in durum wheat
Marco Maccaferri - *University of Bologna, Italy*
- P51 RGB-derived vegetation indices as a tool to estimate soil coverage ability in durum wheat
Fabio Fania - *University of Foggia, Italy*

Session 8. Managing a sustainable durum production for food security

- P52 Marker-trait associations of agronomic traits from the Cerealméd durum wheat panel as assessed in multi-environment trials under conservative agriculture
Elisabetta Mazzucotelli - *CREA, Italy*



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GENERAL INFORMATION

CONFERENCE VENUE

Conference Center • Emilia-Romagna Region

Viale della Fiera 8 - Bologna

Bus Nr. 35 (stop Aldo Moro)

Timetable available on: www.fromseedtopasta.com - section "general information / Venue"

WI-FI

In the Conference venue free Wi-Fi is available.

Network: EmiliaRomagnaWiFi

COVID RULES

During the Conference it is mandatory to wear the FFP2 face mask in the Conference room and in the other common areas

POSTERS' VIEW

The Posters are available on the website www.fromseedtopasta.com - Section Program / Posters

COFFEE STATION

With automatic machine for water, coffee, hot drinks and snacks

26th - 27th - 28th October

Available from 9:00 to 18:00

29th October

Available from 9:00 to 13:00

LUNCH VENUE

(reserved to the participants that have booked the service)

Wednesday 26th October - Hotel Savoia Regency

12:30 - Bus departure from Conference venue

Thursday 27th October - Hotel Sydney

12:45 - Bus departure from Conference venue

Friday 28th October - Hotel Sydney

12:30 - Bus departure from Conference venue

SOCIAL DINNER VENUE

Hotel Sydney

Via Michelino 73 - Bologna



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SHUTTLE SERVICE

Wednesday 26th October

From Hotels to Conference venue

08:00 Holiday Inn Express Hotel (same pick up venue for Cosmopolitan Guests)

08:10 Sydney Hotel (same pick up venue for Michelino Hotel Guests)

From Conference venue to Hotels

19:30 Destinations: Sydney Hotel, Michelino Hotel, Holiday Inn Express and Cosmopolitan

Thursday 27th October

From Hotels to Conference venue

08:20 Holiday Inn Express Hotel (same pick up venue for Cosmopolitan Guests)

08:30 Sydney Hotel (same pick up venue for Michelino Hotel Guests)

From Conference venue to Hotels

19:00 Destinations: Sydney Hotel, Michelino Hotel, Holiday Inn Express and Cosmopolitan

Friday 28th October

From Hotels to Conference venue

08:10 Holiday Inn Express Hotel (same pick up venue for Cosmopolitan Guests)

08:20 Sydney Hotel (same pick up venue for Michelino Hotel Guests)

From Conference venue to Hotels

18:00 Destinations: Sydney Hotel, Michelino Hotel, Holiday Inn Express and Cosmopolitan

Social Dinner (only for participants that have booked the ticket)

19:45 Pick up from Holiday Inn Express and Cosmopolitan to Sydney Hotel

22:30 Pick up from Sydney Hotel (Social Dinner venue) to Hotel Cosmopolitan

Saturday 29th October

From Hotels to Conference venue

08:40 Holiday Inn Express Hotel (same pick up venue for Cosmopolitan Guests)

08:50 Sydney Hotel (same pick up venue for Michelino Hotel Guests)

From Conference venue to Hotels

12:30 Destinations: Sydney Hotel, Michelino Hotel, Holiday Inn Express and Cosmopolitan

USEFUL NUMBERS

Organizing Secretariat onsite: + 39 348 2487176

Taxi service: + 39 051 4590 / + 39 051 372727

Private cars: + 39 051 519090 (Cosepuri)
+ 39 051 553415 (Cab)

Bologna Airport: + 39 051 6479615

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