

# CURRICULUM VITAE



## PERSONAL INFORMATION

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## WORK EXPERIENCE

- **Date** From 31-12-2013
- **Name and address of employer** ISA-CNR Institute of Food Sciences  
Via Roma, 64 Avellino
- **Occupation or position held** Researcher
- **Main activities and responsibilities** Purification and characterization of biomolecules (polyphenols, proteins, peptides, hydro and liposoluble vitamins,) in accordance with basic and advanced biochemical methods (HPLC / UPLC). Spectrophotometric methods to monitor the polyphenols content, antioxidant activity and hydroperoxide; Ames II test.
- **Date** From 31-12-2013
- **Name and address of employer** ISA-CNR Institute of Food Sciences  
Via Roma, Avellino
- **Occupation or position held** Researcher
- **Date** From 30-10-2012 to 31-12-2013
- **Name and address of employer** ISA-CNR Institute of Food Sciences  
Via Roma, Avellino
- **Occupation or position held** CTER
- **Participation in research projects**
  - 2019-2023 PSR CAMPANIA 2014-2020 (10) - 10.2.1 DICOVale
  - 2019-2023 "AgroBiodiversity Campania:" – ABC - 10- Art.28 del Reg. UE 1305/2013 - 10.2
  - 2019-2020 In-situ Resource Bio-Utilization for the space (ReBUS)" Prot. ASI n. 1714 del 19 feb. 2018
  - 2015-2019 EDEN- ISS Innovation Action program Horizon 2020
  - BE & Save 2013-2015 Project PON 04a2\_F

- Calabriasalus PSR 2007-2013, (124)
- FFresco PSR 2007/2013 (124HC)
- 2010-2012 SALVE (Biodiversity Protection of Campania Region plants) (PSR 2009-2013 )214 action F2
- 2006- 2009 NoChemfood Novel Vegetal-based Extracts Additives for CHEmical Free FOOD Strep del sixth Framework Programme –Priority 5
- 2002-2004 ProfSicuri CNR/MIUR L.449/97-2002-2003 Agrobiotecnologie

## EDUCATION AND TRAINING

<ul style="list-style-type: none"> <li>• Dates</li> <li>• Name and type of organization providing education and training</li> <li>• Principal subjects/occupational skills covered</li> <li>• Title of qualification</li> </ul>	<p>2001</p> <p>Federico II University, Naples Italy</p> <p>Thesis Title: empirical research “Contributo del muscolo all’aumentata ossidazione lipidica in ratti alimentati con dieta iperlipidica”</p> <p>Degree in Biological Science</p>
<ul style="list-style-type: none"> <li>• Dates</li> <li>• Name and type of organization providing education and training</li> <li>• Principal subjects/occupational skills covered</li> <li>• Title of qualification</li> </ul>	<p>2001-2002</p> <p>Federico II University, Naples Italy</p> <p>Professional qualification in biology</p>
<ul style="list-style-type: none"> <li>• Dates</li> <li>• Name and type of organization providing education and training</li> <li>• Principal subjects/occupational skills covered</li> <li>• Title of qualification</li> </ul>	<p>2001-2002</p> <p>Federico II University, Naples Italy</p> <p>Habilitation for the controls of safety and quality of food</p> <p>Post-graduate studies “Public health and food technologies”</p>
<ul style="list-style-type: none"> <li>• Dates</li> <li>• Name and type of organization providing education and training</li> <li>• Principal subjects/occupational skills covered</li> <li>• Title of qualification</li> </ul>	<p>2002-2003</p> <p>Seconda Università degli Studi di Napoli Medicine and Surgery.</p> <p>Habilitation for the professional nutritionist</p> <p>Post-graduate studies “Human Feeding”</p>

## COMPETENCES

Spectrophotometric procedures to evaluate polyphenols, lycopene, beta carotene, antioxidant activity hydroperoxides content ; knowledge of chromatographic methods for the valuation of phenolic compounds (UPLC / HPLC) test of Ames- base of microbiology- Protein and lipid extraction Electrophoretic and chromatographic procedures to monitor the soluble N fraction

## PUBLICATIONS

1. Liguori L., Malvano F., **Fratianni F.**, Nazzaro F., Orilio P., Albanese D. "Effect of argon-enriched modified atmosphere on the over quality and bioactive compounds of ready-to-use broccoli rabe (*Brassica rapa sylvestris* L. var. *esculenta*) during the storage" *Food Science and Technology International* 2021, 0(0) 1-11 DOI: 10.1177/10820132211062696
2. **F. Fratianni**, M. N. Ombra, A. d'Acierno, L. Caputo, G. Amato, V. De Feo, R. Coppola, F. Nazzaro "Polyphenols Content and In Vitro  $\alpha$ -Glycosidase Activity of Different Italian Monofloral Honeys, and Their Effect on Selected Pathogenic and Probiotic Bacteria" *Microorganisms* 2021 (9)8 1-19 <https://doi.org/10.3390/microorganisms9081694>
3. **F. Fratianni**, A. d'Acierno, M.N. Ombra, G. Amato, V. De Feo, J. F. Ayala-Zavala, R. Coppola, F. Nazzaro "Fatty Acid Composition, Antioxidant, and in vitro Anti-inflammatory Activity of Five Cold-Pressed Prunus Seed Oils, and Their Anti-biofilm Effect Against Pathogenic Bacteria" *Frontiers in Nutrition* 2021 (8) 1-13 [doi.org/10.3389/fnut.2021.775751](https://doi.org/10.3389/fnut.2021.775751)
4. F. Nazzaro, **F. Fratianni** 1, A. d'Acierno, L. Caputo, V. De Feo, R. Coppola, "Antibiofilm Properties Exhibited by the Prickly Pear (*Opuntia ficus-indica*) Seed Oil" *Proceedings* 2020, 66, 29; 1-5 [doi:10.3390/proceedings2020066029](https://doi.org/10.3390/proceedings2020066029)
5. F. Nazzaro, **F. Fratianni**, A. d'Acierno, M.N. Ombra, L. Caputo, R. Coppola, V. De Feo "Antibiofilm properties exhibited by different types of monofloral honey" *Proceedings* 2020, 66, 16; 1-5 [doi:10.3390/proceedings2020066016](https://doi.org/10.3390/proceedings2020066016)
6. L. De Martino, R. Coppola, V. De Feo, L. Caputo, **F. Fratianni**, and F. Nazzaro "Essential Oils Diversity of *Teucrium* Species" *Teucrium Species: Biology and Applications* Springer Milan Stanković Editor 2020, 7, 179-210
7. L. Caputo, G. Amato, **F. Fratianni**, R. Coppola, V. Candido, V. De Feo, F. Nazzaro "Chemical Characterization and Antibiofilm Activities of Bulbs and Leaves of Two Aglione (*Allium ampeloprasum* var. *holmense* Asch. et Graebn.) Landraces Grown in Southern Italy" *Molecules* 2020, 25, 5486 1-11
8. F. Nazzaro, **F. Fratianni**, A. d'Acierno, A.G. da Cruz, V. De Feo, R. Coppola "Microbial production of metabolites for food and processes" *New and Future Developments in Microbial Biotechnology and Bioengineering*, 2020, Elsevier (5) Pages 107-130 <https://doi.org/10.1016/B978-0-444-64301-8.00005-6>
9. F. Nazzaro L. De Martino, **F. Fratianni** V. De Feo Essential oils from Mediterranean aromatic plants *The Mediterranean Diet (Second Edition)* 2020, (49) Pages 555-564 <https://doi.org/10.1016/B978-0-12-818649-7.00048-5>
10. M. N. Ombra, **F. Fratianni** F. Nazzaro "Street Food in Southern Italy: From the Past to the Future" *Nova Publishers, Hauppauge (Stati Uniti d'America)*, 2020 55-78
11. M. N. Ombra, **F. Fratianni** F. Nazzaro "The Confectionery of Southern Italy: From the Tradition to the Future" *Nova Publishers, Hauppauge (Stati Uniti d'America)*, 2020 79-103
12. F. Nazzaro, **F. Fratianni**, V. De Feo, A. Battistelli, A. Gomes Da Cruz, R. Coppola "Polyphenols, the new frontiers of prebiotics". *Advances in Food and Nutrition Research* 2020, 94, 35-89
13. **F. Fratianni**, A. Cozzolino, A. d'Acierno, F. Nazzaro, R. Riccardi, P. Spigno "Qualitative Aspects of Some of Some Traditional Landraces of the Tomato "Piennolo" (*Solanum lycopersicum* L.) of the Campania Region, Southern Italy" *Antioxidants* 2020, 9, 7, 565 1-14
14. **F. Fratianni**, A. d'Acierno, A. Cozzolino, P. Spigno, R. Riccardi, F. Raimo, C. Pane, M. Zaccardelli, V. Tranchida Lombardo, M. Tucci, S. Grillo, R. Coppola, F. Nazzaro "Biochemical characterization of traditional varieties of sweet pepper (*Capsicum annum* L.) of the Campania Region, Southern Italy" *Antioxidants* 2020, 9, 6, 556 1-16
15. L. Caputo, A. Smeriglio, D. Trombetta, L. Cornara, G. Trevena, M. Valussi, **F. Fratianni**, V. De Feo, F. Nazzaro "Chemical Composition and Biological Activities of the Essential Oils of *Leptospermum petersonii* and *Eucalyptus gunnii*" 2020,11, 409, 1-15
16. M.N. Ombra, A. d'Acierno, F. Nazzaro, **F. Fratianni** "Health attributes of ten Mediterranean edible flowers: anti-proliferative and enzyme-inhibitory properties" *Trends in Phytochemical Research* 2019, 251-260
17. **F. Fratianni**, A. Cozzolino, V. De Feo, R. Coppola, M. N. Ombra, F. Nazzaro "Polyphenols, Antioxidant, Antibacterial, and Biofilm Inhibitory Activities of Peel and Pulp of *Citrus medica* L., *Citrus bergamia*, and *Citrus medica* cv. Salò Cultivated in Southern Italy" *Molecules* 2019, 24, 4577 1-14
18. F. Nazzaro, **F. Fratianni**, R. Cozzolino, A. Martignetti, L. Malorni, V. De Feo, A. G. Cruz, A. d'Acierno "Antibacterial Activity of Three Extra Virgin Olive Oils of the Campania Region, Southern Italy, Related to Their Polyphenol Content and Composition" *Microorganisms* 2019, 7 321 1-11

19. **F. Fratianni**, R. Cozzolino, A. Martignetti, L. Malorni, A. d'Acerno, V. De Feo, A. G da Cruz, F. a Nazzaro "Biochemical composition and antioxidant activity of three extra virgin olive oils from the Irpinia Province, Southern Italy" *Food Science & Nutrition* 2019, 1-11
20. F. Nazzaro, **F. Fratianni**, A. d'Acerno, R. Coppola, F. Jesus Ayala-Zavala, A. Gomez da Cruz, V. De Feo "Essential Oils and Microbial Communication" *Essential Oils - Oils of Nature* Editore IntechOpen 2019, 1-26
21. Reale, T. Di Renzo, F. Boscaino, F. Nazzaro, **F. Fratianni**, M. Aponte "Lactic Acid Bacteria Biota and Aroma Profile of Italian Traditional Sourdoughs from the Irpinian Area in Italy" *Frontiers in Microbiology* 2019, 10, 1621-1636
22. F. Nazzaro, **F. Fratianni**, A. d'Acerno, V. De Feo, F. Jesus Ayala-Zavala, A. Gomes-Cruz, D. Granato, R. Coppola "Effect of Polyphenols on Microbial Cell-Cell Communications" *Quorum Sensing Molecular Mechanism and Biotechnological Application* 2019, 195-223
23. F Nazzaro, MN Ombra, **F Fratianni** Effect of RED Clover (*Trifolium Pratense*) on the Growth and Functional Properties of Two *Lactobacillus Paracasei* and *Lactobacillus Rhamnosus* Probiotic Strains *Journal of clinical gastroenterology* 2018, 52, S111-S111
24. Ombra, M.N., Corrado, G., Nazzaro, F., **Fratianni**, F. *Phaseolus vulgaris*: Southern Italian varieties, properties and health benefits *Phaseolus vulgaris: Cultivars, production and uses* 2018, 3-25
25. A T. Bernal-Mercado, C. Acevedo-Hernandez, B. A Silva-Espinoza, M R. Cruz-Valenzuela, G. A Gonzalez-Aguilar, F. Nazzaro, M. Wasim Siddiqui, J F. Ayala-Zavala, **F. Fratianni**, F J. Vazquez-Armenta "Antioxidant and Antimicrobial Capacity of Phenolic Compounds of Mango (*Mangifera indica* L.) Seed depending upon the Extraction Process" *Journal of Medicinal Plants and By-products* (2018) 2: 209-219
26. MN Ombra, A d'Acerno, F Nazzaro, P Spigno, R Riccardi, M Zaccardelli, C. Pane, R. Coppola, **F. Fratianni** "Alpha-amylase, alpha-glucosidase and lipase inhibiting activities of polyphenol-rich extracts from six common bean cultivars of Southern Italy, before and after cooking" *International journal of food sciences and nutrition* 2018, 69 (7), 824-834
27. O. Gennari, V. Marchesano, R. Rega, L. Mecozzi, F. Nazzaro, **F. Fratianni**, R. Coppola, L. Masucci, E. Mazzon, A. Bramanti, P. Ferraro, and S. Grilli "The Pyroelectric Effect Enables Simple and Rapid Evaluation of Biofilm Formation" *ACS Appl. Mater. Interfaces*, 2018, 10 (18), pp 15467–15476
28. M. Snoussi, E. Noumi, R. Punchappady-Devasya, N. Trabelsi, S. Kanekar, F. Nazzaro **F. Fratianni**, G. Flamini, V. De Feo, A. Al-Sieni. "Antioxidant properties and anti-quorum sensing potential of *Carum copticum* essential oil and phenolics against *Chromobacterium violaceum*" *J Food Sci Technol* 2018 55(8):2824–2832
29. F. Nazzaro, **F. Fratianni**, M. N. Ombra, A. d'Acerno, R. Coppola Recovery of biomolecules of high benefit from food waste *Current Opinion in Food Science* 2018 22:43–54
30. **F Fratianni**, MN Ombra, A d'Acerno, L Cipriano, F Nazzaro "Apricots: biochemistry and functional properties" *Current Opinion in Food Science* 2018, 19:23–29
31. FJ Vazquez-Armenta, AT Bernal-Mercado, J Lizardi-Mendoza BA Silva-Espinoza, MR Cruz-Valenzuela, GA Gonzalez-Aguilar, F Nazzaro, **F Fratianni**, JF Ayala-Zavala "Phenolic extracts from grape stems inhibit *Listeria monocytogenes* motility and adhesion to food contact surfaces" *Journal of Adhesion Science and Technology*, 2018. 32: 8, 889–907
32. F Nazzaro, **F Fratianni**, R Coppola, VD Feo "Essential Oils and Antifungal Activity" *Pharmaceuticals* 10 (4), 86 2017
33. M. N. Ombra, A. Cozzolino, F. Nazzaro, A. d'Acerno, P. Tremonte, R. Coppola, **F. Fratianni** "Biochemical and biological characterization of two Brassicaceae after their commercial expiry date" *Food Chemistry* 218 (2017) 335–340
34. C Pane, **F Fratianni**, F Raimo, F Nazzaro, M Zaccardelli "Efficacy of phenolic- rich extracts from leaves of pepper landraces against *Alternaria* leaf blight of tomato" *Journal of Plant Pathology* (2017), 99 (1), 239-244
35. E. Meddeb, M. Charni, T. Ghazouani, A. Cozzolino, **F. Fratianni**, F. Raboudi, F. Nazzaro, S. Fattouch "Biochemical and Molecular Study of *Carpobrotus edulis* Bioactive Properties and Their Effects on *Dugesia sicula* (Turbellaria, Tricladida) Regeneration" *Applied Biochemistry and Biotechnology*, (2017), 182 (3) 1131–1143 DOI 10.1007/s12010-016-2387-y
36. **F. Fratianni**, D. Gallotta, M. A. Belisario, A. Leone, A. Sada, F. Nazzaro "Confronto del contenuto in polifenoli di lattuga e spinaci biologici e convenzionali" *Ingredienti Alimentari - (Chiriotti Ed)* (2017) XVI, 4-12
37. B Silva-Espinoza, M Cruz-Valenzuela, F Nazzaro, **F Fratianni**, J Ayala-Zavala "Antibacterial and antioxidant properties of grape stem extract applied as disinfectant in fresh leafy vegetables" *Journal of food science and technology* 2017
38. F Nazzaro, R Coppola, A Di Luccia, **F Fratianni** "Microelectrophoresis, an innovative

*analytical tool to study microbial and food proteins*" *Tecnica Molitoria* - vol. LXVIII 19-24 (2017)

39. M.N. Ombra, A. d'Acierno, F. Nazzaro, R. Riccardi, P. Spigno, M. Zaccardelli, C. Pane, M. Maione, **F. Fratianni** "Phenolic Composition and Antioxidant and Antiproliferative Activities of the Extracts of Twelve Common Bean (*Phaseolus vulgaris* L.) Endemic Ecotypes of Southern Italy before and after Cooking" *Oxidative Medicine and Cellular Longevity*, 2016
40. B. Nicolaus, A. Poli, P. Di Donato, I. Romano, G. Laezza, A. Gioiello, S. Ulgiati, **F. Fratianni** F. Nazzaro, P. Orlando, S. Dumontet "Pb<sup>2+</sup> Effects on Growth, Lipids, and Protein and DNA Profiles of the Thermophilic Bacterium *Thermus Thermophilus*" *Microorganisms* 2016, 4, 45;
41. **F. Fratianni**, R. Riccardi, P. Spigno, M.N. Ombra, A. Cozzolino, P. Tremonte, R. Coppola, F. Nazzaro "Biochemical Characterization and Antimicrobial and Antifungal Activity of Two Endemic Varieties of Garlic (*Allium sativum* L.) of the Campania Region, Southern Italy" *JOURNAL OF MEDICINAL FOOD* 2016, 19(7): 686-691.
42. C. Pane, **F. Fratianni**, M. Parisi, F. Nazzaro, M. Zaccardelli "Control of *Alternaria* post-harvest infections on cherry tomato fruits by wild pepper phenolic-rich extracts" *Crop Protection* 84 (2016) 81e87
43. **F. Fratianni**, M.N. Ombra, A. Cozzolino, R. Riccardi, P. Spigno, P. Tremonte, R. Coppola, F. Nazzaro "Phenolic constituents, antioxidant, antimicrobial and anti-proliferative activities of different endemic Italian varieties of garlic (*Allium sativum* L.)" *Journal of Functional Foods* 21, (2016) 240-248
44. F. Nazzaro, **F. Fratianni**, A. Cozzolino, T. Granese, R. Coppola "Active carbohydrates" *Postharvest Management Appr. for Maintaining Quality of Fresh Produce* 2016, 141-156
45. **F. Fratianni**, R. Pepe, F. Nazzaro, "Polyphenols composition, Antioxidant, Antimicrobial and anti Quorum Quenching Activity of the "Carciofo di Montoro" (*Cynara cardunculus* L. var. *Scolymus* Global artichoke of the Campania Region southern Italy" *Food and Nutritional Sciences* (2014) 5 (21), 2053-2062
46. **F. Fratianni**, S. Pepe, F. Cardinale, T. Granese, A. Cozzolino, R. Coppola and F. Nazzaro "Eruca sativa Might Influence the Growth, Survival under Simulated Gastrointestinal Conditions and Some Biological Features of *Lactobacillus acidophilus*, *Lactobacillus plantarum* and *Lactobacillus rhamnosus* Strains" *International Journal of Molecular Sciences* (2014) 15, 17790-17805
47. F. Nazzaro, F. Cardinale, A. Cozzolino, T. Granese, **F. Fratianni** "Polyphenol Composition and Antioxidant Activity of Different Potentially Functional Kale-Based Snacks" *Food and Nutrition Sciences* (2014) 5, 1145-1152
48. **F. Fratianni**, F. Cardinale, A. Cozzolino, T. Granese, S. Pepe, R. Riccardi, P. Spigno, R. Coppola, F. Nazzaro "Polyphenol Composition and Antioxidant Activity of Two Autochthonous Brassicaceae of the Campania Region, Southern Italy" *Food and Nutrition Sciences*, (2014) 5, 66-70
49. T. Granese, F. Cardinale, A. Cozzolino, S. Pepe, M.N. Ombra, F. Nazzaro\*, R. Coppola, **F. Fratianni** "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" *Food and Nutrition Sciences* (2014) 5, 60-65
50. **F. Fratianni**, F. Cardinale, I. Russo, C. Iuliano, P. Tremonte, R. Coppola, F. Nazzaro "Ability of synbiotic encapsulated *Saccharomyces cerevisiae* boulardii to grow in berry juice and to survive under simulated gastrointestinal conditions" *Journal of Microencapsulation* (2014) 31 3; 299-305
51. F. Nazzaro, **F. Fratianni**, R. Coppola "Quorum Sensing and Phytochemicals" *Int. J. Mol. Sci.* (14) (2013) 12607-12619
52. **F. Fratianni**, F. Nazzaro, A. Marandino, M. del R. Fusco, R. Coppola, V. De Feo, L. De Martino "Biochemical Composition, Antimicrobial Activities and Anti-Quorum-Sensing Activities of Ethanol and Ethyl Acetate Extracts from *Hypericum connatum* Lam. Guttiferae") *J MED FOOD* 16 (5) (2013) 454-459
53. **F. Fratianni**, F. Cardinale, I. Russo, C. Iuliano, A. C. Cucciniello, M. Maione, A. d'Acierno, F. Nazzaro "Fermentation of tomato juice with the probiotic yeast *Saccharomyces cerevisiae* boulardii" *Functional Foods: Sources, Biotechnology Applications and Health Challenges* (2013) pag 143-152
54. F. Nazzaro, P. Orlando, **F. Fratianni**, A. Di Luccia R. Coppola "Protein Analysis-on-Chip Systems in Foodomics" *Nutrients* (2012) 4, 1475-1489
55. F. Nazzaro, F. Fratianni R. Coppola "Microtechnology and nanotechnology in food science" In: *Green Technologies in Food Production and Processing* Boye, Joyce; Arcand, Yves (Eds.), Springer 1st Edition. 2012, Chapter 17.

56. F. Fratianni, L. De Martino, A. Melone, V. De Feo, R. Coppola, F. Nazzaro "Preservation of Chicken Breast Meat Treated with Thyme and Balm Essential Oils" *Journal of Food Science* (2010) Vol. 75, Nr. 8, M528-M535
57. **F. Fratianni**, A. Sada, L. Cipriani, A. Masucci, F. Nazzaro. "Biochemical characteristics, antimicrobial and mutagenic activity in organically and conventionally produced *Malus domestica*, Annurca." *The Open Food Science Journal* (2007) 1, 10-16
58. **34.F. Fratianni**, M. Tucci, M. Palma, R. Pepe, F. Nazzaro "Polyphenolic composition in different parts of some cultivars of globe artichoke (*Cynara cardunculus* L. var. *scolymus* (L.) Fiori)." *Food Chemistry* (2007) 104, 1282-1286
59. F. Nazzaro, **F. Fratianni**, G. Picariello, R. Coppola, A. Reale, A. Di Luccia., "Evaluation of gamma rays influence on some biochemical and microbiological aspects in black truffle." *Food Chemistry* (2007) 103, 344-354.
60. **F. Fratianni**, A. Di Luccia, R. Coppola. F. Nazzaro, "Mutagenic and antimutagenic properties of aqueous and ethanolic extracts from fresh and irradiated *Tuber aestivum* black truffle: a preliminary study." *Food Chemistry* (2007) 102, 471-474