EUROPEAN CURRICULUM VITAE FORMAT

PERSONAL INFORMATION

Name	GULLÌ, Mariolina
Address	UNIVERSITY OF PARMA DEPARTMENT OF CHEMISTRY LIFE SCIENCES AND ENVIRONMETAL SUSTAINABILITY PARCO AREA DELLE SCIENZE 11A, 43124 PARMA
Telephone	0521 905486
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Web page	https://en.unipr.it/ugov/person/21890
Nationality	Italian
Date of Birth	13-05-1963
Gender	Female

WORK EXPERIENCE

• Dates	From 2015
• Name and address of the employer	University of Parma
• Type of business or sector	Associate professor of Crop Genetics (SSD AGRI-06/A, former AGR/07)
• Dates	from 2000- to 2015
• Name ad address of the employer	University of Parma
• Type of business or sector	Researcher in Genetics (SSD BIO/18)
• Dates	2013
• Type of business or sector	National Scientific Qualification (SSD AGR/07)

EDUCATION AND TRAINING

From 1996 to 1997	Postdoc Scholarship Department of Environmental Sciences, University of Parma. Theme: "Analysis of the expression of genes regulated by water stress in higher plants".
Name and type of organisation providing education and training	Funded by the Ministry of Agriculture and Forestry.
From 1994 to 1995	Postdoc Scholarship Department of Evolutionary Biology and Botanical Garden. Topic: "Genetic resistance of agricultural plants to biotic and abiotic stresses: molecular-genetic analysis of genes induced by abscisic acid in cereals".
Name and type of organisation providing education and training	Funded by the Ministry of Agriculture and Forestry.
From 1989 to 1992	PhD course
Name and type of organisation providing education and training	Tuscia University, Viterbo, Italy

Title of qualification awarded	PhD in “Agricultural genetics” with a dissertation on “Molecular and genetic analysis of drought stress tolerance in cultivated plants: role of abscisic acid”
From 1983 to 1987	Course of Biology
Name and type of organisation providing education and training	University of Parma
Title of qualification awarded	B. Sc. Biology Degree (cum laude)

TEACHING TASKS

From 2018	Bachelor’s Degree Course in Biotechnology: courses of Plant Genetics and Breeding (6 CFU) and Plant and Animal Genomics for Agri-Food Sector (6 CFU) Bachelor's Degree Course in ‘Food System: Management, Sustainability and Technologies’ : Course of Climate Change and Food Production (8CFU)
From 2012 to 2018	Bachelor's Degree in Biotechnology : Genomics and Molecular Markers (6 CFU)
From 2000 to 2012	Bachelor's Degree Course in Biotechnology: Molecular Markers (4 CFU) in 2010; Genetic Engineering (Module) (3 CFU) (from 2004 to 2008). Master's Degree Course in Industrial Biotechnology course of General Genomics (5 CFU) (from 2004 to 2008). Bachelor's Degree in Biotechnology course of Plant Genetic Engineering (3 CFU) (from 2002 to 2004). Degree Course in Environmental Sciences: Genetic Biotechnology (from 2000 to 2002).

PERSONAL SKILLS AND COMPETENCES

Mother language	Italian

Other language	COMPREHENSION	SPEAKING	WRITING
English	C1	B2	C1

Communication skills	I have good communication skills acquired during my experience as a university teacher
Organizational and management skills	I have good organization and management skills acquired during my experience in management of Bachelor's and Master's degree students, PhD students; management of national and international research projects
Professional skills	Use of laboratory tools: electrophoresis of nucleic acids and proteins, centrifuges, PCR, real-time PCR, capillary electrophoresis. Preparative techniques for the purification of nucleic acids and proteins. Molecular Biology Techniques. Scientific reporting as papers and research project reporting.
IT skills	Good command of the Office suite tools (word processor, spreadsheet, presentation software), programs for digital image processing, statistical analysis programs (SPSS, PAST), bioinformatics analysis programs, use of the main genomics and proteomics databases.

MAIN RESEARCH INTEREST

1. Study of the genetic and molecular bases of genotype-environment interactions in crops:
-Isolation, sequencing, characterization and mapping of genes induced in response to abiotic stresses in cereals and horticultural crops.
-Effects of the environmental conditions (cultivation techniques, water regimes, fertilization) on proteome quality in crops. The seed proteome is analyzed by 2D-PAGE and mass spectrometry to characterize the reserve seed proteome in the Italian wheat and rice varieties.
2. Development and characterization of products with biostimulant and bioprotective properties to improve crop sustainability, for application in organic and soil-less cultivation systems. Enhancement of the aromatic and medicinal plant supply chain.
3. Molecular traceability of food supply chains for food safety and food authenticity:
-GMO traceability in food chains using advanced genomic methods for DNA analysis. In particular different PCR systems were developed (qualitative, competitive, nested, real-time) and multiplex PCR methods (qualitative and quantitative), that are instrumental for the implementation of molecular array platforms.
-Allergenic species traceability in processed foods. Qualitative and quantitative PCR methods were developed for the identification of the main food allergens. A patent has been registered on this application.
4. Development of molecular markers for fingerprinting and species identification using conventional and advanced PCR methods (RT-PCR, Multiplex PCR, HRM PCR, Array).

OTHER INFORMATION

Technological transfer activity

- Member of the Interdepartmental Center SITEIA.PARMA, Interdepartmental Center for Safety, Technologies and Innovation of the Agrofood chain. Web site https://www.centritecnopolo.unipr.it/siteiaparma/

Special project at University of Parma

- Member of the Food Project, promoted by the University of Parma to establish and strengthen the already existing competences of excellence in the field of research and teaching in the food sector. Web site http://www.foodproject.unipr.it/en/

Scientific production

- I authored papers in international journals, book chapters. I participated to national and international meeting.
ORCID: https://orcid.org/0000-0001-8326-4965
ResearcherID: G-9759-2011
Scopus Author ID: 6602849811

Relevant publications of the last 5 years

GRAZIANO, S., CALDARA, M., GULLÌ, M., CORNALI, S., VASSURA, I., CORALLI, I., PAGANO, L., MARMIROLI, M., DONATI, M., BEVIVINO, A.; et al. (2025) Improving the Sustainability of Tomato Production with Biochar and Biofertilizers in Emilia-Romagna, Italy. Soil Use Manag. 41, e70091, https://doi.org/10.1111/sum.70091

GULLÌ, M., CANGIOLI, L., FRUSCIANTE, S., GRAZIANO, S., CALDARA, M., FIORE, A., KLONOWSKI, A.M., MAESTRI, E., BRUNORI, A., MENGONI, A., et al. (2025) The relevance of biochar and co-applied SynComs on maize quality and sustainability: Evidence from field experiments. Sci. Total Environ. 968, 178872, https://doi.org/10.1016/j.scitotenv.2025.178872

CALDARA M., GULLÌ, M., GRAZIANO S., RIBONI N., MAESTRI E., MATTAROZZI M, BIANCHI F., CARERI M., MARMIROLI N. (2024) Microbial consortia and biochar as sustainable biofertilisers: Analysis of their impact on wheat growth and production. Science of The Total Environment,170168, ISSN 0048-9697, https://doi.org/10.1016/j.scitotenv.2024.170168

JANNI, M., MAESTRI, E., GULLÌ, M., MARMIROLI, M., & MARMIROLI, N. (2024). Plant responses to climate change, how global warming may impact on food security: A critical review.

Frontiers in Plant Science, 14, 1297569. https://doi.org/10.3389/fpls.2023.1297569

RIBONI, N., BIANCHI, F., MATTAROZZI, M., CALDARA, M., GULLÌ, M., GRAZIANO, S., MAESTRI, E., MARMIROLI, N., & CARERI, M. (2023). Ultra-high Performance Liquid Chromatography–Ion Mobility–High-Resolution Mass Spectrometry to Evaluate the Metabolomic Response of Durum Wheat to Sustainable Treatments. Journal of Agricultural and Food Chemistry, 71(41), 15407-15416. https://doi.org/10.1021/acs.jafc.3c04532

GRAZIANO, S., CALDARA, M., GULLÌ, M., BEVIVINO, A., MAESTRI, E., & MARMIROLI, N. A Metagenomic and Gene Expression Analysis in Wheat (T. durum) and Maize (Z. mays) Biofertilized with PGPM and Biochar. International journal of molecular sciences, 2022, 23(18), 10376. (DOI:10.3390/ijms231810376)

DE PASCALI M., DE CAROLI M., APRILE A., MICELI A., PERROTTA C., GULLÌ M., RAMPINO P. Drought Stress Pre-Treatment Triggers Thermotolerance Acquisition in Durum Wheat. Int. J. Mol. Sci. 2022, 23(14), 7988. (DOI:10.3390/ijms23147988)

GRAZIANO S., AGRIMONTI C., MARMIROLI N., GULLÌ M., Utilisation and limitations of pseudocereals (quinoa, amaranth, and buckwheat) in food production: a review. Trends in Food Science and Technology, 125, 154-165 (DOI: 10.1016/j.tifs.2022.04.007)

GULLÌ M., DE PASCALI M., PERROTTA C., RAMPINO P., A stress-related transcription factor belonging to the YL-1 family is differently regulated in durum wheat cultivars differing in drought sensitivity. Plant Physiology and Biochemistry 170, 307-315 (DOI: 10.1016/j.plaphy.2021.12.016) IF 5.437

GRASSI, S., GULLÌ, M., VISIOLI, G., & MARTI, A. (2021). Gluten aggregation properties as a tool for durum wheat quality assessment: A chemometric approach. LWT, 142, 111048. (DOI:1016/j.lwt.2021.111048) IF 4.952

GALATI S., GULLÌ M., GIANNELLI G., FURINI A., DALCORSO G., FRAGNI, R., BUSCHINI A., & VISIOLI, G. (2021) Heavy metals modulate DNA compaction and methylation at CpG sites in the metal hyperaccumulator *Arabidopsis halleri*. Environmental and Molecular Mutagenesis. (DOI: 10.1002/em.22421)

National and international Projects

Ongoing

- 2024-2027 Project RISORGO funded by Emilia-Romagna COPSR 2023 – 2027 – Intervention SRG01 – OS5 "White grain sorghum for water efficiency and sustainability of regional agriculture: germplasm characterization, cultivation, and quality" (36 months)
- 2024-2027 Project STARTER funded by Emilia-Romagna COPSR 2023 – 2027 – Intervention SRG01 – OS4 "Strategies for the adaptation and resilience of cropping systems to climate change, with innovative techniques that allow the restoration of soil fertility" (30 months)
- 2024-2027 PI Project ES.O.PO 'Valorizzazione della filiera biologica di piante aromatiche e officinali per la definizione di biopesticidi e biostimolanti per la coltivazione biologica del pomodoro' funded by Italian Ministry of Agriculture, Food Sovereignty and Forestry. (36 months)
- 2023-2026 Project-PNRR – Mission 4 "Formation and Research" – National Research Program and Project of relevent national interest -Project PRIN 2022 "The puzzling mystery of tryptamine and serotonin roles in plants: a comprehensive investigation in Solanum lycospersicum."– Code 2022XSZJ9S (24 months)

Concluded

- 2022-2024 Project PNR 2015-2020- "Shelf life, quality and safety of fruit and vegetable products with a high service content" (POFACS) https://www.pofacs.it/
- 2016-2022 Project H2020 "Sustainable Innovation of Microbiome Applications in food system" - SIMBA (Grant Agreement No. 818431) https://simbaproject.eu/
- 2016-2018 POR FESR 2014-2020, Action 1.2.2 -"Identification of wheat genotypes at low impact for people with genetic susceptibility for celiac disease" (Smartwheat) (24 months).

- 2014-2016 CRC Foundation 2013: Production of special wheats for the food industry “Special Wheat”(24 months).
- 2013-2015 ETB Project (6° EUROTRANS-BIO call) “Development and validation of DNA based prototypes for detection of allergenic species” (Allergotype) Project MSE n. E01/0885/02/X21. (30 months)
- 2011-2014 AGER project RISINNOVA “Integrated genetic and genomic approaches for new Italian rice breeding strategies” (42 months)
- 2010-2011 Cariparma Foundation “Molecular biotechnologies for the research of proteomic biomarkers of exposure to HIV” (18 months)
- 2010 -2013 AGER Project “Environmental and economic sustainability for yield and quality production of durum wheat supply chain”. (36 months)
- 2008-2011 EuroTransBio project: Preparation, validation and commercialization of prototype toxigenomics chip (Project n. E01/0731/01/X13) (TOXICHIP)" (30 months)
- 2005-2008 EU Integrated Project "GM and non-GM supply chains: their CO-Existence and TRAceability" (COEXTRA), Framework VI (36 month)
- 2001-2003 EU project "Traceability of DNA fragments through the food chain by DNA/PNA techniques: Application to novel foods" (DNA TRACK) (36 month)
- 2001-2005 Italian Ministry of Agriculture and Forestry project "New approaches for genetic improvement in cultivated wheat base on the exploitation of germplasm resources and molecular techniques: Search and characterization of new alleles for thermo-tolerance in wheat and cognate wild species" ("AMIFRUGAM") (36 month)(Partecipazione UR-PR)

Scientific society affiliation

AGI (Associazione Genetica Italiana)

SIGA (Società Italiana di Genetica Agraria)

Personal information

I authorize the processing of my personal data pursuant to Legislative Decree 30 June 2003, n. 196 "Code regarding the protection of personal data”.