

Filomena Nazzaro

Place and date of born: Portici (NA), Italy, February 7th 1960

She got her degree in Biology in 1986 at the “Federico II” University, in Naples. Relator was Prof Francesco Della Corte. Title of thesis: “Forms and functions of lymphocytes, in humans”.

Post-lauream trainingship and scientific activity

- ❖ PhD in animal biology. Study of tunicates. University “Federico II” Naples, 1986-1990.
- ❖ 1990-1993 CNR fellowship, Institute of protein biochemistry (formerly Institute of Enzymology and Protein Biochemistry, section of Pozzuoli, Naples), tutor Prof Mosè Rossi, Drs Francesco La Cara and Pierangelo Orlando. Study of enzymes from different extremophile microorganisms.
- ❖ 1993-1994. Post doc fellowship, University “Federico II” Naples. Purification and characterization of an alcohol dehydrogenase activity from the archea *Sulfolobus solfataricus* MT3
- ❖ 1995. Research Scientist (permanent position from 1998) at the Institute of Food Science, CNR-ISA, in Avellino (Italy).

Roles at CNR

- ❖ 2015: component of the task force of the CNR, Department of Science, Food and Agriculture
- ❖ 2015: component of the task force of the National CNR NUTRHEFF (www.nutrheff.cnr.it) network
- ❖ 2011-2015: CNR delegate in the EU platform “Food for life”
- ❖ Since 2011 Responsible of the CNR project “FOOD”
- ❖ Since 2005: Responsible of the CNR Research Committee “Technologies, traceability and Food Safety”
- ❖ 2004-2005: Responsible of the research line: “Biotechnology, quality and food safety”
- ❖ Since 1995: Head of the laboratory of food biotechnology (formerly Biotechnology and food safety).

Responsibility in the following research projects:

- ❖ Since 2015: responsible for CNR-ISA in the EU project EDEN-ISS
- ❖ Since 2014: responsible for ISA-CNR in the PON SMART CITIES project “BE&SAVE” for the recovery and valorisation of biomolecules from domestic wastes
- ❖ 2014-2015 scientific responsible of the Campania PSR 2007-2013 mis 124 “FFRESCO CAMPANO” for the formulation of new Campania fresh dairy products and safeguard through use of natural additives and/or biopolimers.
- ❖ 2014-2015: scientific responsible of the Calabria PSR 2007-2013 mis. 124 “CALABRIASALUS” for the formulation of new healthy products based on typical citrus of Calabria region
- ❖ 2010-2015 responsible for ISA CNR in the project “SALVE”, safeguard of vegetal resources, supported by the Campania region, PSR 2007-2013, mis. 214, act f2. Biochemical and biological characterization of several hundred vegetal varieties of the Campania region.
- ❖ 2008-2009: responsible for ISA CNR in the collaboration between CNR and Eurolactis for the Molecular characterization of Donkey milk.
- ❖ 2008-2011: Scientific responsible. Project TRASPEC: safety and quality of sheep dairy products of the Siena province

- ❖ 2007-2008: Scientific responsible for CNR-ISA and then coordinator of the bilateral project Italy-China, for the realization of a common scientific laboratory in China for food quality and safety studies. "LABAGRO"
- ❖ 2006-2009 WP leader (WP2: Extracts characterization: Chemical and toxicological characterization;
- ❖ Task leader (WP4-Meat products analyses). EU project supported by the SIXTH FRAMEWORK PROGRAMME PRIORITY 5 (Food Quality and Safety) "NOvel Vegetal-based Extracts Additives for CHEMical-Free FOOD".
- ❖ 2005-2007: Responsible in the Cooperation between ENZA ZADEN srl and CNR-ISA: "study of the healthy properties in some foods of the mediterranean diet"
- ❖ 2003-2004 Responsible for CNR-ISA in the EU project "ALFA LATIN AMERICA-ACADEMIC TRAINING" Exchange Programme between Universities of the European Union and Latin America supported by the European Community. Sub-programme B: Co-operation for Scientific and Technological Training Scientific Field: Engineering, Food Technology, Biotechnology; Environmental Studies, Natural and/or Energy Resources. Title of the Project: "Preparation of Network for sustainable utilisation of natural resources in food biotechnology (Food Biotech BEC-FID project n° II-0254-B1).
- ❖ 1999-2001. Responsible for CNR-ISA in the Multiregional operative programme (POM): "Biotechnologies for the valorization of bakery products through the identification of factors affecting their organoleptic, biological and nutritional peculiarities.

TEACHING ACTIVITY

- ❖ Contract Professor in Microbiology at University Parthenope, in Naples, years 2007-2008 and 2008-2009
- ❖ Contract Professor in Food technology and Chemistry at University Federico II, Naples, Faculty of human nutrition, from 2010
- ❖ From 2001 until present Assistant supervisor or relator of several theses at university Federico II, Naples, and at University of Salerno.

Scientific publications (last five years)

1. Essential Oils from Mediterranean Aromatic Plants. L De Martino, F. Nazzaro, E.Mancini, V. De Feo. In: The Mediterranean Diet- An Evidence-Based Approach, Edited by Victor R. Preedy, Ronald Ross Watson, 12/2015: chapter 58: pages 649-661; Elsevier., ISBN: 978-0-12-407849-9,2015
2. Peptide extracts of different Sardinia cheeses might exhibit antimicrobial and antifungal activity after the in vitro digestion of the products. F.Nazzaro, R.Coppola, F.Fratianni. In: Multidisciplinary approaches for studying and combating microbial pathogens, Edited by A.Mendez-Vilas, 01/2015: pages 117-120; Brown Walker Press Boca raton., ISBN: 978-1-62734-544-6,2015
3. Antifungal activity of wild Capsicum foliar extracts containing polyphenols against the phytopathogens *Alternaria alternata*, *Rhizoctonia solani*, *Sclerotinia minor* and *Verticillium dahliae*. C. Pane · F.Fratianni · M.Caputo · M.Parisi · F.Nazzaro · M.Zaccardelli. In: Multidisciplinary approaches for studying and combating microbial pathogens, Edited by A.Mendez-Vilas, 01/2015

4. Phenolic content, antimicrobial and antioxidant activities of *Hypericum perforatum* L. D Del Monte, L De Martino, A Marandino, F Fratianni, F Nazzaro, et al. *Industrial Crops and Products* 74, 342-347,2015
5. Preparazione di un succo di frutta a base di frutti rossi contenente *Saccharomyces cerevisiae* boulardii micro-incapsulato. F Cardinale, F Fratianni, T Granese, A Cozzolino, I Russo, R Coppola, F.Nazzaro. *Ingredienti Alimentari* 13 (77), 15-24, 2014
6. In vitro antioxidant, antimicrobial and anti-proliferative activities of purple potato extracts (*Solanum tuberosum* cv Vitelotte noire) following simulated gastro-intestinal digestion. MN Ombra, F Fratianni, T Granese, F Cardinale, A Cozzolino, F Nazzaro. *Natural product research*, 1-, 2014.
7. Polyphenol Composition, Antioxidant, Antimicrobial and Quorum Quenching Activity of the "Carciofo di Montoro" (*Cynara cardunculus* var. scolymus) Global Artichoke of the Campania Region, Southern Italy. F Fratianni, R Pepe, F Nazzaro. *Food and Nutrition Sciences* 5 (21), 205 2014.
8. *Eruca sativa* Might Influence the Growth, Survival under Simulated Gastrointestinal Conditions and Some Biological Features of *Lactobacillus acidophilus*, *Lactobacillus plantarum* and *Lactobacillus rhamnosus* Strains. F Fratianni, S Pepe, F Cardinale, T Granese, A Cozzolino, R Coppola, et al. *International journal of molecular sciences* 15 (10), 17790-17805,2014
9. Polyphenol Composition and Antioxidant Activity of Different Potentially Functional Kale-Based Snacks. F Nazzaro, F Cardinale, A Cozzolino, T Granese, F Fratianni. *Food and Nutrition Sciences* 2014
10. Polyphenol composition and antioxidant activity of different grass pea (*Lathyrus sativus*), lentils (*Lens culinaris*), and chickpea (*Cicer arietinum*) ecotypes of the Campania region (Southern Italy) F Fratianni, F Cardinale, A Cozzolino, T Granese, D Albanese, et al. *Journal of functional foods* 7, 551-557, 2014
11. Variation of Polyphenols, Anthocyanins and Antioxidant Power in the Strawberry Grape (*Vitis labrusca*) after Simulated Gastro-Intestinal Transit and Evaluation of in Vitro Antimicrobial Activity. T Granese, F Cardinale, A Cozzolino, S Pepe, MN Ombra, F Nazzaro, et al. *Food and Nutrition Sciences* 2014
12. Polyphenol Composition and Antioxidant Activity of Two Autochthonous Brassicaceae of the Campania Region, Southern Italy. F Fratianni, F Cardinale, A Cozzolino, T Granese, S Pepe, R Riccardi, P. Spigno, R.Coppola and F. Nazzaro. *Food and Nutrition Sciences*, 2014
13. Isolation and functional characterization of a novel gene coding for flavonoid 3'-hydroxylase from globe artichoke. M De Palma, F Fratianni, F Nazzaro, M Tucci. *Biologia Plantarum*, 1-11, 2014
14. Ability of synbiotic encapsulated *Saccharomyces cerevisiae* boulardii to grow in berry juice and to survive under simulated gastrointestinal conditions. F Fratianni, F Cardinale, I Russo, C Iuliano, P Tremonte, R Coppola, F. Nazzaro. *Journal of microencapsulation* 31 (3), 299-305, 2013.
15. Differential modulation of innate immunity in vitro by probiotic strains of *Lactobacillus gasserii*. D Luongo, J Miyamoto, P Bergamo, F Nazzaro, F Baruzzi, T Sashihara, M.Rossi. *BMC microbiology* 13 (1), 298, 2013.
16. Anti quorum sensing activity of polyphenol extracts from two Brassicaceae of Southern Italy. F.Nazzaro, F. Fratianni, R.Riccardi, P. Spigno, R.Coppola. In: *Microbial Diversity* 2013

- Microbial Interactions in Complex Ecosystems MD2013, PROCEEDINGS OF THE SECOND INTERNATIONAL CONFERENCE ON MICROBIAL DIVERSITY 2013 - MICROBIAL INTERACTIONS IN COMPLEX ECOSYSTEMS, MD2013, Edited by J.B. Gallego, G.Cardinali, S.Casella, E.Neviani, 01/2013: pages 311-312; 2013 SIMTREA, Società Italiana di Microbiologia Agraria-Alimentare e Ambientale, San Casciano Val di Pesa, Firenze, Italy.
17. Effect of essential oils on pathogenic bacteria. F Nazzaro, F Fratianni, L De Martino, R Coppola, V De Feo. *Pharmaceuticals* 6 (12), 1451-1474, 2013.
 18. Chemical composition and biological activity of the essential oil from leaves of *Moringa oleifera* Lam. cultivated in Mozambique. T Marrufo, F Nazzaro, E Mancini, F Fratianni, R Coppola, L De Martino, V. De Feo. *Molecules* 18 (9), 10989-11000, 2013.
 19. Quorum sensing and phytochemicals. F Nazzaro, F Fratianni, R Coppola, *International journal of molecular sciences* 14 (6), 12607-12619, 2013.
 20. Biochemical Composition, Antimicrobial Activities, and Anti-Quorum-Sensing Activities of Ethanol and Ethyl Acetate Extracts from *Hypericum connatum* Lam.(Guttiferae) F Fratianni, F Nazzaro, A Marandino, MR Fusco, R Coppola, V De Feo, L. De Martino. *Journal of medicinal food* 16 (5), 454-459, 2013
 21. Fermentation of tomato juice with the probiotic yeast *Saccharomyces cerevisiae boulardii*. F Fratianni, F Cardinale, I Russo, C Iuliano, AC Cucciniello, M Maione, A.d'Acierno, F.Nazzaro. in: *Functional Foods*, 143-152,2013.
 22. Protein analysis-on-chip systems in foodomics. F Nazzaro, P Orlando, F Fratianni, A Di Luccia, R Coppola. *Nutrients* 4 (10), 1475-1489, 2012
 23. Caratteristiche biochimiche e biologiche di estratti vegetali ottenuti da coltivazioni organiche e convenzionali. F.Fratianni · D.Gallotta · A. Sada · M.A.Belisario · R.Coppola · F.Nazzaro. In: *Ricerche e Innovazioni nell'Industria Alimentare, Vol 10*, Edited by Sebastiano Porretta, 01/2012: pages 396-400; Chiriotti Pinerolo (TO) Italy., ISBN: 978-88-96027
 24. Analisi delle proteine della carne di specie diversa mediante 1D e 2D microelettroforesi. Filomena Nazzaro · F.Fratianni · R.Coppola · T. Di Renzo · R.Gagliardi · A. Di Luccia. In: *Ricerche e innovazioni nell'Industria Alimentare Vol 10*, Edited by Sebastiano Porretta, 01/2012: pages 611-614; Chiriotti, Pinerolo (TO),Italy., ISBN: 968-88-96027.
 25. A Safe Consortium Position Paper: Update on Microbial Safety of Fresh Produce. M Abadias, N Belc, A Dobre, K Flynn, A Lasagabaster, F Nazzaro, I Smeu, et al. *Symposium Proceedings* 1, 1, 2012
 26. Passive refrigeration (PRS)TM as innovative system for the vegetable preservation. F.Fratianni · R.Riccardi · P. Spigno · C.Iuliano · A. Corbo · R. Coppola · F. Nazzaro. In: *International Conference on Food Technology*, Edited by P.Fito and F. Toldrà, 1-4,2012
 27. The prebiotic source influences the growth, biochemical features and survival under simulated gastrointestinal conditions of the probiotic *Lactobacillus acidophilus*. F Nazzaro, F Fratianni, B Nicolaus, A Poli, P Orlando. *Anaerobe* 18 (3), 280-285, 2012
 28. Biochemical traits, survival and biological properties of the probiotic *Lactobacillus plantarum* grown in the presence of prebiotic inulin and pectin as energy source. F Nazzaro, F Fratianni, P Orlando, R Coppola. *Pharmaceuticals* 5 (5), 481-492, 2012
 29. Microencapsulation in food science and biotechnology. F Nazzaro, P Orlando, F Fratianni, R Coppola. *Current Opinion in Biotechnology* 23 (2), 182-186, 2012

30. ATTIVITÀ ANTIMICROBICA DI PEPTIDI DA PRODOTTI LATTIERO CASEARI SARDI. F Nazzaro, F Fratianni, M Maione, Ombra MN. In: ALTRIFORMAGGI :Autenticità, Legislazione, TRadizione e Innovazione per la ... , 2012
31. ATTIVITÀ ANTIMICROBICA DEL LATTE E DEL PECORINO DELLE CRETE SENESI. F Nazzaro, M Maione, F Fratianni. In: ALTRIFORMAGGI: Autenticità, Legislazione, TRadizione e Innovazione per la ..., 2012
32. Book: Studio bioagronomico del fagiolo di Gorga. L De Martino · V De Feo · E Mancini · A Marandino · F Fratianni · F Nazzaro, ISBN: 9788890687341,2012.
33. Biochemical characteristics and biological properties of annurca apple cider. F Fratianni, A De Giulio, A Sada, F Nazzaro. Journal of medicinal food 15 (1), 18-23, 2012
34. Microtechnology and nanotechnology in food science. F Nazzaro, F Fratianni, R Coppola. In: Green Technologies in Food Production and Processing, Springer Science & Business Media 471-494, 2012
35. Phenolic composition and antimicrobial and antiquorum sensing activity of an ethanolic extract of peels from the apple cultivar Annurca. F Fratianni, R Coppola, F Nazzaro. Journal of medicinal food 14 (9), 957-963, 2011
36. Antibacterial properties of polyvinyl alcohol-rosemary polyphenol blends. A Ottobrino, F Fratianni, F Nazzaro. International Conference BIOMICROWORLD, 2011
37. Preservation of chicken breast meat treated with thyme and balm essential oils. F Fratianni, L De Martino, A Melone, V De Feo, R Coppola, F Nazzaro. Journal of food science 75 (8), M528-M535, 2010
38. Probiotic microorganisms isolated from donkey milk. F Nazzaro, P Orlando, A Conti. US Patent App. 13/319,124, 2010
39. THE USE OF PROBIOTIC STRAINS IN THE PRODUCTION OF A DONKEY MILK-BASED FUNCTIONAL BEVERAGE. F Nazzaro, F Fratianni, P Orlando, R Coppola. International Journal of Probiotics & Prebiotics 5 (2), 91, 2010
40. A novel functional probiotic product containing phenolics and anthocyanins. F Fratianni, R Coppola, A Sada, J Mendiola, E Ibañez, F Nazzaro. International Journal of Probiotics & Prebiotics 5 (2), 85, 2010
41. Functional foods and nondairy probiotic food development: trends, concepts, and products. D Granato, GF Branco, F Nazzaro, AG Cruz, JAF Faria. Comprehensive reviews in food science and food safety 9 (3), 292-302,2010
42. Agricultural product innovation:" Torzella"(Brassica oleracea L. var. acephala) a traditional cultivation on the way of a new revalorization. F Raimo, R Riccardi, P Spigno, A Mauro, F Nazzaro, E Frusciante, ...Italus Hortus 17 (2), 59-60, 2010
43. Isolation of components with antimicrobial property from the donkey milk: A preliminary study. F Nazzaro, P Orlando, F Fratianni, R Coppola. The Open Food Science Journal 4, 43-47, 2010.