CURRICULUM VITAE MARIA FIORELLA MAZZEO

PERSONAL INFORMATION

Name, Surname	**MARIA FIORELLA MAZZEO**
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ORCID/SCOPUS	**0000-0003-1542-0027/35617338200**
Nationality	**ITALIAN**

WORK EXPERIENCE

Period (from – to)	**OCTOBER_2011 - PRESENT**
Name of employer	National Research Council of Italy, Institute of Food Sciences (CNR-ISA)
Type of business or sector	Public Research Institution
Occupation or position held	Permanent Researcher, third level
Period (from – to)	**DECEMBER_2007- MARCH 2011**
Name of employer	National Research Council of Italy, Institute of Food Sciences (CNR-ISA)
Type of business or sector	Public Research Institution
Occupation or position held	Temporary Researcher, third level
Period (from – to)	**AUGUST_2003- JULY 2007**
Name of employer	National Research Council of Italy, Institute of Food Sciences (CNR-ISA)
Type of business or sector	Public Research Institution
Occupation or position held	Post-doc as part of the project "Identificazione ed analisi funzionale delle alterazioni molecolari e geniche che caratterizzano i tumori della mammella ormono-responsivi" sponsored by Ministero dell'Istruzione, dell'Università e della Ricerca PNR 2001-2003, FIRB art.8) Programma Strategico: Post-genoma
Period (from – to)	**DECEMBER_2002- JUNE 2003**
Name of employer	National Research Council of Italy, Institute of Food Sciences (CNR-ISA)
Type of business or sector	Public Research Institution
Occupation or position held	Post-doc as part of the project "Trattamento di prodotti freschi altamente deperibili per garantirne qualità, sicurezza e salubrità - PROFSICURI" sponsored by Ministero dell'Istruzione, dell'Università e della Ricerca Legge 449/97-99, Anno 1999. Settore: 2. Agrobiotecnologie

EDUCATION

Period (from – to)	**OCTOBER 1998- OCTOBER 2002**
Name and type of organization providing education	University of Naples "Federico II", Italy
Title of qualification awarded	PhD in Biological Chemistry and Molecular Biology
Period (from – to)	**NOVEMBER_1998**
Name and type of organization providing education	University of Salerno, Italy
Title of qualification awarded	Qualified as a Professional Chemist

Period (from – to)	**MAY_1998**
Name and type of organization providing education	University of Salerno, Italy
Title of qualification awarded	Chemistry Degree
NATIVE LANGUAGE	**ITALIAN**
OTHER LANGUAGE	**ENGLISH**
Reading	advanced
Writing	advanced
Talking	upper intermediate

ORGANIZATIONAL CAPACITY

Member of the organizing committees:
First REPAS Meeting - "REte Proteomica per un'Alimentazione Salutistica: dalla tavola al campo Workshop on "New developments in Proteomics and Metabolomics"
Workshop on "Cancer Biomarkers from Discovery to Clinical Assay Using Protein Chip Technology"
Workshop on "Recent Advances in Biological and Proteomic Mass Spectrometry"

RESEARCH ACTIVITIES

Microbial proteomics

Functional and differential proteomics to elucidate molecular mechanisms underlying probiotic (adhesion, immunomodulation) and biotechnological (stress tolerance) features of foodborne microorganisms. Studies have been focused on lactic acid bacteria, such as *L. crispatus, L. plantarum, L. casei, L. acidophilus, L. gasseri, Bacillus clausii* and pathogenic bacteria such as *Listeria monocytogenes*

Plant proteomics

Functional and differential proteomics to study resistance mechanisms to Fusarium oxysporum f. sp. radicis-lycopersici FORL infection in tomato roots and stress mechanisms in tomato anthers

Human proteomics

Functional and differential proteomics to investigate molecular aspects of different human diseases (e.g., Parkinson's disease, endometriosis, Bardet-Biedl syndrome, hepatocellular carcinoma, mucopolysaccharidosis)

"Molecular Profiling" methodologies

Development and application of molecular profiling strategies based on MALDI-TOF-MS to identify and discriminate foodborne bacteria. The method allowed the discrimination of 75 strains belonging to twelve different genera (*Escherichia, Listeria, Yersinia, Staphylococcus, Salmonella, Micrococcus, Morganella, Pseudomonas, Proteus, Sarcina, Lactobacillus, Leuconostoc*). Data are deposited on a free available database (http://bioinformatica.isa.cnr.it/Descr_Bact_Dbase.htm).

Development and application of an innovative method based on MALDI-TOF-MS for the authentication of fish species and fraud detection of trade fish products (baby food, fillets and sticks). Forty different fish species belonging to seven orders and twenty families, representing one of the most comprehensive repertoire of fish species, have been analyzed and discriminated

Development and application of an innovative method based on MALDI-TOF-MS for the authentication and discrimination of twenty-nine hazelnut cultivars

Structural studies of food proteins

Structural characterization of durum wheat proteins (gliadins, glutenins and albumins) during grain development and other food proteins by means of mono and bidimensional electrophoretic techniques and tandem mass spectrometry coupled with nano-liquid chromatography

Studies of molecular mechanisms underlying the onset of Coeliac Disease

Structural studies of native gliadin peptides and gliadin peptides modified by a transamidation reaction catalysed by a microbial transglutaminase by means of mono and bidimensional electrophoretic techniques and tandem mass spectrometry coupled with nano-liquid chromatography. Obtained results contribute to clarify the molecular basis of the onset of Coeliac Disease and design enzymatic strategies to detox wheat flour

CONTRIBUTION TO EVALUATION COMMITTEE, WORK GROUP, TECHNICAL AND SCIENTIFIC NETWORK

Expert for EFSA designated by CNR, in the area ‘‘Human nutrition, dietetic products, allergens and/or novel foods”

Expert for REPRISE, Register of Expert Peer-Reviewers for Italian Scientific Evaluation

Member of the Nutrheff Network-Nutraceutical Health Enhancing Functional Food, sponsored by National Research Council of Italy- BioAgrifood Department

Reviewer Project for the Call “Installation Research Projects (2013) sponsored by The Croatian Science Foundation (HRZZ)

Member of the Quality Committee Work Group AFI – Pharmaceutical Industrial Association - to draft National Guidelines to implement Rapid Analytical Methods in Microbiology

CONTRIBUTION TO EDITORIAL BOARD OF INTERNATIONAL JOURNALS

Review Editor on the Editorial Board of Nutrition and Microbes (Frontiers)

Guest associate Editor in Food Microbiology (Frontiers)

Editorial Board Member of Biology (MDPI) Proteomics Section

PEER-REVIEWER ACTIVITIES

Referee for
International Journal of Molecular Sciences
Journal of Agricultural Food Chemistry
Food Chemistry
Molecular Nutrition and Food Research
Science of the Total Environment
Journal of proteomics
Plant Physiology and Biochemistry
Food Research International
Biology
Foods
Frontiers in Microbiology

TEACHING ACTIVITIES

Supervisor for the laboratory activities on proteomic methodologies for the course of Proteomics within the Scienze e Tecnologie Omiche: Proteomica e Metabolomica course (Laurea Magistrale in Biotecnologie Genetiche e Molecolari dell’Università degli Studi del Sannio, Italy, academic years 2014-2015, 2015-2016,2016-2017,2017-2018)

Co-supervisor for the thesis titled “Studio dei meccanismi molecolari dell’interazione tra proteomico dei meccanismi molecolari dell’interazione tra *Lactobacillus acidophilus* e il polifenolo rutina mediante proteomica “(University of Naples "Federico II”, Italy)

Supervisor for the laboratory activities aimed to draft degree and PhD thesis, “(University of Naples "Federico II”, Italy)

Science Communicator of the development and application of the method based on MALDI-TOF-MS for the authentication of fish species and fraud detection in television shows (SUPERQUARK, Striscia la Notizia, TG2)

RESPONSIBILITY FOR LABORATORIES AND/OR INSTRUMENTAL PLATFORM

Supervisor of the Laboratory of Protein Biochemistry (CNR-ISA)

Supervisor of a hybrid-quadrupole-time of flight mass spectrometer coupled with nano-HPLC

Supervisor of a MALDI-TOF mass spectrometer

ACKNOWLEDGMENTS

National Scientific Qualification as Associate Professor (05/E1 Biochimica Generale)

Winner of a scholarship as part of “Programma di scambi internazionali con Università ed Istituti di Ricerca stranieri per la mobilita di breve durata di docenti, ricercatori e studiosi carrying out research activities at the Department of Biological Chemistry, Imperial College of Science, Technology and Medicine, London (Supervisor Professor Howard R. Morris)

PROJECTS

Title “Potenziamento Infrastrutturale: progetti di ricerca strategici per l'ente –DISBA (BIO-

MEMORY). Progetto n. SAC.AD002.173.008

Title: Nutrizione, Alimentazione & Invecchiamento Attivo (NUTR-AGE, FOE-2019, DSB.AD004.271)

Title: METROFOOD-RI - Infrastructure for promoting Metrology in Food and Nutrition (Preparatory Phase) (H2020 INFRADEV-02-2019 CSA METROFOOD-PP project.)

Title: Nuove formulazioni di prodotti nutraceutici per la prevenzione primaria di patologie oncologiche associate a inquinanti ambientali nella Terra dei Fuochi – EcoNutraPrevention (POR CAMPANIA FESR 2014/2020)

Title: PRO-METROFOOD-Progressing towards the construction of METROFOOD-RI Horizon 2020 Research and Innovation Programme,- INFRADEV (2016-2017)

Title: Interomics, Sviluppo di una piattaforma integrata per l'applicazione delle scienze "omiche" alla definizione dei biomarcatori e profili diagnostici, predittivi, e teranostici (progetto Bandiera) – SOTTOPROGETTO Tecnologie omiche per la valorizzazione del germoplasma di frumento duro. (MIUR- CNR, Progetti Bandiera)

Title: Benessere dalle BioTecnologie: Nuovi Processi e Prodotti per la Nutraceutica, la Cosmeceutica e la Nutrizione umana (BenTeN). (POR CAMPANIA FERS 2007 – 2013)

Title: Qualità delle produzioni tipiche campane ed il suo territorio: approcci innovativi ed integrati per rafforzare la competitività del sistema Agroalimentare – QUARC (PO FESR – REGIONE CAMPANIA 2007/2013)

Title: Metodologie di Spettrometria di Massa per il monitoraggio della qualità di Prodotti Agroalimentari del Mezzogiorno (OR2.1.3) nell'ambito del Progetto Conoscenze Integrate per la Sostenibilità e l'Innovazione del Made in Italy Agroalimentare (CISIA) (MIUR – Legge 191 art.2 comma 44 del 23/12/2009 (Legge Finanziaria 2010)

Publications

42 Articles in International Scientific Journals (ISI WoS)

6 Chapters in books (5 international, 1 national)

1 Articles in National or not ISI Scientific Journals

41 Abstracts in international or national congresses

Date, 19th December 2021

Main publications

Rossi S, Giordano D, **Mazzeo MF**, Maurano F, Luongo D, Facchiano A, Siciliano RA, Rossi M.
Transamidation Down-Regulates Intestinal Immunity of Recombinant α-Gliadin in HLA-DQ8 Transgenic Mice.
Int J Mol Sci. 2021; 22: 7019. doi: 10.3390/ijms22137019.

Siciliano RA, Reale A, **Mazzeo MF*,** Morandi S, Silvetti T, Brasca M.
Paraprobiotics: A New Perspective for Functional Foods and Nutraceuticals.
Nutrients. 2021; 13: 1225. doi: 10.3390/nu13041225.
* Corresponding Author

De Pasquale V, Costanzo M, Siciliano RA**, Mazzeo MF**, Pistorio V, Bianchi L, Marchese E, Ruoppolo M, Pavone LM, Caterino M.
Proteomic Analysis of Mucopolysaccharidosis IIIB Mouse Brain.
Biomolecules. 2020; 10: 355. doi: 10.3390/biom10030355

Lippolis R, Gnocchi D, Santacroce L, Siciliano RA**, Mazzeo MF,** Scacco S, Sabbà C, Mazzocca A
A distinctive protein signature induced by lysophosphatidic acid receptor 6 (LPAR6) expression in hepatocellular carcinoma cells.
Biochem Biophys Res Commun. 2020; 526: 1150-1156. doi: 10.1016/j.bbrc.2020.04.036.

Mazzeo MF, Luongo D, Sashihara T, Rossi M, Siciliano RA.
Secretome Analysis of Mouse Dendritic Cells Interacting with a Probiotic Strain of *Lactobacillus gasseri***.**
Nutrients. 2020; 12: 555. doi: 10.3390/nu12020555.

Siciliano RA, Lippolis R, **Mazzeo MF.**
Proteomics for the Investigation of Surface-Exposed Proteins in Probiotics**.**
Front Nutr. 2019; 6: 52. doi: 10.3389/fnut.2019.00052.

Siciliano RA, Pannella G, Lippolis R, Ricciardi A**, Mazzeo MF*,** Zotta T.*
Impact of aerobic and respirative life-style on *Lactobacillus casei* N87 proteome.
Int J Food Microbiol. 2019; 298 :51-62. doi: 10.1016/j.ijfoodmicro.2019.03.006.
* These authors contributed equally to the present work - Corresponding Author

Mazzeo MF, Cacace G, Iovieno P, Massarelli I, Grillo S, Siciliano RA**.**
Response mechanisms induced by exposure to high temperature in anthers from thermo-tolerant and thermo-sensitive tomato plants: A proteomic perspective.
PLoS One. 2018; 13: e0201027. doi: 10.1371/journal.pone.0201027.

Mazzeo MF, Di Stasio L, D'Ambrosio C, Arena S, Scaloni A, Corneti S, Ceriotti A, Tuberosa R, Siciliano RA, Picariello G, Mamone G.
Identification of Early Represented Gluten Proteins during Durum Wheat Grain Development.
J Agric Food Chem. 2017; 65 :3242-3250. doi: 10.1021/acs.jafc.7b00571.

Mazzeo MF, Siciliano RA.
Proteomics for the authentication of fish species**.**
J Proteomics. 2016; 147:119-124. doi: 10.1016/j.jprot.2016.03.007

Mazzeo MF, Lippolis R, Sorrentino A, Liberti S, Fragnito F, Siciliano RA.
Lactobacillus acidophilus-Rutin Interplay Investigated by Proteomics**.**
PLoS One. 2015; 10: e0142376. doi: 10.1371/journal.pone.0142376.

Lippolis R, Siciliano RA, Pacelli C, Ferretta A, **Mazzeo MF,** Scacco S, Papa F, Gaballo A, Dell'Aquila C, De Mari M, Papa S, Cocco T.
Altered protein expression pattern in skin fibroblasts from parkin-mutant early-onset Parkinson's disease patients.
Biochim Biophys Acta. 2015; 1852:1960-70. doi: 10.1016/j.bbadis.2015.06.015.

Ciarmiello LF*, **Mazzeo MF*,** Minasi P, Peluso A, De Luca A, Piccirillo P, Siciliano RA, Carbone V.
Analysis of different European hazelnut (*Corylus avellana L.*) cultivars: authentication, phenotypic features, and phenolic profiles.
J Agric Food Chem. 2014; 62: 6236-46. doi: 10.1021/jf5018324.
* These authors contributed equally to the present work.

Mazzeo MF, Cacace G, Ferriello F, Puopolo G, Zoina A, Ercolano MR, Siciliano RA
Proteomic investigation of response to FORL infection in tomato roots.
Plant Physiol Biochem. 2014; 74: 42-9. doi: 10.1016/j.plaphy.2013.10.031.

Mazzeo MF, Bonavita R, Maurano F, Bergamo P, Siciliano RA, Rossi M.
Biochemical modifications of gliadins induced by microbial transglutaminase on wheat flour**.**
Biochim Biophys Acta. 2013; 1830: 5166-74. doi: 10.1016/j.bbagen.2013.07.021

Mazzeo MF, Cacace G, Peluso A, Zotta T, Muscariello L, Vastano V, Parente E, Siciliano RA
Effect of inactivation of ccpA and aerobic growth in *Lactobacillus plantarum*: A proteomic perspective.
J Proteomics. 2012; 75: 4050-61. doi: 10.1016/j.jprot.2012.05.019.

Siciliano RA**, Mazzeo MF.**
Molecular mechanisms of probiotic action: a proteomic perspective.
Curr Opin Microbiol. 2012; 15: 390-6. doi: 10.1016/j.mib.2012.03.006.

Cacace G*, **Mazzeo MF*,** Sorrentino A, Spada V, Malorni A, Siciliano RA.
Proteomics for the elucidation of cold adaptation mechanisms in *Listeria monocytogenes*.
J Proteomics. 2010; 73: 2021-30. doi: 10.1016/j.jprot.2010.06.011.
* These authors contributed equally to the present work.

Mazzeo MF, Giulio BD, Guerriero G, Ciarcia G, Malorni A, Russo GL, Siciliano RA**.**
Fish authentication by MALDI-TOF mass spectrometry**.**
J Agric Food Chem. 2008; 56: 11071-6. doi: 10.1021/jf8021783.

Gianfrani C, Siciliano RA, Facchiano AM, Camarca A, **Mazzeo MF**, Costantini S, Salvati VM, Maurano F, Mazzarella G, Iaquinto G, Bergamo P, Rossi M
Transamidation of wheat flour inhibits the response to gliadin of intestinal T cells in celiac disease.
Gastroenterology. 2007; 133 :780-9. doi: 10.1053/j.gastro.2007.06.023.

Mazzeo MF, Sorrentino A, Gaita M, Cacace G, Di Stasio M, Facchiano A, Comi G, Malorni A, Siciliano RA.
Matrix-assisted laser desorption ionization-time of flight mass spectrometry for the discrimination of food-borne microorganisms**.**
Appl Environ Microbiol. 2006; 72: 1180-9. doi: 10.1128/AEM.72.2.1180-1189.2006.