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# 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)



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

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

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

## PROGRAM

### WEDNESDAY, 24 SEPTEMBER 2025

08:00-08:30 Registration of participants

#### ROOM ALESSANDRO AMBROSI

**08:30-09:10**

#### **WELCOME ADDRESSES**

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

- 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**

##### *Invited presentations*

09:10-09:20

*Title to be announced*

Maurizio Martina - *FAO Deputy Director General* - recorded

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* - recorded

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 & posters vision*



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**WEDNESDAY, 24 SEPTEMBER 2025**

- 11:20-11:40 **Artificial intelligence and machine learning method: enhance prediction accuracy of durum wheat traits**  
José Crossa - *CIMMYT, Texcoco, Mexico*
- 11:40-12:00 **Integrating molecular tools into durum wheat breeding for enhanced crop performance**  
Susanne Dreisigacker - *CIMMYT, Texcoco, Mexico*
- 12:00-12:30 Q&A and discussion with the speakers
- 12:30-13:00 *Short presentations selected from Abstracts*
- 12.30-12:33 **Genotypic variation in wheat root architecture, soil pore structure and hydraulic properties**  
Giuseppe Dimattia - *University of Bologna, Italy*
- 12:33-12:36 **Genomic and Phenomic-Driven Prediction for Yellow Rust in Bread and Durum Wheat Biparental Populations**  
Paolo Vitale - *CIMMIYT, Mexico*
- 12:36-12:39 **Digital canopy height time series from RGB-UAV imaging reveal sequential activation of rht and vrn genes in bread wheat**  
Fabio Fania - *Research Centre for Cereal and Industrial Crops, Italy*
- 12:39-12:42 **New insight into wheat domestication**  
Emile Cavalet-Giora - *University of Science and Technology (KAUST), Saudi Arabia*
- 12:42-12:45 **Breaking the Phenotype Barrier: Genomic Tools for Distinctness, Uniformity, and Stability (DUS) Testing in Durum Wheat**  
Gautam Amit - *ICARDA, India*
- 12:45-12:48 **Genebank-Omics: A Vision for Diversifying Global Food Crops Exemplified by the A.E. Watkins Durum Landrace Project**  
Noam Chayut - *John Innes Centre, United Kingdom*
- 12:48-12:51 **Phenotypic Diversity and Drought Tolerance in *Triticum araraticum* for Wheat Improvement**  
Hakan Ozkan - *Çukurova University, Turkey*
- 12:51-12:54 **Beyond Reference Biases and SNPs: k-mer-based Pangenome GWAS Taps into Disease Resistance Diversity in Wheat Landraces**  
Javier Sánchez-Martín - *University of Salamanca, Spain*



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**WEDNESDAY, 24 SEPTEMBER 2025**

- 12:54-12:57 **Allele Mining in the Watkins Landrace Collection of Durum Wheat for Grain Carotenoid Content and Disease Resistance**  
Ajay Siluveru - *John Innes Centre, United Kingdom*
- 12:57-13:00 **Functional Analysis of WRKY Transcription Factors in wild emmer (*Triticum dicoccoides*)**  
Antonio Costa de Oliveira - *Federal University of Pelotas - Brazil*
- 13:00-14:00 *Lunch*
- 14:00-17:00** **Session 2**  
**AGRONOMY, PHYSIOLOGY AND MODELING OF YIELD POTENTIAL TO ENHANCE THE SUSTAINABILITY OF DURUM WHEAT**  
Chairs: Zina Flagella - *University of Foggia, Italy*; Nicola Pecchioni - *CREA Foggia, Italy*
- Invited presentations*
- 14:00-14:20 **The transition of durum wheat cultivation from conventional to conservation tillage in Mediterranean conditions**  
Michele Pisante - *University of Teramo, Italy*
- 14:20-14:40 **Durum wheat spike traits for improving yield potential**  
Nicola Pecchioni - *CREA, Cereal and Industrial Crops, Italy*
- 14:40-15:00 **Yield potential and adaptation to stress are not mutually exclusive**  
José Luis Araus - *University of Barcelona, Spain* - recorded
- 15:00-15:20 **Lessons from global Genotype x Environment x Management (GxExM) systems research to enhance the durum wheat value chain**  
Brian Beres - *Agrifood, Alberta, Canada* - recorded
- 15:20-16:00 Q&A and discussion with the speakers
- 16:00-16:30 *Coffee break & posters vision*
- 16:30-17:00 *Short presentations selected from Abstracts*
- 16:30-16:33 **Interactive effects of heat and drought on wheat yield change from synergistic to antagonistic as their severity increases**  
Arisede Chisaka - *University of Reading, United Kingdom*
- 16:33-16:36 **Relationships between durum wheat NUE traits and grain protein quality evaluated in two contrasting Mediterranean environments**  
Michele De Santis - *University of Foggia, Italy*



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**WEDNESDAY, 24 SEPTEMBER 2025**

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- 16:36-16:39      **Yield potential and stress adaptation of durum wheat in Mediterranean environments of central Chile**  
*Alejandro Del Pozo - Universidad de Talca, Chile*
- 16:39-16:42      **Genetic Dissection of Drought-Adaptive Physiological Traits in Durum Wheat Using Wild Wheat-Derived NAM Populations**  
*Yaman Jabbour – ICARDA, Rabat, Morocco*
- 16:42-16:45      **Genetic Gains in Grain Yield and Yield-Related Traits in Argentinian Durum Wheat**  
*Ana Laura Achilli - University of Saskatchewan, Canada*
- 16:45-16:48      **Plant responses to nanoplastic pollution in durum wheat: a new challenge for stress-tolerance breeding**  
*Giuliana Bruno - University of Tuscia, Italy*
- 16:48-16:51      **Wild Emmer Introgression Enhances Leaf CO<sub>2</sub> Diffusion and Photosynthesis Under Drought in Durum Wheat**  
*Zait Yotam - The Hebrew University of Jerusalem, Israel*
- 16:51-17:00      Open Discussion
- 17:00-19:00**      **INNOVAR & WHEAT SECURITY**  
*Chairs: Fiona Doohan - University of Dublin, Ireland; Filippo Bassi - ICARDA, Morocco*
- 19:00**              **End of the Conference Day**



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**THURSDAY, 25 SEPTEMBER 2025**

**ROOM ALESSANDRO AMBROSI**

**08:30-10:25**

**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* - recorded

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* - recorded

10:25-10:40

*Coffee break & posters vision*



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## THURSDAY, 25 SEPTEMBER 2025

10:40-13:00

### **SPECIAL SESSION “INNOVATIVE APPROACHES FROM THE INDUSTRY”**

*Moderators: Roberto Ranieri - Open Fields, Parma, Italy*

#### **CASE HISTORY**

10:40-10:48

#### **The Strategic Role of Pro-Fume® in Integrated Pest Management for the Milling Sector**

*Alexander Stock - Douglas Products and Colkim*

10:48-10:56

#### **Ensure quality, from raw material to finished product**

*Anton Paar*

10:56-11:04

#### **Disinfestazioni radicali: Alte temperature e acido cianidrico**

*Claudio Massara - Mouse & CO*

11:05-13:15

#### **ROUND TABLE**

*Honorary chair: Paolo De Castro – Economist, Expert of European Policies*

*Moderators: Roberto Ranieri - Open Fields, Parma, Italy*

11:05-11:20

#### **Opening lecture**

#### **Mediterranean diet: a worldwide Italian excellence**

*Paolo De Castro - Economist, expert of European policies*

11:20-11:32

#### **Worldwide pasta business overview**

*Margherita Mastromauro - President of the Italia Pasta Makers, Italy*

11:32-11:44

#### **AltoGrano: a breakthrough in the milling industry**

*Graziano Stasi - Molino Casillo, Bari, Italy*

11:44-11:56

#### **Stra Pasta: durum wheat pasta with 19% of protein and 12% of fiber**

*Emidio Mansi - Pastificio Lucio Garofalo, Gragnano, Italy*

11:56-12:08

#### **FROM INTUITION TO REALITY: Research as a driver of extraordinary results in the pasta industry**

*Alessio Marchesani - Fava-Storci, Cento, Italy*

12:08-12:20

#### **End products from the new perennial grain Kernza developed from intermediate wheatgrass, and looking ahead to a perennial durum-wheatgrass hybrid**

*Timothy Crews - The Land Institute, Salina, Kansas USA*

12.20-12.32

#### **Operative millers: how to manage high innovation and future**

*Lorenzo Cavalli - President Italian Association of Operative Millers – Antim*



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**THURSDAY, 25 SEPTEMBER 2025**

12:32-13:00	<b>Open Discussion</b>
13:00-14:00	<i>Lunch</i>
<b>14:00-16:00</b>	<b>ROUND TABLE WITH DURUM WHEAT AND PASTA STAKEHOLDERS</b> Moderators: Silvia Giuliani - <i>Assosementi Bologna, Italy</i> ; Roberto Ranieri - <i>Open Fields, Parma, Italy</i> <ul style="list-style-type: none"><li>• Stefano Ravaglia - <i>Società Italiana Sementi, Italy</i></li><li>• Andrea Massi - <i>Produttori Sementi Bologna, Italy</i></li><li>• Oriana Porfiri - <i>CGS Sementi, Italy</i></li><li>• Davide Bacilieri - <i>RAGT, Italy</i></li><li>• Francesco Divella - <i>Divella Pasta Company, Italy</i></li></ul>
16:00-16:40	<b><i>Short presentations selected from Abstracts</i></b>
16:00-16:03	<b>Harnessing Durum-like Traits and Wild Germplasm to Improve Grain Quality and Heat Resilience in Wheat</b> <i>Abbas Assad - Western Sydney University, Australia</i>
16:03-16:06	<b>Wheat Security: Exploring the genetic and environmental basis of wheat quality</b> <i>Francisco Andrade Martin - Universidad de Córdoba, Spain</i>
16:06-16:09	<b>Genetic Characterization and Traceability of Sicilian Tetraploid Wheat Conservation Varieties Using SNP Markers</b> <i>Marco Bonarrigo - University of Tuscia, Italy</i>
16:09-16:12	<b>Technological quality of durum wheat pasta as affected by soil tillage and fertilization management</b> <i>Laura Gazza - CREA Research Centre for Engineering and Agro-Food Processing, Italy</i>
16:12-16:15	<b>Exploring Arabinoxylans in Durum Wheat: Contrasting Genotypes and Environments Across Different Crop Seasons</b> <i>Nayeli Hernandez-Espinosa - CIMMYT, Texcoco, Mexico</i>
16:15-16:18	<b>Expanding End-Uses of Durum Wheat: Converting Starch into Dietary Fibers &amp; Using Grain Softness for Multipurpose Flours</b> <i>Maria Itria Ibbia - CIMMYT, Texcoco, Mexico</i>



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16:18-16:21 **Bran Oils from Tunisian Durum Wheat and Barley: Phytochemical Composition and Evaluation of In Vitro Bioactivities**  
Ines Yacoubi - *Centre of Biotechnology, Tunisia*

16:21-16:40 **Open discussion**

16:40-17:00 *Coffee break & posters vision*

**CELEBRATION OF NAZARENO STRAMPELLI**

17:00-17:15 **Presentation of the commemorative stamp on Nazareno Strampelli**  
Roberto Tuberosa - *DISTAL University of Bologna, Italy*

17:15-17:30 **The impact of Nazareno Strampelli work on wheat breeding in China**  
Xueyong Zhang - *CAAS, China recorded*

**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, Texcoco, Mexico*

**THEMATIC AREA B**

18:15-18:25 **Mutagenesis-driven modulation of the carotenoid pathway in durum wheat: nutritional gains and pleiotropic effects**  
Samuela Palombieri - *Tuscia University, Italy*

18:25-18:35 **CRISPR-based editing of the  $\omega$ - and  $\gamma$ -gliadin gene clusters reduces wheat immunoreactivity without affecting grain protein quality**  
Yu Zitong - *Plant Pathology Dpt., Kansas State University, USA*



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**THURSDAY, 25 SEPTEMBER 2025**

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 - <i>Manitoba University, Canada</i>
18:45-19:00	<b>AWARD CEREMONY</b>
19:00	<b>End of the Conference Day</b>

**FRIDAY, 26 SEPTEMBER 2025**

**ROOM ALESSANDRO AMBROSI**

<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 - <i>University of Bari, Italy</i> ; Stefania Masci - <i>University of Tuscia, Viterbo, Italy</i>
08:30-08:50	<b>Commemoration of Gian Tommaso Scarascia Mugnozza and his research activities</b> Antonio Blanco - <i>University of Bari, Italy</i>
08:50-09:10	<b>Feeding the World through Science: The life and work of Gian Tommaso Scarascia Mugnozza</b> Antonio Bonatesta - <i>University of Bari, Italy</i>
09:10-09:20	<b>Durum Wheat Research at the University of Tuscia: From Creso to Climate Resilience</b> Stefania Masci - <i>University of Tuscia, Viterbo, Italy</i>
09:20-09:30	<b>Gian Tommaso Scarascia Mugnozza and the Green Revolution</b> Roberto Tuberosa - <i>University of Bologna, Italy</i>
09:30-09:50	<b>A Novel Genotype-Driven BSA Strategy for Mapping Adaptive Traits: Insights from a Bread Wheat Case Study</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, Texcoco, Mexico</i>
10:05-10:20	<b>Genomic breeding for heat tolerance at ICARDA</b> Hafssa Kabbaj - <i>ICARDA, Rabat, Morocco</i>



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- 10:20-10:30 **Conclusions**  
Enrico Porceddu - *University of Tuscia, Viterbo, Italy*
- AWARD IN MEMORY OF GIAN TOMMASO SCARASCIA MUGNOZZA**
- 10:30-11:00 *Coffee break & Posters vision*
- 11:00-13:00 Session 5**  
**BREEDING FOR DISEASE RESISTANCE/TOLERANCE IN DURUM WHEAT**  
Chairs: Valentyna Klymiuk - *University of Saskatchewan, Canada*;  
Fiona Doohan - *University of Dublin, Ireland*
- 11:00-11:20 **Pre-breeding for disease resistance in durum**  
Valentyna Klymiuk - *University of Saskatchewan, Canada*
- 11:20-11:40 **The long road to Fusarium Head Blight resistance in durum wheat**  
Barbara Steiner - *BOKU University, Vienna, Austria*
- 11:40-12:00 **Genetic basis for FHB and DON heterogeneity in barley: a single plant-omics approach**  
Gurcharn Singh Brar - *University of Alberta, Canada*
- 12:00-12:20 **The evolutionary battle between *Stb* resistance genes and *Septoria tritici* blotch across bread and durum wheats**  
Marcel Thierry - *INRAE, Palaiseau, France*
- 12:20-12:40 **Genetic dissection of resistance to major diseases and insects in cultivated emmer wheat**  
Steven Xu - *USDA, Albany, USA*
- 12:40-13:00 **Short presentations selected from Abstracts**
- 12:40-12:43 **Novel k-mer based genomic tools enable rapid discovery of crop wild relative introgressions, uncovering a novel loci for Hessian Fly resistance**  
Anna Elisabeth Backhaus - *ICARDA, Rabat, Morocco*
- 12:43-12:46 **The adaptive metabolomic response of pistils to heat stress applied at anthesis in durum wheat-*Thinopyrum ponticum* recombinant genotypes**  
Ljiljana Kuzmanović - *University of Tuscia, Italy*
- 12:46-12:49 **Enhancing Nigeria's Food Security through Collaborative Durum Wheat (*Triticum turgidum* subsp. *Durum* Desf.) Innovation**  
Mala Kachalla - *Lake Chad Research Institute, Nigeria*



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- 12:49-12:52      **Mixing varieties mitigates early root competition in durum wheat under water and nutrient limitation**  
Germain Montazeaud - *Université de Montpellier, France*
- 12:52-12:55      **Durum Wheat Breeding for the Senegal River Basin: High-yielding Cultivars Adapted to heat in Northwest Africa**  
Filippo Bassi - *Instut Sénégalais de Recherches Agricoles ISRA – Senegal*
- 12:55-12:58      **From genebank to farmers: Unlocking durum wheat diversity for climate change resilience**  
Meryem Zaim - *ICARDA, Rabat, Morocco*
- 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*, 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*



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**FRIDAY, 26 SEPTEMBER 2025**

*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*

16:00-16:15 **Genetic variation in semolina yellow colour-associated genes within the Global Durum Panel**  
Carlos Guzman - *University of Cordoba, Spain*

16:15-16:30 *Short presentations selected from Abstracts*

16:15-16:18 **Genome-Wide Association Studies Integrated with Genomic Selection Reveal Novel Loci for Rust Resistance in Canadian Durum Wheat**  
Julio Isidro y Sánchez - *Technical University of Madrid, Spain*

16:18-16:21 **Genetic Insights into Durum Wheat Resistance to WSSMV and SBCMV Across France and Italy**  
Hélène Pidon - *Institut Univ Montpellier, France*

16:21-16:24 **Molecular modulation of the brassinosteroid pathway in durum wheat to enhance abiotic stress resilience**  
Chiara D'Attilia - *Unitus- DAFNE, Italy*

16:24-16:27 **Root development in wheat triggered by phytohormones crosstalk and dosage changes in monocot-specific genes**  
Gilad Gabay - *University of the Negev, Israel*

16:27-16:30 **A new genetic map in durum wheat allows the detection of QTL related to yield and grain protein content**  
Laura Pascual - *Universidad Politécnica de Madrid, Spain*

16:30-16:40 **Open discussion**

16.40-17:00 *Coffee break & Posters vision*

**17:00-19:10**

**Session 8**

**DECODING AND LEVERAGING THE DURUM WHEAT PANGENOME**

Chairs: Marco Maccaferri, *University of Bologna, Italy*; Curtis Pozniak - *University of Saskatchewan, Canada*



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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>
<b>19:10</b>	<b>End of the Conference Day</b>
20:00-23:00	<b><i>Social Dinner</i></b>

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**SATURDAY, 27 SEPTEMBER 2025**

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**ROOM ALESSANDRO AMBROSI**

<b>09:00-11:30</b>	<b>EWG durum wheat</b>
11:30-12:00	<i>Coffee break and Posters vision</i>

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**1. SETTING THE FSTP5 SCENE FOR WHEAT BREEDING 5.0**

- P. 1 Breaking the Phenotype Barrier: Genomic Tools for Distinctness, Uniformity, and Stability (DUS) Testing in Durum Wheat**  
Gautam Amit 1, Yaman Jabbour 2, Hafssa Kabbaj 3, Muhammad Awais Farooq 4, Xinying Zeng 4, Marco Maccaferri 4, Filippo M. Bassi 3  
1 ICARDA, India  
2 General Commission for Scientific Agricultural Research, Syria  
3 International Center for Agriculture Research in Dry Areas, Rabbat  
4 University of Bologna, Italy
- P. 2 Functional Analysis of WRKY Transcription Factors in wild emmer (*Triticum dicoccoides*)**  
Antonio Costa de Oliveira 1, Valeria Oliveira Nizolli 1, Jennifer Villavicencio 1, 2, Winder Felipez 1, 5, Amanda Valentini Basegio 1, Camila Pegoraro 1, Luciano Da Maia 1  
1 Universidade Federal de Pelotas, Faculdade de Agronomia Eliseu Maciel, Departamento de Fitotecnia, Campus Capão do Leão, Brazil;  
2 Universidad Científica del Sur, Carrera de Agroforesteria, Lima, Peru;  
3 Universidad Nacional "Siglo XX", Dirección General de Investigación, Llallagua, Bolivia.
- P. 3 Genotypic variation in wheat root architecture, soil pore structure and hydraulic properties**  
Giuseppe Dimattia 1, Maria Hernandez-Soriano 2, Silvio Salvi 1, Roberto Tuberosa 1, Marco Bittelli 1  
1 University of Bologna, Italy  
2 John Innes Centre, Norwich, United Kingdom
- P. 4 New insight into wheat domestication**  
Emile Cavalet-Giorsa 1, Simon Krattinger 1  
1 University of Science and Technology (KAUST)
- P. 5 Genebank-Omics: A Vision for Diversifying Global Food Crops Exemplified by the A.E. Watkins Durum Landrace Project**  
Noam Chayut 1, Ajay Siluveru 1, Mei Jiang 2, Karim Ammar 3, Shifeng Cheng 2, Noam Chayut 1  
1 Germplasm Resources Unit, John Innes Centre, UK;  
2 Agricultural Genomics Institute at Shenzhen, China;  
3 CIMMYT (International Maize and Wheat Improvement Center), Mexico



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- P. 6 Digital canopy height time series from RGB-UAV imaging reveal sequential activation of rht and vrn genes in bread wheat**  
Fabio Fania 5, Patrizio Spadanuda 1,2, Damiano Puglisi 1, Giuseppina Angione 1,2, Ida Colella 1,3, Nicola Pecchioni 1, Salvatore Esposito 4, Pasquale De Vita 1  
*1 Research Centre for Cereal and Industrial Crops (CREA-CI), S.S. 673 Km 25, 200, 71122 Foggia, Italy.*  
*2 Department of Agriculture, Food, Natural Science, Engineering, University of Foggia, Via Napoli 25, 71122 Foggia, Italy.*  
*3 Department of Agricultural and Forestry Sciences (DAFNE), University of Tuscia, Italy*  
*4 National Research Council of Italy, Institute of Biosciences and BioResources, Research Division Portici (CNR-IBBR)*  
*5 Research Centre for Cereal and Industrial Crops, Italy*
- P. 7 Evaluation of the relationship between vegetation indices and agronomic and physiological performance of several durum wheat (*Triticum durum* Desf.) genotypes under agroecological system**  
Nasreddine Louahdi 1, Labad Ryma 2, Belguet Haroun 1, Meziani Mouna 1, Boukhobza Nawel 1  
*1. Institut Technique des Grandes Cultures (ITGC Algeria)*  
*2. Ecole Nationale Supérieure Agronomique (ENSA Algeria)*
- P. 8 Phenotypic Diversity and Drought Tolerance in *Triticum araraticum* for Wheat Improvement**  
Hakan Ozkan 1, Ali Zain 1, Melike Biçici 1, İ. Barış Çankaya 1, Benjamin Kilian 2, Michael Frei 3  
*1 Department of Field Crops, Faculty of Agriculture, Çukurova University, Adana, Turkey*  
*2 Global Crop Diversity Trust, Bonn, Germany*  
*3 Department of Agronomy and Crop Physiology, Institute of Agronomy and Plant Breeding, Germany*
- P. 9 Integrating genomic and phenomic prediction to enhance complex trait selection in wheat**  
Damiano Puglisi 1, Fabio Fania 1,2, Patrizio Spadanuda 1,2, Salvatore Esposito 1,3, Giuseppina Angione 1,2, Ida Colella 1,4, Nicola Pecchioni 1, Renaud Rincant 5, Pasquale De Vita 1  
*1 Council for Agricultural Research and Economics, Research Centre for Cereal and Industrial Crops (CREA-CI), Italy*  
*2 Department of Agricultural Sciences, Food, Natural Resources and Engineering (DAFNE), University of Foggia, Italy*  
*3 National Research Council of Italy, Institute of Biosciences and BioResources, Research Division Portici (CNR-IBBR), Italy*  
*4 Department of Agricultural and Forestry Sciences (DAFNE), University of Tuscia, Italy*  
*5 GQE-Le Moulon, Université Paris-Saclay, INRAE, CNRS, AgroParisTech, France.*
- P. 10 Beyond Reference Biases and SNPs: k-mer-based GWAS Taps into Disease Resistance Diversity in Wheat Landraces**  
Javier Sánchez-Martín<sup>3</sup>, Benjaming Jaegle<sup>2</sup>, David Encalada Bustamante<sup>1</sup>, Victoria Widrig<sup>1</sup>  
*1 Department of Microbiology and Genetics, Spanish-Portuguese Agricultural Research Center (CIALE), University of Salamanca, Salamanca, Spain*  
*2 Department of Plant and Microbial Biology, University of Zurich, Zollikerstrasse 107, 8008 Zurich, Switzerland*  
*3 University of Salamanca, Spain*



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**P.11 Allele Mining in the Watkins Landrace Collection of Durum Wheat for Grain Carotenoid Content and Disease Resistance**

Ajay Siluveru<sup>1</sup>, Josh Waites<sup>1</sup>, Mei Jiang<sup>2</sup>, Simon Orford<sup>1</sup>, Rebecca Lee<sup>1</sup>, Ruth Eyiowuawi<sup>1</sup>, Smitha Chundakkad<sup>1</sup>, Workie Zegeye<sup>1</sup>, Liz Sayers<sup>1</sup>, Alex Howard<sup>1</sup>, Hang Gao<sup>1</sup>, Darryl Playford<sup>1</sup>, Karim Ammar<sup>3</sup>, Shifeng Cheng<sup>2</sup>, Noam Chayut<sup>1</sup>

*1 Germplasm Resources Unit, John Innes Centre, UK;*

*2 Agricultural Genomics Institute at Shenzhen, China;*

*3 CIMMYT, Mexico;*

**P. 12 Genomic and Phenomic-Driven Prediction for Yellow Rust in Bread and Durum Wheat Biparental Populations**

Paolo Vitale 1, Abelardo Montesinos-Lopez 2, Naeela Qureshi 1, Karim Ammar 1, Susanne Dreisigacker 1, Julio Huerta-Espino 1, Velu Govindan 1, Osva Montesinos-Lopez 3, Gilberto Thompson 1, Matthew Reynolds 1, Keith Gardner 1, Jose Crossa 1, Guillermo Gerard 1

*1 International Maize and Wheat Improvement Center (CIMMYT), México*

*2 Departamento de Matemáticas, Centro Universitario de Ciencias Exactas e Ingenierías (CUCEI), Universidad de Guadalajara, Mexico*

*3 Facultad de Telemática, Universidad de Colima, Mexico*



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**2. AGRONOMY, PHYSIOLOGY AND MODELING OF YIELD POTENTIAL  
TO ENHANCE THE SUSTAINABILITY OF DURUM WHEAT**

**P.13 Genetic Gains in Grain Yield and Yield-Related Traits in Argentinian Durum Wheat**

Ana Laura Achilli<sup>1,2,3</sup>, Pablo F. Roncallo<sup>2,3</sup>, Susanne Dreisigacker<sup>4</sup>, Curtis J. Pozniak<sup>1</sup>, Viviana C. Echenique<sup>2</sup>

*1 Crop Development Centre and Department of Plant Sciences, University of Saskatchewan, Saskatoon, Saskatchewan, Canada*

*2 Centro de Recursos Naturales Renovables de la Zona Semiárida (CERZOS–CCT–CONICET Bahía Blanca), Argentina*

*3 Departamento de Agronomía, Universidad Nacional del Sur (UNS), Argentina*

*4 The International Maize and Wheat Improvement Center (CIMMYT), Mexico*

**P.14 From the Green Revolution to Green Resilience: Rht genes between productivity and adaptation**

Giuseppina Angione<sup>1</sup> Concetta Lotti<sup>1</sup>, Salvatore Esposito<sup>2</sup>, Ida Colella<sup>3,4</sup> Patrizio Spadanuda<sup>1,3</sup>, Angelica Giancaspro<sup>1</sup>, Philippa Borrill<sup>5</sup>, Pasquale De Vita<sup>3</sup>.

*1 Department of Agricultural Sciences, Food, Natural Resources and Engineering (DAFNE), University of Foggia, Italy;*

*2 National Research Council of Italy, Institute of Biosciences and BioResources, Research Division Portici (CNR-IBBR), Italy;*

*3 Council for Agricultural Research and Economics (CREA), Research Centre for Cereal and Industrial Crops (CREA-CI), Italy*

*4 Department of Agricultural and Forestry Sciences (DAFNE), University of Tuscia, Italy*

*5 Department of Crop Genetics, John Innes Centre, UK*

**P. 15 Plant responses to nanoplastic pollution in durum wheat: a new challenge for stress-tolerance breeding**

Giuliana Bruno<sup>1</sup>, Benedetta Pizziconi<sup>2</sup>, Marco Bonarrigo<sup>1</sup>, Giulia Quagliata<sup>1</sup>, Panagiotis Liakopoulos<sup>3</sup>, Petros Kolovos<sup>3</sup>, Yiannis Kourkoutas<sup>3</sup>, Stefania Astolfi<sup>1</sup>, Laura De Gara<sup>2</sup>, Sara Cimini<sup>2</sup>, Francesco Sestili<sup>1</sup>, Samuela Palombieri<sup>1</sup>

*1 University of Tuscia, DAFNE, Department of Agriculture and Forest Sciences, Italy*

*2 Campus Bio-Medico University of Rome, Department of Science and Technology for Sustainable Development and One-Health, Italy*

*3 Democritus University of Thrace, DUT, Department of Molecular Biology & Genetics, Greece*



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- P. 16 Characterizing Developmental Traits for Grain Yield Enhancement in Tetraploid Wheat Core Collection: Focus on Spike Fertility and Grain Morphology**  
Eugenia Carini<sup>1</sup>, Paola Viola<sup>2</sup>, Carlo Invernizzi<sup>2</sup>, Elisabetta Mazzucotelli<sup>3</sup>, Agata Gadaleta<sup>4</sup>, Ilaria Marcotuli<sup>4</sup>, Roberto Tuberosa<sup>1</sup>, Marco Maccaferri<sup>1</sup>;  
<sup>1</sup> *Alma Mater Studiorum – Università di Bologna, Department of Agricultural and Food Sciences and Technologies (DISTAL), Italy;*  
<sup>2</sup> *APSOV Sementi S.P.A, Voghera, PV, Italy;*  
<sup>3</sup> *Council for Agricultural Research and Economics, CREA-GB Research Centre for Genomics and Bioinformatics, Italy;*  
<sup>4</sup> *Department of Agricultural and Environmental Science, University of Bari 'Aldo Moro', Italy.*
- P. 17 Interactive effects of heat and drought on wheat yield change from synergistic to antagonistic as their severity increases**  
Arisede Chisaka<sup>1</sup>, John P. Hammond<sup>1</sup>, Shinichi Nakagawa<sup>2,3</sup>, Jacob Bishop<sup>1</sup>  
<sup>1</sup> *School of Agriculture, Policy and Development, University of Reading, UK*  
<sup>2</sup> *Evolution and Ecology Research Centre, School of Biological and Environmental Science, University of New South Wales, Australia.*  
<sup>3</sup> *Department of Biological Sciences, University of Alberta, CW 405, Biological Sciences Building, Canada*
- P.18 Relationships between durum wheat NUE traits and grain protein quality evaluated in two contrasting Mediterranean environments**  
Michele De Santis<sup>1</sup>, Raffale Meloni<sup>2</sup>, Pasquale De Vita<sup>3</sup>, Nicola Pecchioni<sup>3</sup>,  
Amedeo Reyneri<sup>2</sup>, Massimo Blandino<sup>2</sup>, Zina Flagella<sup>1</sup>  
<sup>1</sup> *University of Foggia, Department of Agriculture, Food, Natural resources and Engineering (DAFNE), Italy*  
<sup>2</sup> *University of Turin, Dipartimento di Scienze Agrarie, Forestali e Alimentari, Italy*  
<sup>3</sup> *CREA Research Centre for Cereal and Industrial Crops, Italy*
- P. 19 Yield potential and stress adaptation of durum wheat in Mediterranean environments of central Chile**  
Alejandro Del Pozo<sup>1</sup>, K. Gütter<sup>1</sup>, I. Matus<sup>2</sup>, D. Castillo<sup>2</sup>, F. Mejias<sup>1</sup>, J. Pacheco<sup>1</sup>, and A. Schwember<sup>3</sup>  
<sup>1</sup> *Centro de Mejoramiento Genético y Fenómica Vegetal, Facultad de Ciencias Agrarias, Universidad de Talca, Chile.*  
<sup>2</sup> *Instituto de Investigaciones Agropecuarias, Centro Regional de Investigaciones Quilamapu, Chile.*  
<sup>3</sup> *Departamento de Ciencias Vegetales, Facultad de Agronomía y Sistemas Naturales, Pontificia Universidad Católica de Chile, Chile.*
- P. 20 Agronomic and genotypic insights into durum wheat adaptation to conservation agriculture: a plot-to-field scale approach**  
Zina Flagella<sup>1</sup>, Michele Andrea De Santis<sup>1</sup>, Francesco Ciavarella<sup>2</sup>, Michele Rinaldi<sup>2</sup>  
<sup>1</sup> *University of Foggia, Department of Agriculture, Food, Natural resources and Engineering (DAFNE), Italy*  
<sup>2</sup> *CREA Research Centre for Cereal and Industrial Crops, Italy*



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- P. 21 The responses of winter cultivars of common wheat, durum wheat and spelt to agronomic factors**  
Krzysztof Jankowski 1, Wojciech Budzyński 1, Krzysztof Bepirszcz 1, Bogdan Dubis 1, Anna Hłasko-Nasalska 1, Mateusz Sokółski 1, Jacek Olszewski 2, Dariusz Załuski 3  
*1 University of Warmia and Mazury in Olsztyn, Faculty of Agriculture and Forestry, Department of Agrotechnology and Agribusiness, Poland*  
*2 University of Warmia and Mazury in Olsztyn, Faculty of Agriculture and Forestry, Experiment and Education Station, Poland*  
*3 University of Warmia and Mazury in Olsztyn, Faculty of Agriculture and Forestry, Department of Genetics, Plant Breeding and Bioresource Engineering, Poland*
- P. 22 Genetic Dissection of Drought-Adaptive Physiological Traits in Durum Wheat Using Wild Wheat-Derived NAM Populations**  
Yaman Jabbour 1, Mohammad Shafik Hakim 2, Hiba Alatrash 1, Hafssa Kabbaj 3, Meryem Zaïm 3, Charles Kleinerman 3, Filippo M. Bassi 3  
*1 General commission for scientific Agriculture research (GCSAR), Syria.*  
*2 Field Crop Department, Faculty of Agriculture Engineering, Aleppo University, Aleppo, Syria*  
*3 ICARDA, Biodiversity and Integrated Gene Management, Rabat, Morocco*
- P. 23 Integrating imaging, yield components, and grain composition data to assess drought response in durum wheat**  
Giacomo Mangini<sup>1</sup>, Pasquale Luca Curci<sup>1</sup>, Angelo Petrozza<sup>2</sup>, Claudia Testolin<sup>3</sup>, Elena Baldoni<sup>3</sup>, Fabio Francesco Nocito<sup>4</sup>, Aldo Ceriotti<sup>3</sup>, Francesco Cellini<sup>2</sup>, Gabriella Sonnante<sup>1</sup>  
*1 Institute of Biosciences and BioResources, National Research Council (CNR-IBBR), Italy*  
*2 Agenzia Lucana di Sviluppo e Innovazione in Agricoltura (ALSIA) Centro Ricerche Metapontum Agrobios, Italy*  
*3 Institute of Agricultural Biology and Biotechnology, National Research Council (CNR-IBBA), Italy*  
*4 Department of Agricultural and Environmental Sciences -Production, Territory, Agroenergy, University of Milan, Italy*
- P. 24 Genomic approaches to reduce cadmium accumulation in durum wheat for food safety and sustainable cultivation**  
Ilaria Marcotuli 1, Alessio Aprile 2, Zina Flagella 3, Nunzio Fiorentino 4, Agata Gadaleta 1  
*1 Department of Soil, Plant and Food Science, University of Bari Aldo Moro, Bari, Italy*  
*2 Department of Biological and Environmental Sciences and Technologies, University of Salento, Lecce, Italy*  
*3 Department of Agriculture, Food, Natural Resources and Engineering, University of Foggia, Foggia, Italy*  
*4 Department of Agricultural Sciences, University of Naples Federico II, Portici, Italy*
- P. 25 Michay-Inia: A High-Yielding Spring Durum Wheat Cultivar for Chilean Conditions**  
Ivan Matus 1, D. Castillo 1, C. Jobet 2, J. Hirzel 1, M. Valenzuela 3, N. Muñoz 3  
*1 Instituto de Investigaciones Agropecuarias, Centro Regional de Investigaciones Quilamapu, Chile.*  
*2 Instituto de Investigaciones Agropecuarias, Centro Regional de Investigaciones Carillanca, Chile.*  
*3 Departamento de Producción Vegetal, Facultad de Agronomía Universidad de Concepción, Chile*



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- P. 26 Study of nitrogen metabolism in wheat cultivars under water and nutrient stress**  
Sara Muciaccia 1, Marcotuli, I. 1, Giove S.L. 1, Maccaferri M. 2, Forestan C. 2, Simone M. 1, Caranfa D. 1, Gadaleta A. 1  
*1 Department of Soil, Plant and Food Sciences, University of Bari Aldo Moro, Italy.*  
*2 Department of Agricultural and Food Sciences, University of Bologna, Italy.*
- P. 27 Grain metabolome profiling of a durum wheat core collection in response to different nitrogen supply**  
Raul Pirona 1, Elahe Tavakoli 2 Cristian Forestan 3, Laura Ruth Cagliani 4, Chiara Cappucci 3, Marco Maccaferri 3, Matteo Bozzoli 3, Andrea Tafuri 1, Aldo Ceriotti 1, Roberto Consonni 4  
*1 Institute of Agricultural Biology and Biotechnology (IBBA), National Research Council, Milan, Italy*  
*2 Department of Plant Genetics and Production, Shiraz University, Iran*  
*3 Department of Agricultural and Food Sciences (DISTAL), Alma Mater Studiorum – University of Bologna, Bologna, Italy*  
*4 Institute of Chemical Sciences and Technologies (SCITEC) “Giulio Natta”, National Research Council, Milan, Italy*
- P. 28 Response of ancient durum wheat varieties to low and high-input management systems: agronomic and physiological evaluation**  
Amani Romdhane 1, Khoulood Chetoui 1, Salma Tissaoui 2, Romdhane Nasraoui 3, Abdennour Sebei 2, Noura Omri Ben Youssef 2, Noura Jammezi 2, Mariem Balloumi 2, Salah BenYoussef 1  
*1 Forage and Animal production Laboratory, Institut National de la Recherche Agronomique de Tunisie, Institution de la Recherche et de l’Enseignement supérieur Agricoles- Université de Carthage*  
*2 Field Crop Laboratory, Institut National de la Recherche Agronomique de Tunisie, Institution de la Recherche et de l’Enseignement supérieur Agricoles- Université de Carthage*
- P. 29 The Italian Durum Wheat Variety Trial Network: A Collaborative Platform for Climate-Resilient Variety Evaluation**  
Fabrizio Spadanuda 1, Fabio Fania 1-2, Ivano Pecorella 2, Damiano Puglisi 2, Filippo Maria Bassi 3, Nicola Pecchioni 2, Pasquale De Vita 2  
*1 Department of Agriculture, Food, Natural Science, Engineering, University of Foggia, Italy*  
*2 Research Centre for Cereal and Industrial Crops (CREA-CI), Italy.*  
*3 International Center for Agricultural Research in the Dry Areas (ICARDA), Morocco.*
- P. 30 T. durum in Poland- new challenge for farmers**  
Elżbieta Suchowilska 1, Marian Wiwart 1, Urszula Wachowska 2, Dariusz Gontarz 3  
*1) Department of Genetics, Plant Breeding and Bioresource Engineering, Faculty of Agriculture and Forestry, University of Warmia and Mazury in Olsztyn, Poland*  
*2) Department of Entomology, Phytopathology and Molecular Diagnostics, Faculty of Agriculture and Forestry, University of Warmia and Mazury in Olsztyn, Poland*  
*3) Polskie Zakłady Zbożowe Lubella GMW Ltd. LP, Lublin, Poland*



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- P. 31 Enhancing Wheat Performance Through Variety Mixtures: Preliminary Insights from a Multi-Environment Study in Morocco**  
Mona Taghouti 1, G. Diria 1, F. Gaboune 1, K. M'bida 2, H. El Bouzidi 3  
*1 Institut National de la Recherche Agronomique Maroc*  
*2 Faculté des sciences Fès Maroc*  
*3 Faculté des sciences Settat Maroc*
- P. 32 Cultivar-Specific Responses to Phosphate Fertilization in Triticum durum**  
Olga Maria Vaccarella 1, Stefania Giove 2, Eleonora Davide 3, Nunzio Dipierro 1, Candida Vannini 3, Milena Marsoni 3, Guido Domingo 3, Stefania Fortunato 1, Ilaria Marcotuli 2, Agata Gadaleta 2, Maria Concetta de Pinto 1, Federico Vita 1  
*1 Università degli Studi di Bari "Aldo Moro", Dipartimento di Bioscienze, Biotecnologie e Ambiente, Bari, Italy*  
*2 Università degli Studi di Bari "Aldo Moro", Dipartimento di Scienze del Suolo, della Pianta e degli Alimenti Bari, Italy*  
*3 Università degli Studi dell'Insubria, Dipartimento di Biotecnologie e Scienze della Vita, Varese, Italy*
- P. 33 Evaluating Row-Based Yield Prediction in Durum Wheat Using Multispectral and Thermal Imagery**  
Dolors Villegas 1, David Gómez-Candón (1,2), Joaquim Bellvert (3), José Antonio Jiménez-Berni (4)  
*(1) EEAD, CSIC, Zaragoza, Spain*  
*(2) ARAID Foundation, Zaragoza, Spain*  
*(3) IRTA, Lleida, Spain*  
*(4) IAS, CSIC, Córdoba, Spain*
- P. 34 Wild Emmer Introgression Enhances Leaf CO<sub>2</sub> Diffusion and Photosynthesis Under Drought in Durum Wheat**  
Zait Yotam - The Hebrew University of Jerusalem, Israel



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

- P. 35 Expanding End-Uses of Durum Wheat: Converting Starch into Dietary Fibers & Using Grain Softness for Multipurpose Flours**  
Karim Ammar 1, Susanne Dreisigacker 1, Angela Pacheco Gill  
*1 CIMMYT-Mexico*
- P. 36 Wheat Security: Exploring the genetic and environmental basis of wheat quality**  
Francisco Andrade Martin 1, Juan B. Alvarez 1, Nieves Aparicio 2, José Luis Araus 3, Fiona Doohan 4, Marco Maccaferri 5, Matteo Bozzoli 5, Justin Blancon 6, Sophie Bouchet 6, María Itria Ibba 7, Carlos Guzmán 1  
*1 Departamento de Genética, ETSIAM, Universidad de Córdoba, CeIA3, Spain.*  
*2 Agrarian Technological Institute of Castilla y León, Ctra. Burgos-Portugal, Spain*  
*3 Section of Plant Physiology, University of Barcelona, Spain*  
*4 School of Biology and Environmental Science and Earth Institute, University College Dublin, Ireland*  
*5 Department of Agricultural Sciences, University of Bologna, Italy*  
*6 UMR GDEC, INRAE, Université Clermont Auvergne, Clermont-Ferrand, France*  
*7 International Maize and Wheat Improvement Center (CIMMYT), Mexico*
- P. 37 Harnessing Durum-like Traits and Wild Germplasm to Improve Grain Quality and Heat Resilience in Wheat**  
Abbas Assad 1, Jing He1, Afroz Naznin1, Damilola Dauda1, Kun Ning1, Yuanyuan Wang1, Jayakumar Bose1, Zhonghua Chen1\*  
*1. School of Science, Western Sydney University, Australia*
- P. 38 Genetic Characterization and Traceability of Sicilian Tetraploid Wheat Conservation Varieties Using SNP Markers**  
Marco Bonarrigo<sup>1</sup>, Giulio Metelli<sup>1</sup>, Bernardo Messina<sup>2</sup>, Giuseppe Russo<sup>2</sup>, Francesco Sestili<sup>1</sup>  
*<sup>1</sup>Department of Agriculture and Forest Science (DAFNE) University of Tuscia, Italy*  
*<sup>2</sup>Consorzio di Ricerca Gian Pietro Ballatore, Italy*



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- P. 39 Tetraomix Wheat Database: An Online Platform to Manage Triticum Germplasm**  
Ida Colella 1; Giuseppina Angione<sup>2,3</sup>; Fabio Fania 2,3; Patrizio Spadanuda 2,3; Damiano Puglisi 2; Salvatore Esposito 4; Riccardo Aiese Cigliano 5; Rosa Barcelona Cabeza 5; Francesco Sestili 1; Pasquale De Vita 2;  
*1. Department of Agricultural and Forestry Sciences (DAFNE), University of Tuscia, Italy*  
*2. Research Centre for Cereal and Industrial Crops (CREA-CI), CREA Council for Agricultural Research and Economics, Italy*  
*3. Department of Agricultural Sciences, Food, Natural Resources and Engineering (DAFNE), University of Foggia, Foggia*  
*4. National Research Council of Italy, Institute of Biosciences and BioResources, Research Division Portici (CNR-IBBR), Italy*  
*5. Sequentia Biotech SL, Barcelona, Spain*
- P.40 Transcriptomic profiling reveals divergent nitrogen deprivation responses in durum wheat cultivars**  
Pasquale Luca Curci 1, Giacomo Mangini 1, Diana Lucia Zuluaga 1, Francesco Punzi 1-2, Emanuela Blanco 1, Gaetano Laghetti 1, Barbara Laddomada 3, Gabriella Sonnante 1  
*1 Institute of Biosciences and BioResources, National Research Council (CNR-IBBR), Italy*  
*2 Department of Soil, Plant and Food Sciences, Section of Genetic and Plant Breeding, University of Bari Aldo Moro, Italy*  
*3 Institute of Sciences of Food Production, National Research Council (CNR-ISPA), Italy*
- P. 41 Investigation of Vrn-B1 Diversity in Triticum Spp. Using In-Silico and Molecular Approaches**  
Pasquale De Vita 2, Da Colella 1,2, – Giuseppina Angione 2,3, – Salvatore Esposito 4 – Samuela Palombieri 1- Francesco Sestili 1  
*1. Department of Agricultural and Forestry Sciences (DAFNE), University of Tuscia, Italy*  
*2. Research Centre for Cereal and Industrial Crops (CREA-CI), CREA Council for Agricultural Research and Economics, Italy*  
*3. Department of Agricultural Sciences, Food, Natural Resources and Engineering (DAFNE), University of Foggia, Italy*  
*4. National Research Council of Italy, Institute of Biosciences and BioResources, Research Division Portici (CNR-IBBR), Italy*



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- P. 42 Protect and promote Crop Wild Relatives (PRO-WILD project): wild emmer for the resilience of food systems**  
Francesca Desiderio 1, Davide Guerra 1, Elisabetta Mazzucotelli 1, Giulia Castorina 1, Giorgia Carletti 1, Lorenzo Covarelli 2, Giovanni Beccari 2, Ioannis Mylonas 3, Hakan Özkan 4, Einav Mayzlish-Gati 5, Avraham A Levy 5, Luigi Cattivelli 1  
*1- CREA – Research Centre for Genomics and Bioinformatics, Fiorenzuola d'Arda (PC), Italy.*  
*2- Department of Agricultural, Food and Environmental Sciences, University of Perugia, Perugia, Italy.*  
*3- Hellenic Agricultural Organization – DIMITRA (ELGO – DIMITRA), Institute of Plant Breeding & Genetic Resources, Thessaloniki, Greece.*  
*4- Department of Field Crops, Faculty of Agriculture, University of Çukurova, Adana, Turkey.*  
*5- Department of Plant and Environmental Sciences, The Weizmann Institute of Science, Rehovot, Israel.*
- P. 43 Genetic variation and association mapping studies in elite spring bread wheat genotypes for yield and other agronomic traits under irrigated and rainfed environments**  
Zakaria El Gataa 1  
*1 Mohammed VI Polytechnic University (UM6P), AgBs, CAES, Benguerir, Morocco*
- P. 44 Genetic Dissection of Root Growth Angle Reveals Breeding Targets for Drought-Resilient Durum Wheat**  
Genet Atsbeha Fiseha 1, Muhammad Awais Farooq1, Martina Bruschi1, Manar Makoul2, Francisco Pinto4, Chunyi Liu1, Xinying Zheng1, Cristian Forestan1, Matteo Bozzoli1, Matthew Reynolds4, Rod J Snowdon 2, Silvio Salvi1, Eric Ober3, Roberto Tuberosa1, Marco Maccaferri1.  
*1 Department of Agricultural and Food Sciences, University of Bologna, Italy;*  
*2 IFZ Research Centre for Biosystems, Land Use and Nutrition, Justus Liebig University, Department of Plant Breeding, Germany;*  
*3 NIAB, 93 Lawrence Weaver Road, Cambridge, UK;*  
*4 Global Wheat Program, International Maize and Wheat Improvement Center (CIMMYT), Mexico*
- P. 45 Genetic Diversity and Genome Wide Association Study in Tetraploid Wheat (Triticum Turgidum Spp.) Genotypes from Ethiopia**  
Miheretu Fufa 1,2, Andargachew Gedebo 1, Tesfaye Letta 2, Dangachew Lule 2, and Anna Maria Mastrangelo 3  
*1 Hawassa University College of Agriculture, Hawassa, Ethiopia*  
*2 Oromia Agricultural Research Institute, Finfinnee, Ethiopia*  
*3 CREA-Research Centre for Cereal and Industrial Crops, Foggia, Italy*
- P. 46 Technological quality of durum wheat pasta as affected by soil tillage and fertilization management**  
Laura Gazza1, Francesca Nocente 1, Roberto Mancinelli 2, Marta Naso 1, Gaia Blandizzi 1, Gabriele Chilosi 3  
*1 CREA Research Centre for Engineering and Agro-Food Processing, Rome, Italy*  
*2 Department of Agriculture and Forest Sciences (DAFNE), University of Tuscia, Italy*  
*3 Department for Innovation in Biological, Agrofood and Forest Systems (DIBAF), University of Tuscia, Italy.*



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- P. 47 Exploring Arabinoxylans in Durum Wheat: Contrasting Genotypes and Environments Across Different Crop Seasons**  
Nayeli Hernandez-Espinosa 1, Maria Itria Ibba 1  
*1 International Maize and Wheat Improvement Center, CIMMYT, Mexico*
- P. 48 The valorization of Apulian durum wheat landraces through their collection, characterization, and storage: the project SaveGrain-CER**  
Gaetano Laghetti 1, Zonna Mariano1, Giunta Rosella1, Dorenzo Paolo1  
*1 Institute of Biosciences and BioResources, National Research Council (CNR), Italy*
- P. 49 History of durum wheat in Spain**  
Fernando Martinez-Moreno 1  
*1 University of Seville, Spain*
- P. 50 Assessment of a Balkan Durum Panel for Virus Resistance and Sustainable Wheat Production**  
Dragan Perovic 1, Heike Lehnert2, Cai Yu1, Katy Niedung1, Jelena Zindovic3, Zoran Jovovic3, Giacomo Mangini7, Mariella Matilde Finetti-Sialer7, Novo Przulj4, Marco Maccaferri5, Peter Dracatos6, Ana Velimirovic3  
*1 Federal Research Centre for Cultivated Plants, Institute for Resistance Research and Stress Tolerance, Julius Kuehn-Institute, Germany*  
*2 Federal Research Centre for Cultivated Plants, Institute for Biosafety in Plant Biotechnology, Julius Kuehn-Institute, Germany*  
*3 Biotechnical Faculty Podgorica, University of Montenegro, Montenegro*  
*4 The Academy of Sciences and Arts of the Republika Srpska, Banja Luka, Republika Srpska, Bosnia and Herzegovina.*  
*5 Department of Agricultural and Food Sciences (DISTAL), Alma Mater Studiorum – Università di Bologna, Italy*  
*6 La Trobe Institute of Sustainable Agriculture and Food (LISAF), AgriBio, Australia*  
*7 Institute of Biosciences and Bioresources, National Research Council (IBBR-CNR), Italy*
- P. 51 Introgression breeding for durum wheat improvement**  
1 Edina Türkösi, 1 Klaudia Kruppa,1 Eszter Gaál, 1 Balázs Kalapos, 2 Ilaria Marcotuli, 2 Agata Gadaleta, 1 István Molnár  
*1 Centre for Agricultural Research, HUN-REN, Martonvásár, Hungary*  
*2 University of Bari „Aldo Moro”, Italy*
- P. 52 Genomic Design-Driven Enhancement of Processing Quality in Common Wheat**  
Yingyin Yao 1, Zhaoheng Zhang 1, Dan Liu 1, Zhongfu Ni 1, Qixin Sun 1, Weilong Guo 1  
*1 State Key Laboratory of High-Efficiency Production of Wheat-Maize Double Cropping, Frontier Science Center for Molecular Design Breeding, China Agricultural University, Beijing 100193, China*



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**P. 53 Bran Oils from Tunisian Durum Wheat and Barley: Phytochemical Composition and Evaluation of In Vitro Bioactivities**

Ines Yacoubi 1, Karama Hamdi1, Fatma Masmoudi 2, Najeh Krayem 3, Marcello Greco Miani 4

*1 Biotechnology and Plant Improvement Lab, Centre of Biotechnology. Sfax, Tunisia*

*2 Laboratory of Biopesticides (LB PES), Center of Biotechnology of Sfax, Sfax University, Sfax, Tunisia*

*3 Laboratoire de Biochimie et de Génie Enzymatique des Lipases, ENIS, Université de Sfax, Tunisia*

*4 Casillo Next Gen Food S.r.l. Bari, Italy*



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Jang Bahadur Singh<sup>1</sup>, Rahul Gajghate<sup>1</sup>, Amit Gautam<sup>2</sup>, Shiv Kumar Agrawal<sup>3</sup>, and Filippo Bassi<sup>4</sup>  
*1 Scientist, ICAR-Indian Agricultural Research Institute, Regional Station, Indore, India*  
*2 National Associate Scientist, ICARDA, Amlaha, Sehore, India*  
*3 Regional Coordinator, ICARDA-South Asia & China Regional Program, New Delhi, India*  
*4 Scientist, ICARDA-Morocco*
- P. 55 Impact of Chilean Environmental Conditions on Durum Wheat Quality: Adverse And Optimal Scenarios**  
1 Dalma Castillo, 1 Iván Matus, 2 Alejandro del Pozo, 3 Nicolás Muñoz  
*1 Instituto de Investigaciones Agropecuarias INIA-Chile.*  
*2 Centro de Mejoramiento Genético y Fenómica Vegetal, Facultad de Ciencias Agrarias, Universidad de Talca, Av. Lircay s/n, Talca, Chile.*  
*3 Departamento de Producción Vegetal, Facultad Agronomía, Universidad de Concepción, Av. Vicente Méndez 595. Chillán. Ñuble. Chile.*
- P. 56 Discovering transcriptional regulators of drought-induced senescence in wheat**  
Miles Curl<sup>1</sup>, Catherine Evans<sup>2</sup>, Chris Burt<sup>3</sup>, Nick Bird<sup>4</sup>, Rachel Goddard<sup>5</sup>, Gurbinder Singh Sidhu<sup>6</sup>, Richard Morris<sup>6</sup>, Philippa Borrill<sup>1</sup>  
*1) Department of Crop Genetics, John Innes Centre, Norwich, UK*  
*2) Rothamsted Research, Harpenden, UK*  
*3) RAGT Seeds Ltd, Grange Road, Ickleton, UK CB10 1TA*  
*4) KWS UK Ltd, 56 Church Street, Thriplow, Royston, UK*  
*5) Limagrain UK, Woolpit, Bury St Edmunds, UK*  
*6) Department of Computational and Systems Biology, John Innes Centre, Norwich, UK*
- P. 57 Characterization of Ppo-A1 alleles and their impact on PPO activity in tetraploid wheat**  
Domenico De Paola<sup>2</sup>, Fanelli V.1, Dellino M. 1, De Paola D. 2, De Giovanni C. 1, Minervini A.P. 2, Mangini G. 2, D'Agostino N. 3, De Vita P. 4, Montemurro C. 1,5,6, Taranto F. 2  
*<sup>1</sup> Department of Soil, Plant and Food Sciences, University of Bari Aldo Moro, Bari, Italy*  
*<sup>2</sup> Institute of Biosciences and Bioresources (CNR-IBBR), Bari, Italy*  
*<sup>3</sup> Department of Agricultural Sciences, University of Naples Federico II, Portici, Italy*  
*<sup>4</sup> Research Centre for Cereal and Industrial Crops (CREA-CI), Foggia, Italy*  
*<sup>5</sup> SINAGRI S.r.l., Spin-off of the University of Bari Aldo Moro, Bari, Italy*  
*<sup>6</sup> Support Unit Bari, Institute for Sustainable Plant Protection, National Research Council of Italy (CNR), Bari, Italy*



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- P. 58 Assessment of the technological quality and the pasta-making aptitude of emerging durum wheat lines cultivated in multiple Italian environments**  
Laura Gazza<sup>1</sup>, Eder Groli<sup>2</sup>, Mariarosa Giordano<sup>2</sup>, Simone Palmirani<sup>2</sup>, Andrea Raggi<sup>2</sup>, Alessandro Cammerata<sup>1</sup>, Viviana Del Frate<sup>1</sup>, Marta Naso<sup>1</sup>, Ester Gosparini<sup>1</sup>, Alessandra Arcangeli<sup>1</sup>, Roberto Mortaro<sup>1</sup>, Cristina Cecchini<sup>1</sup>, Stefano Ravaglia<sup>2</sup>  
*ICREA Research Centre for Engineering and Agro-Food Processing, Via Manziana,, Italy*  
*2 S.I.S. Società Italiana Sementi S.p.A., Italy*
- P. 59 Harnessing Genomic Tools to Accelerate Breeding for Heat Tolerance in Durum Wheat in West Africa**  
Hafssa Kabbaj<sup>1</sup>, Amadou Tidiane SALL<sup>2</sup>, Anna backhaus<sup>1</sup>, Jesus Quiroz-Chavez<sup>3</sup>, Rodomiro Ortiz<sup>4</sup>, Filippo M. Bassi<sup>1</sup>  
*1 International Center for Agricultural Research in the Dry Areas, Rabat, Morocco*  
*2 Senegalese Institute for Agricultural Research (ISRA), Saint-Louis, Senegal*  
*3 John Innes Centre, UK*  
*4 Plant Breeding, Swedish University of Agricultural Sciences, Alnarp, Sweden*
- P. 60 Genome-Wide Association Study Identifies Novel SNPs for Forage Quality and Related Traits in Dual-Purpose Winter Wheat**  
Maria Ali<sup>1</sup> Ali Missaoui<sup>12</sup>, Uttam Saha<sup>3</sup>, Benjamin Lopez<sup>1</sup>, Steve Sutton<sup>1</sup>, Mohamed Mergoum<sup>12\*</sup>  
*1 Department of Crop and Soil Sciences, University of Georgia, Griffin Campus, GA, USA*  
*2 Institute of Plant Breeding, Genetics & Genomics, University of Georgia, Athens, GA, USA*  
*3 Agricultural and Environmental Services Laboratories, University of Georgia Cooperative Extension, Athens, Georgia, USA*  
*\*Corresponding author*
- P. 61 G X E interaction and its effect on yield components of durum wheat under terminal drought conditions in the Mediterranean dryland of central Chile.**  
Marcela Opazo<sup>1</sup>, Christian Alfaro<sup>1</sup>, Jereline Cardenas<sup>3</sup>, Ivan Matus<sup>2</sup>, Dalma Castillo<sup>2</sup>  
*1 INIA Rayentue*  
*2 INIA Quilamapu*  
*3 Universidad de Chile*



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- P. 62 Genetic Dissection of Heat Stress Tolerance in Durum Wheat under field conditions**  
Roshan Paudel<sup>1</sup>, M. Awais Farooq<sup>1</sup>, Matteo Bozzoli<sup>1</sup>, Eder Licieri Groli<sup>2</sup>, Elisabetta Frascaroli<sup>1</sup>, Marco Maccaferri<sup>1</sup>, Karim Ammar<sup>3</sup>, Roberto Tuberosa<sup>1</sup>  
*1. Alma Mater Studiorum Bologna, University of Bologna, Department of Agrofood Sciences and Technologies (Distal), Italy;*  
*2. Società Italiana Sementi, Italy;*  
*3. International Maize and Wheat Improvement Centre, CIMMYT, El Batián, Mexico*
- P. 63 Evaluation of Moroccan durum wheat (*Triticum turgidum* L. ssp. durum) genotypes under seedling-stage drought stress in controlled conditions**  
Oumaïma Rachik<sup>1</sup>, Abdelghani Nabloussi<sup>1</sup>, Loubna Belqadi<sup>2</sup>, Hafssa Kabbaj<sup>3</sup>, Moha Ferrahi<sup>4</sup>  
*1-Research Unit of Plant Breeding and Plant Genetic Resources Conservation, Regional Agricultural Research Center of Meknes, National Institute of Agricultural Research, Morocco*  
*2-Institut Agronomique et Vétérinaire Hassan II, Department of Plant Production, Protection and Biotechnologies, Morocco*  
*3-International Center for Agricultural Research in the Dry Areas (ICARDA), Morocco*  
*4-Department of Breeding and Conservation of Genetic Resources, National Institute for Agricultural Research (INRA), Morocco*
- P. 64 Genetic discovery of fast dry down characteristics in durum wheat**  
Yuefeng Ruan<sup>1\*</sup>, Jatinder S. Sangha<sup>1\*</sup>, Ron Knox<sup>2§</sup>, Curtis Pozniak<sup>3</sup>, Brad Meyer<sup>1</sup>, Tinku Gautam<sup>1</sup>, Firdissa Bokore<sup>1</sup>, Richard D. Cuthbert<sup>1</sup>, Greg Viers<sup>5</sup>, Wentao Zhang<sup>4</sup>, Samia Berraies<sup>1</sup>  
*1 Swift Current Research and Development Centre, Agriculture and Agri-Food Canada, Swift Current, SK, Canada*  
*2 Retired, Swift Current Research and Development Centre, Agriculture and Agri-Food Canada, Swift Current, SK, Canada*  
*3 Crop Development Centre and Department of Plant Sciences, University of Saskatchewan, Saskatoon, SK, Canada*  
*4 Aquatic and Crop Resources Development, National Research Council of Canada, 110 Gymnasium Place, Saskatoon, SK, Canada*  
*5 Barilla America Inc, 3311 East Lincoln way Ames, IA 50010*
- P. 65 Enhancing Drought Resilience in Tetraploid Wheat: The Role of Polyphenol Oxidases and Microbial Inoculation**  
Francesca Taranto<sup>1</sup>, Minervini A.P.<sup>1</sup>, Pellegrini A.<sup>1</sup>, Procino S.<sup>1</sup>, Bianco C.<sup>2</sup>, Logozzo G.<sup>3</sup>, Marzario S.<sup>3</sup>, Prestera M.<sup>3</sup>, Placido G.<sup>3</sup>, Morante C.<sup>3</sup>, Verrastro V.<sup>3</sup>, Mangini G.<sup>1</sup>, De Vita P.<sup>4</sup>, Gioia T.<sup>3</sup>, D'Agostino N.<sup>5</sup>  
*1. Institute of Biosciences and Bioresources (CNR-IBBR) Bari, Italy*  
*2. Institute of Biosciences and Bioresources (CNR-IBBR) Napoli, Italy*  
*3. School of Agricultural, Forestry, Food and Environmental Sciences, University of Basilicata, Italy*  
*4. Research Centre for Cereal and Industrial Crops (CREA-CI), Italy*  
*5. University of Naples Federico II, Department of Agricultural Sciences, Italy*



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**5. BREEDING FOR DISEASE RESISTANCE/TOLERANCE IN DURUM WHEAT**

- P. 66 Novel k-mer based genomic tools enable rapid discovery of crop wild relative introgressions, uncovering a novel loci for Hessian Fly resistance.**  
Anna Elisabeth Backhaus<sup>1</sup>, Kabbaj, Hafssa<sup>1</sup>; Cavalet-Giorsa, Emile<sup>2</sup>; Quiroz-Chavez, Jesus<sup>4</sup>; Boulamat, Rachid<sup>1</sup>; El'Bouhssini, Mustapha<sup>3</sup>; Walkowiak, Sean<sup>5</sup>; Bassi Filippo<sup>1</sup>  
*1 Int. Centre of Agricultural Research in the Dry Areas, Morocco*  
*2 King Abdullah University of Science and Technology, Saudi Arabia*  
*3 Mohamed VI Polytechnic University, Morocco*  
*4 John Innes Centre, UK*  
*5 Canadian Grain Commission, Canada*
- P. 67 Durum Wheat Breeding for the Senegal River Basin: High-yielding Cultivars Adapted to heat in Northwest Africa**  
Filippo Bassi<sup>1</sup>  
*1 Institut Sénégalais de Recherches Agricoles (ISRA), Senegal*
- P. 68 Identification of QTLs for Resistance to Leaf Rust, Yellow Rust, and Septoria Tritici Blotch Using Association and Linkage Mapping in Durum Wheat**  
Luca Ceccato<sup>1</sup>, Eugenia Carini<sup>1</sup>, Matteo Bozzoli<sup>1</sup>, Chunyi Liu<sup>1</sup>, Francesco De Sario<sup>1</sup>, Rafika Benbernou<sup>2</sup>, Fabrice Ntakirutimana<sup>2</sup>, Manon Delanoue<sup>2</sup>, Nicolas Lapalu<sup>2</sup>, Frédéric Suffert<sup>2</sup>, Thierry C. Marcel<sup>2</sup>, Chiara Cappucci<sup>1</sup>, Muhammad Awais Farooq<sup>1</sup>, Elisabetta Mazzucotelli<sup>2</sup>, Paola Viola<sup>3</sup>, Carlo Invernizzi<sup>3</sup>, Roberto Tuberosa<sup>1</sup>, Marco Maccaferri<sup>1</sup>;  
*1. Department of Agricultural and Food Sciences, Alma Mater Studiorum – Università di Bologna, Bologna, Italy;*  
*2. Université Paris Saclay, INRAE, UR BIOGER, Palaiseau, France; 3. Apsovsementi S.p.a., Voghera, Pavia, Italy*



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- P. 69 Loci relevant for Yellow Rust Resistance in Durum Wheat adapted to the Mediterranean environments identified in cultivated and landrace germplasm through genome-wide association study**  
Liu Chunyi<sup>1</sup>, Francesco De Sario<sup>1</sup>, Muhammad Awais Farooq<sup>1</sup>, Jad B Novi<sup>1</sup>, Shruti Dilip Desai<sup>1</sup>, Ambra Viviani<sup>1</sup>, Alessia Confortini<sup>1</sup>, Eugenia Carini<sup>1</sup>, Matteo Bozzoli<sup>1</sup>, Cristian Forestan<sup>1</sup>, Sandra Stefanelli<sup>1</sup>, Elisabetta Mazzucotelli<sup>2</sup>, Francesca Desiderio<sup>2</sup>, Anna M Mastrangelo<sup>3</sup>, Daniela Marone<sup>3</sup>, Paola Viola<sup>4</sup>, Carlo Invernizzi<sup>4</sup>, Rola El Amil<sup>5</sup>, Nazari Kumarse<sup>6</sup>, Hakan Hozkan<sup>7</sup>, Isam Bashour<sup>8</sup>, Mohamed E Sharif Ragab<sup>9</sup>, Idrissi Omar<sup>10</sup>, Pablo Roncallo<sup>11</sup>, Zahara Pourkhorshid<sup>12</sup>, Filippo M Bassi<sup>13</sup>, Luigi Cattivelli<sup>2</sup>, Roberto Tuberosa<sup>1</sup>, Agata Gadaleta<sup>14</sup>, Marco Maccaferri<sup>1</sup>  
*1) Alma Mater Studiorum Bologna, University of Bologna, Department of Agrofood Sciences and Technologies (DISTAL), Italy;*  
*2) CREA Research Centre for Genomics and Bioinformatics, Italy;*  
*3) Council for Agricultural Research and Economics, Research Centre for Cereal and Industrial Crops, Italy;*  
*4) APSOV Sementi S.P.A, Italy;*  
*5) Lebanese Agricultural Research Institute (LARI) Lebanon;*  
*6) International Center for Agricultural Research in the Dry Areas (ICARDA), Biodiversity and Crop Improvement Program, Regional Cereal Rust Research Center (RCRRC), Turkey;* *7) Department of Field Crops, Faculty of Agriculture, University of Çukurova, Turkey;*  
*8) Department of Agriculture, Faculty of Agricultural and Food Sciences, American University of Beirut, Lebanon;*  
*9) Agronomy Department, Faculty of Agriculture, Beni Suef University, Egypt;*  
*10) Laboratory of Food Legumes Breeding, Regional Center of Agricultural Research of Settat, National Institute of Agricultural Research, Morocco;*  
*11) Centro de Recursos Naturales Renovables de la Zona Semiárida (CERZOS), Departamento de Agronomía, Universidad Nacional del Sur (UNS)-CONICET, Argentina;* *12) Department of Plant Production and Genetics, School of Agriculture; Shiraz University, Iran;*  
*13) International Center for Agricultural Research in the Dry Areas (ICARDA), Morocco;* *14) Department of Agricultural and Environmental Science, University of Bari 'Aldo Moro', Italy*
- P. 70 Susceptibility and attractiveness of ancient and old wheats to *Sitophilus granarius* (L.) and *Rhizopertha dominica* (F.)**  
Ilaria D'Isita<sup>1</sup>, Federica Lo Muzio<sup>1</sup>, Onofrio Marco Pistillo<sup>1</sup>, Sandra Pati<sup>1</sup>, Antonella Di Palma<sup>1</sup>, Pasquale De Vita<sup>2</sup>, Giacinto S. Germinara<sup>1</sup>  
*1) Department of Agricultural Sciences, Food, Natural Resources and Engineering (DAFNE), University of Foggia, Via Napoli 25, 71122 Foggia, Italy.*  
*2) CREA Research Centre for Cereal and Industrial Crops, 71122 Foggia, Italy*
- P. 71 Evaluation of yield and quality traits in moderately *Fusarium* head blight resistant Durum wheat lines**  
Salomè Foessel<sup>2</sup>, Julia Lafferty<sup>1</sup>, Hermann Buerstmayr<sup>2</sup>, Barbara Steiner<sup>2</sup>  
*<sup>1</sup> Saatzucht Donau, Head office and breeding station, Saatzuchtstraße 11, A-2301 Probstdorf, NÖ, Austria*  
*<sup>2</sup> BOKU University, Department of Agricultural Sciences, Konrad Lorenz Str. 20, A-3430 Tulln, Austria*



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**P. 72 Genetic study of FHB resistance in durum wheat using near isogenic lines**

Stefania Lucia Giove<sup>1</sup>, Maria Simone<sup>1</sup>, Pasqualina Colasuonno<sup>1</sup>, Iliaria Marcotuli<sup>1</sup>, Agata Gadaleta<sup>1</sup>  
*1Department of Soil, Plant and Food Sciences, University of Bari Aldo Moro, Italy*

**P. 73 Unraveling the genetic determinants of host specificity in the Zymoseptoria tritici– Wheat pathosystem**

Ulysse Guilloteau<sup>1</sup>, Emmie Dzialo<sup>1</sup>, Lola Longayrou<sup>1</sup>, Anaïs Bosc-Biernel<sup>1</sup>, Vincent Leporini<sup>1</sup>, Rafika Benbernou<sup>1</sup>, H el ene Rimbart<sup>2</sup>, Olivier Soudiere<sup>3</sup>, Fabrice Ntakirutimana<sup>1</sup>, Karim Ammar<sup>3</sup>, Cyrille Saintenac<sup>2</sup>, Nicolas Lapalu<sup>1</sup>, Thierry C Marcell

*1Universit  Paris-Saclay, INRAE, UR BIOGER, Palaiseau, France*

*2Universit  Clermont Auvergne, INRAE, UMR GDEC, Clermont-Ferrand, France*

*3International Maize and Wheat Improvement Center (CIMMYT), Mexico, D.F., Mexico*

**P. 74 Durum landraces as valuable gene pool to uncover and map resistance to Septoria Tritici Blotch**

Michela Giunti<sup>1</sup>, Chunyi Liu<sup>2</sup>, Matteo Bozzoli<sup>2</sup>, Francesco De Sario<sup>2</sup>, Delfina Barabaschi<sup>3</sup>, Francesca Desiderio<sup>3</sup>, Agata Gadaleta<sup>1</sup>, Marco Maccaferri<sup>2</sup>, Elisabetta Mazzucotelli<sup>3</sup>.

*1Department of Agricultural and Environmental Science, University of Bari Aldo Moro, Italy*

*2Department of Agricultural and Food Sciences, University of Bologna, Italy*

*3Council for Agricultural Research and Economics (CREA) – Research Centre for Genomics and Bioinformatics, Italy*

**P. 75 Performance of Ethiopian Durum and Bread Wheat Varieties and Candidate Lines Under High of Yellow Rust Pressure in 2023**

Daniel Kasa<sup>1</sup>, Alemu Ayele<sup>1</sup>, Getnet Muche<sup>1</sup>, Tamrat Negash<sup>1</sup>

*Ethiopian Institute of Agricultural Research (EIAR), Kulumsa Agricultural Research center, Ethiopia*

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1) Bożena Kordan, Anna Wr blewska-Kurdyk, 3) Mariusz Kowalczyk, 3) Iwona Kowalska, 4) Jan Bocianowski, 2) Katarzyna Dancewicz, 1) Agnieszka Pszcz łkowska, 2) Beata Gabry s

*1) Department of Entomology, Phytopathology and Molecular Diagnostics, University of Warmia and Mazury in Olsztyn, Poland*

*2) Department of Botany and Ecology, University of Zielona G ra, Poland*

*3) Department of Phytochemistry, Institute of Soil Science and Plant Cultivation – State Research Institute, Poland*

*4) Department of Mathematical and Statistical Methods, Pozna  University of Life Sciences, Poland*



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Klaudia Kruppa, Éva Szakács, Kitti Szőke-Pázsai, Edina Türkösi, Eszter Gaál, András Farkas, László Ivanizs, Péter Kovács, Norbert Hidvégi, Andrea Gulyás, István Molnár  
*HUN-REN Centre for Agricultural Research*
- P.78 The adaptive metabolomic response of pistils to heat stress applied at anthesis in durum wheat-*Thinopyrum ponticum* recombinant genotypes**  
Ljiljana Kuzmanović<sup>1</sup>, Giuseppina Fanelli<sup>2</sup>, Gloria Giovenali<sup>1</sup>, Sara Rinalducci<sup>2</sup>, Carla Ceoloni<sup>1</sup>  
*1 Dept. of Agriculture and Forest Sciences (DAFNE), University of Tuscia, Italy*  
*2 Dept. of Ecological and Biological Sciences (DEB), University of Tuscia, Italy*
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Federica Lo Muzio<sup>1</sup>, Ilaria D'Isita<sup>1</sup>, Michele Romanelli<sup>1</sup>, Giovanni Iadarola<sup>1</sup>, Barbara Laddomada<sup>2</sup>, Sara Mancarella<sup>2</sup>, Marco Pistillo<sup>1</sup>, Giuseppina Angione<sup>1,3</sup>, Fabio Fania<sup>3</sup>, Pasquale De Vita<sup>3</sup>, Giacinto S. Germinara<sup>1</sup>  
*1 Department of Agricultural Sciences, Food, Natural Resources and Engineering, University of Foggia*  
*2 Institute of Sciences of Food Production, National Research Council (ISPA CNR), Lecce*  
*3 CREA-CI Research Centre for Cereal and Industrial Crops, Foggia*
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Joy Jedi Mahilum<sup>1</sup>, Rizky Psthika Kirana<sup>3</sup>, Sebastian Michell<sup>1</sup>, Hermann Buerstmayr<sup>1</sup>, Barbara Steiner<sup>1</sup>  
*1 BOKU University, Department of Agricultural Sciences, Austria*  
*2 Visayas State University, Department of Plant Breeding and Genetics, Faculty of Agriculture and Food Science, Philippines*  
*3 Universitas Gadjah Mada, Faculty of Agriculture, Department of Agronomy, Indonesia*
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Kachalla Mala<sup>1</sup>, A. Nair<sup>2</sup>, N. Metah<sup>2</sup>, A. Pandey<sup>2</sup>, D. Adeniyi<sup>2</sup>, B.G.J. Kabir<sup>1</sup>, A.S. Wali<sup>1</sup>, F.M. Bassi<sup>3</sup>,  
*1 Lake Chad Research Institute, Maiduguri, Nigeria*  
*2 Olam Agri-Crown Flour Mills, Nigeria*  
*3 ICARDA, Rabat, Morocco*
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Mastrangelo AM<sup>1</sup>, Laidò G<sup>1</sup>, Pecchioni N<sup>1</sup>, Mores A<sup>1</sup>, Giovanniello V<sup>1</sup>, Ferragonio P<sup>1</sup>, De Simone V<sup>1</sup>,  
**Marone D<sup>1</sup>**  
*ICREA, Council for Agricultural Research and Economics, Research Centre for Cereal and Industrial Crops, S.S. 673, m 25,200, 71122 Foggia*



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Simone M. <sup>1</sup>, Giove L.S. <sup>1</sup>, Marcotuli I. <sup>1</sup>, Caranfa D. <sup>1</sup>, Colasuonno P. <sup>1</sup>,  
Gadaleta A. <sup>1</sup>, Muciaccia S. <sup>1</sup>  
*1 Department of Soil, Plant and Food Sciences, Section of Genetics and Plant Breeding, University of Bari  
"Aldo Moro", Italy*
- P. 84 Mixing varieties mitigates early root competition in durum wheat under water and nutrient limitation**  
Germain Montazeaud <sup>1</sup>, Pierre Roumet<sup>1</sup>, Mickaël Lamboeuf<sup>2</sup>, Christian Jeudy<sup>2</sup>, Martin Ecartot<sup>1</sup>, Lise  
Malicet-Chebbah<sup>1</sup>, Christophe Salon<sup>2</sup>, Hélène Fréville<sup>1</sup>  
*1 AGAP, Université de Montpellier, CIRAD, INRAE, L'institut Agro, Montpellier, France  
2 Univ. Bourgogne, Agroecol Lab, Univ. Bourgogne Franche Comte, AgroSup Dijon, INRAE, Dijon, France*
- P. 85 A collaborative approach to improve Fusarium head blight resistance in durum wheat: a multi-  
environment phenotyping ring trial**  
Barbara Steiner<sup>1</sup>, Karim Ammar<sup>2</sup>, Agata Gadaleta<sup>3</sup>, Anna Maria Mastrangelo<sup>4</sup>, Hermann Buerstmayr<sup>1</sup>,  
Luigi Cattivelli<sup>5</sup>  
*1 BOKU University, Department of Agricultural Sciences, Austria  
2 International Maize and Wheat Improvement Center (CIMMYT), Mexico  
3 Department of Soil, Plant and Food Sciences, University of Bari Aldo Moro, Italy  
4 CREA – Research Centre for Cereal and Industrial Crops, Italy  
5 CREA – Research Centre for Genomics and Bioinformatics, Italy*
- P. 86 Screening of durum wheat ancient genotypes reaction to Pyrenophora tritici- repentis**  
Salma Tissaoui<sup>1</sup>, Amani Romdhane<sup>2</sup>, Salah BenYoussef<sup>2</sup>, Abdenmour Sebei<sup>1</sup>, Noura  
Jammezi<sup>1</sup>, Mariem Balloumi<sup>1</sup>, Khouloud Chetoui<sup>2</sup>, Noura Omri BenYoussef<sup>1</sup>  
*1: Field Crop Laboratory, Institut National de la Recherche Agronomique de Tunisie, Institution de la  
Recherche et de l'Enseignement supérieur Agricoles- Université de Carthage  
2: Forage and Animal production Laboratory, Institut National de la Recherche Agronomique de Tunisie,  
Institution de la Recherche et de l'Enseignement supérieur Agricoles- Université de Carthage*
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Meryem Zaim <sup>1</sup>, Nouredine El Haddad <sup>2</sup>, Andrea Visioni <sup>1</sup>, Miguel Sanchez-Garcia <sup>1</sup>, Zakaria Kehell,  
Amadou Tidiane Sall <sup>3</sup>, Rola El Amil <sup>4</sup>, Wasihun Lagesse <sup>5</sup>, Kachalla Mala <sup>6</sup>, Hajer Ben Ghanem <sup>7</sup>,  
Benjamin Kilian <sup>8</sup>, and Filippo M. Bassi <sup>1</sup>  
*1 International Center for Agricultural Research in the Dry Areas (ICARDA), Rabat 10112, Morocco  
2 Plant Stress Resistance & Crop Improvement & Plant-Environment Interaction, Mohammed VI  
Polytechnic University (UM6P), Benguerir 43150, Morocco  
3 Institut Sénégalais de Recherches Agricoles (ISRA), Saint-Louis 46024, Sénégal  
4 Lebanese Agricultural Research Institute (LARI), Zahle 287, Lebanon  
5 Ethiopian Institute Agricultural Research (EIAR), Addis Ababa 1000, Ethiopia  
6 Lake Chad Research Institute, Cereals Research (LCRI), Maiduguri, Nigeria  
7 National Agricultural Research Institute of Tunisia (INRAT), Tunis 1004, Tunisia  
8 Global Crop Diversity Trust, Bonn, Germany*



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Ana Laura Achilli 4, Pablo F. Roncallo 1,2; Susanne Dreisigacker 3; Curtis J. Pozniak 4; Viviana C. Echenique 1

1 *Centro de Recursos Naturales Renovables de la Zona Semiárida (CERZOS–CCT–CONICET Bahía Blanca), Camino de La Carrindanga Km 7, 8000 Bahía Blanca, Argentina*

2 *Departamento de Agronomía, Universidad Nacional del Sur (UNS), Argentina*

3 *The International Maize and Wheat Improvement Center (CIMMYT), Mexico*

4 *Crop Development Centre and Department of Plant Sciences, University of Saskatchewan, Saskatoon, Saskatchewan, Canada*

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Lorenzo Calzini (1), Matteo Bozzoli (1), Cristian Forestan (1), Ambra Viviani (1), Francesco Camerlengo (1), Robert Eric Hoffie (2), Jochen Kumlehn (2), Roberto Tuberosa (1), Marco Maccaferri (1)

1: *Department of Agricultural and Food Sciences, Alma Mater Studiorum – Università di Bologna, Bologna, Italy;*

2: *Plant Reproductive Biology, Leibniz Institute of Plant Genetics and Crop Plant Research, Germany*

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Pasqualina Colasuonno 1, Ilaria Marcotuli 1, José Miguel Soriano 2, Sara Muciaccia 1, Stefania Lucia Giove 1, Agata Gadaleta 1

1 *Department of Soil, Plant and Food Sciences, University of Bari Aldo Moro, Italy*

2 *Universitat de Lleida: Lleida, Catalunya, Spain*

**P. 91 Segmental introgression from wild *Thinopyrum ponticum* harbouring LATERAL ROOT DENSITY (LRD) gene positively affects root growth under drought stress and during recovery in durum wheat**

Maria Lia Di Romana 1, Carla Ceoloni 1

1 *Department of Agriculture and Forest Sciences (DAFNE), University of Tuscia, Italy*

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Gilad Gabay 1, Jigar Arvindbha Sutariya 1, Juan M Debernardi 2, Jorge Dubcovsky 3,4

1. *French Associates Institute for Agriculture and Biotechnology of Drylands, The Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Sede-Boker, Israel*

2. *Plant Transformation Facility, University of California, Davis, CA, USA*

3. *Department of Plant Sciences, University of California, Davis, CA, USA*

4. *Howard Hughes Medical Institute, Chevy Chase, MD, USA*



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- P. 93 Identification of QTL and candidate genes involved in pigment biosynthesis in wheat**  
Fabiola Iurino 1, Pasqualina Colasuonno 1, Antonia Mores 1, Davide Caranfa 1, Agata Gadaleta 1  
*1 Department of Soil, Plant and Food Science, University of Bari "Aldo Moro", Italy*
- P. 94 Agronomic Traits and Stability Indexes in a Durum Wheat Panel Assessed in a Multi-Environment Trial**  
Anna Maria Mastrangelo 1, María Dolores Requena-Ramírez<sup>1,9</sup>, Elisabetta Mazzucotelli<sup>1</sup>, Daniela Marone<sup>2</sup>, Sherif Ragab Mohamed El-Areed<sup>3</sup>, Omar Idrissi<sup>4</sup>, Ali Amamou<sup>4</sup>, Laila Satia<sup>4</sup>, Aziz Baidani<sup>5</sup>, Esra Çakır<sup>6</sup>, Hakan Ozkan<sup>6</sup>, Pasquale Garofalo<sup>7</sup>, Alessandro Vittorio Vonella<sup>7</sup>, Muhammad Awais Farooq<sup>8</sup>, Xinying Zeng<sup>8</sup>, Matteo Bozzoli<sup>8</sup>, Antonia Mores<sup>2</sup>, Giuseppe Petruzzino<sup>2</sup>, Valentina Giovanniello<sup>2</sup>, Sergio G. Atienza<sup>9</sup>, Iliaria Marcotuli<sup>10</sup>, Agata Gadaleta<sup>10</sup>, Marco Maccaferri<sup>8</sup>, Luigi Cattivelli<sup>1</sup>  
*1 Council for Agricultural Research and Economics-Research Centre for Genomics and Bioinformatics, Italy;*  
*2 Council for Agricultural Research and Economics-Research Centre for Cereal and Industrial Crops, Italy;*  
*3 Beni-Suef University, Fac. of Environmental Agriculture, Bio and Food Processing, Agronomy Department, Beni Suef, Egypt;*  
*4 National Institute of Agricultural Research (INRA Morocco), Regional Center of Settati, Morocco;*  
*5 Hassan First University of Settati, Faculty of Sciences and Techniques, Settati, Morocco;*  
*6 University of Çukurova, Faculty of Agriculture, Department of Field Crops, Adana, Türkiye;* *7 Council for Agricultural Research and Economics- Research Centre for Agriculture and Environment, Bari, Italy;*  
*8 Alma Mater Studiorum – University of Bologna, Department of Agricultural and Food Sciences, Bologna, Italy;*  
*9 Institute for Sustainable Agriculture, CSIC, Avda, Menéndez Pidal s/n, E 14004 Córdoba, Spain;*  
*10 University of Bari Aldo Moro, Department of Agricultural and Environmental Science, Bari, Italy*
- P.95 Genome-wide association and characterization of antioxidant traits in durum wheat (*Triticum turgidum* subsp. *durum*)**  
Antonia Mores 1, Iliaria Marcotuli 1, Pasqualina Colasuonno 1, Stefania Lucia Giove 1, Agata Gadaleta 1  
*1 Department of Soil, Plant and Food Sciences, University of Bari Aldo Moro, Italy*
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Miriam Negussu<sup>1</sup>, Francesco Camerlengo<sup>1</sup>, Debora Giorgi<sup>2</sup>, Francesco Sestili<sup>1</sup>, Carla Ceoloni<sup>1</sup>  
*1 Dept. of Agriculture and Forest Sciences, University of Tuscia, Italy*  
*2 Dept. for Sustainability, Div. of Biotechnology, Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA), Italy*



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Francesca Orlando (1), Chiara D'Attilia (1), Valentina Bigini (1), Francesco Sestili (1), Fabio D'Orso (2), Daniel Valentin Savatin (1)  
*(1) Department of Agriculture and Forest Sciences (DAFNE), University of Tuscia, Via San Camillo De Lellis SNC, 01100 Viterbo, Italy*  
*(2) CREA-Research Centre for Genomics and Bioinformatics, Via Ardeatina 546, 00178 Rome, Italy*



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Claudia Araceli 1; Isabelle La Jeunesse: 1, 2; Marco Dettori: 3; Claudia Cirelli: 1; Alicia Bianchi-Sci: 1  
*1: Université de Tours*  
*2: Université Côte d'Azur*  
*3: AGRIS*
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O. Bachrouch 1, H. Ben Ghanem 2, L. Gayess 3, S. Somrani 2, K. Horchani Ennaifer 4, A. Amdouni 5, M. Abderraba 3  
*1 Laboratory of Plant Protection, University of Carthage, National Agricultural Research Institute of Tunisia, Hédi Karray Street, TN-2049 Ariana, Tunis, Tunisia.*  
*2 Field Crops Laboratory. University of Carthage. National Agronomic Research Institute of Tunisia (INRAT), Ariana, Tunisia*  
*3 Materials, Molecules and Applications Laboratory, LMMA. IPEST, University of Carthage Sidi Bou Said Street, TN-51, 2075 La Marsa, Tunisia*  
*4 Physico-Chemistry Laboratory of Mineral Materials and their Applications, National Center for Research in Materials Sciences, Soliman, Tunisia*  
*5 La Coopérative Centrale des Semences, COSEM, sis au 46 Rue des travailleurs, 2010, Manouba*
- P. 100 Identification of Genetic Markers Associated with Quality Traits in Durum Wheat: A GWAS Approach Across Diverse Environments**  
Houda Bousselham 1, Mounira Azerou 1, Meryem Zaim 1, Hafssa Kabbaj 1, Andrea Visionsi 1, Amal Safi 2, Filippo M. Bassi 1,  
*1- International Center for Agricultural Research in the Dry Areas (ICARDA), Rabat 10112, Morocco*  
*2- Faculty of Sciences and Techniques of Mohammedia, University Hassan II of Casablanca, Morocco*
- P. 101 Study of grain quality traits in a tetraploid wheat collection: genotypic effects on protein content and yellow index**  
Davide Caranfa<sup>1</sup>, Ilaria Marcotuli<sup>1</sup>, Patricia Cabas-Lühmann<sup>2</sup>, Antonia Mores<sup>1</sup>, Stefania Lucia Giove<sup>1</sup>, Andrés R. Schwember<sup>2</sup>, Pasqualina Colasuonno<sup>1</sup>, Maria Simone<sup>1</sup>, Sara Muciaccia<sup>1</sup>, Agata Gadaleta<sup>1</sup>  
*1 Department of Soil, Plant and Food Sciences, University of Bari Aldo Moro, Italy*  
*2 Departamento de Ciencias Vegetales, Facultad de Agronomía y Sistemas Naturales, Pontificia Universidad Católica de Chile, Chile*



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Alessio Cimini<sup>1</sup>, Giacomo Buglia<sup>1</sup>, Lorenzo Morgante, Alessandro Benelli<sup>1</sup>  
*Department for Innovation in Biological, Agrofood, and Forestry Systems (DIBAF), University of Tuscia, Viterbo, Italy*
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Chiara D'Attilia  
*Unitus- DAFNE, Italy*
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Gilad Gabay - *University of the Negev, Israel*
- P. 105 Technological quality of durum wheat pasta as affected by soil tillage and fertilization management**  
Laura Gazza <sup>1</sup>, Francesca Nocente <sup>1</sup>, Roberto Mancinelli <sup>2</sup>, Marta Naso <sup>1</sup>, Gaia Blandizzi <sup>1</sup>, Gabriele Chilosi <sup>3</sup>, Laura Gazza <sup>1</sup>  
*1ICREA Research Centre for Engineering and Agro-Food Processing, Italy*  
*2 Department of Agriculture and Forest Sciences (DAFNE), University of Tuscia, Italy*  
*3Department for Innovation in Biological, Agrofood and Forest Systems (DIBAF), University of Tuscia, Italy.*
- P. 106 Genome-Wide Association Studies Integrated with Genomic Selection Reveal Novel Loci for Rust Resistance in Canadian Durum Wheat.**  
Julio Isidro y Sánchez, Alejandro Domínguez Rondón<sup>1</sup>, Julián García-Abadillo<sup>1</sup>, Ron Knox<sup>§2</sup>, Firdissa E. Bokore<sup>2</sup>, Kerry Boyle<sup>3</sup>, Karim Ammar<sup>4</sup>, Julio Huerta-Espino<sup>5</sup>, Samia Berraies<sup>2</sup>, Brad Meyer<sup>2</sup>, Wentao Zhang<sup>3</sup>, Richard D. Cuthbert<sup>2</sup>, Pierre Fobert<sup>§3</sup>, Yuefeng Ruan<sup>2\*</sup>, Julio Isidro y Sánchez<sup>1</sup>  
*1 Technical University of Madrid*  
*2Centro de Biotecnología y Genómica de Plantas (CBGP, UPM-INIA), Universidad Politécnica de Madrid (UPM) – Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA), Campus de Montegancedo-UPM, Spain.*  
*3Agriculture and Agri-Food Canada, Swift Current Research and Development Centre., Canada.*  
*4Aquatic and Crop Resource Development, National Research Council of Canada, Canada.*  
*5International Maize and Wheat Improvement Center, (CIMMYT), México.*  
*6Campo Experimental Valle de México, INIFAP, México.*



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Barbara Laddomada<sup>1</sup>, Elisabetta Cavalcanti<sup>2</sup>, Samuela Palombieri<sup>3</sup>, Francesco Sestili<sup>3</sup>, Marcello Chieppa<sup>4</sup>, Angelo Santino<sup>1</sup>  
*1 Institute of Sciences of Food Production (ISPA), National Research Council (CNR), Italy;*  
*2 National Institute of Gastroenterology "S. de Bellis", Institute of Research, Italy;*  
*3 Department of Agricultural and Forestry Sciences (DAFNE), University of Tuscia, Italy;*  
*4 Department of Experimental Medicine (DIMES), University of Salento, Italy.*
- P. 108 Assessing the fortification potential of intermediate wheatgrass in pasta applications**  
Maneka Malalgoda<sup>1</sup>, Mackenzie Ferguson<sup>1</sup>, Doug Cattani<sup>2</sup>, Bin Xiao Fu<sup>3</sup>  
*1 Department of Food and Human Nutritional Sciences, University of Manitoba, Winnipeg, MB, Canada*  
*2 Department of Plant Science, University of Manitoba, Winnipeg, MB, Canada*  
*3 Canadian Grain Commission, University of Manitoba, Winnipeg, MB, Canada*
- P.109 Safeguarding and Enhancing Sicilian Pasta: From Historical and Cultural Identity to the Promotion of the Local Product and Supply Chain**  
Bernardo Messina, Giuseppe Russo  
*1 Consorzio di Ricerca Gian Pietro Ballatore, Via Libertà 203, 90139 PALERMO*  
*1 Distretto Produttivo Cereali Sicilia, Via Libertà 203, 90139 – Palermo*
- P. 110 Biocontrol activity of yeast strains against *Aspergillus ochraceus* on Cereal products**  
Safa Oufensou<sup>1,2\*</sup>, Koumba Mai Kone<sup>3</sup>, Virgilio Balmas<sup>1,2</sup>, Giampiera Porqueddu<sup>1</sup>, Targo Simplicie Guehi<sup>4</sup>, Quirico Migheli<sup>1,2</sup>  
*1 Dipartimento di Agraria, Università degli Studi di Sassari, Italy;*  
*2 Nucleo di Ricerca sulla Desertificazione, Università degli Studi di Sassari, Italy;*  
*3 National Polytechnic Institute Houphouët Boigny (INPHB), Yamoussoukro, Ivory Coast.*  
*4 Department of Foods Sciences and Technology, University Nangui Abrogoua, Abidjan, Ivory Coast.*
- P. 111 A new genetic map in durum wheat allows the detection of QTL related to yield and grain protein content**  
Laura Pascual, Naima Bouabdellah<sup>1</sup>, Joaquín Algorta<sup>1</sup>, José Miguel Soriano<sup>2,3</sup>, Magdalena Ruiz<sup>4</sup>, Patricia Giraldo<sup>1</sup>  
*1 Department of Biotechnology-Plant Biology, School of Agricultural, Food and Biosystems Engineering, Universidad Politécnica de Madrid, 28040, Madrid, Spain*  
*2 Department of Agricultural and Forest Sciences and Engineering, University of Lleida, Av. Rovira Roure 191, 25198, Lleida, Spain*  
*3 AGROTECNIO-CERCA Center, Av. Rovira Roure 191, 25198, Lleida, Spain*  
*4 Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA), CSIC, Alcalá de Henares, Madrid, 28805, Spain*



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Hélène Pidon 1, Valentin Ribaut<sup>1</sup>, Matteo Bozzoli<sup>2</sup>, Hélène Pidon<sup>1</sup>, Véronique Viader<sup>1</sup>, Michel Bonnefoy<sup>3</sup>, Morgane Ardisson<sup>1</sup>, Sylvain Santonni<sup>1</sup>, Faharidine Mohamadi<sup>3</sup>, Marco Maccaferri<sup>2</sup>, Jacques David<sup>1</sup>,  
*1- Umr Agap Institut, Univ Montpellier, Cirad, Inrae, France*  
*2 – Università Di Bologna – Department of Agricultural Sciences, Italy*  
*3 – Arvalis – Institut Du Vegetal, France*
- P. 113 Cultivar Classification of Durum Wheat Pasta By 1h-Nmr Spectroscopy Combined with Chemometrics**  
Rosa Ragone<sup>1</sup>, Biagia Musio, <sup>1</sup>; Stefano Todisco <sup>1</sup>; Antonino Rizzuti <sup>1</sup>; Maria Trisolini <sup>1</sup>; Marica Antonicelli <sup>1</sup>; Mario Latronico <sup>1, 2</sup>; Piero Mastrorilli <sup>1, 2</sup>; Vito Gallo <sup>1,2</sup>.  
*1. DICATECh, Polytechnic of Bari, Italy;*  
*2. Innovative Solutions, Spin Off of Polytechnic of Bari, Italy*
- P. 114 Low-GI Potential of Innovative Soft and Durum Wheat Breads: A Case Study from the Healthy & Green Cereal Project**  
Giuseppe Russo  
*1 Farmacia Giuffrè, Piazza Tommaso Natale, 195 – 90147 Palermo (PA)*  
*2 Consorzio di Ricerca Gian Pietro Ballatore, Via Libertà, 203 – 90139 Palermo (PA)*  
*3 Consulpan SAS, Via Torre Ombra, 24 – 95030 Mascali (CT)*
- P. 115 Comparative study of Physicochemical, Functional, and Nutritional Properties of Tunisian ancient Durum Wheat genotypes for the Development of Innovative Cereal-Based Products**  
Dorra Sfayhi Terras <sup>1</sup>, Abessi, B<sup>1</sup>., Zarroug Y<sup>1</sup>., Ben Youssef, S<sup>2</sup>., Sbei A<sup>1</sup>., Romdhane, A<sup>2</sup>., Tissaoui S<sup>1</sup>, Ouji, S<sup>1</sup>., Ben wada, M<sup>1</sup>., Omri Ben Youssef, N<sup>1</sup>.  
*1. Field Crop Laboratory (LR16INRAT02), National Institute of Agronomic Research of Tunisia, University of Carthage, Rue Hedi Karray, Ariana 2049, Tunisia*  
*2. Forage and Animal production Laboratory, Institut National de la Recherche Agronomique de Tunisie, Institution de la Recherche et de l'Enseignement supérieur Agricoles- Université de Carthage*
- P. 116 Nuclear Magnetic Resonance quantification of betaine in Wheat and Pasta Extracts**  
Maria Trisolini<sup>1</sup>, Agata Gadaleta<sup>3</sup>, Maurizio Triggiani<sup>1,2</sup>, Stefano Todisco<sup>1</sup>, Rosa Ragone<sup>1</sup>, Antonino Rizzuti<sup>1</sup>, Biagia Musio<sup>1</sup>, Mario Latronico<sup>1,2</sup>, Piero Mastrorilli<sup>1,2</sup>, Ilaria Marcotuli<sup>3</sup>, Pasqualina Colasuonno<sup>3</sup>, Vito Gallo<sup>1,2</sup>  
*1 Dipartimento di Ingegneria Civile, Ambientale, del Territorio, Edile e di Chimica (DICATECh), Politecnico di Bari, Via Orabona 4, I-70125, Bari, Italy;*  
*2 Innovative Solutions, Innovative Solutions S.r.l, Spin Off del Politecnico di Bari, Zona H 150/B, I-70015, Noci (BA), Italy*  
*3 Dipartimento Di Scienze Del Suolo, Della Pianta E Degli Alimenti (Di.S.S.P.A.), Università degli studi di Bari Aldo Moro.*



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