









## Spanish participants (21 Lleida, 21 Córdoba)

	<p><b>Gustavo Slafer</b> (Lleida &amp; Córdoba) gustavo.slafer@udl.cat</p> <p>Gustavo's research has focused on studying the crop-physiological mechanisms underlying the responses of wheat (and other grain crops) to environmental and genetic factors, with lines of research focused on understanding traits determining yield physiology and their plasticity.</p>
	<p><b>Roxana Savin</b> (Lleida &amp; Córdoba) roxana.savin@udl.cat</p> <p>Roxana's expertise is focused on crop physiology of yield and grain quality, carbon and nitrogen relationships, and heat and nitrogen stress.</p>
	<p><b>Rosa Morcuende</b> (Lleida &amp; Córdoba) rosa.morcuende@irnasa.csic.es</p> <p>Rosa is the deputy coordinator of the 'WheatNet'. Her research activity is focused on the study of the regulation of primary carbon and nitrogen metabolism for understanding the adaptation mechanisms underlying wheat response to environmental changes and its impact on grain yield and quality.</p>
	<p><b>Francisco Barro</b> (Lleida &amp; Córdoba) fbarro@ias.csic.es</p> <p>Francisco Barro is coordinator of the 'WheatNet'. He is interested in developing and using modern breeding techniques such as RNAi and CRISPR/Cas to accelerate wheat breeding. A priority line of research is the elimination of wheat grain proteins responsible for human allergies and intolerances and the development of varieties suitable for these groups. Genomics and transcriptomics to enhance the efficiency of wheat under abiotic stress is another priority line of research.</p>

	<p><b>Azahara C. Martín</b> (Lleida &amp; Córdoba)  Azahara.martin@ias.csic.es</p> <p>My main research focuses on wheat meiosis and manipulating genetic recombination to facilitate the transfer of useful traits from related species. I am also interested in understanding the basis of male reproduction sensitivity to temperature stress, including both meiosis and pollen development, and its subsequent effect on seed set, crucial for wheat cultivation in a changing climate. Ultimately, my goal is to better understand wheat reproductive biology and apply this knowledge to improve crop production.</p>
	<p><b>Gilberto Igrejas</b> (Córdoba)  gigrejas@utad.pt</p> <p>He develops research work focused on the use of omics tools, particularly genomics and proteomics, at the molecular genetics and biotechnology level of various plant, animal and microbial species. These are in the chronological involvement as priority research areas, based on these tools and their scope i) characterization of genetic resources of wheat, rye and triticale; ii) Proteomics applied to the detection of genes responsible for the functionality and allergenicity of wheat grain, rye and triticale; iii) Genomics and proteomics applied to antibiotic resistance; iv) Nutrigenomics and proteomics applied to the evaluation of protein species and finally, v) Probiotics in biotechnology and health. In 2022 he was included in the list of world authors with the greatest scientific impact in the area of "One Health", being the first Portuguese and occupying the 4th position worldwide.</p>
	<p><b>Jorge Pastor</b> (Córdoba)  jpastormoreno@gmail.com</p> <p><b>Previous Positions:</b> President of the International Richemont Club and Head of R&amp;D at Novapan, SL / Panishop, in Zaragoza, Spain. Over 45 years of experience in managing, planning, and innovating within companies in the food sector and the bakery industry, both nationally and internationally. Since 2011, he has focused extensively on Research, Development, and Innovation in the bakery sector, co-authoring various scientific papers in collaboration with prestigious research centers (CSIC, EURECAT, CNTA).</p>
	<p><b>Cristina Nieto</b> (Lleida)  cristina.nieto@csic.es</p> <p>Cristina's research focuses on studying the molecular mechanisms that control the thermomorphogenic response in wheat. She uses natural variation in Spanish landraces and induced variation in TILLING mutants to search for warm temperature adaptation genes.</p>



**Marta Da Silva** (Lleida)

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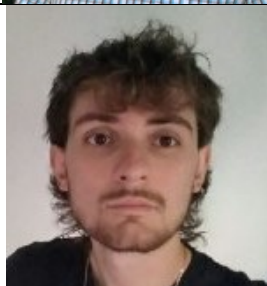
Marta's interests encompass pioneering sustainable agricultural practices through advanced plant breeding and agronomy research, with a strong emphasis on high-efficiency phenotyping to deliver faster, impactful solutions for farmers. Her core research areas include developing crop varieties and management protocols optimized for yield, protein content, disease resistance, and nutritional value. Additionally, she is dedicated to exploring alternative crop management strategies, particularly refining mechanical weeding and fertilizer application techniques to reduce environmental contamination.



**José Luis Araus** (Lleida)

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José Luis Araus leads the Crop Ecophysiology Group at the University of Barcelona. The group investigates plant response to drought, salinity, heat and other abiotic stress factors and their impact on productivity. This translates into different lines of research. From the development of high-intensity phenotyping protocols to the study of the photosynthetic metabolism of non-laminar organs, such as wheat spikes or other small grain cereals.



**Joel Segarra** (Lleida)

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J. Segarra has a PhD in plant ecology and physiology, and he is currently a postdoctoral researcher (University of Barcelona). His fields of research are ecophysiology, remote sensing, geography and agriculture and land use change.



**Dolors Villegas** (Lleida)

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Dolors is a Research Scientist at EEAD-CSIC. She works on the genetic improvement and adaptation of wheat to Mediterranean conditions and both abiotic and biotic environmental stresses. Her main interests include analytical methods to enhance breeding efficiency through remote sensing technologies. She is also interested in the genetics underlying phenology and its implications for environmental adaptation, as well as improving wheat rust resistance, particularly in relation to the presence of barberry.



**Nieves Aparicio** (Lleida)

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Nieves has actively participated in public breeding programmes for winter cereals (barley, durum wheat and bread wheat). She collaborates with the Integrative Crop Ecophysiology Group (University of Barcelona) led by Dr. JL Araus, analysing the physiological and molecular mechanisms involved in the adaptive response of wheat and the practical implementation of precision phenotyping. She is also interested in the evaluation of germplasm collections as a source of genes for adaptation and tolerance to biotic and abiotic stresses.





**Santiago Tamagno** (Lleida)

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Dr. Santiago Tamagno is a researcher at the University of Lleida (Catalonia, Spain) within the Crop Physiology group. His current research focuses on physiological traits related to spike fertility and their interaction with the environment, including heat stress tolerance, soil fertility, and developmental factors, within the context of genetic improvement and increasing the potential yield of wheat as a global goal.



**Sofía Marchese** (Lleida)

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Sofia is a doctoral student at the University of Lleida working on the impact of breeding on wheat yield and wheat resilience to abiotic stresses such as heat stress and nitrogen deficiency. She is interested in spike fertility and related traits within physiological mechanisms that can contribute to increase yield potential.



**Celia Rasines** (Lleida)

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Celia is a PhD researcher, focusing on wheat resilience to climate change, particularly the effects of heat stress. Her research aims to quantify phenotypic plasticity in wheat reproductive development and grain filling traits under heat waves. She is also characterizing modern, well-adapted wheat cultivars grown in Spain.



**Hassan Karim** (Lleida)

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Hassan Karim is a Ph.D. student at the University of Lleida, specializing in wheat physiology and genetics. His research explores the genetic and physiological mechanisms behind spike fertility traits in wheat, focusing on how variations in spikelet number results in grain number under varying environmental conditions. He also investigates trade-offs in spike fertility and its impact on grain yield.



**Rafael Carrera** (Lleida)

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Rafael Carrera is a PhD researcher at the Universitat de Lleida, focusing on yield plasticity in wheat and its components. His research examines how wheat's plasticity responds to environmental signals, such as photoperiod and heat waves, and to resource availability, including water and nutrient availability, distinguishing between these two sources of variation. Rafael aims to enhance yield potential, contributing to the development of innovative strategies for wheat breeding and adaptation.



**Breno Bicego de Almeida** (Lleida)

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Breno is a PhD student at university of Lleida, Spain. He has been working on field experiments focusing on the ecophysiology of wheat as a crop. More specifically he is interested in the spike fertility responses to abiotic stresses like heat waves or resources availability.



**Rubén Vicente** (Lleida)

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Rubén's research is focused on (i) the understanding of plant responses to abiotic stresses under future climate change scenario, (ii) the coordination of carbon and nitrogen metabolism, with a special focus on source-sink dynamics, and (iii) the identification of key traits for crop improvement by the integration of field phenotyping and lab-based tools.



**Iker Aranjuelo** (Lleida & Córdoba)

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Iker's research focuses on optimizing resource use in agriculture through digital tools like sensors, IoT, and Big Data analytics, enabling precise, sustainable decision-making to boost productivity and reduce environmental impact. As a plant physiologist, he studies how key processes such as water use efficiency, photosynthesis, and nutrient uptake can be enhanced using these technologies. His work also includes crop characterization under climate change, examining how stresses like drought, temperature extremes, and altered precipitation affect growth. By integrating digital tools with climate models, he aims to help farmers adapt management strategies and develop resilient crops for sustainable food production in a changing climate.



**David Cobertera** (Lleida & Córdoba)

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Researcher specializing in breeding, with a particular focus on improving disease resistance and enhancing yield stability. My work involves utilizing advanced genomic techniques, including genomic selection and genotyping-by-sequencing, to identify genetic markers associated with key traits like disease resistance and stress tolerance. Through my experience in both lab-based research and field trials, I aim to develop wheat varieties that can thrive in diverse environmental conditions while maintaining high productivity. My research is driven by a commitment to sustainable agriculture and improving wheat production to support global food security.

	<p><b>Sergio Atienza</b> (Córdoba) sgatienza@ias.csic.es</p> <p>Sergio's research focuses on improving the nutritional quality of wheat grain. In particular he is focusing on grain carotenoid content and profile. He is also interested in determining how climate change will impact grain quality and productivity in Mediterranean conditions.</p>
	<p><b>Pilar Prieto</b> (Córdoba) pilar.prieto@ias.csic.es</p> <p>Pilar Prieto is a tenured scientist at the IAS-CSIC. Her main research focuses on meiosis studies for plant breeding, using cytogenetics and confocal microscopy tools. Her group is interested in promoting interspecific chromosome associations and recombination in cereals. Her lab also targets studying genome organization and nuclear architecture in plant meiosis. Simultaneously, a breeding program has been developed to transfer desirable agronomic traits from related species into wheat.</p>
	<p><b>Elena Prats</b> (Córdoba) elena.prats@ias.csic.es</p> <p>My research focuses on enhancing crop resilience, particularly improving the adaptability of cereals like oats and wheat to the Mediterranean climate. Targeting key biotic stresses, such as rust and powdery mildew, alongside abiotic challenges like drought, I aim to boost yield under region-specific conditions. My work spans molecular, cellular, and crop levels, combining molecular biology with advanced genomics (GWAS and genomic prediction) and analyses of genotype-environment interactions. By understanding the mechanisms driving stress resistance, I work toward developing crops that are better adapted to Mediterranean conditions and resilient to various stresses, supporting sustainable agriculture in vulnerable climates.</p>
	<p><b>Pilar Hernández</b> (Córdoba) phernandez@ias.csic.es</p> <p>Pilar is a research scientist at the Institute for Sustainable Agriculture (IAS-CSIC). Her research focus is the analysis of crops adaptation to mediterranean agroenvironments, including genomics and phenotyping methods for stress and quality.</p>
	<p><b>Juan Arellano</b> (Córdoba) juan.arellano@irnasa.csic.es</p> <p>JBA is a member of the Photosynthesis group at IRNASA. His research activity is focused on the photosynthetic, antioxidant response and grain antioxidant quality of wheat to combined abiotic factors, mainly water deficit and high temperatures, under a scenario of global climate change with the aim of identifying varieties with sustainable production and high resilience.</p>





**Alejandro Pérez** (Córdoba)

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Alejandro's research group focuses on resistance to fungal diseases (rust and septoria) in wheat and the applications of nanobiotechnology in plant production and protection. He collaborates on a breeding programme for bread and durum wheat, identifying resistant genotypes and incorporating this resistance into new cultivars. Additionally, he uses various nanocarriers to improve the efficacy and reduce the environmental impact of current agrochemicals, as well as to develop novel methods for disease control.



**Susana Sánchez** (Córdoba)

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Susana's research is focused on the application of biotechnology for the generation, development and characterization of wheat lines suitable for people suffering from allergies and intolerances. Susana uses cutting edge technologies as RNAi or the application of gene editing mediated by the CRISPR/Cas system for the development of low gluten content wheat lines, analyzing their protein and immunological profile, with a special focus on derived products such as high quality breads.



**José Guadalupe Vázquez García** (Córdoba)

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Jose holds a Ph.D. in Biosciences and Agri-Food Sciences. He recently joined the Plant Breeding Laboratory at the Polytechnic University of Madrid through a *Juan de la Cierva* contract. He is currently working on a project titled *Genomic Approaches for the Identification of Genes Influencing Functional Quality in Wheat*.



**Carlos Guzmán** (Córdoba)

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WHEAT UCO research group focuses on the genetic improvement of grain quality (both industrial and nutritional) of wheat. The group is interested in understanding the genetic control of those traits and in the discovery of new sources of variability that could be used in breeding programs.



**Patricia Giraldo** (Córdoba)

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Patricia's research group focuses on exploring the genetic and phenotypic richness of wheat landraces, to deploy germplasm resources for the generation of high-quality varieties. The group is also interested in identifying novel molecular variation responsible of quality-related traits (by GWAS) and also in addressing the relationship between end-use quality and environment.



**Cristina de Miguel Rojas** (Córdoba)

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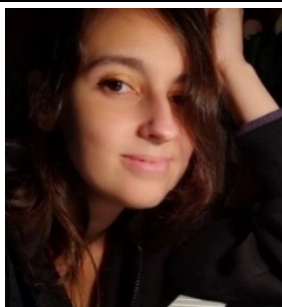
Cristina is a Senior Postdoctoral Researcher in the Cereal Stress Resistance Breeding Group at the IFAPA center. Cristina's research focuses on the interaction of wheat-fungal foliar pathogens under climate change scenarios, identifying wheat genotypes with resistance against rusts and STB under high temperature and CO<sub>2</sub> concentration. She is also interested in the fungal development in these new scenarios. In addition, she is working in the development of a genetic spray based on the RNAi technology for gene silencing of leaf wheat pathogens.



**María Helena Guzmán López** (Córdoba)

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Helena is currently a member of Francisco Barro's research group at the Institute for Sustainable Agriculture. Her research focuses on the characterization and engineering of cereal storage proteins to enhance cereal quality and reduce wheat immunogenicity. She optimizes transformation protocols for rice, oat, and wheat as well as protein extraction and analysis methods. Her work also involves the design of CRISPR/Cas vectors and screening of edited lines through sequencing.



**Miriam Marín Sanz** (Córdoba)

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Miriam main research is the genomic and transcriptomic characterization of genetically engineered low-gluten wheat. She has participated in research projects about developing bioinformatic pipelines in wheat and minor crops concerning their potential to trigger human pathologies or their tolerance to abiotic stresses.



**Safaa Ouahid** (Córdoba)

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Safaa is a Ph.D. student jointly affiliated with the International Center for Agricultural Research in the Dry Areas (ICARDA) and the University of Córdoba. Her research centers on the application of remote sensing and artificial intelligence in agriculture, with a particular emphasis on high-throughput phenotyping to improve barley's adaptation to climate change. Safaa's work aims to develop innovative solutions for predicting key traits in barley, contributing to the development of drought-resilient crop varieties that address the challenges of a changing climate particularly in drought-prone regions.

In addition to her academic pursuits, Safaa is an active member of the African Young Leaders Foundation and was selected to participate in the AWARD Leadership Program for Emerging African Women in Science. She is also a co-founder of the Moroccan Data Scientists Community (MDS), where she helps foster collaboration and innovation among data science professionals in Morocco





**Guillermo Saldaña** (Córdoba)

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Degree in Veterinary Medicine (Bromatology) and in Food Science and Technology. PhD by the University of Zaragoza in the group of New Food Processing Technologies. Experience and publications in food microbiology, food preservation, new food processing technologies (PEAV, HPH, HPP) and new product development. Currently, responsible for the R&D department of Novapan S.L., coordinating product development and management and execution of funded research projects.



**Ignacio Solis** (Córdoba)

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Technical Director of the breeding company Agrovegetal S.A. managing agreements with CIMMYT, IRTA and UCO to develop new triticale, durum and bread wheat cultivars for the Spanish seed market. Field trials network at nine locations at Andalusia for phenotyping and agronomic selection of new advanced lines and commercial cultivars.