

## IWC4 2026 - POSTER LIST

### TOPIC 1

#### ENABLING SUSTAINABLE WHEAT PRODUCTION IN A BROAD CROPPING SYSTEM. I CROP MANAGEMENT, SOIL CONSERVATION AND HEALTH

##### **P1 - Activating genomic resources to decipher biological nitrification inhibition (BNI) in wheat**

**Ana Laura Achilli** <sup>(1)</sup> - **Jennifer Ens** <sup>(1)</sup> - **Krystalee Wiebe** <sup>(1)</sup> - **Susanne Dreisigacker** <sup>(2)</sup> - **Harmeet Chawala** <sup>(3)</sup> - **Sean Walkowiak** <sup>(4)</sup> - **Curtis Pozniak** <sup>(1)</sup>

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##### **P2 - Evaluating Genotype-by-Treatment Interactions in Hexaploid and Durum Wheat under Combined Water and Nutritional Stresses**

**Delfina Barabaschi** <sup>(1)</sup> - **Elisabetta Mazzucotelli** <sup>(1)</sup> - **Francesca Desiderio** <sup>(1)</sup> - **Alessandro Tondelli** <sup>(1)</sup> - **Alice Povesi** <sup>(1)</sup> - **Luigi Cattivelli** <sup>(1)</sup>

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##### **P3 - A comparison of innovation systems to enable public-private collaboration in wheat breeding**

**Lauren Benoit** <sup>(1)</sup> - **Mark Brock** <sup>(2)</sup> - **Josh Cowan** <sup>(3)</sup> - **Derek Freitag** <sup>(4)</sup> - **Adam Meyer** <sup>(5)</sup> - **Cami Ryan** <sup>(6)</sup> - **Curtis Pozniak** <sup>(1)</sup>

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##### **P4 - Genetic differences in wheat nitrogen use efficiency are explained by radiation interception under contrasting nitrogen availabilities**

**Fabián Carrasco** <sup>(1)</sup> - **Daniel Calderini** <sup>(2)</sup>

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##### **P5 - From Maximum to Economically Optimal Yield and quality: Nitrogen Management Strategies for Winter Wheat in Flanders, Belgium**

**Bram Vervisch** <sup>(1)</sup> - **Jonas Claeys** <sup>(1)</sup> - **Jill Dillen** <sup>(2)</sup> - **Veerle Derycke** <sup>(3)</sup> - **Sofie Landschoot** <sup>(3)</sup> - **Jean-Pierre Pellissier** <sup>(2)</sup>

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##### **P6 - Effect of Biostimulant Application at Different Growth Stages on Wheat Grain Morphology**

**Jurica Duvnjak** <sup>(1)</sup> - **Josip Stanic** <sup>(2)</sup> - **Velimir Mladenov** <sup>(3)</sup> - **Valentina Spanic** <sup>(1)</sup>

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##### **P7 - Enhancing Durum Wheat Drought Resilience and Soil Fertility through Microbial Biostimulants and Wheat-Clover Intercropping Systems**

**Noemi Gatti** <sup>(1)</sup> - **Moez Maghrebi** <sup>(1)</sup> - **Matteo Spada** <sup>(2)</sup> - **Alessandra Salvioli di Fossalunga** <sup>(1)</sup> - **Marco Laiolo** <sup>(3)</sup> - **Stefano Maruccia** <sup>(3)</sup> - **Massimo Blandino** <sup>(3)</sup> - **Valentina Fiorilli** <sup>(1)</sup> - **Stefania Astolfi** <sup>(2)</sup> - **Gianpiero Viganì** <sup>(1)</sup>

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### **P8 - Bread Wheat Varietal Mixtures Enhance Yield Stability and Grain Quality in Variable Environments**

**El Bouzidi Hind** <sup>(1)</sup> - **Taghouti Mouna** <sup>(2)</sup> - **Tadesse Degu Wuletaw** <sup>(3)</sup> - **El Ftouh Imane** <sup>(2)</sup> - **Oudrhiri Fatima Ezzahra** <sup>(2)</sup> - **Baidani Aziz** <sup>(4)</sup> - **Gaboun Fatima** <sup>(2)</sup> - **Diria Ghizalne** <sup>(2)</sup>

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### **P9 - Fragmented consensus: industry challenges in defining sustainable wheat**

**Nicolas Giordano** <sup>(1)</sup> - **Victor Sadras** <sup>(2)</sup> - **Terry Griffin** <sup>(3)</sup> - **Katherine Nelson** <sup>(4)</sup> - **Aastha Gautam** <sup>(1)</sup> - **Stephen Welch** <sup>(1)</sup> - **Mary Guttieri** <sup>(1)</sup> - **Hande McGinty** <sup>(5)</sup> - **Nirmal Gelal** <sup>(5)</sup> - **Carlos Bonini Pires** <sup>(6)</sup> - **Aryan Dalal** <sup>(5)</sup> - **Kelsey Andersen Onofre** <sup>(7)</sup> - **Jean Ribert Francois** <sup>(8)</sup> - **Deborah Kohl** <sup>(3)</sup> - **Trevor Hefley** <sup>(9)</sup> - **Pascal Hitzler** <sup>(5)</sup> - **Romulo Pisa Lollato** <sup>(1)</sup>

### **P10 - The Yield and Quality of Winter Wheat Grain under Different Sowing and Nitrogen Management Strategies: A Case Study in Northeastern Poland**

**Krzysztof Jankowski** <sup>(1)</sup> - **Krzysztof Lachutta** <sup>(1)</sup>

<sup>(1)</sup> University of Warmia and Mazury in Olsztyn, Department of Agrotechnology and Agribusiness, Olsztyn, Poland

### **P11 - Conservation Agriculture for Sustainable Wheat Production under the Soil–Climate Conditions of Uzbekistan**

**Muzaffar Khalikulov** <sup>(1)</sup> - **Aziz Nurbekov** <sup>(2)</sup>

<sup>(1)</sup> Scientific-Research Institute of Agricultural Mechanization, Soil tillage and planting mechanization laboratory, Tashkent, Uzbekistan - <sup>(2)</sup> Tashkent State Agrarian University, Agronomy, Tashkent, Uzbekistan

### **P12 - Growth dynamics and nitrogen utilization characteristics of a wheat line with biological nitrification (BNI) inhibition capacity**

**Miu Koga** <sup>(1)</sup> - **Akari Tanaka** <sup>(1)</sup> - **Ping An** <sup>(2)</sup> - **Satoshi Tobita** <sup>(3)</sup> - **Tadashi Yoshihashi** <sup>(4)</sup> - **Guntur Venkata Subbarao** <sup>(5)</sup> - **Masahiro Kishii** <sup>(4)</sup> - **Taiken Nakashima** <sup>(6)</sup> - **Hayato Maruyama** <sup>(6)</sup> - **Junichi Kashiwagi** <sup>(6)</sup>

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### **P13 - Integrated Biological and Chemical Control Strategies for the Management of Mycotoxin Contamination in Wheat Cropping Systems under Different Tillage Regimes**

**Marco Laiolo** <sup>(1)</sup> - **Valentina Scarpino** <sup>(1)</sup> - **Stefano Maruccia** <sup>(1)</sup> - **Raffaele Meloni** <sup>(1)</sup> - **Mattia Scapino** <sup>(1)</sup> - **Massimo Blandino** <sup>(1)</sup>

- <sup>(1)</sup> DISAFA, Grugliasco (Turin), Italy

### **P14 - From multi-omics to breeding: adaptive mechanisms of wheat under combined nutrient and water stress**

**Iliaria Marcotuli** <sup>(1)</sup> - **Sara Muciaccia** <sup>(1)</sup> - **Davide Caranfa** <sup>(1)</sup> - **Cristian Forestan** <sup>(2)</sup> - **Marco Maccaferri** <sup>(2)</sup> - **Matteo Bozzoli** <sup>(2)</sup> - **Agata Gadaleta** <sup>(1)</sup>

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### **P15 - Thinking outside the row – investigating alternate spatial arrangements in wheat cropping**

**Frank Mazzone** <sup>(1)</sup> - **James Hunt** <sup>(1)</sup> - **Juan Wang** <sup>(1)</sup> - **Mohammad Pourkheirandish** <sup>(1)</sup> - **James Manson** <sup>(2)</sup>

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### **P16 - From knowledge to practice:**

***The economic assessment of improved varieties adoption in the case of wheat***

***Meryem Moulim*** <sup>(1)</sup> - ***Abdelali Laamari*** <sup>(2)</sup>

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### **P17 - A multidimensional framework for selecting soft wheat varieties in dryland environments integrating productivity, nitrogen use efficiency, stability and economic performance**

***Qudratullah Soofizada*** <sup>(1)</sup> - ***Antonio Pescatore*** <sup>(1)</sup> - ***Simone Orlandini*** <sup>(1)</sup> - ***Marco Napoli*** <sup>(1)</sup>

- <sup>(1)</sup> Department of Agriculture, Food, Environment and Forestry, University of Florence - Department of Agriculture, Food, Environment and Forestry, Firenze, Italy

### **P18 - Sensory profiles of wheat: Suitability for resilient production and consumer acceptance**

***Olawale Olalekan*** <sup>(1)</sup> - ***Julia Darlison*** <sup>(1)</sup> - ***Nikwan Shariatipour*** <sup>(1)</sup> - ***Karin Wendin*** <sup>(2)</sup> - ***Marcus Johansson*** <sup>(2)</sup> - ***Tina Henriksson*** <sup>(3)</sup> - ***Thomas Björklund*** <sup>(4)</sup> - ***Firuz Odilbekov*** <sup>(3)</sup> - ***Mahbubjon Rahmatov*** <sup>(1)</sup> - ***Eva Johansson*** <sup>(1)</sup>

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### **P19 - Remote sensing -based evidence from farmers' fields on how wheat benefits cropping systems**

***Pirjo Peltonen-Sainio*** <sup>(1)</sup> - ***Lauri Jauhiainen*** <sup>(1)</sup>

<sup>(1)</sup> Natural Resources Institute Finland LUKE, Field crop production, Helsinki, Finland

### **P20 - Perennial wheat and perennial cereals: grain and forage yield**

***Valentin Picasso*** <sup>(1)</sup>

<sup>(1)</sup> Swedish University of agricultural sciences, Crop production ecology, Uppsala, Sweden

### **P21 - Timing Matters: Sowing Date Modulates Winter Wheat Agronomic Optimum Plant Density**

***Luiz Otavio Pradella*** <sup>(1)</sup> - ***Romulo Pisa Lollato*** <sup>(1)</sup>

<sup>(1)</sup> Kansas State University, Agronomy, Manhattan, United States

### **P22 - Enhancing Spring Wheat Adaptation in Northern Sweden Through Early Maturity, Yield Potential and Quality Improvement**

***Mahbubjon Rahmatov*** <sup>(1)</sup> - ***Firuz Odilbekov*** <sup>(2)</sup> - ***Johanna Fonskov*** <sup>(2)</sup> - ***Pernilla Vallenback*** <sup>(2)</sup> - ***Olawale Olalekan*** <sup>(1)</sup> - ***Mohammed Elsafy*** <sup>(1)</sup>

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### **P23 - Optimizing wheat agronomic inputs in the humid Midsouth region of the United States**

***Tyson Raper*** <sup>(1)</sup>

<sup>(1)</sup> University of Tennessee, Plant Sciences, Knoxville, United States

### **P24 - Evaluating Planting Strategies and Varietal Canopy Architecture for Maximizing Winter Wheat Yield**

***Wallas da Silva*** <sup>(1)</sup> - ***Maninder Pal Singh*** <sup>(1)</sup>

<sup>(1)</sup> Michigan State University, Dept of Plant, Soil and Microbial Sciences, East Lansing, United States

### **P25 - Restorative biostimulants as a strategic tool for drought resilience and resource efficiency in durum wheat systems**

***Matteo Spada*** <sup>(1)</sup> - ***Moez Maghrebi*** <sup>(2)</sup> - ***Giulia Quagliata*** <sup>(1)</sup> - ***Eleonora Coppa*** <sup>(1)</sup> - ***Roberto Ruggeri*** <sup>(1)</sup> - ***Francesco Rossini*** <sup>(1)</sup> - ***Gianpiero Vigani*** <sup>(2)</sup> - ***Stefania Astolfi*** <sup>(1)</sup>

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### **P26 - Primer crops to improve wheat productivity in high soil strength sandy soils**

**Wendy Vance** <sup>(1)</sup> - **Richard Bell** <sup>(2)</sup> - **David Minkey** <sup>(3)</sup> - **Roger Armstrong** <sup>(4)</sup> - **Nigel Wilhelm** <sup>(5)</sup> - **Yash Dang** <sup>(6)</sup>

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### **P27 - Impact of fungicide strategies on yellow rust (*Puccinia striiformis*) and yield in winter wheat cultivars in Belgium**

**Derycke Veerle** <sup>(1)</sup> - **Kevin Dewitte** <sup>(1)</sup> - **Sofie Landschoot** <sup>(1)</sup> - **Joos Latré** <sup>(2)</sup>

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### **P28 - Optimizing disease management and economic performance of winter wheat through varietal choice, application timing and variety mixtures under Flemish conditions**

**Bram Vervisch** <sup>(1)</sup> - **Jonas Claeys** <sup>(1)</sup> - **Sarah Bossuyt** <sup>(1)</sup> - **Veerle Derycke** <sup>(2)</sup>

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### **P29 - A High Tillering QTn.mst-6B Allele Can Increase Productive Tillers And Yield Under High-Biomass Spring Wheat Cultivars Grown In Rainfed Environments**

**Mei-Ling Wong** <sup>(1)</sup> - **Jason Cook** <sup>(1)</sup>

<sup>(1)</sup> Montana State University, Department of Plant Sciences & Plant Pathology, Bozeman, United States

### **P30 - Productivity and identification of high-yielding genotypes of perennial grain crops in rainfed farming conditions of South-Eastern Kazakhstan**

**Rauan Zhapayev** <sup>(1)</sup> - **Gulya Kunyipyayeva** <sup>(2)</sup> - **Aliya Alimzhanova** <sup>(1)</sup> - **Alexey Morgounov** <sup>(3)</sup>

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### **P31 - The effects of strigolactone on the tiller formation in wheat**

**Min Zhu** <sup>(1)</sup>

<sup>(1)</sup> Yangzhou University, Agricultural College, Yangzhou, China

### **P32 - Slow-release nitrogen fertilizer optimizes the vertical distribution of root systems and soil nutrients in the middle and later stage of wheat**

**Xinkai Zhu** <sup>(1)</sup>

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## TOPIC 2

### ENABLING SUSTAINABLE WHEAT PRODUCTION IN A BROAD CROPPING SYSTEM. II PHENOMICS, ENVIROMICS, CROP MODELLING, DIGITAL AGRICULTURE

### **P33 - DiPredict – AI based optimization of selection under drought stress in wheat breeding**

**Muhammad Afzal** <sup>(1)</sup>

<sup>(1)</sup> Martin-Luther University Halle-Wittenberg, Institute of Agricultural and Nutritional Sciences, Halle (Saale), Germany

### **P34 - Use of non-supervised clustering to classify wheat phenology**

**Patricia Arizo-García** <sup>(1)</sup> - **Enric Cruzado-Campos** <sup>(1)</sup> - **Sergio Castiñeira-Ibáñez** <sup>(2)</sup> - **Daniel Tarrazó-Serrano** <sup>(2)</sup> - **Alberto San Bautista** <sup>(1)</sup>

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### **P35 - Image-based classification of cereal breeding trial plots in Martonvasar**

**Judit Banyai** <sup>(1)</sup> - **Gyorgy Balassa** <sup>(2)</sup> - **Monika Cseplo** <sup>(1)</sup> - **Klara Meszaros** <sup>(1)</sup> - **Peter Miko** <sup>(1)</sup>

<sup>(1)</sup> HUN-REN ATK, Researh center, Martonvasar, Hungary - <sup>(2)</sup> AGRON Analytics, Ltd., Budapest, Hungary

### **P36 - Combining genomics, phenomics and phenotyping analysis to better characterize durum and bread wheat varieties under multi-environmental trials**

**Matteo Bozzoli** <sup>(1)</sup> - **Cristian Forestan** <sup>(1)</sup> - **Martina Bruschi** <sup>(1)</sup> - **Sandra Stefanelli** <sup>(1)</sup> - **Francesco De Sario** <sup>(1)</sup> - **Anna Giulini** <sup>(2)</sup> - **Matteo Ruggeri** <sup>(3)</sup> - **Davide Meriggi** <sup>(3)</sup> - **Edoardo Bartocetti** <sup>(4)</sup> - **Sridapa Udupa** <sup>(5)</sup> - **Preben Klarskov Hansen** <sup>(6)</sup> - **Humberto Fanelli Carvalho** <sup>(7)</sup> - **Julio Isidro y Sánchez** <sup>(7)</sup> - **Fiona Doohan** <sup>(8)</sup> - **Lisa Black** <sup>(9)</sup>

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### **P37 - NIRS-based models in Wheat Breeding: Potential and Challenges!**

**Pranvera Berisha** <sup>(1)</sup> - **Hermann Bürstmayr** <sup>(1)</sup>

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### **P38 - Development of a Decision Support System for Precision Agriculture in Soria: From uncertainty to Variable Rate-Nitrogen prescription maps in Wheat fields.**

**Enric Cruzado-Campos** <sup>(1)</sup> - **Patricia Arizo-García** <sup>(1)</sup> - **Sergio Castiñeira-Ibáñez** <sup>(2)</sup> - **Daniel Tarrazó-Serrano** <sup>(2)</sup> - **Constanza Rubio** <sup>(2)</sup>

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### **P39 - Characterizing Wheat GxE Interactions via Factor Analytic Models and Climate Covariates for Cross Performance Prediction in Unobserved Environments.**

**Mitchell Eglinton** <sup>(1)</sup> - **Lee Hickey** <sup>(1)</sup> - **Ben Hayes** <sup>(1)</sup> - **Karine Chenu** <sup>(1)</sup> - **Eric Dinglasan** <sup>(1)</sup> - **Alison Kelly** <sup>(1)</sup> - **Bertus Jacobs** <sup>(2)</sup>

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### **P40 - Temporal QLT mapping of canopy height using UAV-based phenotyping in bread wheat**

**Fabio Fania** <sup>(1)</sup> - **Salvatore Esposito** <sup>(2)</sup> - **Damiano Puglisi** <sup>(1)</sup> - **Patrizio Spadanuda** <sup>(3)</sup> - **Abelardo Montesinos-López** <sup>(4)</sup> - **Osvaal A. Montesinos-López** <sup>(4)</sup> - **Paolo Vitale** <sup>(5)</sup> - **José Crossa** <sup>(6)</sup> - **Pasquale De Vita** <sup>(1)</sup>

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### **P41 - Explainable AI uncovers genomic regions associated with wheat yield prediction within a multimodal deep learning model**

**Rohini Trivedi** <sup>(1)</sup> - **David Edwards** <sup>(1)</sup> - **Monica Furaste Danilevicz** <sup>(1)</sup>

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### **P43 - Scaling law links plant growth variation to grain yield in wheat stands**

**Guy Golan** <sup>(1)</sup> - **François Vasseur** <sup>(2)</sup> - **Yongyu Huang** <sup>(3)</sup> - **Kenan Tan** <sup>(3)</sup> - **Victor Sadras** <sup>(4)</sup> - **Cyrille Violle** <sup>(2)</sup> - **Thorsten Schnurbusch** <sup>(3)</sup>

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### **P44 - Genomic Prediction in Wheat: using Random Regression Models for Stability with Genotype-Specific Phenology Derived Environmental Covariates**

**Lucia Gutierrez** <sup>(1)</sup> - **Pablo Sandro** <sup>(2)</sup> - **Rishap Dhakal** <sup>(2)</sup> - **Guillermo Sniadower** <sup>(3)</sup> - **Pablo Gonzalez-Barrios** <sup>(3)</sup>  
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### **P45 - Applications of Drone-Based High-Throughput Phenotyping in Wheat Variety Evaluation**

**Nicolas Vuille-dit-Bille** <sup>(1)</sup> - **Simon Treier** <sup>(1)</sup> - **Juan M. Herrera** <sup>(1)</sup>  
<sup>(1)</sup> Agroscope, Production technology and cropping systems, Nyon, Switzerland

### **P46 - Relationships between UAV-derived vegetation indices, grain yield and plant height in wheat genotypes across growth stages and seasons**

**Vesna Kandić Raftery** <sup>(1)</sup> - **Irina Marina Stević** <sup>(2)</sup> - **Nataša Ljubičić** <sup>(3)</sup> - **Dušan Urošević** <sup>(1)</sup> - **Maša Buđen** <sup>(4)</sup> - **Miloš Pajić** <sup>(5)</sup>  
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### **P47 - Precision phenotyping of transpiration profiles and vegetation indices reveals importance of early response to drought in winter wheat**

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### **P48 - Phenome-Emphasis - the French plant phenomic infrastructure**

**Jacques Le Gouis** <sup>(1)</sup> - **Tania Rougier** <sup>(1)</sup> - **Bertrand Muller** <sup>(2)</sup>  
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### **P49 - UAV Image-Based High-Throughput Phenotyping for Wheat Breeding: From Single Rows to Yield Plots**

**Ali Lotfi** <sup>(1)</sup> - **Steve Shirliffe** <sup>(1)</sup> - **Adam Carter** <sup>(1)</sup>  
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### **P50 - High-throughput stomatal phenotyping provides novel selection targets for stress-resilient wheat**

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### **P51 - From imagery to selection: advancing wheat breeding with uav-based high-throughput phenotyping**

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### **P52 - AI-BASED SYSTEM TO SUPPORT SUSTAINABLE AGRICULTURE AND CEREAL SUPPLY CHAIN**

**Carmen Manganiello** <sup>(1)</sup> - **Giovanni Laidò** <sup>(1)</sup> - **Anna Maria Mastrangelo** <sup>(1)</sup> - **Donatella Bianca Maria Ficco** <sup>(1)</sup> - **Salvatore Colecchia** <sup>(1)</sup> - **Antonio Troccoli** <sup>(1)</sup> - **Valeria Menga** <sup>(1)</sup> - **Clara Fares** <sup>(1)</sup> - **Vanessa De Simone** <sup>(1)</sup> - **Maki Habib** <sup>(2)</sup> - **Chiara Sammarco** <sup>(3)</sup> - **Antonio Padovano** <sup>(3)</sup> - **Daniela Marone** <sup>(1)</sup>

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### **P53 - Satellite-derived nitrogen nutrition index for precision fertilization in durum wheat: agronomic, economic and environmental performance**

**Carolina Fabbri** <sup>(1)</sup> - **Antonio Delgado** <sup>(2)</sup> - **Lorenzo Guerrini** <sup>(3)</sup> - **Marco Napoli** <sup>(1)</sup>

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### **P54 - Evaluation of Photosynthetic Traits Across Various Hexaploid Wheat Genotypes**

**Preeti Rani** <sup>(1)</sup> - **Mamrutha HM** <sup>(2)</sup> - **Zeenat Wadhwa** <sup>(3)</sup> - **Rinki khobra** <sup>(3)</sup> - **Vanita Pandey** <sup>(3)</sup> - **Yogesh Kumar** <sup>(3)</sup> - **Ratan Tiwari** <sup>(3)</sup>

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### **P55 - Magnetic resonance imaging (MRI) for wheat grain phenotyping and beyond**

**Hardy Rolletschek** <sup>(1)</sup> - **Iaroslav Plutenko** <sup>(2)</sup> - **Christian Hänig** <sup>(2)</sup> - **Ljudmilla Borisjuk** <sup>(1)</sup>

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### **P56 - Cross-Sensor Phenotyping Reveals Key Traits for Yield-Based Drought Tolerance in Wheat**

**Sahameh Shafiee** <sup>(1)</sup>

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### **P57 - A Lightweight Semi-Automated Framework for Wheat Spike Segmentation and Spike-Level Phenotyping**

**Firozeh Solimani** <sup>(1)</sup> - **Nida Mushtaq** <sup>(1)</sup> - **Fabio Fania** <sup>(1)</sup> - **Salvatore Colecchia** <sup>(1)</sup> - **Giovanni Laido** <sup>(1)</sup> - **Nicola Pecchioni** <sup>(1)</sup>

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### **P58 - Differential Antioxidative and Molecular Responses among Winter Wheat Genotypes: Implications for Precision Crop Management**

**Katarina Šunić Budimir** <sup>(1)</sup> - **Rosemary Vuković** <sup>(2)</sup> - **Velimir Mladenov** <sup>(3)</sup> - **Valentina Španić** <sup>(1)</sup>

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### **P59 - Integrating OJIP kinetics and gas exchange traits to screen for drought tolerance in Wheat**

**Vishnukiran Thuraga** <sup>(1)</sup> - **Mahubjon Rahmatov** <sup>(1)</sup> - **Lan Yuzhou** <sup>(1)</sup> - **Firuz Odilbekov** <sup>(2)</sup> - **Jonathan Cope** <sup>(3)</sup> - **Eva Johansson** <sup>(1)</sup> - **Aakash Chawade** <sup>(1)</sup>

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### **P60 - From Climate Data to Durum Wheat Cultivar Selection: An AI-based Interpretable Decision-Support Framework**

**Walter Vieri** <sup>(1)</sup> - **Nastasiya F. Grinberg** <sup>(2)</sup> - **Andreina Belocchi** <sup>(3)</sup> - **Donatella Paffetti** <sup>(4)</sup> - **Matteo Buti** <sup>(4)</sup>

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### **P61 - Disentangling genetic and environmental control of photosynthetic nitrogen dynamics in wheat canopies**

**Emilio Villar Alegria** <sup>(1)</sup> - **Nicholas J. Russell** <sup>(1)</sup> - **Tsu-Wei Chen** <sup>(1)</sup>

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### **P62 - Rapid detection of wheat frost at seedling Stage using UAV based phenotyping**

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### **P63 - High-Throughput Phenotyping and QTL Analysis of Wheat Stomatal Density Enabled by Portable Microscopy and Deep Learning**

**yonggui xiao** <sup>(1)</sup> - **yidan jia** <sup>(1)</sup> - **shuaipeng fei** <sup>(1)</sup> - **lei li** <sup>(1)</sup>

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### **P64 - Future climate threatens Australian wheat yield and quality**

**Zixiong Zhuang** <sup>(1)</sup> - **Emi Tanaka** <sup>(1)</sup> - **Richard Trethowan** <sup>(2)</sup> - **Danielle Way** <sup>(1)</sup>

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### **P65 - Utilizing High-Throughput Phenotyping to Identify Metribuzin Tolerance in Winter Wheat**

**Melinda Zubrod** <sup>(1)</sup> - **Andrew Herr** <sup>(1)</sup> - **Pia Spsychalla** <sup>(2)</sup> - **Ian Burke** <sup>(1)</sup> - **Arron Carter** <sup>(1)</sup>

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## TOPIC 3

### CARBON FOOTPRINT OF WHEAT PRODUCTION: TOWARD A REDUCTION OF GREENHOUSE GAS EMISSIONS

### **P66 - Developing Nitrogen-Efficient Wheat Using Biological Nitrification Inhibition (BNI) Technology for Sustainable Production in the Indo-Gangetic Plains**

**Pradeep Kumar BHATI** <sup>(1)</sup> - **Manish kumar Vishwakarma** <sup>(1)</sup> - **Narain Dhar** <sup>(1)</sup> - **B M Prasanna** <sup>(2)</sup>

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### **P67- Increasing the protein use efficiency of the MAGIC-WHEAT-Population WM-800**

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## TOPIC 4

### EXPLORING WHEAT DIVERSITY, EVOLUTION AND GENETIC RESERVOIRS

### **P68 - Controlling wheat – rye interspecific crossability for Wheat and Triticale improvement**

**Bacon Antoine** <sup>(1)</sup> - **Sourdille Pierre** <sup>(1)</sup> - **Pitarch Anaïs** <sup>(1)</sup> - **Partier Anne** <sup>(1)</sup> - **Choulet Frederic** <sup>(1)</sup> - **Sakuma Shun** <sup>(2)</sup> - **Vautrin Sonia** <sup>(3)</sup>

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### **P69 - An automated untargeted metabolomics analysis platform for large-scale samples and its application in wheat polyploidization research**

**Min Ao** <sup>(1)</sup> - **Zhitao Tian** <sup>(1)</sup>

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### **P70 - Assessment of in situ wild emmer wheat genome evolution over long-term periods**

**Dana Bar-Zvi** <sup>(1)</sup> - **Cathy Melamed-Bessudo** <sup>(1)</sup> - **Dikla Lifshitz** <sup>(2)</sup> - **Einav Mayzlish-Gati** <sup>(2)</sup> - **Avraham A. Levy** <sup>(1)</sup>

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### **P71 - Seed germination and seedling establishment in durum wheat: the role of heterosis and its influence in stress tolerance**

**Sara Belcapo** <sup>(1)</sup> - **Elise Rethoré** <sup>(2)</sup> - **Francesca Desiderio** <sup>(3)</sup> - **Nusrat Ali** <sup>(2)</sup> - **Lun Jing** <sup>(2)</sup> - **Clara Le Tennier** <sup>(2)</sup> - **Sandrine Jaguelin** <sup>(2)</sup> - **Eric Nguema-Ona** <sup>(2)</sup> - **Ignacio Ezquer** <sup>(1)</sup>

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### **P72 - Wheat polyploidization - genome shock or business as usual?**

**Peter Civan** <sup>(1)</sup> - **Meriem Banouh** <sup>(1)</sup> - **Jerome Salse** <sup>(1)</sup>

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### **P73 - Integrated Analyses of the Vrn-B1 Locus Reveal Structural Variations and Novel Allelic Diversity in Triticum spp.**

**Ida Colella** <sup>(1)</sup> - **Giuseppina Angione** <sup>(2)</sup> - **Salvatore Esposito** <sup>(3)</sup> - **Francesco Sestili** <sup>(1)</sup> - **Dominique Stephanie Hirsz** <sup>(4)</sup> - **Bethan Kate Soanes** <sup>(4)</sup> - **Laura Dixon** <sup>(4)</sup> - **Pasquale De Vita** <sup>(5)</sup>

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### **P74 - Investigation of phenotypic and gene expression response to different vernalization regimes.**

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### **P75 - Beyond Green Revolution Rht Genes: Candidate Loci Influencing Growth in Durum Wheat**

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### **P76 - Screening and Genetic Dissection of Common Bunt Resistance in a Diverse Wheat Panel**

**Claire Simone Ferreira** <sup>(1)</sup> - **Albrecht Serfling** <sup>(1)</sup> - **Andreas Stahl** <sup>(1)</sup>

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### **P77 - Genetic Dissection of Root Architectural and Biomass Traits in Durum Wheat Landraces Using Rhizotron Experiments**

**Genet Atsbeha Fiseha** <sup>(1)</sup> - **Muhammad Awais Farooq** <sup>(1)</sup> - **Congying Zhou** <sup>(1)</sup> - **Martina Bruschi** <sup>(1)</sup> - **Manar Makoul** <sup>(2)</sup> - **Francisco Pinto** <sup>(3)</sup> - **Chunyi Liu** <sup>(1)</sup> - **Xinying Zheng** <sup>(1)</sup> - **Cristian Forestan** <sup>(1)</sup> - **Matteo Bozzoli** <sup>(1)</sup> - **Matthew Reynolds** <sup>(3)</sup> - **Rod J S nowdon** <sup>(4)</sup> - **Enrico Noli** <sup>(1)</sup> - **Silvio Salvi** <sup>(1)</sup> - **Eric Ober** <sup>(5)</sup> - **Roberto Tuberosa** <sup>(1)</sup> - **Marco Maccaferri** <sup>(1)</sup>

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### **P78 - Investigating the relationship between grain morphology and polysaccharide content in ancient and modern wheats**

**Mathilde Francin-Allami** <sup>(1)</sup> - **David Legland** <sup>(1)</sup> - **Axelle Boudier** <sup>(1)</sup> - **Sabine Martin** <sup>(2)</sup> - **Lucie Le Bot** <sup>(1)</sup> - **Sylvie Durand** <sup>(1)</sup> - **Lèna Brionne** <sup>(1)</sup> - **Amélie Bresson** <sup>(2)</sup> - **Clément Dubiton** <sup>(2)</sup> - **Camille Alvarado** <sup>(1)</sup> - **Angelina**

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### **P79 - Mutation Burden in Wheat Germplasm: It Is Time to Address This Genetic Cost**

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### **P80 - Recent winter wheat cultivars from N.A.R.D.I. Fundulea possess a rare combination of high grain yield and good grain protein concentration**

**Serban Gabriela** <sup>(1)</sup> - **Marinciu Cristina Mihaela** <sup>(1)</sup> - **Galit Indira** <sup>(1)</sup> - **Mandea Vasile** <sup>(1)</sup> - **Vasilescu Silviu** <sup>(1)</sup> - **Saulescu N. Nicolae** <sup>(1)</sup>

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### **P81- Dissecting the Root Growth Angle QTLome in tetraploid Wheat (Triticum turgidum ssp) as a Key Component of Drought Stress Resilience**

**Alessio Gaudino** <sup>(1)</sup> - **Muhammad Awais Farooq** <sup>(1)</sup> - **Martina Bruschi** <sup>(1)</sup> - **Manar Makoul** <sup>(2)</sup> - **Francisco Pinto** <sup>(3)</sup> - **Chunyi Liu** <sup>(1)</sup> - **Enrico Noli** <sup>(1)</sup> - **Matthew Reynolds** <sup>(4)</sup> - **Pasquale De Vita** <sup>(5)</sup> - **Nicola Pecchioni** <sup>(5)</sup> - **Rod J Snowdon** <sup>(2)</sup> - **Silvio Salvi** <sup>(1)</sup> - **Eric Ober** <sup>(4)</sup> - **Roberto Tuberosa** <sup>(1)</sup> - **Marco Maccaferri** <sup>(1)</sup>

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### **P82 - Characterization of $\alpha$ -Gliadin amplicons and identification of celiac disease epitopes in Spanish wheat landraces.**

**Marta Gavilán-Camacho** <sup>(1)</sup> - **María H Guzmán-López** <sup>(1)</sup> - **Miriam Marín-Sanz** <sup>(1)</sup> - **Rosa Morcuende** <sup>(2)</sup> - **Juan B. Arellano** <sup>(2)</sup> - **Francisco Barro** <sup>(1)</sup>

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### **P83 - Semi-dwarf Italian durum wheats: Thirty-five years of breeding progress under a changing Mediterranean climate**

**Rosella Motzo** <sup>(1)</sup> - **Simona Bassu** <sup>(1)</sup> - **Marco Dettori** <sup>(2)</sup> - **Gianluca Carboni** <sup>(3)</sup> - **Lucia Mameli** <sup>(3)</sup> - **Francesco Giunta** <sup>(1)</sup>

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### **P84 - Induced Mutant Lines as a Source of Phenotypic Variability for Bread Wheat (Triticum aestivum L.) Improvement**

**Svetlana Glogovac** <sup>(1)</sup> - **Dragana Trkulja** <sup>(1)</sup> - **Dragana Miladinović** <sup>(1)</sup> - **Milan Miroslavljević** <sup>(2)</sup> - **Igor Vukelić** <sup>(1)</sup> - **Ankica Kondić-Špika** <sup>(1)</sup>

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### **P85 - The Complete Chloroplast Genome of Triticum araraticum Reveals a Mismatch in the Origin of Georgian Zanduri Wheat (T. timopheevii)**

**Mari Gogniashvili** <sup>(1)</sup> - **Natia Tepnadze** <sup>(2)</sup> - **Nana Kunelauri** <sup>(1)</sup> - **Assaf Distelfeld** <sup>(3)</sup>

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**P86 - Dynamics of repetitive DNA sequences over the course of evolution and intraspecific divergence of tetraploid goat-grass species *Aegilops biuncialis* Vis.**

Maida Jazmin Gonzalez Franco <sup>(1)</sup> - Olga Razumova <sup>(1)</sup> - Viktoria Sokolova <sup>(1)</sup> - Anna Yurkina <sup>(1)</sup> - Viktoria Voronezhskaya <sup>(1)</sup> - Daniil Ulyanov <sup>(1)</sup> - Mikhail Divashuk <sup>(1)</sup> - Ekaterina Badaeva <sup>(1)</sup>

<sup>(1)</sup> All-Russia Research Institute of Agricultural Biotechnology, Laboratory of Applied Genomics and Crop Breeding, Moscow, Russia

**P87 - Influence of the root system in the performance of wheat under sustainable systems - TRigoSost**

Carla Guijarro-Real <sup>(1)</sup> - María Ángeles Morales-Céspedes <sup>(1)</sup> - Patricia Giraldo <sup>(1)</sup>

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**P88 - Digitalize wheat haplotype block diversity towards cost-efficient genotyping and knowledge integration**

Wenxi Wang <sup>(1)</sup> - Zihao Wang <sup>(1)</sup> - Zhengzhao Yang <sup>(1)</sup> - Zhe Chen <sup>(1)</sup> - Zhaoxing Yu <sup>(1)</sup> - Xiaoming Xie <sup>(1)</sup> - Siqi Chen <sup>(1)</sup> - Jianxia Niu <sup>(1)</sup> - Huiru Peng <sup>(1)</sup> - Zhongfu Ni <sup>(1)</sup> - Qixin Sun <sup>(1)</sup> - Weilong Guo <sup>(1)</sup>

<sup>(1)</sup> Wheat Genetics and Genomics Center, China Agricultural University, Beijing, China

**P89 - Accumulation of ph1 (zip4-5B) and ph2 (msh7-3D) mutations fails to boost homoeologous recombination in hexaploid wheat**

Camille Haquet <sup>(1)</sup> - Isabelle Nadaud <sup>(1)</sup> - Azahara C. Martin <sup>(2)</sup> - Maria-Dolores Rey <sup>(2)</sup> - Asma Ben Bouslah <sup>(1)</sup> - Carus John-Bejai <sup>(3)</sup> - Graham Moore <sup>(2)</sup> - Pierre Sourdille <sup>(1)</sup>

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**P90 - Exploring seasonality in wheat through alternative growth habits**

Dominique Hirsz <sup>(1)</sup> - Beth Soanes <sup>(1)</sup> - India Lacey <sup>(2)</sup> - Harry Taylor <sup>(3)</sup> - Laura Dixon <sup>(1)</sup>

<sup>(1)</sup> Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Genebank, Gatersleben, Germany - <sup>(2)</sup> University of Leeds, University of Leeds, Leeds, United Kingdom - <sup>(3)</sup> University of Cambridge, University of Cambridge, Cambridge, United Kingdom

**P91 - Molecular characterization of introgressions from *Thinopyrum ponticum* conferring stem solidness in Canadian Wheat.**

Sandra Ibellow <sup>(1)</sup> - Martha Bonilla-Bentancourt <sup>(1)</sup> - Carlos Erazo <sup>(1)</sup> - Pierre Hucl <sup>(1)</sup> - Adam Carter <sup>(1)</sup>

<sup>(1)</sup> University of Saskatchewan, Department of Plant Sciences, Saskatoon, Canada

**P92 - Multiple modes of chromosome elimination during hybrid embryogenesis in the subfamily wide hybridization of wheat, oat, and Pennisetum species**

Takayoshi Ishii <sup>(1)</sup>

<sup>(1)</sup> Tottori University, International Platform for Dryland Research and Education, Tottori, Japan

**P93 - Genome-wide association study of male reproductive traits reveals a novel locus in *Aegilops tauschii***

Hiroyuki Kakui <sup>(1)</sup> - Moeko Okada <sup>(2)</sup> - Wei Guo <sup>(3)</sup> - Yoshihiro Matsuoka <sup>(4)</sup>

<sup>(1)</sup> Graduate School of Environmental, Life, Natural Science and Technology, Okayama University, Okayama, Japan -

<sup>(2)</sup> Graduate School of Science and Technology, Niigata University, Niigata, Japan - <sup>(3)</sup> Graduate School of Agricultural and Life Sciences, The University of Tokyo, Tokyo, Japan - <sup>(4)</sup> Graduate School of Agricultural Science, Kobe University, Kobe, Japan

**P94 - A trait-customized Wheat (*Triticum aestivum* L.) core-collection provides sources of resistance against powdery mildew (*Blumeria graminis*) for its use in pre-breeding**

Sandip Kale <sup>(1)</sup> - Stefanie Lueck <sup>(2)</sup> - Dimitar Douchkov <sup>(2)</sup> - Jochen Reif <sup>(2)</sup>

<sup>(1)</sup> NA, Aarhus University, Slagelse, Denmark - <sup>(2)</sup> NA, IPK, Gatersleben, Germany

**P95 - Activating the global potential of the Australian Grains Genebank with open data, digital tools and AI**

Gabriel Keeble-Gagnere <sup>(1)</sup> - Kerrie Forrest <sup>(1)</sup> - Debbie Wong <sup>(1)</sup> - Don Isdale <sup>(1)</sup> - Luisa Teasdale <sup>(1)</sup> - James O'Dwyer <sup>(1)</sup> - Mahdi Rahimi <sup>(1)</sup> - Kenny Yu <sup>(1)</sup> - Kanak Jain <sup>(1)</sup> - Frank Su <sup>(1)</sup> - Parampreet Kaur <sup>(1)</sup> - Shiva Azizinia <sup>(1)</sup> - Irene Van den Berg <sup>(1)</sup> - Sivakumar Sukumaran <sup>(1)</sup> - Sally Norton <sup>(1)</sup> - Matthew Hayden <sup>(1)</sup>

<sup>(1)</sup> Agriculture Science and Technology, Agriculture Victoria, Melbourne, Australia

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### **P96 - Discovery of Stem Rust Resistance in a Wheat Wild Relative Using Bulked Segregant Analysis Sequencing**

**Madison Kist** <sup>(1)</sup> - **Valentyna Klymiuk** <sup>(1)</sup> - **Curtis Pozniak** <sup>(1)</sup>

<sup>(1)</sup> Crop Development Centre, University of Saskatchewan, Saskatoon, Canada

### **P97 - Population structure and genetic diversity of Japanese wheat collection assessed by genome-wide genotyping and gene targeted sequencing**

**Shoya Komura** <sup>(1)</sup> - **Haruki Nakamura** <sup>(2)</sup> - **Nobuyuki Mizuno** <sup>(1)</sup> - **Yutaka Sato** <sup>(1)</sup> - **Tsuyoshi Tanaka** <sup>(3)</sup> - **Goro Ishikawa** <sup>(1)</sup> - **Fuminori Kobayashi** <sup>(1)</sup>

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### **P98 - Genomic analysis of *Thinopyrum* spp. introgressions on durum wheat 7AL arm via flow-sorted chromosome sequencing**

**Ljijana Kuzmanovic** <sup>(1)</sup> - **Raul Pirona** <sup>(2)</sup> - **Debora Giorgi** <sup>(3)</sup> - **Elena Baldoni** <sup>(2)</sup> - **Alessandra Capoccioni** <sup>(1)</sup> - **Miriam Negussu** <sup>(1)</sup> - **Maria Lia Di Romana** <sup>(1)</sup> - **Sergio Lucretti** <sup>(3)</sup> - **Francesco Camerlengo** <sup>(4)</sup> - **Francesco Sestili** <sup>(4)</sup> - **Carla Ceoloni** <sup>(4)</sup>

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### **P99 - Winter survival in Iceland explained by population structure in Nordic winter wheat germplasm**

**Sbatie Lama** <sup>(1)</sup> - **Egill Gautason** <sup>(1)</sup> - **Hrannar Smári Hilmarsson** <sup>(1)</sup>

<sup>(1)</sup> Agricultural University of Iceland, Faculty of Agricultural Sciences, Hvanneyri, Iceland

### **P100 - Stability of grain yield and protein content in winter wheat under varying production conditions**

**Ana Lovrić** <sup>(1)</sup> - **Marko Maričević** <sup>(1)</sup> - **Ivica Ikić** <sup>(1)</sup> - **Bruno Rajković** <sup>(1)</sup> - **Hrvoje Šarčević** <sup>(2)</sup>

<sup>(1)</sup> Bc Institute for Breeding and Production of Field Crops, Department of Small Grains and Forage Crops, Dugo Selo, Croatia - <sup>(2)</sup> University of Zagreb Faculty of Agriculture, Department of Plant Breeding, Genetics and Biometrics, Zagreb, Croatia

### **P101 - Wheat Genetic Background Selection: A Core Prerequisite for Wide Hybridization and Efficient Utilization of *Agropyron cristatum* 6P Elite Genes**

**Yuqing Lu** <sup>(1)</sup> - **Kai Qi** <sup>(1)</sup> - **Haiming Han** <sup>(1)</sup> - **Jinpeng Zhang** <sup>(1)</sup> - **Shenghui Zhou** <sup>(1)</sup> - **Lihui Li** <sup>(1)</sup>

<sup>(1)</sup> Institute of Crop Sciences, Chinese Academy of Agricultural Sciences, Beijing, China

### **P102 - Breeding for Better Durum: Enhancing Defense Against Fusarium Headblight Disease**

**Jedi Joy Mahilum** <sup>(1)</sup> - **Barbara Steiner** <sup>(1)</sup> - **Hermann Buerstmayr** <sup>(1)</sup> - **Kirana Rizky Psthika** <sup>(2)</sup>

<sup>(1)</sup> BOKU University, Crop Breeding and Genomics, Tulln, Austria - <sup>(2)</sup> Universitas Gadjah Mada, Department of Agronomy, Faculty of Agriculture, Yogyakarta, Indonesia

### **P103 - Variability of grain yield and quality in winter wheat accessions from the Croatian gene bank released over 60-year period**

**Marko Maričević** <sup>(1)</sup> - **Ana Lovrić** <sup>(1)</sup> - **Ivica Ikić** <sup>(1)</sup> - **Bruno Rajković** <sup>(1)</sup> - **Hrvoje Šarčević** <sup>(2)</sup>

<sup>(1)</sup> Bc Institute for Breeding and Production of Field Crops, Department for Small Grains, Dugo Selo, Croatia - <sup>(2)</sup> Faculty of Agriculture, University of Zagreb, Zagreb, Croatia

### **P104 - Yield and Yield Components Evaluation in a Subset of Genotypes from the Global Durum Panel (GDPv1) Under Drought and Normal Rainfall Conditions**

**Juan Manuel Rivera** <sup>(1)</sup> - **Diana Martino** <sup>(1)</sup> - **Lisardo Gonzalez** <sup>(1)</sup> - **Juan Pablo Edwards Molina** <sup>(2)</sup> - **Pablo Federico Roncallo** <sup>(3)</sup>

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### **P105 - Genome-wide association study of root morphology traits in a collection of durum wheat cultivars and landraces**

**Grazia Maria Borrelli** <sup>(1)</sup> - **Daniela Marone** <sup>(1)</sup> - **Elisabetta Mazzucotelli** <sup>(2)</sup> - **Marco Maccaferri** <sup>(3)</sup> - **Matteo Bozzoli** <sup>(3)</sup> - **Maria Anna Russo** <sup>(1)</sup> - **Anna Iannucci** <sup>(1)</sup> - **Antonia Mores** <sup>(1)</sup> - **Vanessa De Simone** <sup>(1)</sup> - **Leonardo Morcone** <sup>(1)</sup> - **Maria Pellegrino** <sup>(1)</sup> - **Anna Maria Mastrangelo** <sup>(1)</sup>

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### **P106 - Epigenomic dynamics and changes in chromosomal architecture during synthetic wheat formation**

**Messerer Maxim** <sup>(1)</sup> - **McKenzie Neil** <sup>(2)</sup> - **Juhasz Angela** <sup>(3)</sup> - **Horsnell Richard** <sup>(4)</sup> - **Lan Yuxuan** <sup>(5)</sup> - **Gundlach Heidrun** <sup>(1)</sup> - **Gardiner Laura** <sup>(5)</sup> - **Kamal Nadia** <sup>(6)</sup> - **Lang Daniel** <sup>(1)</sup> - **Martin Azahara** <sup>(2)</sup> - **Goodwin Sara** <sup>(7)</sup> - **McCombie Richard** <sup>(7)</sup> - **Regulski Michael** <sup>(7)</sup> - **Martienssen Rob** <sup>(7)</sup> - **Moore Graham** <sup>(2)</sup> - **Mayer Klaus F X** <sup>(1)</sup> - **Hall Anthony** <sup>(5)</sup> - **Spannagl Manuel** <sup>(1)</sup> - **Bevan Michael** <sup>(2)</sup>

<sup>(1)</sup> Helmholtz Munich, Helmholtz Munich / PGSB, Munich, Germany - <sup>(2)</sup> John Innes Centre, John Innes Centre, Norwich, United Kingdom - <sup>(3)</sup> Edith Cowan University, Edith Cowan University, Joondalup, Australia - <sup>(4)</sup> NIAB, NIAB, Cambridge, United Kingdom - <sup>(5)</sup> Earlham Institute, Earlham Institute, Norwich, United Kingdom - <sup>(6)</sup> TUM, TUM / CPB, Freising, Germany - <sup>(7)</sup> CSHL, CSHL, Cold Spring Harbor, United States

### **P107 - Morphological and Genetic Diversity in Serbian Wheat Germplasm**

**Sanja Mikic** <sup>(1)</sup> - **Dragana Trkulja** <sup>(2)</sup> - **Ankica Kondic-Spika** <sup>(2)</sup> - **Verica Zelic** <sup>(1)</sup> - **Ljiljana Brbaklic** <sup>(1)</sup>

<sup>(1)</sup> Institute of Field and Vegetable Crops, Small Grains Department, Novi Sad, Serbia - <sup>(2)</sup> Institute of Field and Vegetable Crops, Biotechnology Laboratory, Novi Sad, Serbia

### **P108 - The indigenous, traditional Georgian wheat species, disease-resistant and healthy food**

**Marine Mosulishvili** <sup>(1)</sup> - **Nino Toriashvili** <sup>(1)</sup> - **Ineza Maisaia** <sup>(2)</sup> - **Marine Bokeria** <sup>(3)</sup> - **Zaal Kikvidze** <sup>(4)</sup>

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### **P109 - Integration of molecular cytogenetic techniques and SNP genotyping to identify the genomic loci associated with *Aegilops speltoides* derived leaf rust resistance gene**

**Niranjana Murukan** <sup>(1)</sup> - **Ragini R** <sup>(1)</sup> - **Malavika N Shal** <sup>(1)</sup> - **Navpreet Kaur Sekhon** <sup>(1)</sup> - **Priyanka Agarwal** <sup>(1)</sup> - **Chetna Chugh** <sup>(1)</sup> - **Prachi Yadav** <sup>(1)</sup> - **Niharika Mallick** <sup>(1)</sup> - **SK Jha** <sup>(1)</sup> - **SMS Tomar** <sup>(1)</sup> - **Vinod** <sup>(1)</sup>

<sup>(1)</sup> ICAR-Indian Agricultural Research Institute, Division of Genetics, New Delhi, India

### **P110 - Exploring the regulatory mechanisms of hybrid incompatibilities in synthetic hexaploid wheat by transcriptome analysis**

**Sotaro Nakanishi** <sup>(1)</sup> - **Kazusa Nishimura** <sup>(1)</sup> - **Makoto Kashima** <sup>(2)</sup> - **Haruna Kagehira** <sup>(2)</sup> - **Moeko Okada** <sup>(3)</sup> - **Yuki Monden** <sup>(1)</sup> - **Kenji Kato** <sup>(1)</sup> - **Atsushi Toyoda** <sup>(4)</sup> - **Hidetaka Nishida** <sup>(1)</sup>

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### **P111 - Linking aneuploidy, meiotic irregularities and fertility to phenology in synthetic octoploid wheat derived from *Triticum turgidum* and *Aegilops columnaris***

**Adam Izzuddin Nasir** <sup>(1)</sup> - **Kentaro Yoshida** <sup>(1)</sup>

<sup>(1)</sup> Laboratory of Plant Genetics, Kyoto University, Kyoto, Japan

### **P112 - Unlocking Global Wheat Diversity through the Panphenome**

**Hannah Friederike Oertel** <sup>(1)</sup>

- <sup>(1)</sup> Quantitative Genetics, Seeland, Germany

### **P113 - Potential of traditional Spanish wheat varieties for organic farming and end-use quality analysis**

**José Palma** <sup>(1)</sup> - **Laura Pascual** <sup>(1)</sup> - **Elena Benavente** <sup>(1)</sup> - **Patricia Giraldo** <sup>(1)</sup>

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### **P114 - Potential of traditional Spanish wheat varieties for organic farming and end-use quality analysis**

**José Jorge Palma Pérez** <sup>(1)</sup> - **Laura Pascual** <sup>(1)</sup> - **Patricia Giraldo** <sup>(1)</sup> - **Elena Benavente** <sup>(1)</sup>

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### **P115 - QTL mapping for seminal root traits in Meridiano × Kyperunda durum wheat RIL population**

**Guglielmo Piazzì** <sup>(1)</sup> - **Borjana Arsova** <sup>(2)</sup> - **Bartolo Giuseppe Dimattia** <sup>(1)</sup> - **Luca Ceccato** <sup>(1)</sup> - **Matteo Bozzoli** <sup>(1)</sup> - **Jana Kelm** <sup>(2)</sup> - **Jule Hansen** <sup>(2)</sup> - **Helena Waldmann** <sup>(2)</sup> - **Tanja Ehrlich** <sup>(2)</sup> - **Kerstin Nagel** <sup>(2)</sup> - **Josefine Kant** <sup>(3)</sup> - **Marco Maccaferri** <sup>(1)</sup> - **Silvio Salvi** <sup>(1)</sup> - **Roberto Tuberosa** <sup>(1)</sup>

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### **P116 - Uncovering Alien Defences: Detecting Rust Resistance Introgressions in Wheat Using High-Density SNP Arrays and Segmentation**

**Marin Pierre** <sup>(1)</sup> - **Vazeille Aymeric** <sup>(1)</sup> - **Bouchet Sophie** <sup>(1)</sup>

<sup>(1)</sup> INRAE, Genetics, Diversity and Ecophysiology of Cereals (GDEC), Clermont-Ferrand, France

### **P117 - Identification and mapping of Hessian fly resistance genes in elite spring bread wheat genotypes**

**Fatima Ezzahra Rachdad** <sup>(1)</sup> - **Wuletaw Tadesse DEGU** <sup>(1)</sup> - **Fatima HENKRAR** <sup>(2)</sup>

<sup>(1)</sup> ICARDA, Spring bread wheat, Rabat, Morocco - <sup>(2)</sup> FSR, Mohamed V University, Rabat, Morocco

### **P118 - Differential Phosphorus Acquisition Strategies in Triticum turgidum ssp. durum: Plant Nutritional Insights for Future Breeding**

**Tobias Reineke** <sup>(1)</sup> - **Steffen Parl** <sup>(1)</sup> - **Mahdi Jalali** <sup>(1)</sup> - **Mirriam Chishala Chibesa** <sup>(2)</sup> - **Raphael Tiziani** <sup>(2)</sup> - **Salvatore Esposito** <sup>(3)</sup> - **Tanja Mimmo** <sup>(2)</sup> - **Pasquale De Vita** <sup>(3)</sup> - **Jakob Santner** <sup>(1)</sup>

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### **P119 - Australian donors based wheat nested association mapping population enhanced genetic diversity for stripe rust adult plant resistance in high yielding cultivars from eastern africa and south asia**

**Karanjeet Sandhu** <sup>(1)</sup> - **Davinder Singh** <sup>(1)</sup> - **Fikrte Belayineh** <sup>(2)</sup> - **Tamrat Negash** <sup>(2)</sup> - **Hanif Khan** <sup>(3)</sup> - **Subhash Bhardwaj** <sup>(3)</sup> - **Suraj Baidya** <sup>(4)</sup> - **Dhruba Thapa** <sup>(4)</sup> - **Muhammad Fayyaz** <sup>(5)</sup> - **Shahzad Asad** <sup>(5)</sup> - **Robert Park** <sup>(1)</sup>

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### **P120 - Defining the juvenile-to-adult phase transition in wheat revealed its diversification among spring wheat varieties**

**Kanata Senoo** <sup>(1)</sup> - **Shunsuke Yoshioka** <sup>(1)</sup> - **Koichi Yamamori** <sup>(1)</sup> - **Takanori Yoshikawa** <sup>(1)</sup> - **Shuhei Nasuda** <sup>(1)</sup>

<sup>(1)</sup> Graduate School of Agriculture, Kyoto University, Kyoto, Japan

### **P121 - Evaluation, validation and mapping of unknown leaf and stripe rust resistances from wheat genetic resources**

**Albrecht Serfling** <sup>(1)</sup> - **Jochen Christoph Reif** <sup>(2)</sup> - **Andreas Stahl** <sup>(1)</sup>

<sup>(1)</sup> Julius Kühn-Institut (JKI-RS), Institute for Resistance Research, Quedlinburg, Germany - <sup>(2)</sup> Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Department of Breeding Research, Seeland, Germany

### **P122 - Genome Assemblies and Comparative Genomics of 18 Aegilops Species Reveal Evolutionary Dynamics in Diploid and Polyploid Wild Wheat Relatives**

**Hamna Shazadee** <sup>(1)</sup> - **Tara Edwards** <sup>(2)</sup> - **Madeleine Lévesque-Lemay** <sup>(2)</sup> - **Chunfang Zhang** <sup>(3)</sup> - **Jennifer Ens** <sup>(4)</sup> - **Frank M. You** <sup>(3)</sup> - **Curtis J. Pozniak** <sup>(4)</sup> - **Sylvie Cloutier** <sup>(2)</sup>

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### **P123 - Integrating High-Throughput Genomics and Advanced Bioinformatics to Rationalize and Enhance Utilization of Wheat Genetic Resources from the National Genebank of India**

**Amit Kumar Singh** <sup>(1)</sup>

<sup>(1)</sup> ICAR, National Bureau of Plant Genetic Resources, New Delhi, India

### **P124 - Watkins wheat landraces: a treasure of stripe rust resistance alleles identified using multi-model association analyses**

**Jasneet Singh** <sup>(1)</sup> - **Jawad Awan** <sup>(1)</sup> - **Naveen Kumar** <sup>(1)</sup> - **Samuel Holden** <sup>(1)</sup> - **Rajdeep Khangura** <sup>(2)</sup> - **Gurcharn Brar** <sup>(1)</sup>

<sup>(1)</sup> NA, University of University, Edmonton, Canada - <sup>(2)</sup> NA, University of Wisconsin–Madison, Madison, United States

### **P125 - Unlocking adaptive genetic diversity in Mediterranean durum wheat using genome-wide association analysis**

**Fatima Ezzahrae Addi** <sup>(1)</sup> - **Jose Miguel Soriano** <sup>(1)</sup>

<sup>(1)</sup> Universitat de Lleida, Ciència i Enginyeria Forestal i Agrícola, Lleida, Spain

### **P126 - Identification of novel genes for early heading from wild emmer wheat collected in Israel**

**Nina Takano** <sup>(1)</sup> - **Kazusa Nishimura** <sup>(1)</sup> - **Yun-hsuan Chang** <sup>(2)</sup> - **Mai Kakusaka** <sup>(3)</sup> - **Maho Okuma** <sup>(1)</sup> - **Kazuki Murata** <sup>(2)</sup> - **Ryohei Nakano** <sup>(2)</sup> - **Kanako Kawaura** <sup>(3)</sup> - **Tetsuya Nakazaki** <sup>(4)</sup> - **Kenji Kato** <sup>(1)</sup> - **Yuki Monden** <sup>(1)</sup> - **Hidetaka Nishida** <sup>(1)</sup>

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<sup>(3)</sup> Yokohama City University, Kihara Institute for Biological Research, Yokohama, Japan - <sup>(4)</sup> Kyoto U, Office of Institutional Adv. and Comm., Kyoto, Japan

### **P127 - Global diversity of arabinoxylans, alkylresorcinols and phenolic acids in 180 rye (*Secale cereale* L.) accessions: implications for functional food innovation**

**Yuanyuan Tian** <sup>(1)</sup>

<sup>(1)</sup> Northwest A&F University, College of Agronomy, Northwest A&F University, Yangling, China

### **P128 - Phenotypic Characterization of Serbian Bread Wheat Landraces for Breeding-Relevant Traits**

**Dragana Trkulja** <sup>(1)</sup> - **Sanja Mikić** <sup>(2)</sup> - **Svetlana Glogovac** <sup>(1)</sup> - **Milan Miroslavljević** <sup>(2)</sup> - **Bojan Jocković** <sup>(2)</sup> - **Igor Vukelić** <sup>(1)</sup> - **Dragan Živančev** <sup>(2)</sup> - **Delfina Barabaschi** <sup>(3)</sup> - **Elisabetta Mazzucotelli** <sup>(3)</sup> - **Ankica Kondić Špika Kondić Špika** <sup>(1)</sup>

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### **P129 - A spike length QTL co-localizing with TaERF-A1 shows pleiotropic effects on plant height and agronomic traits**

**Giuliana Ferrari** <sup>(1)</sup> - **Nicole Pretini** <sup>(2)</sup> - **Fernanda Gabriela González** <sup>(1)</sup> - **Leonardo Sebastián Vanzetti** <sup>(3)</sup>

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### **P130 - A Balkan Durum Wheat Panel for Resistance to Mosaic and Streak Viruses under Climate Change**

**Ana Velimirović** <sup>(1)</sup> - **Yu Cai** <sup>(2)</sup> - **Heike Lehnert** <sup>(3)</sup> - **Jelena Zindović** <sup>(1)</sup> - **Zoran Jovović** <sup>(1)</sup> - **Novo Pržulj** <sup>(4)</sup> - **Marco Maccaferri** <sup>(5)</sup> - **Giacomo Mangini** <sup>(6)</sup> - **Mariella Matilde Finetti-Sialer** <sup>(6)</sup> - **Jitendra Thakur** <sup>(7)</sup> - **Gordana Lastovicka Medin** <sup>(8)</sup> - **Dragan Perović** <sup>(2)</sup>

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Montenegro, Podgorica, Montenegro

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### **P131 - Yield Performance of Synthetic-derived Winter Wheat Lines in the U.S. Southern Great Plains**

**Qingwu Xue** <sup>(1)</sup> - **Shuyu Liu** <sup>(2)</sup> - **Jackie Rudd** <sup>(1)</sup> - **Amir Ibrahim** <sup>(3)</sup> - **Shannon Baker** <sup>(1)</sup> - **Jason Baker** <sup>(1)</sup> - **Kirk Jessup** <sup>(1)</sup>

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### **P132 - Deleterious Mutational Load Across Wheat Evolution: From Wild Diploid Progenitors to Hexaploid Bread Wheat**

**Peter Zhurbenko** <sup>(1)</sup> - **Avraham Levy** <sup>(1)</sup>

<sup>(1)</sup> Weizmann Institute of Science, Plant and Environmental Sciences, Rehovot, Israel

## TOPIC 5

### WHEAT GENOMES AND PANGENOMES

### **P134 - Annotation Is the New Bottleneck in Plant Genomics: Frame-Sensitive Detection of CDS Discrepancies with CDScompare, Applied to Hexaploid Wheat**

**Nathalie Chantret** <sup>(1)</sup> - **Johanna Girodolle** <sup>(2)</sup> - **V  t  a Jacot** <sup>(1)</sup> - **Vincent Ranwez** <sup>(2)</sup>

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### **P135 - Towards Developing a Pangenome and Haplotype Catalogue for Yield and Yield Related Traits in Wheat**

**Anu Chitikineni** <sup>(1)</sup> - **Yan Huang** <sup>(1)</sup> - **Chengzhi Jiao** <sup>(2)</sup> - **Yongchao Hao** <sup>(2)</sup> - **Kefei Chen** <sup>(3)</sup> - **Dion Bennett** <sup>(4)</sup> - **Zhonghua Chun** <sup>(5)</sup> - **Richard Harper** <sup>(6)</sup> - **Liu Xin** <sup>(7)</sup> - **Reyazul Rouf Mir** <sup>(1)</sup> - **Rajeev Varshney** <sup>(1)</sup>

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### **P136 - Studing fusarium head blight resistance in durum wheat through snp-based linkage analysis**

**Pasqualina Colasuonno** <sup>(1)</sup> - **Iliaria Marcotuli** <sup>(1)</sup> - **Maria Simone** <sup>(1)</sup> - **Davide Caranfa** <sup>(1)</sup> - **Stefania Lucia Giove** <sup>(1)</sup> - **Rita Milvia De Miccolis Angelini** <sup>(1)</sup> - **Agata Gadaleta** <sup>(1)</sup>

<sup>(1)</sup> University of Bari, Department of Soil, Plant and Food Sciences (DiSSPA), Bari, Italy

### **P137 - 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** <sup>(1)</sup> - **Rania Gamal** <sup>(2)</sup> - **Wuletaw Tadesse** <sup>(3)</sup>

<sup>(1)</sup> ICARDA, university mohammed vi polytechnic (um6p), Benguerir, Morocco - <sup>(2)</sup> ICARDA, ICARDA, Cairo, Egypt - <sup>(3)</sup> ICARDA, ICARDA, Rabat, Morocco

### **P138 - QTL mapping of Fusarium head blight resistance in durum wheat using near-isogenic lines**

**Agata Gadaleta** <sup>(1)</sup> - **Stefania Lucia Giove** <sup>(1)</sup> - **Iliaria Marcotuli** <sup>(1)</sup> - **Pasqualina Colasuonno** <sup>(1)</sup>

<sup>(1)</sup> University, University of Bari Aldo Moro/Department of Soil, Plant and Food Sciences, Bari, Italy

### **P140 - Genome assembly and annotation of bread wheat and synthetic hexaploid wheat lines as a resource for structural variation analysis and leaf rust resistance gene discovery**

**Bosen Jia** <sup>(1)</sup> - **Sylvie Cloutier** <sup>(2)</sup> - **Frank You** <sup>(2)</sup> - **Tara Edwards** <sup>(1)</sup> - **Chi Dawn** <sup>(1)</sup> - **Chunfang Zheng** <sup>(1)</sup> - **Madeleine L  vesque-Lemay** <sup>(1)</sup> - **Brent McCallum** <sup>(3)</sup> - **Colin Hiebert** <sup>(3)</sup> - **Leslie Bezte** <sup>(3)</sup> - **Elsa Reimer** <sup>(3)</sup> - **Curt McCartney** <sup>(4)</sup> - **Curtis Pozniak** <sup>(5)</sup> - **Joel Ens** <sup>(5)</sup>

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### **P141 - De-novo annotation of the wheat pangenome reveals complexity and diversity of the hexaploid wheat pan-transcriptome**

**Thomas Lux** <sup>(1)</sup> - **Benjamin White** <sup>(2)</sup> - **Rachel Rusholme-Pilcher** <sup>(2)</sup> - **Angéla Juhász** <sup>(3)</sup> - **Curtis Pozniak** <sup>(4)</sup> - **Manuel Spannagl** <sup>(1)</sup> - **Anthony Hall** <sup>(2)</sup> - **10+ Wheat Genome Project** <sup>(4)</sup>

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### **P142 - Transposable Element Exaptation as a Source of Gene Innovation in Bread Wheat**

**Flavia Mascagni** <sup>(1)</sup> - **Filippo Giuseppe Marino** <sup>(1)</sup> - **Gabriele Usai** <sup>(1)</sup> - **Samuel Simoni** <sup>(1)</sup> - **Marco Castellacci** <sup>(1)</sup> - **Alberto Vangelisti** <sup>(1)</sup> - **Tommaso Giordani** <sup>(1)</sup> - **Lucia Natali** <sup>(1)</sup> - **Andrea Cavallini** <sup>(1)</sup>

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### **P143 - Use of AI in wheat databases: overview and prospects**

**Alaux Michael** <sup>(1)</sup> - **Caccamo Mario** <sup>(2)</sup> - **Dyer Sarah** <sup>(3)</sup> - **Edwards David** <sup>(4)</sup> - **Hassani-Pak Keywan** <sup>(5)</sup> - **Sen Taner** <sup>(6)</sup>

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### **P144 - High-Resolution Mapping of the 5B-7B Reciprocal Translocation in Wild Emmer Wheat via De Novo Assembly**

**Kazusa Nishimura** <sup>(1)</sup> - **Koichiro Ushijima** <sup>(1)</sup> - **Yasuo Yasui** <sup>(2)</sup> - **Nina Takano** <sup>(1)</sup> - **Ryohei Nakano** <sup>(3)</sup> - **Yuki Monden** <sup>(1)</sup> - **Kenji Kato** <sup>(1)</sup> - **Hidetaka Nishida** <sup>(1)</sup>

<sup>(1)</sup> Okayama University, Graduate School of Environmental, Life, Natural Science and Technology, Okayama, Japan - <sup>(2)</sup> Kyoto University, Graduate school of Agriculture, Kyoto, Japan - <sup>(3)</sup> Kyoto University, Graduate School of Agriculture, Kizugawa, Japan

### **P145 - k-mer based approaches to exploit haplotypes and introgressions from genebank collections**

**Jesus Quiroz Chavez** <sup>(1)</sup>

<sup>(1)</sup> CIMMYT, Wheat Molecular Breeding/Global Wheat Program, Texcoco, Mexico

### **P146 Genomic Gain and Loss Estimation in the D genome of Asian Wheat Landraces and Modern Cultivars Inferred from Pangenome Graph**

**Van Tuan Anh Nguyen** <sup>(1)</sup> - **Shunsuke Yoshioka** <sup>(2)</sup> - **Katharina Jung** <sup>(2)</sup> - **Kentaro Shimizu** <sup>(2)</sup> - **Shuheii Nasuda** <sup>(1)</sup>

<sup>(1)</sup> Laboratory of Plant Breeding, Graduate School of Agriculture, Kyoto University, Kyoto, Japan - <sup>(2)</sup> Department of Evolutionary Biology and Environmental Studies, University of Zurich, Zurich, Switzerland

### **P147 - From k-mers to candidates: Dissecting structural diversity and novel resistance haplotypes at the wheat Yr47/Lr52 locus**

**Bernice Waweru** <sup>(1)</sup> - **Burkhard Steuernagel** <sup>(2)</sup> - **Rachel Goddard** <sup>(3)</sup> - **Ryan Joynton** <sup>(3)</sup> - **Isidore Ambroise Diouf** <sup>(4)</sup> - **Cristobal Uauy** <sup>(1)</sup>

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## TOPIC 6 WHEAT FUNCTIONAL GENOMICS

### **P149 - Harnessing Skim-Sequencing for High-Throughput Genomic Analysis in Wheat and Wild Relatives**

**Laxman Adhikari** <sup>(1)</sup> - **Jesse Poland** <sup>(1)</sup> - **Shuangye Wu** <sup>(2)</sup>

<sup>(1)</sup> King Abdullah University of Science and Technology, 1Plant Science Program, Division of Biological and Environmental Sciences and Engineering, Thuwal, Saudi Arabia - <sup>(2)</sup> Kansas State University, Plant Pathology, Manhattan, United States

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### **P150 - Wheat genotype impacts plant responses to biosolutions**

**Claire Benezech** <sup>(1)</sup> - **Valentine Fontaine** <sup>(1)</sup> - **Louis-Valentin Meteignier** <sup>(1)</sup> - **Jean-Benoit Morel** <sup>(1)</sup> - **Marie-Emmanuelle Saint Macary** <sup>(2)</sup>

<sup>(1)</sup> PHIM, University of Montpellier, Montpellier, France - <sup>(2)</sup> Frayssinet, fertilizers and biostimulants producer, Rouairoux, France

### **P151 - TaPIF3 integrates light and gibberellin responses to control chloroplast development and growth in wheat**

**Daisy Bown** <sup>(1)</sup> - **Ben Sibbett** <sup>(1)</sup> - **Lorraine E. Williams** <sup>(1)</sup> - **Peter Hedden** <sup>(2)</sup> - **Stephen G. Thomas** <sup>(3)</sup> - **Matthew J. Terry** <sup>(1)</sup>

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### **P152 - Breaking the Silence: Understanding Recombination Suppression in Wheat Wild Gene Introgressions**

**Floriane Chéron** <sup>(1)</sup> - **Luxi Yan** <sup>(1)</sup> - **Isabelle Nadaud** <sup>(1)</sup> - **Pierre Sourdille** <sup>(1)</sup>

<sup>(1)</sup> INRAE, GDEC, Clermont-Ferrand, France

### **P153 - Transcriptome Analysis Of Durum Wheat Under Heat Stress**

**Boris Demenou** <sup>(1)</sup> - **Saad En Naimani** <sup>(2)</sup> - **Matthieu Bogard** <sup>(2)</sup>

<sup>(1)</sup> Arvalis, SAGEP, Ouzouer-le-Marché, France - <sup>(2)</sup> Arvalis, SAGEP, Baziège, France

### **P154 - Assessing aquaporin phospho-regulation and drought response relationships in wheat**

**Joseph Esimu** <sup>(1)</sup> - **Annamaria De Rosa** <sup>(1)</sup> - **Samantha McGaughey** <sup>(1)</sup> - **Rose Zhang** <sup>(1)</sup> - **Alison Bentley** <sup>(2)</sup> - **Gonzalo Estavillo** <sup>(2)</sup> - **Jessica Hyles** <sup>(2)</sup> - **Caitlin Byrt** <sup>(1)</sup>

<sup>(1)</sup> Australian National University, Research School of Biology, Canberra Acton, Australia - <sup>(2)</sup> Commonwealth Scientific and Industrial Research Organisation, Agriculture and Food, Canberra Acton, Australia

### **P155 - OPRIII-B1 copy number variation association with root system architecture (RSA) and growth dynamics in tetraploid wheat**

**Nikolay Govta** <sup>(1)</sup> - **Gal Shaked-Raz** <sup>(1)</sup> - **Hanan Sela** <sup>(1)</sup> - **Gilad Gabay** <sup>(2)</sup> - **Jorge Dubcovsky** <sup>(3)</sup> - **Tzion Fahima** <sup>(1)</sup> - **Tamar Krugman** <sup>(1)</sup>

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### **P156 - Environment-Dependent Epigenetic Modulation of Stem Solidness in Wheat**

**Arpit Gaur** <sup>(1)</sup> - **Duncan Pantos** <sup>(1)</sup> - **Andrew Lehrenz** <sup>(1)</sup> - **Suchismita Mondal** <sup>(1)</sup>

<sup>(1)</sup> Montana State University, Department of Plant Sciences and Plant Pathology, Bozeman, United States

### **P157 - Deciphering the transgressive yield in commercial cultivar ND5181 through the lens of transcriptional modules**

**Zhe Chen** <sup>(1)</sup> - **Qiuyuan Li** <sup>(1)</sup> - **Lingfeng Miao** <sup>(1)</sup> - **Danyang Zhao** <sup>(1)</sup> - **Yongming Chen** <sup>(1)</sup> - **Yanhong Liu** <sup>(1)</sup> - **Shiqi Chen** <sup>(1)</sup> - **Chenji Zhang** <sup>(1)</sup> - **Zhengzhao Yang** <sup>(1)</sup> - **Jie Liu** <sup>(1)</sup> - **Zhaorong Hu** <sup>(1)</sup> - **Yufeng Zhang** <sup>(1)</sup> - **Mingshan You** <sup>(1)</sup> - **Huiru Peng** <sup>(1)</sup> - **Zhongfu Ni** <sup>(1)</sup> - **Qixin Sun** <sup>(1)</sup> - **Jiewen Xing** <sup>(1)</sup> - **Weilong Guo** <sup>(1)</sup>

<sup>(1)</sup> Wheat Genetics and Genomics Center, China Agricultural University, Beijing, China

### **P158 - Integrating GWAS, Haplotype Mapping and Genomic Selection to Unlock the Diversity of Ancient Indian Dwarf Wheat (*Triticum sphaerococcum*) for Biotic, Abiotic Stresses, Nutrition and Nitrogen use efficiency**

**Farkhandah Jan** <sup>(1)</sup> - **Mukesh Rathore** <sup>(1)</sup> - **Nikita Aggarwal** <sup>(1)</sup> - **Mahpara Bashir** <sup>(1)</sup> - **Pawanjeet Kaur** <sup>(1)</sup> - **Rohit Kumar** <sup>(1)</sup> - **Mohd Anwar Khan** <sup>(1)</sup> - **Sundeep Kumar** <sup>(2)</sup> - **Anu Chitikineni** <sup>(3)</sup> - **Rajeev K Varshney** <sup>(3)</sup> - **Reyazul Rouf Mir** <sup>(3)</sup>

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### **P159 - Refining the candidate region of a major gene Ymhc responsible for resistance to wheat yellow mosaic virus**

**Kenji Kawaguchi** <sup>(1)</sup> - **Takehiro Ohki** <sup>(2)</sup> - **Kazumitsu Onishi** <sup>(3)</sup> - **Koichi Hatta** <sup>(4)</sup> - **Fuminori Kobayashi** <sup>(5)</sup> - **Toshiharu Shuri** <sup>(4)</sup>

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### **P160 - Dynamic atlas of histone modifications and gene regulatory networks in endosperm of bread wheat**

**Yuqi Li** <sup>(1)</sup> - **Chao He** <sup>(1)</sup> - **Siteng Bi** <sup>(1)</sup> - **Chengxiang Song** <sup>(1)</sup> - **Heping Zhang** <sup>(1)</sup> - **Xintong Xu** <sup>(1)</sup> - **Qiang Li** <sup>(1)</sup> - **Sulaiman Saeed** <sup>(1)</sup> - **Wei Chen** <sup>(1)</sup> - **Chunjie Zhao** <sup>(1)</sup> - **Caixia Lan** <sup>(1)</sup> - **Handong Su** <sup>(1)</sup> - **Hailiang Mao** <sup>(1)</sup> - **Wenhao Yan** <sup>(1)</sup>

<sup>(1)</sup> Huazhong Agricultural University, Huazhong Agricultural University, Wuhan, 中国

### **P161 - Investigating the Regulatory Mechanism of VRN2 and VRN3 in Mediating Adaptation to Photoperiod and Vernalization in Wheat (*Triticum aestivum* L)**

**Ankui Liu** <sup>(1)</sup>

<sup>(1)</sup> Huazhong Agricultural University, College of Plant Science & Technology, Wuhan, China

### **P162 - The investigation of genetic control of leaf senescence in wheat**

**Yalin Liu** <sup>(1)</sup> - **Chris Buckley** <sup>(1)</sup> - **Mike Haydon** <sup>(1)</sup>

<sup>(1)</sup> The University of Melbourne, The University of Melbourne, Melbourne, Australia

### **P164 - Breeding Implications of Wheat Tiller-1 (WT-1) in Optimizing Tiller Architecture and Yield Potential**

**Rizwana Maqbool** <sup>(1)</sup> - **Ragupathi Nagarajan** <sup>(2)</sup> - **Mutti Jasdeep** <sup>(3)</sup> - **Kulvinder Gill** <sup>(4)</sup>

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### **P166 - Investigating the Influence of Genomic Location: Gene Expression and Fusarium Head Blight Response in Wheat-Rye introgression lines.**

**Chidimma Gift Omenoba-Nee Ubah** <sup>(1)</sup> - **Ding Li** <sup>(2)</sup> - **Hans-Wilhelm Nuetzmann** <sup>(3)</sup>

<sup>(1)</sup> University of Bath, Life Sciences, Bath, United Kingdom - <sup>(2)</sup> University of Bristol, Biosciences, Bristol, United Kingdom - <sup>(3)</sup> University of Exeter, Biosciences, Exeter, United Kingdom

### **P167 - Identification of novel resistance loci to Septoria tritici blotch (STB) in winter wheat using Genome-Wide Association Mapping**

**Dominika Piaskowska** <sup>(1)</sup> - **Urszula Piechota** <sup>(1)</sup> - **Magdalena Radecka-Janusik** <sup>(1)</sup> - **Piotr Słowacki** <sup>(1)</sup> - **Paweł Czembor** <sup>(1)</sup>

<sup>(1)</sup> Plant Breeding and Acclimatization Institute, Department fo Applied Biology, Błonie, Poland

### **P168 - Spatial transcriptomic dissection of floral meristem fate in multi-ovary and single-ovary wheat**

**Yue Qu** <sup>(1)</sup> - **Cong Tan** <sup>(2)</sup> - **Guilherme V. Yoshikawa** <sup>(1)</sup> - **Scott A. Boden** <sup>(1)</sup>

<sup>(1)</sup> Adelaide University, School of agricultural, food and wine, Adelaide, Australia - <sup>(2)</sup> BGI, BGI Research, Shenzhen, China

### **P169 - From Triticeae to Avenae: Translational Dissection of the miR156/SPL and VRN Modules to fine-tune flowering in Hexaploid Oat**

**Mehtab Singh** <sup>(1)</sup> - **Sharanaya Tripathi** <sup>(1)</sup> - **Arvind Ambalatharasan** <sup>(1)</sup> - **Rajvinder Kaur** <sup>(1)</sup> - **Jaswinder Singh** <sup>(1)</sup>

<sup>(1)</sup> McGill University, Plant Science, Montreal, Canada

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### **P170 - Genome-wide association analysis of wheat core collection based on grain protein content**

**Jae-Han Son** <sup>(1)</sup> - **ChanHyun Choi** <sup>(1)</sup> - **Myoung-Goo Choi** <sup>(1)</sup> - **Jun-Seok Choi** <sup>(1)</sup> - **Myoung-Hui Lee** <sup>(1)</sup> - **Min-Ju Kim** <sup>(1)</sup> - **Chon-Sik Kang** <sup>(1)</sup>

<sup>(1)</sup> National Institute of Crop and Food Science, Department of Crop Science, Jeonju, Korea, Republic Of

### **P171 - SQUAMOSA Promoter Binding-Like (SPL) Proteins interact with Pullulanase to Regulate Starch Metabolism in Wheat**

**Sharanya Tripathi** <sup>(1)</sup> - **Zhou Zhou** <sup>(2)</sup> - **Arvind Ambalatharasan** <sup>(1)</sup> - **Mehtab Singh** <sup>(1)</sup> - **Rajvinder Kaur** <sup>(3)</sup> - **Jaswinder Singh** <sup>(1)</sup>

<sup>(1)</sup> McGill University, Plant Science, Montreal, Canada - <sup>(2)</sup> Purdue University Fort Wayne, Biological Sciences, Fort Wayne, United States - <sup>(3)</sup> McGill University, Bioresource Engineering, Montreal, Canada

### **P173 - Telomere-to-telomere genome assembly reveals the genomic architecture of disease resistance and yield coordination in elite wheat YM33**

**Yating Wang** <sup>(1)</sup>

<sup>(1)</sup> Huazhong Agricultural University, College of Plant Science and Technology, Hubei, China

### **P175 Genetic Dissection of End-use Quality in Wheat to Facilitate Breeding**

**Ruijie Zhang** <sup>(1)</sup> - **Yijie Liu** <sup>(1)</sup> - **Xiaobang Zhang** <sup>(1)</sup> - **Tao Yang** <sup>(1)</sup> - **Tianqi Kang** <sup>(1)</sup> - **Longfei Wu** <sup>(1)</sup> - **Mingde Liu** <sup>(1)</sup> - **Yuhan Zhang** <sup>(1)</sup> - **Yizhong Miao** <sup>(1)</sup> - **Zhongfu Ni** <sup>(1)</sup> - **Qixin Sun** <sup>(1)</sup> - **Yingyin Yao** <sup>(1)</sup>

<sup>(1)</sup> None, China Agricultural University, Beijing, China.

### **P176 - Genetic and molecular dissection of brassinosteroid-regulated plant architecture in barley**

**Shunlin Zhang** <sup>(1)</sup>

<sup>(1)</sup> Murdoch University, Murdoch University, Perth, Australia

### **P177 - A Spatial Transcriptomic Atlas of Early Wheat Spike Development**

**Xiang Zhang** <sup>(1)</sup> - **Liang-Zi Zhou** <sup>(1)</sup> - **Ying Hua Su** <sup>(1)</sup>

<sup>(1)</sup> Shandong Agricultural University, College of Life Sciences, Tai'an, China

### **P178 - Multi-omics analyses uncover regulatory networks governing flavonoid biosynthesis in *Triticum aestivum***

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## TOPIC 7

### INNOVATIVE WHEAT BREEDING

### **P179 - The Establishment of the First Speed Breeding Facility in Central Asia and Fine-Tuning of Its Protocol**

**Aibek Abduakassov** <sup>(1)</sup> - **Kanat Yermekbayev** <sup>(1)</sup>

<sup>(1)</sup> Zhetysu university named after Ilyas Zhansugurov, Laboratory of Molecular genetics and genomics, Tal'dykorgan, Kazakhstan

### **P181 - Wheat: staple and strategic crop in Uzbekistan**

**Oybek Amanov** <sup>(1)</sup> - **Diyor Juraev** <sup>(1)</sup> - **Sherzod Dilmurodov** <sup>(1)</sup> - **Nurzod Boysunov** <sup>(1)</sup>

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### **P182 - Improving Lr34 Adult Plant Rust Resistance in Wheat**

**Saeid Babaei** <sup>(1)</sup> - **Peng Zhang** <sup>(2)</sup> - **Smriti Singh** <sup>(2)</sup> - **Rohit Mago** <sup>(1)</sup> - **Evans Lagudah** <sup>(1)</sup> - **Ming Luo** <sup>(1)</sup> - **Michael Ayliffe** <sup>(1)</sup>

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### **P183 - Genomic prediction of stem structural biomass uncovers productivity trade-off under Mediterranean climate**

**Simeon Ntawuguranayo** <sup>(1)</sup> - **Roy Sadeh** <sup>(1)</sup> - **Molla Geb Taye** <sup>(1)</sup> - **Hanan Sela** <sup>(2)</sup> - **Ittai Herrmann** <sup>(1)</sup> - **Zvi Peleg** <sup>(1)</sup> - **Roi Ben-David** <sup>(3)</sup>

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### **P184 - CRISPR/Cas9-mediated mutagenesis of the RING-type E3 ubiquitin ligase, TaGW2, in the elite Canadian cultivar AAC Brandon increases grain size and weight but reduces total grain number per plant**

**Andriy Bilichak** <sup>(1)</sup> - **Louie Lopos** <sup>(1)</sup> - **Zhen Yao** <sup>(1)</sup> - **Curt McCartney** <sup>(2)</sup> - **Brent McCallum** <sup>(1)</sup> - **Sean Walkowiak** <sup>(3)</sup> - **Santosh Kumar** <sup>(4)</sup> - **Lovemore Malunga** <sup>(1)</sup>

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### **P185 - Introgression and in-field validation of stem solidness from *Thinopyrum ponticum* into adapted Canadian hexaploid wheat germplasm**

**Martha Liliana Bonilla Betancourt** <sup>(1)</sup> - **Pierre Hucl** <sup>(1)</sup> - **Carlos Erazo** <sup>(1)</sup> - **Curtis Pozniak** <sup>(1)</sup> - **Adam Carter** <sup>(1)</sup>

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### **P186 - Advancing Fusarium Head Blight Resistance in Wheat: Genetic Gains and Genomic Selection Strategies**

**Charlotte Brault** <sup>(1)</sup> - **Emily Conley** <sup>(1)</sup> - **Andrew Read** <sup>(2)</sup> - **Harsimardeep Gill** <sup>(1)</sup> - **Sarah Blecha** <sup>(2)</sup> - **Andrew Green** <sup>(3)</sup> - **Karl Glover** <sup>(4)</sup> - **Jason Cook** <sup>(5)</sup> - **Ruth Dill-Macky** <sup>(6)</sup> - **Jason Fiedler** <sup>(7)</sup> - **James Anderson** <sup>(1)</sup>

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### **P187 - Genomic strategies to accelerate genetic gain in wheat (Wheatboost)**

**Thomas Brown** <sup>(1)</sup>

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### **P188 - John Innes Centre - Wheat Transformation and Gene Editing**

**Valentina Buffagni** <sup>(1)</sup> - **Mark A. Smedley** <sup>(1)</sup> - **Macarena Forner** <sup>(1)</sup> - **Simon Grffiths** <sup>(1)</sup> - **Sadiye Hayta** <sup>(1)</sup>

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### **P189 - Advances in Wheat Genetics in Brazil – 1991 to 2025**

**Eduardo Caierão** <sup>(1)</sup>

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### **P190 - Combining GRF-GIF-Enhanced Cas9 Editor Plants and a Virus-based gRNA Delivery for Functional Gene Validation in Durum Wheat**

**Francesco Camerlengo** <sup>(1)</sup> - **Ambra Viviani** <sup>(1)</sup> - **Lorenzo Calzini** <sup>(1)</sup> - **Alberto Tassinari** <sup>(1)</sup> - **Zitong Yu** <sup>(2)</sup> - **Eduard Akhunov** <sup>(2)</sup> - **Silvio Salvi** <sup>(1)</sup> - **Roberto Tuberosa** <sup>(1)</sup> - **Marco Maccaferri** <sup>(1)</sup>

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### **P191 - Synergistic Application of Speed Breeding for Genetic Studies and Cultivar Release in Wheat (*Triticum aestivum* L.)**

**Jin-Kyung Cha** <sup>(1)</sup> - **Hyeonjin Park** <sup>(1)</sup> - **Youngho Kwon** <sup>(1)</sup> - **So-Myeong Lee** <sup>(1)</sup> - **Woo-Jae Kim** <sup>(1)</sup> - **Jong-Hee Lee** <sup>(1)</sup>

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(1) National Institute of Crop and Food Science, RDA, Department of Upland Crop Sciences, Miryang, Korea, Republic Of

### **P192 - Optimisation of genetic gain for two negatively correlated traits: the case study of winter bread wheat yield and grain protein content.**

**GUILLOU Clément** <sup>(1)</sup>

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### **P193 - Adaptation and Quality Traits of Winter Durum Wheat Cultivars Developed in Martonvásár over the Last Decade**

**Mónika Cséplő** <sup>(1)</sup> - **Katalin Puskás** <sup>(1)</sup> - **Marianna Rakszegi** <sup>(1)</sup> - **Klára Mészáros** <sup>(1)</sup> - **Judit Bányai** <sup>(1)</sup> - **Andrea Uhrin** <sup>(1)</sup> - **Péter Mikó** <sup>(1)</sup> - **Gyula Vida** <sup>(1)</sup>

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### **P194 - Evaluating genetic variability and biometric indicators in bread wheat varieties: Implications for modern selection methods**

**Diyor Juraev** <sup>(1)</sup> - **Sherzod Dilmurodov** <sup>(1)</sup> - **Oybek Amanov** <sup>(1)</sup> - **Aziz Nurbekov** <sup>(2)</sup>

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### **P195 - Implementation of Multi-Trait Rapid-Cycle Recurrent Genomic Selection in Canadian Wheat Breeding**

**Carlos Erazo Melo** <sup>(1)</sup> - **Jordan Ubbens** <sup>(2)</sup> - **Martha Bonilla Betancourt** <sup>(1)</sup> - **Adam Carter** <sup>(1)</sup>

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### **P196 - Responding to Yr15 Virulence to Strengthen Wheat Resistance**

**Isabel Faci** <sup>(1)</sup> - **Diane G.O. Saunders** <sup>(1)</sup>

(1) John Innes Centre, Crop Genetics, Norwich, Norfolk, United Kingdom

### **P197 - A pan proteome of wheat and its use for breeding**

**Longin Friedrich** <sup>(1)</sup> - **Steige Kim** <sup>(1)</sup> - **El Hassouni Khaoula** <sup>(1)</sup> - **Tenzer Stefan** <sup>(2)</sup> - **Sielaff Malte** <sup>(2)</sup>

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### **P198 - SNP genotyping with large, intermediate and small marker panels in hexaploid wheat**

**Martin Ganai** <sup>(1)</sup> - **Joerg Plieske** <sup>(1)</sup> - **Eva Grafahrend-Belau** <sup>(1)</sup> - **Karolina Greziak** <sup>(1)</sup> - **Dagmar Kulosa** <sup>(1)</sup> - **Naser Poursarebani** <sup>(1)</sup> - **Thomas Gross** <sup>(1)</sup> - **Heike Molenaar** <sup>(1)</sup> - **Heike Gnad** <sup>(1)</sup>

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### **P199 - Stem elongation phase as a key trait to improve grain number and yield: Preliminary results from BC4 lines with similar anthesis dates but advancing beginning of stem elongation**

**Pilar Abrego** <sup>(1)</sup> - **Giuliana Ferrari** <sup>(2)</sup> - **Nicole Pretini** <sup>(3)</sup> - **Fernanda Gonzalez** <sup>(4)</sup>

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### **P200 - Seven Decades of Global Impact: CIMMYT's End-to-End Framework for Accelerating Bread Wheat Breeding**

**Velu Govindan** <sup>(1)</sup> - **Zerihun Tadesse** <sup>(1)</sup> - **Pradeep Bhati** <sup>(1)</sup>

(1) International Maize and Wheat Improvement Center (Mexico), Global wheat program, Texcoco, Mexico

### **P201 - Major-Effect QTLs and Validated Markers for Improving Stripe Rust Resistance in Wheat Breeding**

**Mohammad Waris Haider** <sup>(1)</sup> - **Jaspal Kaur** <sup>(2)</sup> - **Ritu Bala** <sup>(2)</sup> - **Puja Srivastava** <sup>(2)</sup> - **Dinesh Kumar Saini** <sup>(3)</sup> - **Parveen Chhuneja** <sup>(4)</sup>

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### **P202 - Improving Genomic Prediction Accuracy for Wheat Stem Sawfly Resistance in Winter Wheat**

**Mik Hammers** <sup>(1)</sup> - **Zachary J. Winn** <sup>(1)</sup> - **Katherine Frels** <sup>(2)</sup> - **Punya Nachappa** <sup>(3)</sup> - **R. Esten Mason** <sup>(1)</sup>

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### **P203 - Haplotype-based Autoencoders for Dimensionality Reduction and Haplotype Block Effect Estimation**

**Philipp Heilmann** <sup>(1)</sup> - **Matthias Frisch** <sup>(1)</sup> - **Carola Zenke-Philippi** <sup>(1)</sup>

(1) Justus Liebig University, Institute of Agronomy and Plant Breeding II, Giessen, Germany

### **P204 - Plant-plant interactions and canopy complexity in winter wheat**

**Lina Hempel** <sup>(1)</sup> - **Nicholas Russell** <sup>(1)</sup> - **Tsu-Wei Chen** <sup>(1)</sup>

(1) Humboldt-Universität zu Berlin, Humboldt-Universität zu Berlin, Berlin, Germany

### **P205 - The ARCs Spring wheat breeding program for the dryland winter rainfall region of the Western Cape.**

**Ian Heyns** <sup>(1)</sup>

(1) Agricultural Research Council, Small Grain Crop Improvement, Stellenbosch, South Africa

### **P206 - Molecular overview of Eastern Canadian winter wheat germplasm for agronomic, quality and disease resistance traits using KASP and STS markers**

**Gavin Humphreys** <sup>(1)</sup> - **Bijendra Khadka** <sup>(1)</sup> - **Michel McElroy** <sup>(2)</sup> - **Tara Edwards** <sup>(1)</sup> - **Emma Hawthorn** <sup>(1)</sup> - **Helen Booker** <sup>(3)</sup> - **Ljiljana Tamburic-Ilincic** <sup>(4)</sup> - **Frank You** <sup>(1)</sup> - **Sylvie Cloutier** <sup>(1)</sup>

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### **P207 - Identifying the genetic drivers of Wheat's endogenous Biological Nitrification Inhibition (BNI) capacity.**

**Iván Jáuregui** <sup>(1)</sup> - **Yvan Ngapout** <sup>(2)</sup> - **Simon Griffiths** <sup>(2)</sup> - **Hervé Vanderschuren** <sup>(3)</sup>

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### **P208 - MosaicFarmAI: An innovative deep learning model for accurate genomic predictions in ultra-sparse field trials**

**Reem Joukhadar** <sup>(1)</sup> - **Abdulqader Jighly** <sup>(1)</sup> - **Rajeev Varshney** <sup>(2)</sup> - **German Spangenberg** <sup>(3)</sup>

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### **P209 - Diallel Analysis of Local Bread Wheat (*Triticum aestivum* L.) Cultivated in Uzbekistan**

**Diyor Juraev** <sup>(1)</sup> - **Oybek Amanov** <sup>(1)</sup> - **Sherzod Dilmurodov** <sup>(1)</sup> - **Aziz Nurbekov** <sup>(2)</sup> - **Nurzod Boysunov** <sup>(1)</sup>

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### **P210 - INHERITANCE PATTERNS IN F<sub>1</sub> HYBRID GENERATIONS OF DURUM WHEAT**

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### **P211 - Effect of Vrn1 and Rht8 genes on wheat performance in South Eastern Europe**

**Ankica Kondic-Spika** <sup>(1)</sup> - **Dragana Trkulja** <sup>(1)</sup> - **Svetlana Glogovac** <sup>(1)</sup> - **Milan Mirosavljevic** <sup>(2)</sup> - **Igor Vukelic** <sup>(1)</sup> - **Simon Griffiths** <sup>(3)</sup>

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### **P212 - Pyramiding of alien genes for high grain Fe and Zn in bread wheat using marker assisted selection**

**Rahul Kumar** <sup>(1)</sup> - **Anjali Verma** <sup>(1)</sup> - **Shoeb Ahmed** <sup>(1)</sup> - **Pushendra K Gupta** <sup>(1)</sup>

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### **P213 - Western Canadian wheat breeding: the path ahead**

**Santosh Kumar** <sup>(1)</sup> - **Clare Workman** <sup>(1)</sup> - **Denis Green** <sup>(1)</sup> - **Jasdeep Kaur** <sup>(1)</sup> - **Brad Cormack** <sup>(1)</sup> - **Paula Cormack** <sup>(1)</sup>

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### **P214 - Root traits as Breeding Targets for Improved Nitrogen Use Efficiency in Durum Wheat**

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### **P215 - DPFlow: A Flexible and Reproducible Pipeline for the Processing and Visualization of Multi-Sensor Drone Data for Wheat Breeding**

**Chun-Han Lee** <sup>(1)</sup> - **A.K.M. Tanbir Sazid** <sup>(1)</sup> - **Michael Drziska** <sup>(1)</sup> - **Muhammad Afzal** <sup>(1)</sup> - **Andreas Maurer** <sup>(1)</sup>

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### **P216 - Powerful one-dimensional scan to detect heterotic quantitative trait loci**

**Guoliang Li** <sup>(1)</sup> - **Renate Schmidt** <sup>(1)</sup> - **Yusheng Zhao** <sup>(1)</sup> - **Jochen Reif** <sup>(1)</sup> - **Yong Jiang** <sup>(1)</sup>

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### **P217 - Loss of Dicer-like 5 induces temperature-sensitive male sterility in wheat**

**Azahara C. Martin** <sup>(1)</sup> - **Sébastien Bélanger** <sup>(2)</sup> - **D. Blaine Marchant** <sup>(3)</sup> - **Junpeng Zhang** <sup>(4)</sup> - **Madison McGregor** <sup>(4)</sup> - **Mark Smedley** <sup>(5)</sup> - **Sadiye Hayta** <sup>(5)</sup> - **Graham Moore** <sup>(5)</sup> - **Blake C Meyers** <sup>(4)</sup>

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### **P218 - QTL for winter hardiness in western Canadian winter wheat (*Triticum aestivum* L.)**

**Curt McCartney** <sup>(1)</sup> - **Demissew Sertse** <sup>(1)</sup> - **Kaitlyn Pidherny** <sup>(1)</sup> - **Anirup Sengupta** <sup>(1)</sup> - **Harwinder Sidhu** <sup>(2)</sup>

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### **P219 - Stigma longevity is not a major limiting factor in hybrid wheat seed production**

**Marina Millan Blanquez** <sup>(1)</sup> - **James Simmonds** <sup>(2)</sup> - **Nicholas Bird** <sup>(3)</sup> - **Yann Manes** <sup>(4)</sup> - **Cristóbal Uauy** <sup>(2)</sup> - **Scott Boden** <sup>(5)</sup>

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### **P221 - Changes in Pannonian wheat spike architecture during the past 90 years**

**Milan Miroslavljević** <sup>(1)</sup> - **Vladimir Aćin** <sup>(1)</sup> - **Dragana Trkulja** <sup>(1)</sup> - **Sanja Mikić** <sup>(1)</sup> - **Ljiljana Brbaklić** <sup>(1)</sup> - **Krstina Aleksić** <sup>(1)</sup> - **Jovana Timić** <sup>(1)</sup> - **Bojan Jocković** <sup>(1)</sup>

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### **P222 - Association mapping to identify loci associated with stripe rust adult plant resistance in hard winter wheat**

**Mushfique Arefin Mobin** <sup>(1)</sup> - **Rajat Sharma** <sup>(1)</sup> - **Brett F. Carver** <sup>(2)</sup> - **Kimberly Garland Campbell** <sup>(3)</sup> - **Mary Guttieri** <sup>(4)</sup> - **Paul St. Amand** <sup>(4)</sup> - **Amy Bernardo** <sup>(4)</sup> - **Guihua Bai** <sup>(5)</sup> - **Indira Priyadarshini Lakkakula** <sup>(1)</sup> - **Anju Maan Ara** <sup>(1)</sup> - **Maricelis Acevedo** <sup>(6)</sup> - **Meriem Aoun** <sup>(1)</sup>

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### **P223 - Introgression and development of tetraploid durum wheat material integrating the common wheat QTL2D\_wssmv and Sbm1 resistance loci against WSSMV and SBCMV mosaics**

**Faharidine Mohamadi** <sup>(1)</sup>

<sup>(1)</sup> ARVALIS, Crops Adaptation to agroclimates, genetics and phenotyping, paris, France

### **P224 - Genetic basis of breeding gains in yield component traits in Nordic spring wheat**

**Keiko Nishioka** <sup>(1)</sup> - **Anja Karine Ruud** <sup>(1)</sup> - **Morten Lillemo** <sup>(1)</sup>

<sup>(1)</sup> Norwegian University of Life Sciences, Faculty of Biosciences, Ås, Norway

### **P225 - Identification of salt tolerant Maize-Wheat and Pearl millet-Wheat cybrid lines produced through in vitro fertilization system**

**Farzana Nowroz** <sup>(1)</sup> - **Nonoka Onda** <sup>(1)</sup> - **Aya Satoh** <sup>(1)</sup> - **Takayoshi Ishii** <sup>(2)</sup> - **Takashi Okamoto** <sup>(1)</sup>

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### **P226 - Effects of High Temperature Stress during Grain Filling on Yield and Grain Quality of Bread Wheat Genotypes**

**Aziz Nurbekov** <sup>(1)</sup> - **Diyor Juraev** <sup>(2)</sup> - **Sherzod Dilmurodov** <sup>(2)</sup> - **Oybek Amanov** <sup>(2)</sup>

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### **P227 - Comparative Analysis of Durum Wheat Varieties with Different Breeding Origins Across Multiple Cultivation Systems: Insights into Nitrogen Metabolism Gene Expression**

**Remzi Özkan** <sup>(1)</sup> - **Merve Bayhan** <sup>(2)</sup> - **Ahmet Can Akıncı** <sup>(2)</sup> - **Cuma Akıncı** <sup>(2)</sup>

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### **P228 - TRANSFERRING RYE CHROMOSOME IN TO WHEAT USING TRITICALE AS BRIDGE SPECIES FOR LEAF RUST RESISTANCE**

**Dharam Pal** <sup>(1)</sup> - **Anjali Pal** <sup>(1)</sup> - **SC Bhardwaj** <sup>(2)</sup> - **Subodh Kumar** <sup>(2)</sup> - **Niranjana M** <sup>(3)</sup>

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### **P229 - Improving Glutenin Subunit Genotypes to Develop "K-ExtraStrong" Wheat for Strategic Blending**

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### **P230 - Marker-assisted introgression of effective yellow rust (Pst) resistance loci into triticale**

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### **P232 - Innovations paving (half)-way towards hybrid wheat breeding**

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### **P233 - Physiological diversity and trait composition in elite CIMMYT bread wheat: implications for yield potential, stress adaptation, and pre-breeding**

**Alma Carolina Rivera Amado** <sup>(1)</sup> - **Guillermo Sebastian Gerard** <sup>(1)</sup> - **Matthew Reynolds** <sup>(1)</sup> - **Araceli Torres-Garcia** <sup>(1)</sup> - **Juan Burgueno** <sup>(2)</sup> - **Velu Govindan** <sup>(1)</sup>

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### **P234 - Integrating Grain Imaging for Deoxynivalenol (DON) Prediction using Fusarium-Damaged Kernel Assessment in Canadian Wheat**

**Yuefeng Ruan** <sup>(1)</sup> - **Samia Berraies** <sup>(1)</sup> - **Tinku Gautam** <sup>(1)</sup> - **Lin Li** <sup>(1)</sup> - **Ron Knox** <sup>(1)</sup> - **Christopher Sehn** <sup>(1)</sup> - **Brad Meyer** <sup>(1)</sup> - **Firdissa Bokore** <sup>(1)</sup> - **Curtis Pozniak** <sup>(2)</sup> - **Richard Cuthbert** <sup>(1)</sup>

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### **P235- Biological Nitrification Inhibition in Wheat: from genetic integration to mechanistic understanding, field validation, and deployment pathways**

**Carolina Saint Pierre** <sup>(1)</sup> - **Hannes Karwat** <sup>(1)</sup> - **Veronica Guwela** <sup>(1)</sup> - **Tek B. Sapkota** <sup>(2)</sup> - **Gretchen M Gettel** <sup>(3)</sup> - **A. Stuart Grandy** <sup>(4)</sup> - **Guillermo S. Gerard** <sup>(1)</sup> - **Susanne Dreisigacker** <sup>(1)</sup> - **Kristian K Brandt** <sup>(5)</sup> - **Hans Thordal-Christensen** <sup>(5)</sup> - **Jawameer Hama** <sup>(6)</sup> - **Cecile Gubry-Rangin** <sup>(7)</sup> - **Paswel Marenja** <sup>(8)</sup>

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### **P236 - Assessment of Tall and Short Plant Height Controlling Alleles on Wheat Adaptation and Yield Using Near-Isogenic Lines**

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### **P237 - Power calculations for testing genetic correlation between pure- and mixture line effects in wheat breeding**

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### **P238 - Vision for hybrid wheat through key male trait integration: A path towards optimizing hybrid grain set**

**Deepak Kumar** <sup>(1)</sup> - **Monika Spiller** <sup>(2)</sup> - **Thorsten Schnurbusch** <sup>(1)</sup>

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### **P239 - Towards accelerating nitrogen use efficiency in five Australian wheat varieties through molecular breeding**

**Devshree Singh** <sup>(1)</sup> - **Reyaz Mir** <sup>(1)</sup> - **Dion Bennett** <sup>(2)</sup> - **Vanika Garg** <sup>(1)</sup> - **Anu Chitikineni** <sup>(1)</sup> - **Rajeev Varshney** <sup>(1)</sup>  
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### **P240 - Replaying The Green Revolution in Wheat Landraces Through Advanced Gene Editing**

**Mark A. Smedley** <sup>(1)</sup> - **Sadiye Hayta** <sup>(1)</sup> - **Rajani Awal** <sup>(1)</sup> - **Sirisha Kaniganti** <sup>(2)</sup> - **Vladimir Nekrasov** <sup>(2)</sup> - **Simon Griffiths** <sup>(1)</sup>  
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### **P241 - Toward Resilient Wheat Production: Stress Physiology and Disease Resistance in Hybrids**

**Valentina Spanic** <sup>(1)</sup> - **Katarina Šunić Budimir** <sup>(1)</sup> - **Jurica Duvnjak** <sup>(1)</sup> - **Ivan Varnica** <sup>(2)</sup> - **Goran Jukic** <sup>(2)</sup> - **Ivna Štolfa Čamagajevac** <sup>(3)</sup> - **Rosemary Vukovic** <sup>(3)</sup> - **Hrvoje Sarcevic** <sup>(4)</sup>  
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### **P242 - Decoding Wheat G×E Dynamics: Insights from Elite Germplasm and BNI (Biological Nitrification Inhibition) lines in Australia**

**David Tabah** <sup>(1)</sup> - **Calum Watt** <sup>(1)</sup> - **Jayfred Godoy** <sup>(1)</sup> - **Chris Lisle** <sup>(2)</sup> - **Dini Ganesalingam** <sup>(2)</sup>  
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### **P243 - Genetic improvement of FHB and DON resistance by combining the Fhb1 gene with additional resistance QTL, and favorable morphological traits, in winter wheat population**

**Ljiljana Tamburic-Ilincic** <sup>(1)</sup> - **Curt McCartney** <sup>(2)</sup> - **Anjan Neupane** <sup>(3)</sup> - **Anita Brûlé-Babel** <sup>(2)</sup> - **Zahra Pourkhorshid** <sup>(4)</sup>  
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### **P244 - Decentralized wheat breeding pipeline: Serving the region from the hotspot**

**Zerihun Tadesse Tarekegn** <sup>(1)</sup> - **Sridhar Bhavani** <sup>(1)</sup> - **Antony Kibet** <sup>(1)</sup> - **Geremew Awas** <sup>(2)</sup> - **Godwin Macharia** <sup>(3)</sup> - **Negash Geleta** <sup>(3)</sup> - **Velu Govindan** <sup>(4)</sup> - **Guillermo Gerard** <sup>(4)</sup> - **Flavio Breseghello** <sup>(4)</sup>  
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### **P245 - West and Central Africa Wheat Development Network (WECAWheat): Leveraging Partnerships for Wheat Transformation in Africa**

**Benjamin Ewa Ubi** <sup>(1)</sup> - **Solomon Asefa Gizaw** <sup>(2)</sup> - **Vincent Ado Tenebe** <sup>(3)</sup>  
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### **P246 - Why people don't prefer to do gamma irradiation mutation breeding using wheat seed**

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### **P247 - Haplotype-Based Identification and Deployment of Rust Resistance Loci in Elite Wheat**

**Seema Yadav** <sup>(1)</sup> - **Shannon Dillon** <sup>(2)</sup> - **Meredith McNeil** <sup>(3)</sup> - **Eric Dinglasan** <sup>(1)</sup> - **Dilani Jambuthenne Gamaralalag** <sup>(1)</sup> - **Rohit Mago** <sup>(2)</sup> - **Peter Dodds** <sup>(2)</sup> - **Lee Hickey** <sup>(1)</sup> - **Ben Hayes** <sup>(1)</sup>

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### **P248 - Unlocking the Genetic Potential of Central Asian Wheat through Molecular Breeding, Genomic Selection and Speed Breeding**

**Kanat Yermekbayev** <sup>(1)</sup> - **Madi Shoken** <sup>(1)</sup> - **Zhuldyz Sartbayeva** <sup>(1)</sup> - **Aibek Abduakassov** <sup>(1)</sup> - **Simon Griffiths** <sup>(2)</sup> - **Yerlan Turuspekov** <sup>(3)</sup> - **Zahid Mahmood** <sup>(4)</sup> - **Jiajie Wu** <sup>(5)</sup> - **Awais Rasheed** <sup>(6)</sup>

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### **P249 - International Partnership and Investment on capacity building Enhanced Ethiopian Wheat Productivity**

**Habtemariam Zegeye** <sup>(1)</sup> - **Wuletaw Tadesse** <sup>(2)</sup> - **Zerihun Tadesse** <sup>(3)</sup> - **Sridhar Behavani** <sup>(3)</sup> - **Velu Govinda** <sup>(4)</sup> - **Maricelis Acevedo** <sup>(5)</sup>

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### **P250 - Genomic prediction with haplotype blocks in wheat**

**Carola Zenke-Philippi** <sup>(1)</sup> - **Philipp Georg Heilmann** <sup>(1)</sup> - **Yohannes Fekadu Difabachew** <sup>(1)</sup>

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### **P251 - Multiplex Genome Editing Enables Simultaneous Improvement of Multiple Elite Traits in Wheat**

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## TOPIC 8

### DEVELOPING CLIMATE-SMART WHEAT IN THE CONTEXT OF ABIOTIC STRESSES

### **P252 - From Farmers' Fields to Future Harvests: Yield and Quality Evaluation of New Wheat Varieties under Dry Season Conditions in Morocco**

**Amamaou ALi** <sup>(1)</sup> - **Moez Amri** <sup>(2)</sup> - **Abdelali Laamari** <sup>(3)</sup>

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### **P253 - Genomic and spectral signatures of PSII heat tolerance in cereals**

**Hanna Amoanima-Dede** <sup>(1)</sup> - **Joy Ojo** <sup>(1)</sup> - **Rebecca Thistlethwaite** <sup>(2)</sup> - **Li Li** <sup>(3)</sup> - **Robert Cope** <sup>(4)</sup> - **Beata Sznajder** <sup>(5)</sup> - **Richard M. Trethowan** <sup>(2)</sup> - **Owen K. Atkin** <sup>(6)</sup> - **Onoriode Coast** <sup>(1)</sup>

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### **P254 - Genetic dissection of root architectural and biomass traits in durum wheat landraces using rhizotron experiments**

**Genet Atsbeha Fiseha** <sup>(1)</sup> - **Muhammad Awais Farooq** <sup>(1)</sup> - **Congying Zhou** <sup>(1)</sup> - **Martina Bruschi** <sup>(1)</sup> - **Manar Makoul** <sup>(2)</sup> - **Francisco Pinto** <sup>(3)</sup> - **Chunyi Liu** <sup>(1)</sup> - **Xinyinh Zheng** <sup>(1)</sup> - **Cristian Forestan** <sup>(1)</sup> - **Matteo Bozzoli** <sup>(1)</sup> - **Matthew Reynolds** <sup>(3)</sup> - **Rod J Snowden** <sup>(2)</sup> - **Enrico Noli** <sup>(1)</sup> - **Silvio Salvi** <sup>(1)</sup> - **Eric Ober** <sup>(4)</sup> - **Roberto Tuberosa** <sup>(1)</sup> - **Marco Maccaferri** <sup>(1)</sup>

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### **P255 - Genomic loci for preharvest sprouting resistance in spring wheat (*Triticum aestivum* L.)**

**Ramanpreet Ramanpreet** <sup>(1)</sup> - **Gurkamal Kaur** <sup>(1)</sup> - **Muhammad Iqbal** <sup>(2)</sup> - **Curt McCartney** <sup>(1)</sup> - **Dean Spaner** <sup>(2)</sup> - **Belay Ayele** <sup>(3)</sup>

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### **P256 - Insights into the role of arbuscular mycorrhizal symbiosis in environmental stress tolerance of different durum wheat genotypes**

**Raffaella Maria Balestrini** <sup>(1)</sup> - **Luca Giovannini** <sup>(2)</sup> - **Giulio Panicucci** <sup>(3)</sup> - **Francesca Ieri** <sup>(3)</sup> - **Fabiano Sillo** <sup>(2)</sup> - **Elisa Zampieri** <sup>(2)</sup> - **Francesco Bergese** <sup>(2)</sup> - **Berivan Özlem Gümüs** <sup>(4)</sup> - **Vicent Arbona** <sup>(4)</sup> - **Miguel González Guzmán** <sup>(4)</sup> - **Giorgia Batelli** <sup>(5)</sup> - **Francesco Sestili** <sup>(6)</sup> - **Daniel Savatin** <sup>(6)</sup> - **Salvatore Esposito** <sup>(5)</sup>

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### **P258 - Response to High Temperature Stress in Bread Wheat Genotypes: A Comparative Evaluation of Organic and Conventional Production Systems**

**Merve Bayhan** <sup>(1)</sup> - **Remzi Özkan** <sup>(2)</sup> - **Ahmet Can Akıncı** <sup>(3)</sup> - **Mehmet Yıldırım** <sup>(3)</sup>

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### **P259 - Introgression of Rye Chromosome Arm 1RS Enhances Climate Resilience in German Winter Wheat**

**Yeneneh Bekele-Reba** <sup>(1)</sup> - **Lorenz Bülow** <sup>(2)</sup> - **Anne Zaar** <sup>(3)</sup> - **Michael Koch** <sup>(4)</sup> - **Adalbert Bund** <sup>(5)</sup> - **Carsten Reinbrecht** <sup>(6)</sup> - **Jost Dörnte** <sup>(7)</sup> - **Hubert Kempf** <sup>(8)</sup> - **Josef Holzzapfel** <sup>(8)</sup> - **Marco Stucke** <sup>(6)</sup> - **Jörg Plieske** <sup>(7)</sup> - **Lorenz Hartl** <sup>(5)</sup> - **Volker Mohler** <sup>(5)</sup> - **Stefan Streng** <sup>(6)</sup> - **Benjamin Stich** <sup>(9)</sup> - **Bernd Hackauf** <sup>(10)</sup>

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### **P260 - Identification and functional characterization of Iron-binding Proteins of bread wheat using hierarchical computational approaches.**

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### **P261 - Development and characterization of salt tolerant wheat variety through integrated breeding approaches**

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### **P262 - Increased night temperature and seed rate effects on grain weight analysed by graphic-mathematical modelling the plastic and elastic growth during grain filling of wheat**

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### **P263 Is yield plasticity a conservative genotypic attribute? Responses of contrasting cultivars to a broad range of conditions**

**Rafael Carrera** <sup>(1)</sup> - **Roxana Savin** <sup>(1)</sup> - **Gustavo Slafer** <sup>(1)</sup> - **Santiago Tamagno** <sup>(1)</sup>

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### **P266 - Developing a high-throughput platform for anatomical phenotyping in plants**

**Yikeng Cheng** <sup>(1)</sup> - **Jiawei Shi** <sup>(1)</sup> - **Zhanghan Pang** <sup>(1)</sup> - **Kejie Chai** <sup>(1)</sup> - **Zhen Jia** <sup>(1)</sup> - **Bingqian Hao** <sup>(1)</sup> - **Wanneng Yang** <sup>(1)</sup> - **Qiang Li** <sup>(1)</sup>

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### **P267 - Cold acclimation induced freezing tolerance and recovery dynamics in winter and spring wheat cultivars**

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### **P268 - Plant growth promoter Rhizobacteria-mediation for improving drought tolerance in spring bread wheat (*Triticum aestivum*).**

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### **P269 - Farmer-Validated Performance of Climate-Resilient Bread Wheat Varieties Under Real Production Conditions: Breaking the Yield Ceiling in Moroccan Dryland Systems**

**Imane ELftouh** <sup>(1)</sup> - **Fatima ezzahra oudrhiri** <sup>(1)</sup> - **Ghizlane Diria** <sup>(1)</sup> - **Mona Taghouti** <sup>(1)</sup> - **Fatima Gaboun** <sup>(1)</sup> - **Rabha Abdelwahed** <sup>(1)</sup>

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### **P270 - Genome-Wide Association Study for Identifying Drought-Tolerance MTAs Associated with Grain Yield and Related Traits in Spring Bread Wheat (*Triticum aestivum* L.)**

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### **P272 - Genome-Wide Identification and Functional Characterization of Ta4CL Genes in Wheat: Key Roles in Salt Tolerance, Cold Acclimation, and Lignin Biosynthesis**

**Fatemeh Gholizadeh** <sup>(1)</sup> - **Tibor Janda** <sup>(1)</sup>

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### **P273 - Linking root traits to nitrogen use efficiency in winter wheat**

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### **P274 - Roots Vertical Distribution and Physiological Characteristics in High-Yielding and Waterlogging-Tolerant Wheat**

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### **P275 - Flowering time governs responses to temperature stress: seasonal shifts and asymmetry in wheat yield**

**Felicity Harris** <sup>(1)</sup> - **Pengcheng Hu** <sup>(2)</sup> - **Nectarios Costadopolous** <sup>(1)</sup> - **Corinne Celestina** <sup>(3)</sup> - **James Hunt** <sup>(3)</sup> - **Kenton Porker** <sup>(4)</sup> - **Rick Graham** <sup>(5)</sup> - **Blakely Paynter** <sup>(6)</sup> - **Hammad Khan** <sup>(7)</sup> - **Kelly Angel** <sup>(8)</sup> - **Matthew Tucker** <sup>(9)</sup> - **Victor Sadras** <sup>(10)</sup>

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### **P276 - Integrated genome-wide association analysis of grain yield and adaptive traits in bread wheat across contrasting environments in the MENA region**

**Fatima Henkrar** <sup>(1)</sup> - **Sabah El Mrabti** <sup>(1)</sup> - **Hicham Derboune** <sup>(1)</sup> - **Wuletaw Tadesse** <sup>(2)</sup>

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### **P277 - Non-histone deacetylation of TaAREB3 by TaHDA8 fine-tunes root elongation and drought resilience in wheat**

**Zehui Liu** <sup>(1)</sup> - **Qun Yang** <sup>(1)</sup> - **Mingming Xin** <sup>(1)</sup> - **Yingyin Yao** <sup>(1)</sup> - **Zhongfu Ni** <sup>(1)</sup> - **Qixin Sun** <sup>(1)</sup> - **Zhaorong Hu** <sup>(1)</sup>

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### **P278 - Variation in weather conditions have significant effects on winter wheat flag leaf stomatal traits**

**Elena Ivandi** <sup>(1)</sup> - **Hanna Hõrak** <sup>(2)</sup> - **Reine Koppel** <sup>(1)</sup> - **Ebe Merilo** <sup>(2)</sup> - **Anne Ingver** <sup>(1)</sup>

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### **P279 - Spatio-temporal dynamics of heat sensitivity: how reproductive developmental gradients govern wheat grain-set processes**

**Duo JIANG** <sup>(1)</sup> - **Olivier Turc** <sup>(1)</sup> - **Aurélien Ausset** <sup>(1)</sup> - **Denis Vile** <sup>(1)</sup> - **Boris Parent** <sup>(1)</sup>

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### **P280 - Genomic breeding for heat tolerance at ICARDA**

**Hafssa Kabbaj** <sup>(1)</sup> - **Amadou Tidiane Sall** <sup>(2)</sup> - **ANNA Backhaus** <sup>(3)</sup> - **Rodomiro Ortiz** <sup>(4)</sup> - **ZAKARIA KEHEL** <sup>(5)</sup> - **Filippo Bassi** <sup>(1)</sup>

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### **P281 - Physiological Basis of Spike Fertility Variation in Wheat**

**Hassan Karim** <sup>(1)</sup> - **Celia Rasines Gandarillas** <sup>(1)</sup> - **Roxana Savin** <sup>(1)</sup> - **Gustavo Slafer** <sup>(1)</sup>

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### **P282 - Identification and validation of an important waterlogging QTL on chromosome 6A in spring wheat.**

**Anjali Khadka** <sup>(1)</sup> - **Anja Karine Ruud** <sup>(2)</sup> - **Tove Kristina Sundgren** <sup>(3)</sup> - **Tatiana Belova** <sup>(4)</sup> - **Morten Lillemo** <sup>(2)</sup>

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### **P283 - Optimising critical periods to maximise resource availability and crop yields in south-eastern Australia**

***Kate Maddern*** <sup>(1)</sup> - ***Bonnie Flohr*** <sup>(2)</sup> - ***Neil Hart*** <sup>(1)</sup>

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### **P284 - Physiological drivers of yield variation between modern durum wheats and Senatore Cappelli under contrasting growing conditions**

***Sofia I. Marchese*** <sup>(1)</sup> - ***Gustavo A. Slafer*** <sup>(1)</sup> - ***Roxana Savin*** <sup>(1)</sup> - ***Santiago Tamagno*** <sup>(1)</sup>

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### **P285 - A water-saving drought survival strategy in a wheat TILLING mutant involves metabolic and phosphorylation reprogramming**

***Ryosuke Mega*** <sup>(1)</sup> - ***Shun-ichiro Hirata*** <sup>(2)</sup> - ***Kota Yamashita*** <sup>(3)</sup> - ***Hinano Takase*** <sup>(3)</sup> - ***Taishi Umezawa*** <sup>(3)</sup> - ***Yasuko Watanabe*** <sup>(4)</sup> - ***June-Sik Kim*** <sup>(4)</sup> - ***Tomoyuki Kosaka*** <sup>(2)</sup> - ***Akihiro Nieda*** <sup>(2)</sup> - ***Hisashi Tsujimoto*** <sup>(5)</sup>

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### **P286 - Black Glumes: A Genetic Trait That Enhances Dry Down in Wheat**

***Daniela Moraes*** <sup>(1)</sup> - ***pierre Hucl*** <sup>(1)</sup> - ***Adam Carter*** <sup>(1)</sup>

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### **P287 - Genetic analysis of root system architecture and waterlogging tolerance in the Japanese Wheat Core collection**

***Ryo Nishijima*** <sup>(1)</sup> - ***Yuhei Nakano*** <sup>(1)</sup> - ***Akito Tokudo*** <sup>(1)</sup>

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### **P288 - Sensitivity to heat stress of wheat O<sub>2</sub>-based gas exchange differs between leaves and spikes**

***Joy Ojo*** <sup>(1)</sup> - ***Hanna Amoanimaa-Dede*** <sup>(1)</sup> - ***Elena Dehnavi*** <sup>(2)</sup> - ***Rebecca Thistlethwaite*** <sup>(3)</sup> - ***Fiona Fogarty*** <sup>(3)</sup> - ***Richard M. Trethowan*** <sup>(3)</sup> - ***Owen K. Atkin*** <sup>(4)</sup> - ***Onoriode Coast*** <sup>(1)</sup>

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### **P289 - Bridging the Adoption Gap: Participatory Validation and Predictive Analytics Drive 100% Re-Adoption of Climate-Resilient Durum Wheat in Morocco**

***Fatima Ezzahra Oudrhiri*** <sup>(1)</sup> - ***Imane El Ftouh*** <sup>(1)</sup> - ***Fatima Gaboun*** <sup>(2)</sup> - ***Rabha Abdelwahed*** <sup>(2)</sup> - ***Ghizlane Diria*** <sup>(2)</sup> - ***Mona Taghouti*** <sup>(3)</sup>

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### **P290 - Unraveling Drought Stress Tolerance Mechanisms in Durum Wheat through RNA Sequencing Applications**

***Mario A. Pagnotta*** <sup>(1)</sup> - ***Echrak Aissa*** <sup>(1)</sup>

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### **P291 - Genome wide association of fertility related traits in a collection of Spanish bread wheat landraces**

***Laura Pascual*** <sup>(1)</sup> - ***Andres Fernandez Borbolla*** <sup>(1)</sup> - ***Gabriel Coll*** <sup>(1)</sup> - ***Alvaro Carrasco Coquillat*** <sup>(2)</sup> - ***Marcos Cadarso*** <sup>(1)</sup> - ***Matilde Lopez-Ferandez*** <sup>(1)</sup> - ***Marina Martinez-Garcia*** <sup>(1)</sup>

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### **P292 - Dissecting heat-stress tolerance mechanisms in durum wheat (*Triticum durum*) germplasm under field conditions**

**Roshan Paudel** <sup>(1)</sup> - **Eder Groli** <sup>(2)</sup> - **Elisabetta Frascaroli** <sup>(1)</sup> - **Marco Maccaferri** <sup>(1)</sup> - **Karim Ammar** <sup>(3)</sup> - **Matteo Bozzoli** <sup>(1)</sup> - **Roberto Tuberosa** <sup>(1)</sup>

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### **P293 - Large wheat rhizosheath size enhanced root growth, diverse bacterial communities, and yield in acidic soil with high Al<sup>3+</sup> content.**

**Huyen T.T. Pham** <sup>(1)</sup> - **Jairo A. Palta** <sup>(2)</sup> - **Jiayin Pang** <sup>(3)</sup> - **Sasha N. Jenskin** <sup>(1)</sup> - **Pankaj K. Singh** <sup>(1)</sup> - **Kadambot H.M. Siddique** <sup>(2)</sup>

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### **P294 - Characterization of Durum Wheat (*Triticum turgidum* L. ssp. durum) tolerance to drought and terminal heat stress under Moroccan Conditions**

**Oumaima Rachik** <sup>(1)</sup> - **Moha Ferrahi** <sup>(2)</sup> - **Loubna Belqadi** <sup>(3)</sup> - **Abdelghani Nabloussi** <sup>(2)</sup> - **Filippo Maria Bassi** <sup>(4)</sup> - **Hafssa Kabbaj** <sup>(4)</sup>

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### **P295 - Yield-Determining Traits Responsible for Yield Penalties Across Contrasting Environments in Elite Wheat Germplasm**

**Celia Rasines Gandarillas** <sup>(1)</sup> - **Hassan Karim** <sup>(1)</sup> - **Gustavo A. Slafer** <sup>(1)</sup> - **Roxana Savin** <sup>(1)</sup>

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### **P296 - Post-anthesis short heat waves in durum wheat do not compromise breeding efforts to increase $\beta$ , $\beta$ -carotenoid content in grains**

**María Dolores Requena Ramírez** <sup>(1)</sup> - **Cristina Rodríguez-Suárez** <sup>(1)</sup> - **Dámaso Hornero-Méndez** <sup>(2)</sup> - **Sergio G. Atienza** <sup>(1)</sup>

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### **P297 - Validation of Major Genes and Identification of Novel Genomic Regions for Plant Height and Heading Date in a Durum Wheat RILs using GWAS**

**Lourdes María Martínez** <sup>(1)</sup> - **María Amparo Blanco Méndez** <sup>(1)</sup> - **Melisa Lorena Bustamante Cid** <sup>(2)</sup> - **Milena Montovio Mayor** <sup>(2)</sup> - **Daniela Russi** <sup>(3)</sup> - **Mariano Javier Beker** <sup>(4)</sup> - **Adelina Olga Larsen** <sup>(5)</sup> - **Carolina aint Pierre** <sup>(6)</sup> - **Pablo Federico Roncallo** <sup>(1)</sup>

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### **P298 - Mapping of QTL for stable falling number in the winter wheat cultivar 'Ellvis'**

**Anja Karine Ruud** <sup>(1)</sup> - **Jon Arne Dieseth** <sup>(2)</sup> - **Susanne Windju** <sup>(2)</sup> - **Muath Alsheikh** <sup>(2)</sup> - **Yang Ennian** <sup>(3)</sup> - **Anne Kjersti Uhlen** <sup>(1)</sup> - **Morten Lillemo** <sup>(1)</sup>

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### **P299 - Cascading Functional Water Balance Traits Enhance Wheat Grain Yield Under Terminal Drought**

**Roy Sadeh** <sup>(1)</sup> - **Roi Ben David** <sup>(2)</sup> - **Ittai Herrmann** <sup>(1)</sup> - **Zvi Peleg** <sup>(1)</sup>

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### **P300 - Genotypic Variation in Wheat Under Individual and Combined Heat and Drought Stress**

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### **P301 - Genome-Wide Association Study Reveals Major SNPs Associated with Pollen Viability and Spikelet Fertility in Wheat under Heat Stress**

**Abu Bakar Siddique** <sup>(1)</sup> - **Onusha Sharmita** <sup>(1)</sup> - **Zhong-Hua Chen** <sup>(2)</sup> - **Sergey Shabala** <sup>(3)</sup> - **Chenchen Zhao** <sup>(1)</sup> - **Meixue Zhou** <sup>(1)</sup>

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### **P302 - Responding to a changing environment: capturing temperature regulation across wheat development**

**Beth Soanes** <sup>(1)</sup> - **Dominique Hirsz** <sup>(1)</sup> - **Sandra Reis** <sup>(1)</sup> - **Katrin Trnka** <sup>(1)</sup> - **Harry Taylor** <sup>(2)</sup> - **Martin Mascher** <sup>(1)</sup> - **Laura Dixon** <sup>(1)</sup>

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### **P303 - Flowerint Locus T4 delayed flowering and suppressed spikelet outgrowth in bread wheat (*Triticum aestivum*)**

**Yanjie Song** <sup>(1)</sup> - **Laura Dixon** <sup>(2)</sup>

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### **P304 - Physiological and Root Architectural Responses to Flowering-Stage Drought in a Wheat Line Carrying a Thinopyrum Group 3 Chromosome**

**Edina Türkösi** <sup>(1)</sup> - **Klaudia Kruppa** <sup>(1)</sup> - **Éva Darkó** <sup>(2)</sup> - **Balázs Varga** <sup>(3)</sup> - **Márton György** <sup>(4)</sup> - **Zsolt Gulyas** <sup>(5)</sup> - **Kristóf Jobbágy** <sup>(1)</sup> - **Kateřina Holušová** <sup>(6)</sup> - **Eszter Gaál** <sup>(1)</sup> - **Balázs Kalapos** <sup>(1)</sup> - **Mónika Cséplő** <sup>(1)</sup> - **András Farkas** <sup>(1)</sup> - **László Ivanizs** <sup>(1)</sup> - **Péter Mikó** <sup>(4)</sup> - **Andrea Gulyás** <sup>(1)</sup> - **Norbert Hidvegi** <sup>(5)</sup> - **Péter Kovács** <sup>(1)</sup> - **András Cseh** <sup>(7)</sup> - **Márta Molnár-Láng** <sup>(1)</sup> - **Jan Bartoš** <sup>(6)</sup> - **Éva Szakács** <sup>(1)</sup> - **István Molnár** <sup>(1)</sup>

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### **P305- Climatic risk patterns for drought and heat stress in Spanish spring wheat: A phenology driven framework for breeding**

**Dolors Villegas**<sup>(1)</sup> - **Castilla Alejandro**<sup>(2)</sup> - **Rogelio Corbacho**<sup>(3)</sup> - **Miguel Gutiérrez**<sup>(4)</sup> - **Ernesto Igartua**<sup>(1)</sup> - **David Gómez-Candón**<sup>(1)</sup> - **Margarita García-Vila**<sup>(5)</sup> - **Alejandro Pérez-de-Luque**<sup>(6)</sup> - **José Antonio Jiménez-Berni**<sup>(5)</sup> - **Josefina C. Sillero**<sup>(6)</sup>

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### **P306 - Are Winter Wheat Yields Warming Up?**

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### **P307 - Wheat Physiology at CIMMYT – 55 Years' Legacy and the Way Forward**

**Jiemeng Xu**<sup>(1)</sup> - **Alma Carolina RIVERA AMADO**<sup>(1)</sup> - **Susanne DREISIGACKER**<sup>(1)</sup> - **Carolina SAINT PIERRE**<sup>(1)</sup> - **Matthew Reynolds**<sup>(1)</sup>

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### **P308 - Explicating the relationship between stay-green character, drought tolerance, and yield stability in Pakistani wheat genotypes**

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### **P310 - Future-proof crops: uncovering effects of future climate stresses on root ideotypes and impact on wheat grain nutritional quality**

**Sibongile Zimba**<sup>(1)</sup> - **Claire Grierson**<sup>(1)</sup>

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## TOPIC 9

### DISSECTING THE WHEAT-PATHOGEN AND PEST INTERACTION

### **P311 - Understanding Tilletia spp. population structure and virulence to support wheat resistance breeding**

**Therese Bengtsson 642TBO**<sup>(1)</sup> - **Laurène Mailhan**<sup>(1)</sup> - **Marwan Alamrani**<sup>(1)</sup> - **Eva Edin**<sup>(2)</sup> - **Björn Andersson**<sup>(3)</sup> - **Tina Henriksson**<sup>(4)</sup> - **Johanna Holmblad**<sup>(4)</sup> - **Anna Berlin**<sup>(3)</sup>

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### **P312 - CResWheat: Advancing Climate-Resilient Spring Wheat Breeding in the Nordic Region**

**Therese Bengtsson 642TBO**<sup>(1)</sup> - **Ahmed Jahoor**<sup>(2)</sup> - **Annika Johansson**<sup>(3)</sup> - **Anne Ingver**<sup>(4)</sup> - **Charlotte Damsgård**<sup>(5)</sup> - **Firuz Odilbekov**<sup>(6)</sup> - **Janni Hedensvang Jørgensen**<sup>(2)</sup> - **Jan T Svensson**<sup>(7)</sup> - **Jihad Orabi**<sup>(2)</sup> - **Jon Arne Dieseth**<sup>(8)</sup> - **Liina Jakobson**<sup>(4)</sup> - **Linda Kærgaard Nielsen**<sup>(5)</sup> - **Marja Jalli**<sup>(3)</sup> - **Marwan Alamrani**<sup>(1)</sup> - **Mehran Patpour**<sup>(9)</sup> - **Min Lin**<sup>(10)</sup> - **Mogens Støvring Hovmøller**<sup>(9)</sup> - **Morten Lillemo**<sup>(10)</sup> - **Muath Alsheikh**<sup>(8)</sup> - **Outi Manninen**<sup>(11)</sup> - **Pernille Bjarup**<sup>(2)</sup> - **Pernilla Vallenback**<sup>(6)</sup> - **Johanna Fonskov**<sup>(6)</sup> - **Reine Koppel**<sup>(4)</sup> - **Rodomiro Ortiz**<sup>(1)</sup> - **Ronja Wonneberger**<sup>(1)</sup> - **Susanne Windju**<sup>(8)</sup> - **Tarja Niemelä**<sup>(11)</sup>

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### **P313 - Characterizing racial diversity and virulence profiles of *Puccinia graminis* f. sp. *tritici* on durum wheat genotypes from the Mediterranean.**

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### **P314 - Determination of Physiological Races of *Puccinia striiformis* f.sp. *tritici* in Iran**

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### **P315 - Integrating Pest Management, Disease Resistance, Cadmium low uptake, and UAV Phenomics for Advancing Sustainable Wheat Production in Nordic Environments**

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### **P316 - Identification of septoria nodorum blotch sensitivity genes in U.S. Great Plains hard winter wheat**

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### **P317 - Addressing the Emerging Threat of Gout Fly (*Chlorops pumilionis* Bjerk.) to Sustainable Spring Wheat Production in Northern Europe**

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### **P318 - Genetic Loci Underlying Resistance to *Ustilago tritici* in the Spring Wheat Variety Carberry**

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### **P319 - GWAS analysis in an elite durum wheat panel uncovers stable QTLs for fusarium head blight (FHB) spike symptoms and deoxynivalenol (DON) content**

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### **P320 - Phenotypic variation in disease pressure on wheat is driven by genetic variation in rust populations across different environments**

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### **P321 - Genetic dissection of leaf rust, yellow rust and STB resistance in biparental mapping populations from *Triticum turgidum* landraces x modern cultivars**

**Luca Ceccato** <sup>(1)</sup> - **Eugenia Carini** <sup>(1)</sup> - **Ambra Viviani** <sup>(1)</sup> - **Matteo Bozzoli** <sup>(1)</sup> - **Jad Novi** <sup>(2)</sup> - **Chunyi Liu** <sup>(1)</sup> - **Congying Zhou** <sup>(1)</sup> - **Paola Viola** <sup>(3)</sup> - **Michael Chocard** <sup>(3)</sup> - **Carlo Invernizzi** <sup>(3)</sup> - **Elisabetta Frascaroli** <sup>(1)</sup> - **Roberto Tuberosa** <sup>(1)</sup> - **Marco Maccaferri** <sup>(1)</sup>

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### **P322 - Genomics-enabled wheat breeding to accelerate development of dwarf and common bunt resistant cultivars**

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### **P323 - Genomic Insights into Leaf Rust Resistance: Leveraging Global Germplasm for Durum Wheat Improvement**

**Francesca Desiderio** <sup>(1)</sup> - **Matteo Bozzoli** <sup>(2)</sup> - **Chunyi Liu** <sup>(2)</sup> - **Anna Maria Mastrangelo** <sup>(3)</sup> - **Daniela Marone** <sup>(3)</sup> - **Biagio Randazzo** <sup>(4)</sup> - **Jad Novi** <sup>(5)</sup> - **Paola Viola** <sup>(6)</sup> - **Carlo Invernizzi** <sup>(6)</sup> - **Sherif Ragab Mohamed El-Areed** <sup>(7)</sup> - **Marcel Thierry** <sup>(8)</sup> - **Omar Idrissi** <sup>(9)</sup> - **Ali Amamou** <sup>(9)</sup> - **Marco Maccaferri** <sup>(2)</sup> - **Luigi Cattivelli** <sup>(1)</sup> - **Elisabetta Mazzucotelli** <sup>(1)</sup>

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### **P324 - Wax Biosynthesis Genes and lncRNA Regulation in Durum Wheat Resistance to Fusarium Head Blight**

**Marina Díaz** <sup>(1)</sup> - **Daniela Soresi** <sup>(2)</sup> - **Alicia Miravalles** <sup>(3)</sup> - **Ingrid Garbus** <sup>(4)</sup> - **Pablo Federico Roncallo** <sup>(2)</sup> - **Alicia Carrera** <sup>(2)</sup>

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### **P325 - Purple pericarp wheat reduces host location, feeding efficiency, and progeny development of the granary weevil *Sitophilus granarius* (L.)**

**Ilaria D'Isita** <sup>(1)</sup> - **Federica Lo Muzio** <sup>(1)</sup> - **Michele Romanelli** <sup>(1)</sup> - **Barbara Laddomada** <sup>(2)</sup> - **Francesco Romaniello** <sup>(3)</sup> - **Maria Assunta Acquavia** <sup>(4)</sup> - **Carmela Gerardi** <sup>(5)</sup> - **Marco Pistillo** <sup>(1)</sup> - **Giuseppina Angione** <sup>(1)</sup> - **Fabio Fania** <sup>(6)</sup> - **Salvatore Esposito** <sup>(7)</sup> - **Pasquale De Vita** <sup>(8)</sup> - **Giacinto Salvatore Germinara** <sup>(1)</sup>

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### **P326 - Genetic factors underlying non-host resistance in wheat against non-adapted powdery mildew**

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### **P327 - Evaluation of yield and quality traits in moderately *Fusarium* head blight resistant Durum wheat lines**

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### **P328 - Genome-wide association study of multiple disease resistances in Australia using a large-scale international wheat panel**

**Nick Fradgley** <sup>(1)</sup> - **Harbens Bariana** <sup>(1)</sup> - **Melissa Cook** <sup>(2)</sup> - **Rama Harinath Reddy Dadu** <sup>(2)</sup> - **Velu Velu** <sup>(3)</sup> - **Cyrus Micheni** <sup>(1)</sup> - **Chris Moore** <sup>(2)</sup> - **Julie Nicol** <sup>(1)</sup> - **Laura Ruiz Espinoza** <sup>(1)</sup> - **Amit Singh** <sup>(1)</sup> - **Davinder Singh** <sup>(4)</sup> - **Wuletaw Tadesse** <sup>(5)</sup> - **Ben Trevaskis** <sup>(6)</sup> - **Laura Ziems** <sup>(1)</sup> - **Richard Trethowan** <sup>(1)</sup>

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### **P329 - Absolute Quantification of *Puccinia triticina* in a Diverse Wheat Panel Using Droplet Digital PCR (ddPCR)**

**Iulian Gabur** <sup>(1)</sup> - **Danut Petru Simioniuc** <sup>(1)</sup> - **Tiberiu Sarbu** <sup>(1)</sup> - **Matilda Ciuca** <sup>(2)</sup> - **Indira Galit** <sup>(2)</sup> - **Daniel Cristina** <sup>(2)</sup>

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### **P330 - Uncovering Novel Genetic Resistance to *Fusarium* Crown Rot in Watkins Wheat Landraces**

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### **P331 - Dissecting the Genetic Architecture of Take-All Disease Resistance in Wheat Using Haplotype Analysis Based on Genome-Wide Association Studies**

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### **P332 - Durum landraces as a valuable gene pool to uncover and map resistance to *Septoria tritici* blotch**

**Michela Giunti** <sup>(1)</sup> - **Chunyi Liu** <sup>(2)</sup> - **Jad Novi** <sup>(2)</sup> - **Eleonora Cappelletti** <sup>(2)</sup> - **Matteo Bozzoli** <sup>(2)</sup> - **Francesco De Sario** <sup>(2)</sup> - **Delfina Barabaschi** <sup>(3)</sup> - **Francesca Desiderio** <sup>(3)</sup> - **Roberto Tuberosa** <sup>(2)</sup> - **Antonio Prodi** <sup>(2)</sup> - **Agata Gadaleta** <sup>(1)</sup> - **Marco Maccaferri** <sup>(2)</sup> - **Elisabetta Mazzucotelli** <sup>(3)</sup>

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### **P333 - Genetic Dissection of Lesion Mimicry in Durum Wheat Identifies NLR and Receptor-Like Kinase Candidate Genes**

**Muhammad Manzoor ul Haq** <sup>(1)</sup> - **Caixia Lan** <sup>(1)</sup>

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### **P334 - Cross-Species Association Mapping Reveals the Genetic Architecture of the Interaction Between Wheat and Its Powdery Mildew Pathogen**

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### **P335 - Introgression of stripe rust adult-plant resistance from cv. Svevo into bread wheat cultivar.**

**Maimona Higazi** <sup>(1)</sup> - **Roi Ben-David** <sup>(2)</sup> - **Tzion Fahima** <sup>(1)</sup> - **Hanan Sela** <sup>(1)</sup>

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### **P336 - Climate Change and Pest Infestation Dynamics: AI-Driven Forecasting of Future Insect Complexes in Wheat Agroecosystems.**

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### **P337 - FreeWheat: High-Resolution Genomics and Microphenomics of Nonhost Resistance to Rust and Mildew**

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### **P338 - CONSEQUENCES OF MANAGEMENT PRACTICES ON DISTRIBUTION OF RUSSIAN WHEAT APHID, DIURAPHIS NOXIA, IN WHEAT PRODUCTION AREAS OF SOUTH AFRICA**

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### **P339 - Genetic Diversity and Population Structure of *Fusarium graminearum* in the Northern Wheat Belt of India: A First-of-Its-Kind Study**

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### **P340 - Genome-wide association study and Genomic prediction for stem rust resistance at the adult plant growth stage in elite spring bread wheat genotypes**

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### **P341 - Tritordeum as a Habitat for the Development of the Rice Weevil Sitophilus oryzae L.—Analysis of Selected Properties of the Cereal Grains Determining Their Resistance Mechanisms**

**Bożena Kordan** <sup>(1)</sup> - **Mariusz Nietupski** <sup>(1)</sup> - **Emilia Ludwiczak** <sup>(1)</sup> - **Elżbieta Suchowilska** <sup>(2)</sup> - **Mariusz Foltynski** <sup>(1)</sup>

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### **P342 - Genetics of Spot Blotch Resistance in Wheat**

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### **P343 - Effects on yield and seed composition of Puccinia striiformis f. sp. tritici inoculation of wheat near isogenic lines containing Yr9, Yr10, and Yr15 resistance genes**

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### **P344 - Climate change alters the landscape of wheat fungal diseases and breeding in China**

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### **P3645 - Develop Durum Wheat with Fusarium Head Blight Resistance Adapted to the Northern Great Plains**

**Xuehui Li** <sup>(1)</sup> - **Harika Pothula** <sup>(1)</sup> - **Evan Salsman** <sup>(1)</sup> - **Jason Axtman** <sup>(1)</sup> - **Justin Hegstad** <sup>(1)</sup> - **Yueqiang Leng** <sup>(2)</sup> - **Shaobin Zhong** <sup>(3)</sup> - **Zhao Jin** <sup>(1)</sup> - **Jason Fiedler** <sup>(4)</sup> - **Steven Xu** <sup>(5)</sup> - **Elias Elias** <sup>(1)</sup>

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### **P346 - Characterizing seedling and adult-plant resistance to Puccinia striiformis f. sp. tritici via genome wide association study and RNA-Seq**

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### **P347 - Metabolic Biological Basis Underlying Resistance to Fusarium Head Blight in Bread Wheat**

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### **P348 - Identification of Genomic Regions and Durum Wheat Genotypes Associated with Yellow Rust Resistance Using a Subset of the Global Durum Panel (GDPv1) Under Inoculation and Field Conditions in Argentina**

**Juan Manuel Rivera** <sup>(1)</sup> - **Pablo E. Campos** <sup>(2)</sup> - **Diana Martino** <sup>(1)</sup> - **Lisardo Gonzalez** <sup>(1)</sup> - **Juan Pablo Edwards Molina** <sup>(3)</sup> - **Pablo Federico Roncallo** <sup>(4)</sup>

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### **P349 - Effect of Pm3d/e chimeric gene on powdery mildew resistance of spring wheat (*Triticum aestivum* L.)**

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### **P350 - Identification of resistance sources to Septoria Tritici Blotch (STB) in spring Bread Wheat of Icarda germplasm in Morocco**

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### **P351 - Unraveling host-pathogen protein-protein interactions in wheat blast through in-silico docking and molecular dynamics simulations**

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### **P352 - Tracing Hybridization Timing in Wheat Powdery Mildew through Historical Genomics**

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### **P353 - A novel necrotrophic effector-receptor interaction in Parastagonospora nodorum-wheat pathosystem**

**Eiko Furuki** <sup>(1)</sup> - **Thomas C. Richardson** <sup>(1)</sup> - **Kasia Rybak** <sup>(1)</sup> - **Fiona Kamphuis** <sup>(1)</sup> - **Huyen Phan** <sup>(1)</sup>

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### **P354 - Genetic insights into Durum Wheat resistance to WSSMV and SBCMV across France and Italy**

**Valentin Ribaut** <sup>(1)</sup> - **Matteo Bozzoli** <sup>(2)</sup> - **Yann Holtz** <sup>(1)</sup> - **Hélène Pidon** <sup>(1)</sup> - **Véronique Viader** <sup>(1)</sup> - **Michel Bonnefoy** <sup>(3)</sup> - **Morgane Ardisson** <sup>(1)</sup> - **Sylvain Santoni** <sup>(1)</sup> - **Faharidine Mohamadi** <sup>(3)</sup> - **Marco Maccaferri** <sup>(2)</sup> - **Jacques David** <sup>(1)</sup>

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### **P355 - Virulence analysis of Polish isolates of the fungus *Zymoseptoria tritici* causing *Septoria tritici* blotch**

**Dominika Piaskowska** <sup>(1)</sup> - **Urszula Piechota** <sup>(1)</sup> - **Magdalena Radecka-Janusik** <sup>(1)</sup> - **Piotr Słowacki** <sup>(1)</sup> - **Paweł Czembor** <sup>(1)</sup>

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### **P356 - Integrating NAM and CIM to Map Stripe Rust Resistance in Spring Wheat**

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### **P357 - Discovery of Host Susceptibility Factors for Enhancing Fusarium Head Blight Resistance in Wheat**

***Nidhi Rawat*** <sup>(1)</sup> - ***Bhavith Chhabra*** <sup>(1)</sup> - ***Simran Goyal*** <sup>(1)</sup> - ***Parva Kumar Sharma*** <sup>(1)</sup> - ***Vijay Kumar Tiwari*** <sup>(1)</sup>

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### **P358 - Genome-wide association study reveals enriched diversity for *Pratylenchus thornei* resistance in Watkins' wheat landraces**

***Md. Tanbir Rubayet*** <sup>(1)</sup> - ***Bharat Garg*** <sup>(2)</sup> - ***Muhammad Rizwan*** <sup>(2)</sup> - ***Muthusamy Karthikeyan*** <sup>(3)</sup> - ***Subramaniam Geethanjali*** <sup>(4)</sup> - ***Madhav Pandit*** <sup>(5)</sup> - ***Jing Lin*** <sup>(2)</sup> - ***Jason Sheedy*** <sup>(2)</sup> - ***Sambasivam Periyannan*** <sup>(2)</sup>

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### **P359 - PGPR Priming and Reprogramming of Stress Crosstalk for Enhancing Resilience to Heat-Induced Spot Blotch Susceptibility in Wheat**

***Jayanwita Sarkar*** <sup>(1)</sup> - ***Usha Chakraborty*** <sup>(2)</sup> - ***Bishwanath Chakraborty*** <sup>(2)</sup>

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### **P360 - Integrating Avirulence Depletion and Pantranscriptomics to Identify Host-Specificity Factors in *Blumeria graminis***

***Benedikt Schiestl*** <sup>(1)</sup> - ***Xinyi Liu*** <sup>(1)</sup> - ***Lukas Kunz*** <sup>(2)</sup> - ***Ralph Hückelhoven*** <sup>(1)</sup> - ***Marion Müller*** <sup>(1)</sup>

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### **P361 - Rust resistance in a changing world as key for future cereal yields**

***Philipp Schulz*** <sup>(1)</sup> - ***Nathalie Beilke*** <sup>(1)</sup> - ***Tim Kloppe*** <sup>(1)</sup> - ***Edyta Paczos-Grzęda*** <sup>(2)</sup> - ***Bettina Klocke*** <sup>(1)</sup>

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### **P362 - Activation of Exotic Wheat Genetic Resources for Disease Resistance**

***Moozhan Serpoush*** <sup>(1)</sup> - ***Peter Dracatos*** <sup>(2)</sup> - ***Francesca Desiderio*** <sup>(3)</sup> - ***Hakan Ozkan*** <sup>(4)</sup> - ***Istvan Molnar*** <sup>(5)</sup> - ***Wanxin Chen*** <sup>(6)</sup> - ***Salim Bourras*** <sup>(7)</sup> - ***Ulrich Schaffrath*** <sup>(8)</sup> - ***Dimitar Douchkov*** <sup>(1)</sup>

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### **P363 - Genome wide association studies and expression analyses identify candidate genes for spot blotch resistance in bread wheat**

**Sandeep Sharma** <sup>(1)</sup> - **G Mahendra Singh** <sup>(1)</sup> - **Uttam Kumar** <sup>(2)</sup> - **Pradeep Bhati** <sup>(3)</sup> - **Manish Kumar Vishwakarma** <sup>(3)</sup> - **Dinesh Kumar Saini** <sup>(4)</sup> - **Vinod K Mishra** <sup>(1)</sup> - **Arun K Joshi** <sup>(3)</sup>

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### **P364 - Identification of stable and high-effect loci for durable leaf rust resistance in bread wheat through multi-environment Genome-Wide Association Mapping**

**Muhammad Ali Sher** <sup>(1)</sup> - **Shoaib Ur Rehman** <sup>(1)</sup> - **Mahmood Alam Khan** <sup>(1)</sup> - **Muhammad Abu Bakar Saddique** <sup>(1)</sup> - **Babar Farid** <sup>(1)</sup> - **Tauqeer Abbas1** <sup>(1)</sup> - **Humayun Raza** <sup>(2)</sup>

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### **P365 - Development of a first comprehensive Near Isogenic line (NIL) series for stem rust resistance in a spring wheat background**

**Davinder Singh** <sup>(1)</sup> - **Karanjeet Sandhu** <sup>(1)</sup> - **Hanif Miah** <sup>(1)</sup> - **Dorian Friendship** <sup>(1)</sup> - **Robert Park** <sup>(1)</sup>

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### **P366 - Exploring Triticale as a Novel Source for Wheat Blast Resistance**

**Xinyao He** <sup>(1)</sup> - **Susanne Dreisigacker** <sup>(1)</sup> - **Muhammad Rezaul Kabir** <sup>(2)</sup> - **Krishna kanta Roy** <sup>(3)</sup> - **Hector Vargas** <sup>(4)</sup> - **Karim Ammar** <sup>(1)</sup> - **Pawan Kumar Singh** <sup>(1)</sup>

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### **P367 - Exploration of wheat lines with tolerance to Fusarium mycotoxin deoxynivalenol**

**Shota Takata** <sup>(1)</sup> - **Hiroyuki Nakagawa** <sup>(2)</sup> - **Fuminori Kobayashi** <sup>(1)</sup>

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### **P368 - Tracking the evolution of Puccinia graminis f. sp. tritici and its impact on the resistance of wheat cultivars and breeding lines in South Africa**

**Tarekegn Terefe** <sup>(1)</sup> - **Botma Visser** <sup>(2)</sup> - **Joyce Mebalo** <sup>(3)</sup> - **Bomikazi Gqola** <sup>(1)</sup> - **Willem Boshoff** <sup>(2)</sup>

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### **P369 - Contrasting Wheat Resistances Shape Plant-to-Plant Field Spread of Foliar Disease in Cultivar Mixtures**

**Adrien Vial** <sup>(1)</sup> - **Valentina Rossi** <sup>(2)</sup> - **Åsa Lankinen** <sup>(3)</sup> - **Laura Grenville-Briggs Didymus** <sup>(3)</sup> - **Firuz Odilbekovs** <sup>(4)</sup> - **Tina Henriksson** <sup>(4)</sup> - **Aakash Chawade** <sup>(1)</sup>

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### **P370 - Deciphering Spot Blotch Resistance in Wheat through Multi-Locus GWAS and Gene Expression Analysis**

**Manish Kumar Vishwakarma** <sup>(1)</sup> - **Pradeep Kumar Bhati** <sup>(1)</sup> - **Ankita Mohapatra** <sup>(2)</sup> - **Narain Dhar** <sup>(1)</sup> - **Gyanendra Pratap Singh** <sup>(3)</sup> - **Sundeep Kumar** <sup>(2)</sup> - **Velu Govindan** <sup>(4)</sup> - **Maruthi Prasanna Boddupalli** <sup>(5)</sup>

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### **P371 - Fusarium, Ergot, and Midge damage in Canadian Wheat across >30 Years and >250,000 Samples**

**Sean Walkowiak** <sup>(1)</sup> - **Tiffany Chin** <sup>(1)</sup>

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### **P372 - Mycotoxin profiles of Tritordeum grain after artificial spike inoculation with Fusarium culmorum** **W.G. Smith**

**Marian Wiwart** <sup>(1)</sup> - **Elżbieta Suchowilska** <sup>(1)</sup> - **Michael Sulyok** <sup>(2)</sup> - **Wolfgang Kandler** <sup>(2)</sup> - **Rudolf Krska** <sup>(2)</sup>

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### **P373- Additive Effects of Key Environmental Factor Combinations Drive Wheat Powdery Mildew Incidence Across Growth Stages Under Climate Change**

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### **P374 - Identification and cloning of a greenbug resistance gene from Aegilops tauschii**

**Dhondup Lhamo** <sup>(1)</sup> - **Jianqiang Shen** <sup>(2)</sup> - **Genqiao Li** <sup>(3)</sup> - **Toni Mohr** <sup>(1)</sup> - **Roger Thilmony** <sup>(1)</sup> - **Prakitchai Chotewutmontri** <sup>(1)</sup> - **Han-Chang Chang** <sup>(1)</sup> - **Honglian Ye** <sup>(4)</sup> - **Shuyu Liu** <sup>(5)</sup> - **Jackie Rudd** <sup>(6)</sup> - **Brett Carver** <sup>(7)</sup> - **Yong-Qiang Gu** <sup>(1)</sup> - **Xiangyang Xu** <sup>(3)</sup> - **Steven Xu** <sup>(1)</sup>

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### **P375 - Molecular identification and validation of an adult-plant stripe rust resistance gene in the wheat cultivar Chuanmai 62**

**Fangjie Yao** <sup>(1)</sup> - **Manyu Yang** <sup>(1)</sup> - **Ning Yang** <sup>(1)</sup> - **Jun Li** <sup>(1)</sup> - **Wuyun Yang** <sup>(1)</sup> - **Ennian Yang** <sup>(1)</sup>

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### **P376 - Uncovering masked blast resistance genes through chromosome dosage manipulation in allohexaploid wheat**

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### **P377 - Identification of stripe rust resistance loci in Gansu wheat landraces using genome-wide association analysis**

**Zhe Zhang** <sup>(1)</sup> - **Yu Zhang** <sup>(1)</sup> - **Ying Guo** <sup>(2)</sup> - **Ravi P. Singh** <sup>(1)</sup> - **Caixia Lan** <sup>(1)</sup>

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### **P378 - Identification and dissection of seedling-stage resistance loci for Septoria tritici blotch (STB) in a Global collection of landraces representative of the Triticum turgidum ssp. germplasm**

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### TOPIC 10

#### WHEAT QUALITY, END-USE PROCESSING, NUTRITION AND HUMAN-HEALTH

**P379 - Multi-locus GWAS for grain contents of eight minerals in bread wheat (*Triticum aestivum* L.)**

**Shoeb Ahmed** <sup>(1)</sup> - **Jitendra Kumar** <sup>(2)</sup> - **Rahul. Kumar** <sup>(1)</sup> - **Pushpendra K Gupta** <sup>(1)</sup>

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**P380 - Endoplasmic reticulum stress remodelling by Lunapark proteins: A transcriptomic dissection in model and wheat plants**

**Muhammad Ali** <sup>(1)</sup> - **Carmen Mangas** <sup>(1)</sup> - **Verena Kriechbaumer** <sup>(1)</sup>

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**P381 - From Farmers' Fields to Future Harvests: Yield and Quality Evaluation of New Wheat Varieties under Dry Season Conditions in Morocco**

**Ali Amamou** <sup>(1)</sup> - **Mouez Amri** <sup>(2)</sup> - **Abdelali Laamari** <sup>(3)</sup>

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**P382 - Development of a High Molecular Weight Glutenin Subunits master set from GLU-B1 locus**

**Francisco Andrade** <sup>(1)</sup> - **Juan B. Alvarez** <sup>(1)</sup> - **Carlos Guzmán** <sup>(1)</sup>

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**P383 - The Triticeae breeding research group: exploring innovative strategies to enhance grain carotenoid content in wheat**

**MD Requena-Ramírez** <sup>(1)</sup> - **C Rodríguez-Suárez** <sup>(1)</sup> - **E. Mazzucotelli** <sup>(2)</sup> - **D. Hornero-Méndez** <sup>(3)</sup> - **SG Atienza** <sup>(1)</sup>

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**P384 - Green Insecticidal Beads Based on Chitosan-Modified Tunisian Diatomaceous Earth and Thyme Essential Oil for the Control of *Rhyzopertha dominica* in Stored Durum Wheat seeds**

**Olfa Bachrouch** <sup>(1)</sup> - **Hager Ben Ghanem** <sup>(2)</sup> - **Lina Gayess** <sup>(1)</sup> - **Syrine Somrani** <sup>(2)</sup> - **Ghozlene Mekhloufi** <sup>(3)</sup> - **karima Horchani Ennaifer** <sup>(4)</sup> - **Arbi Amdouni** <sup>(5)</sup> - **Manef Abderraba** <sup>(6)</sup>

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**P385 - The ectopic expression of taexpa6 and the triple knock-out of tagw2 increase grain weight while maintaining quality traits (protein and phosphorus concentrations) in wheat**

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**P386 - The Tetraploid Wheat Core Collection (TCC): a highly diverse, molecularly characterised germplasm resource assessed for developmental and health-related Quality Traits**

**Eugenia Carini** <sup>(1)</sup> - **Matteo Bozzoli** <sup>(1)</sup> - **Cristian Forestan** <sup>(1)</sup> - **Sandra Stefanelli** <sup>(1)</sup> - **Laura Gazza** <sup>(2)</sup> - **Luigi Cattivelli** <sup>(2)</sup> - **Elisabetta Mazzucotelli** <sup>(2)</sup> - **Maria Caboni** <sup>(1)</sup> - **Roberto Tuberosa** <sup>(1)</sup> - **Marco Maccaferri** <sup>(1)</sup>

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### **P387 - A Differentially Distributed Gene Cluster for Isorhamnetin Biosynthesis Identified in Wheat**

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### **P388 - Identification of QTL involved in heavy metal and trace element accumulation in durum wheat**

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### **P389 - Agronomic, quality and nutritional potential of modern bread wheat in Ireland**

**Sinead Dermody** <sup>(1)</sup> - **Fiona Doohan** <sup>(2)</sup> - **Susanne Barth** <sup>(1)</sup>

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### **P390 - Viscoelastic Properties and Protein Functionality of High-Amylose Wheat Flour**

**Riley Smith** <sup>(1)</sup> - **Yong Cheng Shi** <sup>(1)</sup> - **Hulya Dogan** <sup>(1)</sup>

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### **P391 - WheatRes: Assessing Genetic Diversity for Durum Wheat Quality in Spanish Landraces and Commercial Cultivars**

**Virginia Garcia-Calabres Marin** <sup>(1)</sup> - **Francisco Andrade** <sup>(1)</sup> - **Magdalena Izquierdo Julve** <sup>(2)</sup> - **Julio Isidro y Sánchez** <sup>(3)</sup> - **Jaime Nolasco Rodríguez-Vázquez** <sup>(4)</sup> - **Ignacio Solís** <sup>(4)</sup> - **Juan Bautista Alvarez** <sup>(1)</sup> - **Carlos Guzmán** <sup>(1)</sup>

- (1) Escuela Técnica Superior de Ingeniería Agronómica y de Montes (ETSIAM), Cordoba, Spain - (2) Laboratorio Arbitral Agroalimentario, Ministerio de Agricultura, Pesca y Alimentación, Madrid, Spain - (3) Centro de Biotecnología y Genómica de Plantas (CBGP), Universidad Politécnica de Madrid - Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (UPM-INIA), Madrid, Spain - (4) Agrovegetal, Universidad de Sevilla, Sevilla, Spain

### **P392 - Comparative analysis of wheat grain protein content: wet chemistry and NIR based methods**

**Christina Hagerty** <sup>(1)</sup> - **Gena Mahato** <sup>(2)</sup> - **Ryan Graebner** <sup>(3)</sup> - **Matthew Hunt** <sup>(3)</sup> - **Grayson Namdar** <sup>(2)</sup> - **Rachael Plunkett** <sup>(2)</sup> - **Daisy Wood** <sup>(3)</sup> - **Margaret Krause** <sup>(3)</sup> - **Surendra Singh** <sup>(4)</sup> - **Francisco Calderon** <sup>(3)</sup>

(1) Oregon State University, Botany and Plant Pathology, Pendleton, United Kingdom - (2) Oregon State University, Botany and Plant Pathology, Pendleton, United States - (3) Oregon State University, Crop and Soil Science, Pendleton, United States - (4) Washington State University, Crop Science, Lind, United States

### **P393 - Enhancing Dietary Fiber in Wheat Through Arabinoxylan Improvement**

**Maria Itria Ibhá** <sup>(1)</sup> - **Nayelli Hernandez-Espinosa** <sup>(1)</sup> - **Guillermo Gerard** <sup>(1)</sup> - **Susanne Dreisigacker** <sup>(1)</sup>

(1) CIMMYT, Global Wheat Program, Texcoco, Mexico

### **P394 - Effect of the wheat bread-making gene on gluten protein fractions analyzed by high-performance liquid chromatography**

**Angeline Jacoby** <sup>(1)</sup> - **Chidimma Gift Omenoba-Nee Ubah** <sup>(1)</sup> - **Ansorie Maré** <sup>(2)</sup> - **Maryke Labuschagne** <sup>(1)</sup>

(1) University of the Free State, Department of Plant Sciences, Bloemfontein, South Africa - (2) Agricultural Research Council, Vegetable, Industrial and Medicinal Plants (ARC-VIMP), Pretoria, South Africa

### **P395 - Twenty-year evaluation of baking quality traits in spring and winter wheat cultivars**

**Riinu Kaasik** <sup>(1)</sup> - **Reine Koppel** <sup>(2)</sup> - **Anne Ingver** <sup>(2)</sup>

(1) Centre of Estonian Rural Research and Knowledge, Department of Plant Protection, Jõgeva, Estonia - (2) Centre of Estonian Rural Research and Knowledge, Department of Plant Breeding, Jõgeva, Estonia

### **P396 - High-Throughput Prediction of Farinograph and Baking Traits in Hard Red Spring Wheat Using GlutoPeak Indices and Machine Learning: Fast-Track End-Use Quality Decisions**

**Simardeep Kaur** <sup>(1)</sup> - **Andrew Green** <sup>(2)</sup> - **Shahidul Islam** <sup>(2)</sup>

(1) North Dakota State University (Visiting Scholar) and ICAR-Research Complex for North Eastern Hill Region, Umiam, Meghalaya 793103, India (On leave), Department of Plant Sciences, North Dakota State University, Fargo, United States - (2) North Dakota State University, Department of Plant Sciences, North Dakota State University, Fargo, United States

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### **P397 - Genome-Wide Association Study for Genetic Determinants of Phytic Acid Content and Mineral Bioavailability in Wheat (*Triticum aestivum* L.)**

**Rahul Kumar** <sup>(1)</sup> - **Anjali Verma** <sup>(1)</sup> - **Shoeb Ahmed** <sup>(1)</sup> - **Pushendra K Gupta** <sup>(1)</sup>

<sup>(1)</sup> Department of Genetics and Plant Breeding, Chaudhary Charan Singh University,, MEERUT, India

### **P398 - Effect of global warming on wheat grain and baking quality stability - Project CLIMABOUL (CLimat et quAlité BOULangère)**

**Anne-Laure Chateigner-Boutin** <sup>(1)</sup> - **Laïla Rodrigues De Araujo Alves Cruz** <sup>(2)</sup> - **Baptiste Vancostenoble** <sup>(3)</sup> - **Benoît Méléard** <sup>(3)</sup> - **Christine Girousse** <sup>(2)</sup> - **Catherine Ravel** <sup>(2)</sup> - **Valérie Lullien-Pellerin** <sup>(4)</sup> - **Luc Saulnier** <sup>(1)</sup> - **Jacques Le Gouis** <sup>(2)</sup>

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### **P399 - Dynamic Profiling of Lipid Metabolism in Developing Wheat Grains**

**QianQian Li** <sup>(1)</sup> - **Ting Chen** <sup>(1)</sup> - **Guang Chen** <sup>(1)</sup>

<sup>(1)</sup> Huazhong Agricultural University, College of Plant Science and Technology, WuHan, China

### **P400 - Technological quality screening in wheat: Direct and indirect effects of gluten traits on bread volume**

**Ernandes Manfro** <sup>(1)</sup> - **Gabriela Soster Santeti** <sup>(1)</sup> - **Viginia Cunha** <sup>(1)</sup> - **Luana Carolina do Prado Pabst** <sup>(1)</sup> - **Ivana Sabljic** <sup>(1)</sup>

<sup>(1)</sup> GDM Seeds, Wheat Research, Passo Fundo, Brazil

### **P401 - Genome-Wide Identification and Expression Validation of Phytate Biosynthesis Genes in Wheat for Zn bioavailability**

**Rizwana Maqbool** <sup>(1)</sup> - **Muhammad Ahsan Khan** <sup>(1)</sup> - **Fatime Umar** <sup>(1)</sup> - **Muhammad Taseer Abbas Naqvi** <sup>(1)</sup>

<sup>(1)</sup> University of Agriculture, Faisalabad, Plant Breeding and Genetics, Faisalabad, Pakistan

### **P402 - Multifunctional Roles of Sucrose Fatty Acid Esters in Flour- and Starch-Based Premix Foods**

**Takugi Murata** <sup>(1)</sup> - **Yuki Mitarai** <sup>(1)</sup> - **Tomosada Masuko** <sup>(1)</sup>

<sup>(1)</sup> Mitsubishi Chemical Corporation, Food & Healthcare Group, KANAGAWA, Japan

### **P403 - Integrating Nutritional Quality Sensory Traits and Genetic Diversity for Multi-Trait Wheat Improvement**

**Olawale Olalekan** <sup>(1)</sup> - **Julia Darlison** <sup>(1)</sup> - **Nikwan Shariatipour** <sup>(1)</sup> - **Karin Wendin** <sup>(2)</sup> - **Marcus Johansson** <sup>(2)</sup> - **Tina Henriksson** <sup>(3)</sup> - **Thomas Björklund** <sup>(4)</sup> - **Firuz Odilbekov** <sup>(3)</sup> - **Eva Johansson** <sup>(1)</sup> - **Mahubjon Rahmatov** <sup>(1)</sup>

<sup>(1)</sup> Swedish University of Agricultural Sciences, Department of Plant Breeding, Alnarp, Sweden - <sup>(2)</sup> Kristianstad University, Deptment of Food and Meal Science, Kristianstad, Sweden - <sup>(3)</sup> Lantmännen Lantbruk, Lantmännen Lantbruk, Svalöv, Sweden - <sup>(4)</sup> Warbro Kvarn AB, Warbro Kvarn AB, Sköldinge, Sweden

### **P404 - Genetic Diversity, Fiber Composition and Quality Traits of European Spelt Wheat (*Triticum aestivum* ssp. *spelta*) for Sustainable Crop Improvement**

**Marianna Rakszegi** <sup>(1)</sup> - **Sándor Tömösközi** <sup>(2)</sup> - **Edina Jaksics** <sup>(2)</sup> - **Péter Mikó** <sup>(1)</sup> - **Ildikó Karsai** <sup>(3)</sup> - **András Cseh** <sup>(3)</sup>

<sup>(1)</sup> HUN-REN Centre for Agricultural Research, Cereal Breeding Department, Martonvásár, Hungary - <sup>(2)</sup> Budapest University of Technology and Economics, Department of Applied Biotechnology and Food Science, Faculty of Chemical Technology and Biotechnology, Budapest, Hungary - <sup>(3)</sup> HUN-REN Centre for Agricultural Research, Molecular Breeding Department, Martonvásár, Hungary

### **P405 - Impact of xanthophyll esterification on carotenoid stability during bread-making in wheat and tritordeum**

**María Dolores Requena-Ramírez** <sup>(1)</sup> - **Cristina Rodríguez-Suárez** <sup>(1)</sup> - **Dámaso Hornero-Méndez** <sup>(2)</sup> - **Sergio G. Atienza** <sup>(1)</sup>

<sup>(1)</sup> Spanish National Research Council, Institute for Sustainable Agriculture, Córdoba, Spain - <sup>(2)</sup> Spanish National Research Council, Instituto de la grasa/Department of Food Phytochemistry, Sevilla, Spain

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### **P406 - Understanding the Effects of Global Warming on Wheat Grain to Improve the Stability of Breadmaking Quality.**

**Laïla Rodrigues De Araujo Alves Cruz** <sup>(1)</sup> - **Baptiste Vancostenoble** <sup>(2)</sup> - **Benoît Meleard** <sup>(2)</sup> - **Christine Girousse** <sup>(3)</sup> - **David Alvarez** <sup>(3)</sup> - **Lucie Le-Bot** <sup>(4)</sup> - **Sibille Perrochon** <sup>(3)</sup> - **Catherine Grand-Ravel** <sup>(3)</sup> - **Valérie Lullien-Pellerin** <sup>(5)</sup> - **Luc Saulnier** <sup>(4)</sup> - **Anne-Laure Chateigner-Boutin** <sup>(4)</sup> - **Jacques Le Gouis** <sup>(3)</sup>

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### **P407 - Dissecting the genetic basis of carotenoid accumulation and esterification in an argentinean durum wheat collection using GWAS, evaluation of the carotenoid profile and KASP markers**

**María Amparo Blanco Méndez** <sup>(1)</sup> - **Lourdes María Martínez** <sup>(2)</sup> - **Anna Maria Mastrangelo** <sup>(3)</sup> - **Diana Martino** <sup>(4)</sup> - **Juan Manuel Rivera** <sup>(4)</sup> - **Juan Manuel Rodrigo** <sup>(2)</sup> - **Ana Clara Fernández** <sup>(2)</sup> - **Daniela Soresi** <sup>(2)</sup> - **Dámaso Hornero Méndez** <sup>(5)</sup> - **Sergio Gustavo Atienza** <sup>(6)</sup> - **Cristina Rodríguez Suárez** <sup>(6)</sup> - **Pablo Federico Roncallo** <sup>(2)</sup>

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### **P408 - Exploiting gamma-irradiation mutant population for enhancing grain nutritional quality and nitrogen use efficiency.**

**Ajay Siluveru** <sup>(1)</sup> - **Alex Howard** <sup>(1)</sup> - **Simon Orford** <sup>(1)</sup> - **Workie Zegeye** <sup>(1)</sup> - **Noam Chayut** <sup>(1)</sup> - **Burkhard Steuernagel** <sup>(1)</sup> - **Jon Wright** <sup>(2)</sup>

(1) John Innes centre, Crop Genetics, Norwich, United Kingdom - (2) Earlham Institute, Research Faculty, Norwich, United Kingdom

### **P409 - Multi-Environment Field Trials of a European Elite Wheat Panel Provide Insights into the Genetic Architecture of Falling Number Stability**

**Iulian Gabur** <sup>(1)</sup> - **Harmeet Chawla** <sup>(2)</sup> - **Sylvia Seddig** <sup>(3)</sup> - **Frank Ordon** <sup>(4)</sup> - **Holger Zetzsche** <sup>(4)</sup> - **Andreas Stahl** <sup>(4)</sup>

(1) Iasi University of Life Sciences, Department of Plant Science, 700489 Iasi, Romania - (2) University of Manitoba, Faculty of Agricultural and Food Sciences, Winnipeg, Canada - (3) Julius Kuehn Institute, Institute for Resistance Research and Stress Tolerance, Sanitz, Germany - (4) Julius Kuehn Institute, Institute for Resistance Research and Stress Tolerance, Quedlinburg, Germany

### **P410 - Tritordeum, an alternative cereal for breadmaking**

**Elżbieta Suchowilska** <sup>(1)</sup> - **Marian Wiwart** <sup>(1)</sup> - **Anna Szafrńska** <sup>(2)</sup>

(1) University of Warmia and Mazury in Olsztyn, Department of Genetics, Plant Breeding and Bioresource Engineering, Olsztyn, Poland - (2) Prof. Waclaw Dąbrowski Institute of Agricultural and Food Biotechnology – Stat, Department of Grain Processing and Bakery, Warszawa, Poland

### **P411 - Genotype × Agroecological Management Interactions Promote Rheological and Nutritional Quality of Durum Wheat in Mediterranean Mountains**

**Mona Taghouti** <sup>(1)</sup> - **Rajae Kallida** <sup>(2)</sup> - **Fatima Gaboun** <sup>(3)</sup> - **Miguel Sanchez-Garcia** <sup>(4)</sup> - **Nasserddine Louahdi** <sup>(5)</sup> - **Rola El Amil** <sup>(6)</sup> - **Ilaria Mazzoli** <sup>(7)</sup> - **Dubravka Kolarić Zatezalo** <sup>(8)</sup> - **Rachid Mrabet** <sup>(2)</sup> - **Filippo Bassi** <sup>(4)</sup>

(1) INRA Morocco, Plant Breeding, Rabat, Morocco - (2) INRA, Agronomy, Rabat, Morocco - (3) INRA, bioinformatic, Rabat, Morocco - (4) ICARDA, breeding, Rabat, Morocco - (5) ITGC, Agronomy, Alger, Algeria - (6) LARI, breeding, Zahle, Lebanon - (7) Open Fields, agri-food, Parma, Italy - (8) PINS, development, Skrad, Croatia

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**P412- Accelerating wheat quality phenotyping: streamlined bioactive assays and NIR-machine learning prediction of processing quality**

**Wenfei Tian (1) - Zhonghu He (1)**

*(1) Chinese Academy of Agricultural Sciences (CAAS), Institute of Crop Sciences, Beijing, China*

**P413 - A simple way for wholegrain bakery products to be low-FODMAP**

**Aleksandra Torbica (1)**

*(1) Institute of Food Technology in Novi Sad, University of Novi Sad, Novi Sad, Serbia*

**P414 - Environmental and genetic determination of semolina Minolta b\* value in winter durum wheat**

**Gyula Vida (1) - Katalin Puskas (1) - Monika Cseplo (1)**

*(1) HUN-REN Centre for Agricultural Research, Cereal Breeding Department, Martonvasar, Hungary*

**P415 - A high-quality bread wheat genome unravels adaptive evolution of wheat end-use quality**

**Jijin Zhang (1) - Fei Lu (1) - Xinyou Cao (2)**

*(1) Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, Beijing, China - (2) Crop Research Institute, Shandong Academy of Agricultural Sciences, Jinan, China*

**P416 Turning canopy temperature into a multidimensional tool: phenotyping diurnal canopy temperature dynamics in spring wheat breeding programs**

**Hamza Ali Khan (1) - Gustavo A. Lobos (1)**

*(1) Plant Breeding and Phenomics Center, Universidad de Talca, Chile*

## IWC4 2026 - SELECTED ORAL TALKS

### TOPIC 1

#### ENABLING SUSTAINABLE WHEAT PRODUCTION IN A BROAD CROPPING SYSTEM. I CROP MANAGEMENT, SOIL CONSERVATION AND HEALTH

##### **PO417 - Optimizing sulfur nutrition as a driver for iron homeostasis and grain safety in durum wheat**

**Eleonora Coppa** <sup>(1)</sup> - **Mutsumi Watanabe** <sup>(2)</sup> - **Moez Maghrebi** <sup>(3)</sup> - **Giulia Quagliata** <sup>(1)</sup> - **Alessandro Bruschini** <sup>(1)</sup> - **Rainer Hoefgen** <sup>(4)</sup> - **Gianpiero Vigani** <sup>(3)</sup> - **Stefania Astolfi** <sup>(1)</sup>

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##### **PO418 - Proteome-informed breeding and management of nitrogen uptake and use efficiency across Australian broadacre wheat systems**

**Katharina Belt** <sup>(1)</sup> - **Samantha Harvie** <sup>(1)</sup> - **Hui Cao** <sup>(1)</sup> - **Samalka Wijeweera** <sup>(1)</sup> - **A. Harvey Millar** <sup>(1)</sup>

<sup>(1)</sup> University of Western Australia, School of Molecular Sciences, Crawley, Australia

##### **PO419 - The Wheat Microbiome: Spatial and Genetic Drivers of Bacterial and Fungal Communities in European Wheat Systems**

**Minely Cerón-Bustamante** <sup>(1)</sup> - **Tancredi Caruso** <sup>(1)</sup> - **Cathal McCabe** <sup>(2)</sup> - **Stephen Carey** <sup>(2)</sup> - **Angela Feechan** <sup>(2)</sup> - **Marco Maccaferri** <sup>(3)</sup> - **Matteo Bozzoli** <sup>(3)</sup> - **Sophie Bouchet** <sup>(4)</sup> - **Justin Blancon** <sup>(4)</sup> - **Fiona Doohan** <sup>(1)</sup>

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##### **PO420 - Improving the performance of durum and winter wheat in intermediate areas of France through a combination of appropriate levers: lessons from 10 years of system experimentation in the Syppre network**

**Marie Estienne** <sup>(1)</sup> - **Loïc Viguière** <sup>(1)</sup> - **Domitille Jamet** <sup>(2)</sup> - **Matthieu LOOS** <sup>(2)</sup> - **Eva Deschamps** <sup>(1)</sup> - **Geoffroy Oudoire** <sup>(1)</sup> - **stéphane Cadoux** <sup>(2)</sup> - **Rémy Duval** <sup>(3)</sup> - **Clotilde Rouillon** <sup>(1)</sup>

<sup>(1)</sup> Arvalis, Agronomy, Economy & environnement Service, Paris, France - <sup>(2)</sup> Terres Inovia, Agronomy, Economy & environnement departement, Thiverval-Grignon, France - <sup>(3)</sup> Institut technique de la betterave, research & developpement, Paris, France

##### **PO421- Prospects for Enhancing Durum Wheat Productivity in Ethiopia: From Field to Market:**

**Wasihun Getahun** <sup>(1)</sup>

<sup>(1)</sup> Ethiopian institute of Agricultural Research, Bishoftu Agricultural Research Center, Addis Ababa, Ethiopia

##### **PO422- From Genes to the Rhizosphere: Harnessing Root-Microbiome Interactions to Improve Nitrogen Use Efficiency in Wheat**

**Maria Hernandez-Soriano** <sup>(1)</sup> - **Frederick James Warren** <sup>(2)</sup> - **Falk Hildebrand** <sup>(3)</sup> - **Simon Griffiths** <sup>(1)</sup>

<sup>(1)</sup> John Innes Centre, Crop Genetics, Norwich, United Kingdom - <sup>(2)</sup> Quadram Institute, Food, Microbiome and Health, Norwich, United Kingdom - <sup>(3)</sup> Quadram Institute, Microbial Genomes, Strains and Evolution, Norwich, United Kingdom

##### **PO423 - Learning from Long-Term Data: How Rotation and Establishment Systems have Shaped Winter Wheat Performance in a Temperate Atlantic-influenced Region**

**Jack Jameson** <sup>(1)</sup>

<sup>(1)</sup> Teagasc, Crop Science, Carlow, Ireland

##### **PO425 - Exploring novel planting strategies for sustainable improvement in wheat yield and profits**

**Maninder Pal Singh** <sup>(1)</sup> - **Patrick Copeland** <sup>(1)</sup> - **Wallas da Silva** <sup>(1)</sup> - **Paulo Arias** <sup>(1)</sup> - **Dennis Pennington** <sup>(1)</sup> - **Eric Olson** <sup>(1)</sup>

<sup>(1)</sup> Michigan State University, Dept of Plant, Soil and Microbial Sciences, East Lansing, United States

## IWC4 2026 - SELECTED ORAL TALKS

### TOPIC 2

#### ENABLING SUSTAINABLE WHEAT PRODUCTION IN A BROAD CROPPING SYSTEM. II PHENOMICS, ENVIROMICS, CROP MODELLING, DIGITAL AGRICULTURE

##### **PO426 - Strategically Timed UAV Remote Sensing for Robust Wheat Yield Prediction: A Multi-year Study on Phenology-Aligned Machine Learning Dynamics**

**Shannon Baker** <sup>(1)</sup> - **Nafiul Islam** <sup>(2)</sup> - **Mahendra Bhandari** <sup>(3)</sup> - **Anjin Chang** <sup>(4)</sup> - **Amir MH Ibrahim** <sup>(5)</sup> - **Jinha Jung** <sup>(6)</sup> - **Juan Landivar** <sup>(3)</sup> - **Shuyu Liu** <sup>(2)</sup> - **Varenya Sri Mudumb** <sup>(2)</sup> - **Ritik Pokharel** <sup>(7)</sup> - **Jackie Rudd** <sup>(1)</sup> - **Jose Landivar Scott** <sup>(3)</sup> - **Thanos Gentemis** <sup>(2)</sup>

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##### **PO427 - Digitizing Wheat Variety Testing: Transitioning High-Throughput Phenotyping from Research to Regulatory Infrastructure**

**Alexis Comar** <sup>(1)</sup> - **Alexandra Bürgy** <sup>(1)</sup> - **Patrizia Zamberletti** <sup>(1)</sup> - **Jeremy Labrosse** <sup>(1)</sup> - **Jocelyn Gillet** <sup>(1)</sup> - **Adam Serghini** <sup>(1)</sup> - **Allison Poilance** <sup>(1)</sup>

<sup>(1)</sup> Hiphen, Hiphen, Avignon, France

##### **PO428 - Spectral Fingerprinting of Wheat at Early Growth Stages Enables Accurate Grain Yield Prediction**

**C. Mariano Cossani** <sup>(1)</sup> - **Victor Sadras** <sup>(1)</sup>

<sup>(1)</sup> SARDI-South Australian Research and Development Institute, PIRSA, URRBRAE, Australia

##### **PO429 - Multi-climatic plausibility testing of nitrogen-mitigation scenarios in wheat using crop models: a benchmarking workflow for digital agronomy**

**Francesca Degan** <sup>(1)</sup> - **Nathan Ortalo** <sup>(1)</sup> - **Donghao Xu** <sup>(2)</sup> - **Anna Strekalovskaya** <sup>(3)</sup> - **Chantal Hendriks** <sup>(4)</sup> - **Karin Nikolaus** <sup>(4)</sup> - **Marcos Lana** <sup>(5)</sup> - **Salim Belyazid** <sup>(3)</sup> - **Gerard Ros** <sup>(2)</sup> - **Mengru Wang** <sup>(2)</sup> - **Anaïs Bonnard** <sup>(6)</sup> - **Benoit Piquemal** <sup>(7)</sup>

<sup>(1)</sup> ARVALIS – Institut du végétal, R&D Agronomy, Paris, France - <sup>(2)</sup> Wageningen University & Research, Dept. Earth Systems and Global Change, Wageningen, Netherlands - <sup>(3)</sup> Stockholm University, Dept. of Physical Geography, Stockholm, Sweden - <sup>(4)</sup> Wageningen University & Research, Dept. Sustainable Soil Use, Wageningen, Netherlands - <sup>(5)</sup> Swedish University of Agricultural Sciences (SLU), Dept. of Crop Production Ecology, Agricultural cropping systems, Uppsala, Sweden - <sup>(6)</sup> ARVALIS – Institut du végétal, R&D Crop Physiology, Paris, France - <sup>(7)</sup> ARVALIS – Institut du végétal, R&D Modelling, Paris, France

##### **PO430 - Characterizing yield through wheat's perception of chronological progression: a multi-omics plant-time warping approach**

**Roth Lukas** <sup>(1)</sup> - **Herrera Juan M.** <sup>(2)</sup> - **Häner Lilia Levy** <sup>(2)</sup> - **Pellet Didier** <sup>(2)</sup> - **Fossati Dario** <sup>(2)</sup> - **Boss Mike** <sup>(3)</sup> - **Chen Xiaoran** <sup>(4)</sup> - **Nousi Paraskevi** <sup>(4)</sup> - **Volpi Michele** <sup>(4)</sup>

<sup>(1)</sup> Martin-Luther-University (MLU) Halle-Wittenberg, Precision Phenotyping Group, Halle (Saale), Germany - <sup>(2)</sup> Agroscope, Agroscope, Nyon, Switzerland - <sup>(3)</sup> ETH Zurich, Institute of Agricultural Sciences, Zürich, Switzerland - <sup>(4)</sup> Swiss Data Science Center, Swiss Data Science Center, Zürich and Lausanne, Switzerland

##### **PO431 - Synchronized plant-environment time series enable machine learning prediction of daily wheat transpiration from high-precision gravimetric lysimetry**

**Menachem Moshelion** <sup>(1)</sup> - **Nir Averbuch** <sup>(1)</sup> - **Shani Fridman** <sup>(1)</sup>

<sup>(1)</sup> The Hebrew University of Jerusalem, Institute of Plant Sciences and Genetics in Agriculture, The Robert H. Smith Faculty of Agriculture, Food and Environment, Rehovot, Israel

##### **PO432 - Grain yield efficiency of dry land wheat in Israel: a high-resolution coupled crop-climate modeling approach**

**Ehud Strobach** <sup>(1)</sup> - **Avimanyu Ray** <sup>(1)</sup> - **Daniel Farhi** <sup>(1)</sup> - **Roi Ben-David** <sup>(2)</sup>

<sup>(1)</sup> Agricultural Research Organization, Department of Environmental Physics and Irrigation, Rishon Lezion, Israel - <sup>(2)</sup> Agricultural Research Organization, Vegetable Field Crop Research, Rishon Lezion, Israel

## IWC4 2026 - SELECTED ORAL TALKS

### TOPIC 03

#### CARBON FOOTPRINT OF WHEAT PRODUCTION: TOWARD A REDUCTION OF GREENHOUSE GAS EMISSIONS

##### **PO433 - Environmental Impacts of Precision Agriculture Adoption in Central Italy Wheat Production: A Comparative LCA**

**Claudia Camplone** <sup>(1)</sup> - **Maksims Feofilovs** <sup>(2)</sup> - **Lucia Rocchi** <sup>(1)</sup> - **Sara Allahverdiyeva** <sup>(2)</sup> - **Renzo Santi** <sup>(3)</sup> - **Luisa Paolotti** <sup>(1)</sup> - **Lorenzo Covarelli** <sup>(1)</sup> - **Francesco Romagnoli** <sup>(2)</sup>

<sup>(1)</sup> University of Perugia, Agricultural, Food and Environmental Sciences, Perugia, Italy - <sup>(2)</sup> Riga Technical University, Institute of Energy Systems and Environment, Riga, Latvia - <sup>(3)</sup> Colussi Group, Università degli studi di Perugia, Perugia, Italy

##### **PO434 - Sucrose signalling: a new approach for reducing nitrogen inputs in wheat production?**

**Catherine Famelton** <sup>(1)</sup> - **Maria Oszvald** <sup>(2)</sup> - **Cara Griffiths** <sup>(3)</sup>

<sup>(1)</sup> Rothamsted Research, Engineering Biology for Agriculture, Harpenden, United Kingdom - <sup>(2)</sup> SugaROX Ltd., Harpenden, United Kingdom - <sup>(3)</sup> SugaROX Ltd. and Rothamsted Research, Engineering Biology for Agriculture, Harpenden, United Kingdom

##### **PO435 - Improved carbohydrate accumulation drives wheat breeding progress and yield formation**

**Lukas Förter** <sup>(1)</sup> - **Andris Finkbeiner** <sup>(1)</sup> - **Andreas Stahl** <sup>(2)</sup> - **Tsu-Wei Chen** <sup>(3)</sup> - **Eva Herzog** <sup>(4)</sup> - **Benjamin Wittkop** <sup>(1)</sup> - **Rod J. Snowdon** <sup>(1)</sup>

<sup>(1)</sup> Justus-Liebig-University, Department of Plant Breeding, Giessen, Germany - <sup>(2)</sup> Julius Kühn Institute, Institute for Resistance Research and Abiotic Stress Tolerance, Quedlinburg, Germany - <sup>(3)</sup> Humboldt University Berlin, Group of Intensive Plant Food Systems, Berlin, Germany - <sup>(4)</sup> Justus-Liebig-University, Biometry and Population Genetics, Giessen, Germany

##### **PO436 - Phenotyping nitrogen use efficiency for a new benchmark nutrient management regime in UK farms**

**Oorbessy Gaju** <sup>(1)</sup> - **Fred Wu** <sup>(1)</sup>

<sup>(1)</sup> University of Lincoln, Lincoln Institute for Agr-Food and Technology, Lincoln, United Kingdom

##### **PO437 - Carbon footprint of Brazilian wheat production under contrasting farm sizes**

**Vanderlise Giongo** <sup>(1)</sup> - **Álvaro Augusto Dossa** <sup>(1)</sup> - **Alexandre Ferreira do Nascimento** <sup>(1)</sup> - **Anderson Santi** <sup>(1)</sup> - **Adão da Silva Acosta** <sup>(1)</sup> - **André Júlio do Amaral** <sup>(1)</sup> - **Diego Inácio Patrício** <sup>(1)</sup> - **Oswaldo Vasconcellos Vieira** <sup>(1)</sup> - **Mônica da Silva Santana** <sup>(2)</sup> - **Eduardo Caierão** <sup>(1)</sup>

<sup>(1)</sup> Brazilian Agriculture Research Corporation (Embrapa), Embrapa Wheat, Passo Fundo, Brazil - <sup>(2)</sup> Edmundo Gastal Agricultural Research and Development Support Foundation, Embrapa Wheat, Pelotas, Brazil

##### **PO439 - Breeding Beyond the Plot: Leveraging Rotational Genetics to Improve Wheat Performance and Farming System Sustainability**

**Millicent Smith** <sup>(1)</sup> - **Shanice Van Haeften** <sup>(1)</sup> - **Stephanie Brunner** <sup>(1)</sup> - **Eric Dinglasan** <sup>(1)</sup> - **Mark Edward Fabreag** <sup>(1)</sup> - **Joe Eyre** <sup>(1)</sup> - **Celine Mens** <sup>(1)</sup> - **Ben Hayes** <sup>(1)</sup> - **Michael Udvardi** <sup>(1)</sup> - **Samir Alahmad** <sup>(1)</sup> - **Mitchell Eglinton** <sup>(1)</sup> - **Ryan McQuinn** <sup>(2)</sup> - **Merrill Ryan** <sup>(3)</sup> - **Sarah van der Meer** <sup>(1)</sup> - **Lee Hickey** <sup>(1)</sup>

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### TOPIC 04

#### EXPLORING WHEAT DIVERSITY, EVOLUTION AND GENETIC RESERVOIRS

##### **PO440 - Genetic diversity characterization of *Aegilops tauschii* wide sequenced collection to unlock useful alleles left-behind by domestication and breeding**

**Matteo Bozzoli** <sup>(1)</sup> - **Martina Bruschi** <sup>(1)</sup> - **Pauline Thomelin** <sup>(2)</sup> - **Eric Ober** <sup>(2)</sup> - **Jesús Quiroz Chávez** <sup>(3)</sup> - **Kumar Gaurav** <sup>(3)</sup> - **Sanu Arora** <sup>(3)</sup> - **Cristobal Uauy** <sup>(3)</sup> - **Brande BJ Wulff** <sup>(4)</sup> - **Roberto Tuberosa** <sup>(1)</sup> - **Marco Maccaferri** <sup>(1)</sup>

- <sup>(1)</sup> University of Bologna, Department of Agricultural and Food Sciences (DISTAL), Bologna, Italy - <sup>(2)</sup> National Institute of Agricultural Botany, NIAB, Cambridge, United Kingdom - <sup>(3)</sup> John Innes Centre, Norwich Research Park, Norwich, United Kingdom - <sup>(4)</sup> King Abdullah University of Science and Technology (KAUST), Center for Desert Agriculture, Biological and Environmental Science and Engineering Division (BESE), Thuwal, Saudi Arabia

##### **PO441 - Comprehensive Atlas of Wild Relative Introgressions Reveals Conserved Introgression Patterns and Massive Untapped Diversity in Wheat Genebanks**

**Surbhi Grewal** <sup>(1)</sup> - **Julie King** <sup>(1)</sup> - **Miguel Gonzalez-Sanchez** <sup>(2)</sup> - **Dan Smith** <sup>(2)</sup> - **Burkhard Steuernagel** <sup>(2)</sup>

<sup>(1)</sup> University of Nottingham, Nottingham Wheat Research Centre, Loughborough, United Kingdom - <sup>(2)</sup> John Innes Centre, John Innes Centre, Norwich, United Kingdom

## IWC4 2026 - SELECTED ORAL TALKS

### **PO442 - Genebank genomics provides a comprehensive genome diversity atlas of wheat**

**Max Haupt** <sup>(1)</sup> - **Hannah F Oertel** <sup>(2)</sup> - **Albert W Schulthess** <sup>(2)</sup> - **Samira El Hanafi** <sup>(2)</sup> - **Sandip M Kale** <sup>(3)</sup> - **Erwan Le Floch** <sup>(4)</sup> - **Axel Himmelbach** <sup>(5)</sup> - **Nils Stein** <sup>(5)</sup> - **Jochen Reif** <sup>(5)</sup> - **Martin Mascher** <sup>(1)</sup>

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### **PO443 - Mapping global wheat diversity through an Australian lens**

**Luisa Teasdale** <sup>(1)</sup> - **James O'Dwyer** <sup>(1)</sup> - **Kenny Yu** <sup>(1)</sup> - **Mahdi Rahimi** <sup>(1)</sup> - **Kanak Jain** <sup>(1)</sup> - **Frank Su** <sup>(1)</sup> - **Don Isdale** <sup>(1)</sup> - **Parampreet Kaur** <sup>(1)</sup> - **Debbie Wong** <sup>(1)</sup> - **Sally Norton** <sup>(1)</sup> - **Kerrie Forrest** <sup>(1)</sup> - **Gabriel Keeble-Gagnere** <sup>(1)</sup> - **Matthew Hayden** <sup>(1)</sup>

<sup>(1)</sup> Agriculture Science & Technology, Agriculture Victoria, Melbourne, Australia

### **PO444 - Mitochondrial hybridity in in vitro fertilization-generated maizewheat and pearl milletwheat cybrids drive important stable phenotypic variations**

**Kingsley Ikenna Ikpa-Agodo** <sup>(1)</sup> - **Rika Sugiura** <sup>(2)</sup> - **Nonoka Onda** <sup>(3)</sup> - **Aya Satoh** <sup>(3)</sup> - **Tety Maryenti** <sup>(3)</sup> - **Nasrein Mohamed Kamal** <sup>(4)</sup> - **Takashi Okamoto** <sup>(3)</sup> - **Benjamin Ewa Ubi** <sup>(4)</sup> - **Takayoshi Ishii** <sup>(4)</sup>

<sup>(1)</sup> United Graduate School Of Agricultural Science, Tottori University, Tottori, Japan - <sup>(2)</sup> Graduate School Of Sustainability Science, Tottori University, Tottori, Japan - <sup>(3)</sup> Graduate School Of Sciences, Tokyo Metropolitan University, Tokyo, Japan - <sup>(4)</sup> International Platform For Dryland Research And Education, Tottori University, Tottori, Japan

### **PO445 - Ancient grains illuminate the mosaic origin of domesticated wheat**

**Yael Lev-Mirom** <sup>(1)</sup> - **Assaf Distelfeld** <sup>(1)</sup> - **Valenyna Klymiuk** <sup>(2)</sup> - **Curtis Pozniak** <sup>(2)</sup> - **Sariel Hubner** <sup>(3)</sup> - **Tzion Fahima** <sup>(1)</sup> - **Ehud Weiss** <sup>(4)</sup>

<sup>(1)</sup> University of Haifa, Institute of evolution, Haifa, Israel - <sup>(2)</sup> Crop Development Centre and Department of Plant Sciences, University of Saskatchewan, Saskatchewan, Canada - <sup>(3)</sup> MIGAL, University of Kiryat Shmona, Kiryat Shmona, Israel - <sup>(4)</sup> Martin (Szusz) Department of Land of Israel Studies and Archaeology, University of Bar-Ilan, Ramat Gan, Israel

### **PO446 - Comparative analysis of exome sequencing data reveals convergent selection of durum and bread wheat**

**Lorenzo Pancaldi** <sup>(1)</sup> - **Paolo Callipo** <sup>(1)</sup> - **Matteo Bozzoli** <sup>(1)</sup> - **Roberto Tuberosa** <sup>(1)</sup> - **Eduard Akhunov** <sup>(2)</sup> - **Cristian Forestan** <sup>(1)</sup>

- <sup>(1)</sup> University of Bologna, Department of Agricultural and Food Sciences (DISTAL), Bologna, Italy - <sup>(2)</sup> Kansas State University, Wheat Genetic Resources Center, Manhattan, United States

### **PO447 - Long-term evolution of root architecture response to soil nitrogen management in tetraploid wheat (Triticum durum)**

**LeGrand Salome** <sup>(1)</sup> - **Di Mattia Bartolo** <sup>(2)</sup> - **Collet Clothilde** <sup>(1)</sup> - **Giunti Michela** <sup>(2)</sup> - **Zhou Congying** <sup>(2)</sup> - **Atsbeha Genet** <sup>(2)</sup> - **Noli Enrico** <sup>(2)</sup> - **Carini Eugenia** <sup>(2)</sup> - **Bozzoli Matteo** <sup>(2)</sup> - **Forestan Cristian** <sup>(2)</sup> - **Draye Xavier** <sup>(1)</sup> - **Tuberosa Roberto** <sup>(2)</sup> - **Macaferri Marco** <sup>(2)</sup>

<sup>(1)</sup> UCLouvain, Earth and Life Institute, Louvain-la-Neuve, Belgium - <sup>(2)</sup> University of Bologna, Dipartimento di Scienze e Tecnologie Agro-Alimentari, Bologna, Italy

### **PO448 - Digital characterization of chromosome centromeric haplotypes in polyploid wheat and their potential for breeding**

**Zihao Wang** <sup>(1)</sup> - **Zhaoyang Zhang** <sup>(2)</sup> - **Zhengzhao Yang** <sup>(2)</sup> - **Wenxi Wang** <sup>(2)</sup> - **Siqi Chen** <sup>(2)</sup> - **Jianxia Niu** <sup>(2)</sup> - **Xiaoming Xie** <sup>(2)</sup> - **Mingming Xin** <sup>(2)</sup> - **Yingyin Yao** <sup>(2)</sup> - **Zhaorong Hu** <sup>(2)</sup> - **Huiru Peng** <sup>(2)</sup> - **Zhongfu Ni** <sup>(2)</sup> - **Qixin Sun** <sup>(2)</sup> - **Weilong Guo** <sup>(2)</sup>

<sup>(1)</sup> -, China Agricultural University; Institute of Crop Sciences, Chinese Academy of Agricultural Sciences, Beijing, China - <sup>(2)</sup> -, Frontiers Science Center for Molecular Design Breeding, China Agricultural University, Beijing, China

### **PO450 - High-Resolution Genomics Enables Rapid Gene Discovery in Aegilops longissima**

**Manas Ranjan Prusty** <sup>(1)</sup> - **May Parpar** <sup>(1)</sup> - **Raz Avni** <sup>(1)</sup> - **Anna Mintz-Dov** <sup>(1)</sup> - **Davinder Shrama** <sup>(1)</sup> - **Tomer Parpar** <sup>(1)</sup> - **Brian J. Steffenson** <sup>(2)</sup> - **Brande B.H. Wulff** <sup>(3)</sup> - **Nir Sade** <sup>(1)</sup> - **Amir Sharon** <sup>(1)</sup>

<sup>(1)</sup> Institute for Cereal and Crop Research, The George S. Wise Faculty of Life Sciences, Tel Aviv University, Tel Aviv University, Tel Aviv, Israel - <sup>(2)</sup> University of Minnesota, Plant pathology, Minnesota, United States - <sup>(3)</sup> King Abdullah University of Science and Technology, King Abdullah University of Science and Technology, King Abdullah University of Science and Technology, Saudi Arabia

## IWC4 2026 - SELECTED ORAL TALKS

### TOPIC 05

### WHEAT GENOMES AND PANGENOMES

#### **PO451 - Tracing the origin of non-brittle rachis alleles in wheat**

**Emile Cavalet-Giorsa** <sup>(1)</sup> - **Thomas Wicker** <sup>(2)</sup> - **Simon Krattinger** <sup>(1)</sup>

<sup>(1)</sup> KAUST, Plant Science Program, Thuwal, Saudi Arabia - <sup>(2)</sup> University of Zurich, Department of Plant and Microbial Biology, Zurich, Switzerland

#### **PO452 - Unlocking Long-Range Haplotype Diversity in Synthetic Hexaploid Wheat for Breeding**

**Fernando Delgado Galvan** <sup>(1)</sup> - **Jesus Quiroz Chavez** <sup>(1)</sup> - **Ana Backhaus** <sup>(2)</sup> - **Shifeng Cheng** <sup>(3)</sup> - **Christobal Uauy** <sup>(4)</sup> - **Susanne Dreisigacker** <sup>(1)</sup>

<sup>(1)</sup> CIMMYT, NA, Texcoco, Mexico - <sup>(2)</sup> IPK Gatersleben, NA, Quedlinburg, Germany - <sup>(3)</sup> NA, Hong Kong University, Hong Kong, China - <sup>(4)</sup> John Innes Center, NA, Norwich, United Kingdom

#### **PO453 - From reference transcriptome to pangenome transcriptional diversity: regulatory networks controlling kernel development in durum wheat**

**Cristian Forestan** <sup>(1)</sup> - **Lorenzo Pancaldi** <sup>(1)</sup> - **Rachel Rusholme-Pilcher** <sup>(2)</sup> - **Pavla Navratilova** <sup>(3)</sup> - **Salvatore Esposito** <sup>(4)</sup> - **Tiziana Sirangelo** <sup>(5)</sup> - **Elisabetta Mazzucotelli** <sup>(6)</sup> - **Monica Colombo** <sup>(6)</sup> - **Chiara Cappucci** <sup>(1)</sup> - **Jennifer Ens** <sup>(7)</sup> - **Harmeet Chawla** <sup>(8)</sup> - **Victor Llaca** <sup>(9)</sup> - **Gianluca Moretti** <sup>(10)</sup> - **Davide Scaglione** <sup>(10)</sup> - **Matteo Bozzoli** <sup>(1)</sup> - **Silvio Salvi** <sup>(1)</sup> - **Michele Morgante** <sup>(11)</sup> - **Manuel Spannagl** <sup>(12)</sup> - **Anthony Hall** <sup>(2)</sup> - **Luigi Cattivelli** <sup>(6)</sup> - **Curtis Pozniak** <sup>(7)</sup> - **Roberto Tuberosa** <sup>(1)</sup> - **Marco Maccaferri** <sup>(1)</sup>

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#### **PO454 - An ecosystem of digital tools to solve the FAIR data problem in the pan-genome era**

**Kerrie Forrest** <sup>(1)</sup> - **Don Isdale** <sup>(1)</sup> - **James O'Dwyer** <sup>(1)</sup> - **Mahdi Rahimi** <sup>(1)</sup> - **Parampreet Kaur** <sup>(1)</sup> - **Debbie Wong** <sup>(1)</sup> - **Kenny Yu** <sup>(1)</sup> - **Luisa Teasdale** <sup>(1)</sup> - **Kanak Jain** <sup>(1)</sup> - **Frank Su** <sup>(1)</sup> - **Sally Norton** <sup>(1)</sup> - **Gabriel Keeble-Gagnère** <sup>(1)</sup> - **Matthew Hayden** <sup>(1)</sup>

<sup>(1)</sup> Agriculture Science and Technology, Agriculture Victoria, Melbourne, Australia

#### **PO455 - Digitalized Map of Homologous Clusters across Poaceae Species Unveil the Complex Evolutionary Trajectory of Genes in Triticeae**

**Xiaoming Xie** <sup>(1)</sup> - **Yongming Chen** <sup>(1)</sup> - **Yuqi Zhang** <sup>(1)</sup> - **Zihao Wang** <sup>(1)</sup> - **Yibo Wang** <sup>(1)</sup> - **Peng Zhao** <sup>(1)</sup> - **Huiru Peng** <sup>(1)</sup> - **Chaojie Xie** <sup>(1)</sup> - **Yingyin Yao** <sup>(1)</sup> - **Zhongfu Ni** <sup>(1)</sup> - **Qixin Sun** <sup>(1)</sup> - **Weilong Guo** <sup>(1)</sup>

<sup>(1)</sup> Wheat Genetics and Genomics Center, China Agricultural University, Beijing, China

#### **PO456 - Genomic Investigation of Wheat Genetic Improvement: Introgression, Disease Resistance, and Yield**

**Fei He He** <sup>(1)</sup>

<sup>(1)</sup> NA, Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, Beijing, China

#### **PO457 - The IWGSC RefSeq 3.0 and a bread wheat pangenome providing access to worldwide diversity**

**Lasserre-Zuber Pauline** <sup>(1)</sup> - **Rimbert Hélène** <sup>(1)</sup> - **Fengler Kevin** <sup>(2)</sup> - **Llaca Victor** <sup>(2)</sup> - **Buell Robin** <sup>(3)</sup> - **Hamilton John** <sup>(3)</sup> - **Johnson Catalina** <sup>(4)</sup> - **Gautier Véronique** <sup>(1)</sup> - **Debiton Clément** <sup>(1)</sup> - **Bouchet Sophie** <sup>(1)</sup> - **Saintenac Cyrille** <sup>(1)</sup> - **Benhamed Moussa** <sup>(5)</sup> - **Pereyra-Bistrain Leonardo** <sup>(5)</sup> - **Alaux Michael** <sup>(6)</sup> - **Choulet Frédéric** <sup>(1)</sup> - **Sourdille Pierre** <sup>(1)</sup> - **Stein Josh** <sup>(7)</sup> - **Eversole Kellye** <sup>(7)</sup>

<sup>(1)</sup> INRAE, GDEC, Clermont-Ferrand, France - <sup>(2)</sup> Corteva Agriscience, Bioinformatics, Johnston, United States - <sup>(3)</sup> University of Georgia, Department of Crop & Soil Sciences, Athens, United States - <sup>(4)</sup> Colorado Parks and Wildlife, Colorado Parks and Wildlife, COLORADO, United States - <sup>(5)</sup> Université Paris-Saclay, Institute of Plant Sciences, ORSAY, France - <sup>(6)</sup> INRAE, URGI, Versailles, France - <sup>(7)</sup> IWGSC, IWGSC, EAU-CLAIR, United States

## IWC4 2026 - SELECTED ORAL TALKS

### **PO458 - 10+ Wheat Genomes Project highlights that purifying selection on deleterious variants is shaped by the interactions between subgenomes and gene expression**

**Gwyneth Halstead-Nussloch** <sup>(1)</sup> - **Moeko Okada** <sup>(1)</sup> - **Georg Haberer** <sup>(2)</sup> - **Thomas Lux** <sup>(2)</sup> - **A S M Faridul Islam** <sup>(3)</sup> - **Masaomi Hatakeyama** <sup>(1)</sup> - **Roman Briskine** <sup>(1)</sup> - **Benjamin White** <sup>(4)</sup> - **Anthony Hall** <sup>(4)</sup> - **Curtis Pozniak** <sup>(5)</sup> - **10+ Wheat Genome Project** <sup>(5)</sup> - **Manuel Spannagl** <sup>(2)</sup> - **Timothy Paape** <sup>(6)</sup> - **Kentaro K. Shimizu** <sup>(1)</sup>

<sup>(1)</sup> University of Zurich, Department of Evolutionary Biology and Environmental Studies, Zurich, Switzerland - <sup>(2)</sup> Helmholtz Zentrum München, German Research Center for Environmental Health, Munich, Germany - <sup>(3)</sup> Texas A&M University, Institute for Advancing Health through Agriculture, College Station, United States - <sup>(4)</sup> Earlham Institute, Norwich Research Park, Norwich, United Kingdom - <sup>(5)</sup> University of Saskatchewan, Crop Development Centre and Department of Plant Sciences, Saskatchewan, Canada - <sup>(6)</sup> USDA-ARS, Responsive Agriculture Food Systems Research Unit, College Station, United States

### TOPIC 06

### WHEAT FUNCTIONAL GENOMICS

### **PO459 - Revealing the role of IBH1 in brassinosteroid biosynthesis and signalling via CRISPR-Cas9 knockout in durum wheat**

**Chiara D'Attilia** <sup>(1)</sup> - **Marco Bonarrigo** <sup>(1)</sup> - **Mark Smedley** <sup>(2)</sup> - **Samuela Palombieri** <sup>(1)</sup> - **Valentina Buffagni** <sup>(3)</sup> - **Sadiye Hayta** <sup>(3)</sup> - **Stefania Masci** <sup>(1)</sup> - **Francesco Sestili** <sup>(1)</sup>

<sup>(1)</sup> University of Tuscia, Department of Agriculture and Forest Sciences (DAFNE), Viterbo, Italy - <sup>(2)</sup> John Innes Centre, Department of Crop Genetics, Norwich, United Kingdom - <sup>(3)</sup> John Innes Centre, Department of Crop Genetics, Norwich, United Kingdom

### **PO460 - K-mer-based GWAS in a wheat collection reveals novel and diverse sources of powdery mildew resistance**

**Benjamin Jaegle** <sup>(1)</sup> - **Yoav Voicheck** <sup>(2)</sup> - **Max Haupt** <sup>(3)</sup> - **Alexandros Sotiropoulos** <sup>(4)</sup> - **Kevin Gauthier** <sup>(5)</sup> - **Matthias Heuberger** <sup>(6)</sup> - **Esther Jung** <sup>(7)</sup> - **Gerhard Herren** <sup>(6)</sup> - **Victoria Widrig** <sup>(8)</sup> - **Rebecca Leber** <sup>(6)</sup> - **Yipu Li** <sup>(6)</sup> - **Beate Schierscher** <sup>(7)</sup> - **Sara Serex** <sup>(7)</sup> - **Maja Boczkowska** <sup>(9)</sup> - **Marta Puchta-Jasińska** <sup>(9)</sup> - **Paulina Bolc** <sup>(9)</sup> - **Nils Stein** <sup>(10)</sup> - **Boulos Chalhoub** <sup>(7)</sup> - **Beat Keller** <sup>(6)</sup> - **Javier Sanchez Martin** <sup>(11)</sup>

<sup>(1)</sup> agroscope, Field-Crop Breeding and Genetic Resources, Zurich, Switzerland - <sup>(2)</sup> Gregor Mendel Institute, Nordborg group, Vienna, Austria - <sup>(3)</sup> IPK, Crop Plant Research, Gatersleben, Germany - <sup>(4)</sup> Center for Crop Health, University of Southern Queensland, Queensland, Australia - <sup>(5)</sup> Agroscope, Field-Crop Breeding and Genetic Resources, Zurich, Switzerland - <sup>(6)</sup> Department of Plant and Microbial Biology, University of Zurich, Zurich, Switzerland - <sup>(7)</sup> Agroscope, Breeding of crop plants and genetic resources, Zurich, Switzerland - <sup>(8)</sup> Department of Microbiology and Genetics, Spanish-Portuguese Institute for Agricultural Research, Zurich, Spain - <sup>(9)</sup> IHAR, Plant Breeding and Acclimatization Institute, Blonie, Poland - <sup>(10)</sup> IPK, Institute of Plant Genetics and Crop Plant Research, Gatersleben, Germany - <sup>(11)</sup> Institute for Agrobiotechnology Research, University of Salamanca, Salamanca, Spain

### **PO461 - Cloning of diverse disease resistance genes from wild emmer wheat for breeding**

**Miaomiao Li** <sup>(1)</sup> - **Keyu Zhu** <sup>(1)</sup> - **Huaizhi Zhang** <sup>(1)</sup> - **Ping Lu** <sup>(1)</sup> - **Qihong Wu** <sup>(2)</sup> - **Yongxing Chen** <sup>(2)</sup> - **Guanghao Guo** <sup>(1)</sup> - **Gaojie Wang** <sup>(1)</sup> - **Lingli Dong** <sup>(1)</sup> - **Zhiyong Liu** <sup>(1)</sup>

<sup>(1)</sup> Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, Beijing, China - <sup>(2)</sup> Institute of Biotechnology, Xianghu Laboratory, Hangzhou, China

### **PO462 - Rudimentary Basal Spikelet Formation in Wheat: The Tug-of-War Between Vegetative and Differentiation**

**Yunchuan Liu** <sup>(1)</sup> - **Sophie Carpenter** <sup>(1)</sup> - **Nikolai M. Adamski** <sup>(1)</sup> - **Maximillian Jones** <sup>(1)</sup> - **James Simmonds** <sup>(1)</sup> - **Katie Long** <sup>(2)</sup> - **Cristobal Uauy** <sup>(1)</sup>

<sup>(1)</sup> John Innes Centre, Crop Genetics, Norwich, United Kingdom - <sup>(2)</sup> The Sainsbury laboratory, Cambridge University, Cambridge, United Kingdom

### **PO463 - A TaKNOX1-TaAPO1-Rht1 feedback regulation orchestrates grain number and yield in wheat**

**Zhongyin Deng** <sup>(1)</sup> - **Qihang Chen** <sup>(1)</sup> - **Shuoxun Wang** <sup>(2)</sup> - **Yuqing Che** <sup>(1)</sup> - **Shaoshuai Liu** <sup>(1)</sup> - **Xiuzhi Wei** <sup>(1)</sup> - **Wanxin Xu** <sup>(1)</sup> - **Dada Cui** <sup>(1)</sup> - **Guoliang Chen** <sup>(1)</sup> - **Xinyu Zou** <sup>(1)</sup> - **Ziyang Wang** <sup>(1)</sup> - **Tianhua Chen** <sup>(1)</sup> - **Shuai Feng Gen** <sup>(1)</sup> - **Xiangdong Fu** <sup>(2)</sup> - **Aili Li** <sup>(1)</sup> - **Long Mao** <sup>(1)</sup>

<sup>(1)</sup> Chinese Academy of Agricultural Sciences, Institute of Crop Sciences, Beijing, China - <sup>(2)</sup> Chinese Academy of Sciences, Institute of Genetics and Developmental Biology, Beijing, China

### **PO464 - Spatial transcriptomics of developing wheat seed reveals concentric gene expression zones and subgenome biased expression of key genes**

**Tori Millstead** <sup>(1)</sup> - **David Kainer** <sup>(2)</sup> - **Robert Sullivan** <sup>(3)</sup> - **Xiaohuan Sun** <sup>(4)</sup> - **Ka Leung Li** <sup>(4)</sup> - **Likai Mao** <sup>(4)</sup> - **Arlie Macdonald** <sup>(2)</sup> - **Robert Henry** <sup>(1)</sup>

## IWC4 2026 - SELECTED ORAL TALKS

(<sup>1</sup>) QAAFI, The University of Queensland, Brisbane, Australia - (<sup>2</sup>) ARC Centre of Excellence for Plant Success, The University of Queensland, Brisbane, Australia - (<sup>3</sup>) Queensland Brain Institute, The University of Queensland, Brisbane, Australia - (<sup>4</sup>) MGI Australia, MGI Tech, Brisbane, Australia

### **PO465 - Grain Number Increase 2 (GNI2) improves floret fertility and enhances grain yield in wheat**

**Shun Sakuma** (<sup>1</sup>) - **Matteo Bozzoli** (<sup>2</sup>) - **Guy Golan** (<sup>3</sup>) - **Manar Makhoul** (<sup>4</sup>) - **Cristian Forestan** (<sup>2</sup>) - **Kenan Tan** (<sup>3</sup>) - **Ahmed Raza Khan** (<sup>3</sup>) - **Francesco De Sario** (<sup>2</sup>) - **Sara Milner** (<sup>2</sup>) - **Giuseppe Sciara** (<sup>2</sup>) - **Chuny Liu** (<sup>2</sup>) - **Elisabetta Frascaroli** (<sup>2</sup>) - **Fumitaka Abe** (<sup>5</sup>) - **Goetz Hensel** (<sup>6</sup>) - **Jia-Wu Feng** (<sup>7</sup>) - **Martin Mascher** (<sup>7</sup>) - **Karim Ammar** (<sup>8</sup>) - **Mikiko Kojima** (<sup>9</sup>) - **Masanori Okamoto** (<sup>9</sup>) - **Roberto Tuberosa** (<sup>2</sup>) - **Silvio Salvi** (<sup>2</sup>) - **Rod Snowdon** (<sup>4</sup>) - **Marco Maccaferri** (<sup>2</sup>) - **Thorsten Schnurbusch** (<sup>3</sup>)

(<sup>1</sup>) Tottori University, Faculty of Agriculture, Tottori, Japan - (<sup>2</sup>) University of Bologna, Plant Genetics and Breeding Department of Agricultural and Food Sciences, Bologna, Italy - (<sup>3</sup>) Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Plant Architecture, Gatersleben, Germany - (<sup>4</sup>) Justus Liebig University Giessen, Department of Plant Breeding, Giessen, Germany - (<sup>5</sup>) NARO, Institute of Crop Science, Tsukuba, Japan - (<sup>6</sup>) Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Plant Reproductive Biology, Gatersleben, Germany - (<sup>7</sup>) Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Domestication Genomics, Gatersleben, Germany - (<sup>8</sup>) International Maize and Wheat Improvement Center (CIMMYT), Durum wheat breeding, Mexico City, Mexico - (<sup>9</sup>) RIKEN, Center for Sustainable Resource Science, Yokohama, Japan

### **PO466 - Green Be Gone: Transcription Factor NAC3 Regulates Wheat Senescence**

**Becca Testa** (<sup>1</sup>) - **Emilie Knight** (<sup>1</sup>) - **Edward Banbury** (<sup>1</sup>) - **Sophie Harrington** (<sup>1</sup>) - **Sadiye Hayta** (<sup>1</sup>) - **Mark Smedley** (<sup>1</sup>) - **David Seung** (<sup>2</sup>) - **Philippa Borrill** (<sup>1</sup>)

(<sup>1</sup>) John Innes Centre, Crop Genetics Department, Norwich, United Kingdom - (<sup>2</sup>) John Innes Centre, Biochemistry & Metabolism Department, Norwich, United Kingdom

## TOPIC 07 INNOVATIVE WHEAT BREEDING

### **PO467 - Genomic breeding for dryland durum at ICARDA**

**Filippo Bassi** (<sup>1</sup>) - **Amadou Tidiane Sall** (<sup>2</sup>) - **Amit Gautam** (<sup>3</sup>) - **Hafssa Kabbaj** (<sup>1</sup>) - **Meryam Zaim** (<sup>1</sup>) - **Yaman Jabbour** (<sup>4</sup>) - **Wasihun Lagesse** (<sup>5</sup>) - **Rodomiro Ortiz** (<sup>6</sup>) - **Augusto Luis Becerra** (<sup>1</sup>)

(<sup>1</sup>) ICARDA, na, Rabat, Morocco - (<sup>2</sup>) ISRA, Breeding, Saint Louis, Senegal - (<sup>3</sup>) ICARDA, Breeding, Amlaha, India - (<sup>4</sup>) GCSAR, Breeding, Aleppo, Syrian Arab Republic - (<sup>5</sup>) EIAR, Breeding, Debre Zeit, Ethiopia - (<sup>6</sup>) SLU, Genetics, Alnarp, Sweden

### **PO468 - An AI-guided breeding toolkit for durable multi-disease resistance in wheat**

**Lee Hickey** (<sup>1</sup>) - **Seema Yadav** (<sup>1</sup>) - **Jingyang Tong** (<sup>1</sup>) - **Eric Dinglasan** (<sup>1</sup>) - **Dilani Jambuthenne** (<sup>1</sup>) - **Zerihun Tadesse** (<sup>2</sup>) - **Peter Dodds** (<sup>3</sup>) - **Melania Figueroa** (<sup>3</sup>) - **Jana Sperschneider** (<sup>3</sup>) - **Rohit Mago** (<sup>3</sup>) - **Meredith McNeil** (<sup>3</sup>) - **Shannon Dillon** (<sup>3</sup>) - **Ben Hayes** (<sup>1</sup>)

(<sup>1</sup>) The University of Queensland, QAAFI, Brisbane, Australia - (<sup>2</sup>) CIMMYT, CIMMYT-Kenya, Kenya, Kenya - (<sup>3</sup>) CSIRO, CSIRO, Canberra, Australia

### **PO469 - In vitro fertilization system with wheat, rice and maize gametes: Production of cytoplasmic hybrid between wheat and rice/maize across subfamily**

**Takashi Okamoto** (<sup>1</sup>) - **Tety Maryenti** (<sup>2</sup>) - **Nonoka Onda** (<sup>1</sup>) - **Aya Satoh** (<sup>1</sup>) - **Nowroz Farzana** (<sup>1</sup>) - **Shizuka Koshimizu** (<sup>3</sup>) - **Offiong Ukpong Edet** (<sup>4</sup>) - **Ryosuke Mega** (<sup>5</sup>) - **Kentaro Yano** (<sup>6</sup>) - **Takayoshi Ishii** (<sup>7</sup>)

(<sup>1</sup>) Tokyo Metropolitan University, Biological Sciences, Tokyo, Japan - (<sup>2</sup>) Universitas Indonesia, Mathematics and Natural Sciences, Depok, Indonesia - (<sup>3</sup>) National Institute of Genetics, Bioinformation and DDBJ Center, Mishima, Japan - (<sup>4</sup>) Tottori University, International Platform for Dryland Research and Education,, Tottoi, Japan - (<sup>5</sup>) Kobe University, Agricultural Science, Kobe, Japan - (<sup>6</sup>) WellGreen-i Co. Ltd., WellGreen-i Co. Ltd., Kanagawa, Japan - (<sup>7</sup>) Tottori University, Arid Land Research Center, Tottori, Japan

### **PO470 - Integrative Platform for Accelerated Development of Wheat Varieties via Multiplex Genome Editing**

**Claudia Payacan-Ortiz** (<sup>1</sup>) - **Marco Montes de Oca** (<sup>1</sup>) - **Sebastian Castillo Castro** (<sup>1</sup>) - **Constanza Castro** (<sup>1</sup>) - **Ariel Gutierrez** (<sup>1</sup>) - **Francisca Castillo Castro** (<sup>1</sup>)

(<sup>1</sup>) Neocrop Technologies, -, Valdivia, Chile

### **PO471 - From haplotype-based QTL mapping to founder-resolved pangenomics: dissecting multi-disease resistance architecture in a wheat MAGIC population**

**Anne-Kathrin Pfrieme** (<sup>1</sup>) - **Antonia Lisker** (<sup>1</sup>) - **Wiebke Sannemann** (<sup>2</sup>) - **Jane Gohlisch** (<sup>1</sup>) - **Ebrahim Kazman** (<sup>3</sup>) - **Hilmar Cöster** (<sup>4</sup>) - **Josef Holzapfel** (<sup>5</sup>) - **Erhard Ebmeyer** (<sup>6</sup>) - **Marvin Behnke** (<sup>1</sup>) - **Thomas Schmutzer** (<sup>1</sup>) - **Andreas Maurer** (<sup>1</sup>) - **Klaus Pillen** (<sup>1</sup>)

(<sup>1</sup>) Martin-Luther-University Halle-Wittenberg, Martin-Luther-University Halle-Wittenberg Institute of Agricultural and Nutritional Sciences, Chair of Plant Breeding, Halle (Saale), Germany - (<sup>2</sup>) KWS SAAT SE & Co. KGaA, KWS SAAT SE & Co. KGaA, Einbeck, Germany - (<sup>3</sup>) Syngenta Seeds GmbH, 3Syngenta Seeds GmbH, Oschersleben, Germany - (<sup>4</sup>) RAGT 2n, RAGT 2n, Wernigerode, Germany - (<sup>5</sup>) Secobra Saatzucht GmbH, Secobra Saatzucht GmbH, Moosburg an der Isar, Germany - (<sup>6</sup>) KWS Lochow GmbH, KWS Lochow GmbH, Bergen, Germany

## IWC4 2026 - SELECTED ORAL TALKS

### **PO472 - Integrating Genomics, Multi-Trait Multi-Environment Modeling, and Multimodal Deep Learning Frameworks for Predicting Yield Components in Mediterranean Durum Wheat**

**Damiano Puglisi** <sup>(1)</sup> - **Paolo Vitale** <sup>(2)</sup> - **Jaime Cuevas** <sup>(3)</sup> - **Fabio Fania** <sup>(1)</sup> - **Salvatore Esposito** <sup>(4)</sup> - **Abelardo Montesinos-López** <sup>(5)</sup> - **Osva Montesinos-López** <sup>(6)</sup> - **José Crossa** <sup>(7)</sup> - **Pasquale De Vita** <sup>(1)</sup>

<sup>(1)</sup> Council for Agricultural Research and Economics (CREA), Research Centre for Cereal and Industrial Crops (CI), Foggia, Italy - <sup>(2)</sup> International Maize and Wheat Improvement Center (CIMMYT), Carretera México Veracruz, El Batán, Texcoco, Estado de México, Mexico - <sup>(3)</sup> Universidad Autónoma del Estado de Quintana Roo, Division de Ciencias, Ingeniería y Tecnología (DCIT), Chetumal, Quintana Roo, Mexico - <sup>(4)</sup> National Research Council of Italy (CNR), Institute of Biosciences and BioResources (IBBR), Research Division Portici, Portici, Italy - <sup>(5)</sup> Universidad de Guadalajara, Centro Universitario de Ciencias Exactas e Ingenierías (CUCEI), Guadalajara, Jalisco, Mexico - <sup>(6)</sup> Universidad de Colima, Facultad de Telemática, Colima, Mexico - <sup>(7)</sup> Colegio de Postgraduados, Campus Montecillo, Carretera México Texcoco, Montecillo, Texcoco, Estado de México, Mexico

### **PO473 - Predictive Breeding Applications in Wheat Using Genomics and Phenomics through Artificial Intelligence and Computer-Vision**

**Paolo Vitale** <sup>(1)</sup> - **Jose Crossa** <sup>(2)</sup> - **Abelardo Montesinos-López** <sup>(3)</sup> - **Karim Ammar** <sup>(4)</sup> - **Susanne Dreisigacker** <sup>(4)</sup> - **Osva Montesinos-López** <sup>(5)</sup> - **Keith Gardner** <sup>(1)</sup> - **Matthew Reynolds** <sup>(4)</sup> - **Guillermo Gerard** <sup>(4)</sup> - **Jussi Gillberg** <sup>(6)</sup>

<sup>(1)</sup> CIMMYT, Data Science Group, Texcoco, Mexico - <sup>(2)</sup> Post-Graduate College (COLPOS), Department of Statistics, Montecillos, Mexico - <sup>(3)</sup> Universidad de Guadalajara, Centro Universitario de Ciencias Exactas e Ingenierías, Guadalajara, Mexico - <sup>(4)</sup> CIMMYT, Global Wheat Program, Texcoco, Mexico - <sup>(5)</sup> Universidad de Colima, Facultad de Telemática, Colima, Mexico - <sup>(6)</sup> Yield Systems, Yield Systems, Helsinki, Finland

### **PO474 - Wheat genome editing: from prime editing to large DNA fragment editing**

**Yuan Zong** <sup>(1)</sup> - **Yidi Zhao** <sup>(1)</sup> - **Pei Ni** <sup>(1)</sup> - **Ximeng Zhou** <sup>(1)</sup> - **Zehua Liu** <sup>(1)</sup> - **Zhongfu Ni** <sup>(1)</sup> - **Qixin Sun** <sup>(1)</sup> - **Yanpeng Wang** <sup>(2)</sup>

<sup>(1)</sup> China Agricultural University, China Agricultural University, Beijing, China - <sup>(2)</sup> Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, Beijing, China

## TOPIC 08

### DEVELOPING CLIMATE-SMART WHEAT IN THE CONTEXT OF ABIOTIC STRESSES

#### **PO475 - An XTH gene modulates root exudate-substrate cohesion**

**Emily Carr** <sup>(1)</sup> - **Sacha Przewieslik-Allen** <sup>(1)</sup> - **Keith Edwards** <sup>(1)</sup> - **Malcolm Hawkesford** <sup>(2)</sup> - **Xiaoxian Zhang** <sup>(2)</sup> - **Hannah Cooper** <sup>(3)</sup> - **Richard Whalley** <sup>(2)</sup> - **Sacha Mooney** <sup>(3)</sup> - **Claire Grierson** <sup>(1)</sup>

<sup>(1)</sup> University of Bristol, Life Sciences, Bristol, United Kingdom - <sup>(2)</sup> Rothamsted Research, Rothamsted Research, Harpenden, United Kingdom - <sup>(3)</sup> University of Nottingham, Life Sciences, Nottingham, United Kingdom

#### **PO476 - Leveraging Wild Emmer Wheat Diversity to Unlock Adaptive Traits to Improve Drought-Resilience in Durum Wheat.**

**Giulia Castorina** <sup>(1)</sup> - **Davide Guerra** <sup>(1)</sup> - **Luigi Cattivelli** <sup>(1)</sup> - **Elisabetta Mazzucotelli** <sup>(1)</sup> - **Francesca Desiderio** <sup>(1)</sup>

<sup>(1)</sup> Council for Agricultural Research and Economics (CREA), Research Centre for Genomics & Bioinformatic, Fiorenzuola d'Arda, Italy

#### **PO477 - Exploring the role of NAM-2 in delaying drought-induced senescence in wheat**

**Miles Curl** <sup>(1)</sup> - **Catherine Famelton** <sup>(2)</sup> - **Chris Burt** <sup>(3)</sup> - **Nick Bird** <sup>(4)</sup> - **Rachel Goddard** <sup>(5)</sup> - **Gurpinder Singh Sidhu** <sup>(6)</sup> - **Richard Morris** <sup>(6)</sup> - **Philippa Borrill** <sup>(1)</sup>

<sup>(1)</sup> John Innes Centre, Department of Crop Genetics, Norwich, United Kingdom - <sup>(2)</sup> Rothamsted Research, Rothamsted Research, Harpenden, United Kingdom - <sup>(3)</sup> RAGT Seeds Ltd, RAGT Seeds Ltd, Ickleton, United Kingdom - <sup>(4)</sup> KWS UK Ltd, KWS UK Ltd, Royston, United Kingdom - <sup>(5)</sup> Limagrain UK, Limagrain UK, Bury St Edmunds, United Kingdom - <sup>(6)</sup> John Innes Centre, Department of Computational and Systems Biology, Norwich, United Kingdom

#### **PO479 - From root to grain: multi-omics reveals how nitrogen, CO<sub>2</sub>, and microbes tune wheat drought resilience and grain quality**

**Utpal Bose** <sup>(1)</sup> - **Jennifer Michel** <sup>(2)</sup> - **Claire Leon** <sup>(3)</sup> - **Cassandra Pegg** <sup>(4)</sup> - **David J. Beale** <sup>(5)</sup> - **Bhabananda Biswas** <sup>(6)</sup> - **Mohammad Mahmud Rahman** <sup>(6)</sup> - **Biswajit Biswas** <sup>(7)</sup> - **Shahida A Mitu** <sup>(8)</sup> - **Sally Stockwell** <sup>(4)</sup> - **Keren Byrne** <sup>(4)</sup> - **Frédéric Serre** <sup>(9)</sup> - **David Cormier** <sup>(9)</sup> - **Boris Adam** <sup>(9)</sup> - **Marie Leguillon** <sup>(9)</sup> - **Sibille Perrochon** <sup>(3)</sup> - **Michelle L Colgrave** <sup>(10)</sup> - **BIOFAIR Consortium** <sup>(2)</sup> - **Hervé Vanderschuren** <sup>(11)</sup> - **Cécile Thonar** <sup>(12)</sup> - **Pierre Delaplace** <sup>(2)</sup> - **Angela Juhasz** <sup>(13)</sup> - **Jacques Le Gouis** <sup>(3)</sup>

<sup>(1)</sup> CSIRO Agriculture and Food, Edith Cowan University, ARC CoE CIPPS, CHANCE, School of Science, St Lucia, Australia - <sup>(2)</sup> University of Liège, Plant Sciences, TERRA teaching and research centre, Gembloux Agro-Bio Tech, Gembloux, Belgium - <sup>(3)</sup> INRAE, UMR GDEC, Clermont-Ferrand, France - <sup>(4)</sup> CSIRO, Agriculture and Food, St Lucia, Australia - <sup>(5)</sup> CSIRO, Environment, Ecosciences

## IWC4 2026 - SELECTED ORAL TALKS

Precinct, Dutton Park, Australia - <sup>(6)</sup> The University of Newcastle, Global Centre for Environmental Remediation (GCER), College of Engineering, Science and Environment, Callaghan Campus, Australia - <sup>(7)</sup> The University of Queensland, Institute for Molecular Bioscience, Brisbane, Australia - <sup>(8)</sup> Edith Cowan University, ARC CoE CIPPS, School of Science, Joondalup, Australia - <sup>(9)</sup> INRAE, UE PHACC, Clermont-Ferrand, France - <sup>(10)</sup> CSIRO Agriculture and Food, Edith Cowan University, ARC CoE CIPPS, CHANCE. School of Science, St Lucia, Australia - <sup>(11)</sup> KULeuven, Laboratory for Tropical Crop Improvement, Crop Biotechnics, Faculty of Bioscience Engineering, Leuven, Belgium - <sup>(12)</sup> Université Libre de Bruxelles, Agroecology lab, Sciences Faculty, Bruxelles, Belgium - <sup>(13)</sup> Edith Cowan University, ARC CoE CIPPS, CHANCE, School of Science, Joondalup, Australia

### **PO480 - Wheat responses to combined drought, heat, and elevated CO<sub>2</sub>: integrative morpho-physiological and transcriptomic insights under future climate scenarios**

**Zbynek Milec** <sup>(1)</sup> - **Kashif Nawaz** <sup>(2)</sup> - **Swati Puranik** <sup>(3)</sup> - **Anna Nowicka** <sup>(4)</sup> - **Martin Kovacik** <sup>(4)</sup> - **Hana Findurova** <sup>(1)</sup> - **Emmanuel Opoku** <sup>(1)</sup> - **Ales Pecinka** <sup>(4)</sup> - **Karel Klem** <sup>(1)</sup> - **Otmar Urban** <sup>(1)</sup> - **Pranav Pankaj Sahu** <sup>(1)</sup>

<sup>(1)</sup> Global Change Research Institute, Laboratory of Ecological Plant Physiology, Brno, Czech Republic - <sup>(2)</sup> King Abdullah University of Science and Technology (KAUST), Biological and Environmental Science and Engineering, Thuwal, Saudi Arabia - <sup>(3)</sup> Rothamsted Research, Plant and Crop Molecular Physiology, Rothamsted, United Kingdom - <sup>(4)</sup> Institute of Experimental Botany of the Czech Academy of Sciences, Centre of Plant Structural and Functional Genomics, Olomouc, Czech Republic

### **PO481 - Regulatory Variation at TaNPF2.12 Shapes Nitrogen-Responsive Root Plasticity and Nitrogen Use Efficiency in Winter Wheat**

**Grace Achieng Ochieng** <sup>(1)</sup> - **Luc Gujer** <sup>(1)</sup> - **Annaliese Mason** <sup>(1)</sup> - **Agim Ballvora** <sup>(1)</sup>

<sup>(1)</sup> The University of Bonn, Plant Breeding, Bonn, Germany

### **PO482 - Identification and Functional Characterization of WUE and Drought Resilience Factors in Wheat**

**Yuxin Zhou** <sup>(1)</sup> - **Xiaohan Wang** <sup>(1)</sup> - **Yuan Cao** <sup>(1)</sup> - **Xuelei Lin** <sup>(1)</sup> - **Jun Xiao** <sup>(1)</sup>

<sup>(1)</sup> Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, Laboratory of Advanced Breeding Technologies, Beijing, China

## TOPIC 09

### DISSECTING THE WHEAT-PATHOGEN AND PEST INTERACTION

### **PO483 - Non-host resistance genes – new sources for durable rust resistance?**

**Urooj Fatima** <sup>(1)</sup> - **Natalia Arango** <sup>(1)</sup> - **Umar F. Shahul Hameed** <sup>(2)</sup> - **Francisco J. Guzmán-Vega** <sup>(2)</sup> - **Emile Cavalet-Giora** <sup>(1)</sup> - **Naganand Rayapuram** <sup>(1)</sup> - **Heribert Hirt** <sup>(1)</sup> - **Michael Abrouk** <sup>(1)</sup> - **Yajun Wang** <sup>(1)</sup> - **Jonathan D. G. Jones** <sup>(3)</sup> - **Stefan T. Arold** <sup>(2)</sup> - **Simon G. Krattinger** <sup>(1)</sup>

<sup>(1)</sup> King Abdullah University Of Science And Technology, Plant Science Program, Biological and Environmental Science and Engineering Division, Thuwal, Saudi Arabia - <sup>(2)</sup> King Abdullah University Of Science And Technology, Bioengineering Program, Biological and Environmental Science and Engineering Division, Thuwal, Saudi Arabia - <sup>(3)</sup> The Sainsbury Laboratory, University of East Anglia, Norwich, United Kingdom

### **PO484 - Identification of Candidate Genes for Resistance to Soil-Borne Cereal Mosaic Virus in Durum Wheat using CRISPR-Cas9 Genome Editing Systems**

**Lorenzo Calzini** <sup>(1)</sup> - **Matteo Bozzoli** <sup>(1)</sup> - **Jochen Kumlehn** <sup>(2)</sup> - **Cristian Forestan** <sup>(1)</sup> - **Luca Vitali** <sup>(1)</sup> - **Ambra Viviani** <sup>(1)</sup> - **Roberto Tuberosa** <sup>(1)</sup> - **Marco Maccaferri** <sup>(1)</sup> - **Robert Eric Hoffie** <sup>(2)</sup> - **Francesco Camerlengo** <sup>(1)</sup>

<sup>(1)</sup> University of Bologna, Department of Agricultural and Food Sciences (DISTAL), BOLOGNA, Italy - <sup>(2)</sup> Leibniz Institute of Plant Genetics and Crop Plant Research (IPK), Plant Reproductive Biology, GATERSLEBEN-SEELAND, Italy

### **PO485 - Pan-genome facilitated discovery of dominant North American stripe rust lineage's origin in somatic hybridization**

**Samuel Holden** <sup>(1)</sup> - **Meng Li** <sup>(1)</sup> - **Mehrdad Abbasi** <sup>(2)</sup> - **Ramandeep Bamrah** <sup>(2)</sup> - **Sang Hu Kim** <sup>(3)</sup> - **Sean Formby** <sup>(3)</sup> - **Sean Walkowiak** <sup>(4)</sup> - **Guus Bakkeren** <sup>(3)</sup> - **Gurcharn Singh Brar** <sup>(1)</sup>

<sup>(1)</sup> University of Alberta, Faculty of Agricultural, Life and Environmental Science,, Edmonton, Canada - <sup>(2)</sup> University of British Columbia, Faculty of Land and Food Systems, Vancouver, Canada - <sup>(3)</sup> Agriculture and Agri-Food Canada, Summerland Research Centre, Summerland, Canada - <sup>(4)</sup> Canadian Grain Commission, Grain Research Laboratory, Winnipeg, Canada

### **PO486 - Twenty years of global disease surveillance in wheat reveals increased vulnerability to yellow rust due to incursions of new aggressive races at regional and global scales**

**Mogens Støvring Hovmøller** <sup>(1)</sup> - **Thach Tine** <sup>(1)</sup> - **Marcel Meyer** <sup>(2)</sup> - **Shideh Mojerlou** <sup>(1)</sup> - **Jens Grønbech-Hansen** <sup>(1)</sup> - **David Hodson** <sup>(3)</sup> - **Annemarie Fejer Justesen** <sup>(1)</sup>

<sup>(1)</sup> Aarhus University, Agroecology, Slagelse, Denmark - <sup>(2)</sup> University of Bonn, Crop Science, Bonn, Germany - <sup>(3)</sup> CIMMYT, CIMMYT Nepal, Kathmandu, Nepal

## IWC4 2026 - SELECTED ORAL TALKS

### **PO487 - Loci relevant for yellow rust resistance in a Mediterranean multi-environmental trial networks identified from the Global Durum Genomic Resource**

**Chunyi Liu** <sup>(1)</sup> - **Francesco De Sario** <sup>(1)</sup> - **Muhammad Awais Farooq** <sup>(1)</sup> - **Jad B Novi** <sup>(2)</sup> - **Ambra Viviani** <sup>(1)</sup> - **Alessia Confortini** <sup>(3)</sup> - **Eugenia Carini** <sup>(1)</sup> - **Matteo Bozzoli** <sup>(1)</sup> - **Cristian Forestan** <sup>(1)</sup> - **Sandra Stefanelli** <sup>(1)</sup> - **Elisabetta Mazzucotelli** <sup>(4)</sup> - **Francesca Desiderio** <sup>(4)</sup> - **Anna Maria Mastrangelo** <sup>(5)</sup> - **Daniela Marone** <sup>(5)</sup> - **Paola Viola** <sup>(6)</sup> - **Carlo Invernizzi** <sup>(6)</sup> - **Rola El Amil** <sup>(7)</sup> - **Nazari Kumarse** <sup>(8)</sup> - **Hakan Hozkan** <sup>(9)</sup> - **Isam Bashour** <sup>(10)</sup> - **Mohamed E Sharif Ragab** <sup>(11)</sup> - **Idrissi Omar** <sup>(12)</sup> - **Pablo Roncallo** <sup>(13)</sup> - **Zahara Pourkhorshid** <sup>(14)</sup> - **Filippo M. Bassi** <sup>(15)</sup> - **Luigi Cattivelli** <sup>(4)</sup> - **Roberto Tuberosa** <sup>(1)</sup> - **Agata Gadaleta** <sup>(14)</sup> - **Marco Maccaferri** <sup>(1)</sup>

- <sup>(1)</sup> University Of Bologna, Department Of Agricultural And Food Sciences (Distal), Bologna, Italy - <sup>(2)</sup> Open Field, Open Field, Parma, Italy - <sup>(3)</sup> University College Dublin, Ucd School Of Biology And Environmental Science, Ucd Earth Institute And Ucd Institute Of Food And Health, Dublin, Ireland - <sup>(4)</sup> Crea, Research Centre For Genomics And Bioinformatics, Fiorenzuola D'arda - Piacenza, Italy - <sup>(5)</sup> Crea, Research Centre For Cereal And Industrial Crops, Foggia, Italy - <sup>(6)</sup> Apsov Sementi Spa, Apsov Sementi Spa, Voghera - Pavia, Italy - <sup>(7)</sup> Icarda, International Center For Agricultural Research In The Dry Areas, Biodiversity And Crop Improvement Program, Regional Cereal Rust Research Center (Rcrr, Menemen, Izmir, Turkey - <sup>(8)</sup> University Of Çukurova, Department Of Field Crops, Faculty Of Agriculture, Adana, Turkey - <sup>(9)</sup> American University Of Beirut, Department Of Agriculture, Faculty Of Agricultural And Food Sciences, Beirut, Lebanon - <sup>(10)</sup> Beni Suef University, Agronomy Department, Faculty Of Agriculture, West Nile, Egypt - <sup>(11)</sup> Inrae-M, Laboratory Of Food Legumes Breeding, Regional Center Of Agricultural Research Of Settat, National, Institute Of Agricultural Research, Rabat, Morocco - <sup>(12)</sup> Centro De Recursos Naturales Renovables De La Zona Semiárida (Cezros), Departamento De Agronomía, Universidad Nacional Del Sur (Uns)-Conicet, Buenos Aires, Argentina - <sup>(13)</sup> Shiraz University, Department Of Plant Production And Genetics, School Of Agriculture, Shiraz, Iran (Islamic Republic Of) - <sup>(14)</sup> Università Degli Studi Aldo Moro, Department Of Agricultural And Environmental Science, Bari, Italy - <sup>(15)</sup> Icarda, International Center For Agricultural Research In The Dryareas, Rabat, Morocco

### **PO488- Dual recognition of structurally unrelated mildew effectors underlies the broad-spectrum resistance of Pm3e in wheat**

**Marion Müller** <sup>(1)</sup> - **Lukas Kunz** <sup>(2)</sup> - **Zoe Bernasconi** <sup>(2)</sup> - **Matthias Heuberger** <sup>(2)</sup> - **Beat Keller** <sup>(2)</sup>

<sup>(1)</sup> NA, 2 Chair of Phytopathology, TUM School of Life Sciences, Technical University of Munich, Freising, Germany - <sup>(2)</sup> NA, Department of Plant and Microbial Biology, University of Zurich, Zürich, Switzerland

### **PO489 - Meta-QTL analyses for better characterisation of the genetic architecture of bread wheat resistance to Septoria tritici blotch**

**Laura Paire** <sup>(1)</sup> - **Jean-Noël Thauvin** <sup>(2)</sup> - **Yannick De-Olivera** <sup>(3)</sup> - **Florian Pinot** <sup>(4)</sup> - **Thierry C. Marcel** <sup>(5)</sup> - **Cyrille Saintenac** <sup>(1)</sup>

<sup>(1)</sup> INRAE, Université Clermont-Auvergne, GDEC, Clermont-Ferrand, France - <sup>(2)</sup> RAGT 2n, -, Druelle, France - <sup>(3)</sup> INRAE, CNRS, Université Paris Saclay, GQE-Le Moulon, Gif-sur-Yvette, France - <sup>(4)</sup> Agri-Obtentions, -, Guyancourt, France - <sup>(5)</sup> INRAE, Université Paris-Saclay, Bioger, Palaiseau, France

### **PO490 - Asymmetric priority effects between co-infecting wheat pathogens undermine single-pathogen resistance**

**Kar-Chun Tan** <sup>(1)</sup> - **Leon Lenzo** <sup>(1)</sup> - **Evan John** <sup>(2)</sup> - **Jason Bradley** <sup>(3)</sup> - **Geoff Thomas** <sup>(3)</sup> - **Dion Bennett** <sup>(4)</sup>

<sup>(1)</sup> Centre For Crop and Disease Management, Curtin University, Perth, Australia - <sup>(2)</sup> Institute of Crop Science and Resource Conservation, University of Bonn, Bonn, Germany - <sup>(3)</sup> Department of Primary Industries and Regional Development, Department of Primary Industries and Regional Development, Perth, Australia - <sup>(4)</sup> Australian Grains Technologies, Australian Grains Technologies, Northam, Australia

## TOPIC 10

### WHEAT QUALITY, END-USE PROCESSING, NUTRITION AND HUMAN-HEALTH

### **PO491 - Development of High Dietary Fiber Wheat through Introgression of $\beta$ -Glucan-Rich Alleles from *Aegilops kotschy***

**Upendra Kumar** <sup>(1)</sup> - **Sourav Panigrahi** <sup>(1)</sup>

<sup>(1)</sup> Department of Plant Science, Mahatma Jyotiba Phule Rohilkhand University, Bareilly, India

### **PO492 - Clinical trials investigating the health-promoting effects of Svevo high-amylose products on patients affected by concomitant Chron's disease and metabolic syndrome**

**Barbara Laddomada** <sup>(1)</sup> - **Angelo Santino** <sup>(1)</sup> - **Samuela Palombieri** <sup>(2)</sup> - **Francesco Sestili** <sup>(2)</sup> - **Alessandro Miraglia** <sup>(3)</sup> - **Elisabetta Cavalcanti** <sup>(4)</sup> - **Marcello Chieppa** <sup>(3)</sup>

<sup>(1)</sup> CNR ISPA, DISBA, Bari, Italy - <sup>(2)</sup> University of Tuscia, Department of Agriculture and Forest Sciences (DAFNE), Viterbo, Italy - <sup>(3)</sup> University of Salento, Department of Experimental Medicine, Lecce, Italy - <sup>(4)</sup> IRCCS DE BELLIS, Inflammatory Bowl Disease Unit, National Institute of Gastroenterology, Castellana Grotte, Italy

## IWC4 2026 - SELECTED ORAL TALKS

### **PO493 - Exploiting natural variation in starch granule size and composition in *Aegilops tauschii* to improve wheat starch**

**Rose McNelly** <sup>(1)</sup>

<sup>(1)</sup> John Innes Centre, Biochemistry and Metabolism, Norwich, United Kingdom

### **PO494 - Optimizing Selenium and Sulphur Foliar Fertilization to Enhance Nutritional and Technological Quality of Bread Wheat**

**Antonio Pescatore** <sup>(1)</sup> - **Lorenzo Guerrini** <sup>(2)</sup> - **Yidenekachew Beshah** <sup>(1)</sup> - **Marco Napoli** <sup>(1)</sup>

<sup>(1)</sup> University of Florence, Department of Agriculture, Food, Environment and Forestry (DAGRI), Florence, Italy - <sup>(2)</sup> University of Padua, Department of Land, Environment, Agriculture and Forestry (TESAF), Padua, Italy

### **PO495 - Mapping the Landscape of Carotenoid Esterification in the Global Durum Panel**

**Cristina Rodríguez-Suárez** <sup>(1)</sup> - **María Dolores Requena-Ramírez** <sup>(1)</sup> - **Elisabetta Mazzucotelli** <sup>(2)</sup> - **Dámaso Hornero-Méndez** <sup>(3)</sup> - **Sergio G Atienza** <sup>(1)</sup>

<sup>(1)</sup> Instituto de Agricultura Sostenible, CSIC, Córdoba, Spain - <sup>(2)</sup> Research Centre for Genomics & Bioinformatics, Fiorenzuola d'Arda (PC), Council for Agricultural Research and Economics (CREA), Fiorenzuola d'Arda, Italy - <sup>(3)</sup> Department of Food Phytochemistry, Instituto de la Grasa, CSIC, Sevilla, Spain

### **PO496 - Pleiotropic genetic network underlying grain storage protein composition in bread wheat**

**Naoto Sano** <sup>(1)</sup> - **Anne Plessis** <sup>(2)</sup> - **Catherine Ravel** <sup>(1)</sup> - **Pierre Martre** <sup>(3)</sup> - **Jacques Le Gouis** <sup>(1)</sup>

<sup>(1)</sup> INRAE, GDEC, Clermont-Ferrand, France - <sup>(2)</sup> University of Plymouth, School of Biological and Marine Sciences, Plymouth, United Kingdom - <sup>(3)</sup> INRAE, LEPSE, Montpellier, France

### **PO497 - Rheological, Technological, and Nutritional Implications of High-Amylose Wheat in Breadmaking**

**Claudia Sardella** <sup>(1)</sup> - **Kali Kotsiou** <sup>(2)</sup> - **Sestili Francesco** <sup>(3)</sup> - **Costas G. Biliaderis** <sup>(2)</sup> - **Athina Lazaridou** <sup>(2)</sup> - **Massimo Blandino** <sup>(1)</sup>

<sup>(1)</sup> University of Turin, Department of Agricultural, Forest and Food Science, Grugliasco, Italy - <sup>(2)</sup> Aristotle University of Thessaloniki, Department of Food Science and Technology, School of Agriculture, Thessaloniki, Greece - <sup>(3)</sup> University of Tuscia, Department of Agriculture and Forestry Science, Viterbo, Italy