

CURRICULUM VITAE NOME COGNOME

PERSONAL INFORMATION

Surname, Name	ROSARIA COZZOLINO
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Nationality	ITALIAN

WORK EXPERIENCE

Period (2006 – present)	12_2006 - 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	Researcher
Period (2001 – 2006)	02_2001 – 11_2006
Name of employer	National Research Council of Italy, Institute of Polymers, Composites and Biomaterials (IPCB) Catania
Type of business or sector	Public Research Institution
Occupation or position held	Researcher

EDUCATION

Period (1997 – 2001)	
Name and type of organization providing education	University of Catania, Italy
Title of qualification awarded	Ph.D. in Chemistry
Period (1989 – 1995)	
Name and type of organization providing education	University of Naples "Federico II", Italy
Title of qualification awarded	Master of Science in Chemistry

NATIVE LANGUAGE **ITALIAN**

OTHER LANGUAGES

	ENGLISH
Reading	C1
Writing	C1
Talking	C1

TRAINING

(main)

Period (2021 – 2021)	
Name of Institution	National Research Council of Italy Short Term Mobility Program 2021 University of Madeira (Portugal)
Title of qualification awarded	Visiting Researcher

Period (1995 – 1996)
Name of Institution
Title of qualification awarded

Department of Chemistry of the University of Warwick, Coventry (UK)
CNR fellowship, as part of a Community TMR program

Period (1995 – 1996)
Name of Institution
Title of qualification awarded

National Research Council of Italy, Institute of Polymers, Composites and Biomaterials (IPCB) Catania
CNR fellowship, Comitato Scienze Chimiche (1996-1997) Bando n° 201.03.23 Codice n° 21.03.00

Research Activities/Projects (main)

Research Activity

Research activity has been carried out in the field of Mass Spectrometry Methodologies. Main research lines concern 1) Structural analysis of the oligosaccharide and polysaccharides by Post-source Decay (PSD) MALDI-TOF, 2) Structural study of synthetic polymers by PSD MALDI-TOF, 3) Analysis of proteins mixtures and proteomic studies by advanced mass spectrometry techniques (PSD MALDI-TOF, ESI MS).

Recently, research interest of Dr. Rosaria Cozzolino is focused on Food chemistry: Chemistry of volatile compounds - development of methodologies, aroma properties, and biological effects. Development of methodologies for extraction and analysis of volatile compounds and several secondary bioactive metabolites from different food or food-related matrices (HS SPME; GC-MS, E-Nose, LC-MS)

In clinical analysis, the interest is focused on the validation of analytical approaches that may provide the biochemical basis to study pathologies or can be implemented as a diagnostic tool based on biological fluids (e.g, urine) as non-invasive sampling strategies. Volatomics and urinomics studies related to autism, obesity, non-communicable diseases.

Responsible of research projects

2008-2009: "Sviluppo delle Esportazioni di Prodotti Agroalimentari del Mezzogiorno" Development of exports of agricultural and food products in the Southern Italy. Intesa di programma MIUR/CNR per il Mezzogiorno, Delibera CdA n. 200/2008 Verbale 85.

Participation to research projects (Main)

2019-present P.S.R. Regione Campania 2014-2020-Tipologia 10.2.1 "Diversità, conservazione e valorizzazione delle specie legnose da frutto autoctone campane (DICOVALE)". "Diversity, conservation and enhancement of native fruit woody species from Campania Region"

2019-2021 ADViSE (Antitumor Drugs and Vaccines from SEea). POR-FESR Regione Campania 2014-2020

2013-2016 Benessere dalle Biotecnologie: Nuovi Processi e Prodotti per la Nutraceutica, la Cosmeceutica e la Nutrizione umana (BenTen). Wellness from Biotechnology: New Processes and Products for Nutraceuticals, Cosmeceutics and Human Nutrition POR-FESR Regione Campania

2013-2016 PRIN project: "Impact of functional and/or nutraceutical foods containing polyphenols on energy and glyco-lipid metabolism, sub-clinical inflammation, gene expression and epigenetic modifications in experimental models and in humans" Prot. 2010JCWWKM_003

2012-2015 P.S.R. Regione Basilicata 2007/2013 MISURA 124 "Strategie ecosostenibili per la produzione di formaggi a pasta filata lucani di qualità (QUALIFORM)". Eco-sustainable strategies for the production of quality Lucan spun curd cheeses

2012-2015 Project "Nuove Rotte: Blu Economy" DDG n. 1895/2 del 22 may 2012

2012-2015 PON Project - Technologies and operating models for the sustainable management of the food supply chain through the enhancement of biological waste from production for energy purposes, the reduction of food waste in the distribution system and from consumers and the treatment and enhancement of the edible fraction of urban solid waste" (BE & SAVE). PON "Ricerca e Competitività 2007-2013" PONO\$a2_F

2012-2015 POR FESR 2007-2013 Regione Campania, - "Qualità delle produzioni tipiche campane ed il suo territorio: approcci innovativi ed integrati per rafforzare la competitività del sistema Agroalimentare – CAMPUS-QUARC. Quality of typical Campania products and its territory: innovative and integrated approaches to strengthen the competitiveness of the Agri-food system

2010-2014 "New Polis" Decreto Interministeriale 65/CONT/V/2008 DGR n. 2130 - ex Art. 26 Legge n. 845/78. Decreto Interministeriale 65/CONT/V/2008 DGR n. 2130 - ex Art. 26 Legge n. 845/78

2011-2014 Project for the innovation and development of the Southern Italy "Sostenibilità e innovazione del made in Italy agroalimentare CISA". "Integrated knowledge for the sustainability and innovation of Made in Italy Agri-food"

2007-2010 Project "Mapping And Comparing Oils (MAC-Oils)" Specific Support Action, Food Quality and Safety Priority, EU FP6 (www.mac-oils.eu).

2002-2004 Project "Trattamento di prodotti freschi altamente deperibili per garantirne qualità, sicurezza e salubrità - PROFSICURI". MIUR (Legge 449/97-99, Anno 1999. Settore: 2. Agrobiotecnologie

Reviewer Activity

Regular referee of several scientific journals, including J. Chromatogr. A, J. Chromatogr. B, Talanta, Food Chem.; J. Food Compos. Anal.; Anal. Chimica Acta, Agronomy, Molecules, Horticulturae, Foods ([publons.com /researcher/3863140/rosaria-cozzolino/](https://publons.com/researcher/3863140/rosaria-cozzolino/)). Guest Editor of Special Issues in Foods (MDPI) and Food Nutrition (Frontiers).

Publications

Cozzolino, R, Pace B, Palumbo M, Laurino C, Picariello G, Siano F, De Giulio B, Pelosi S, Cefola M (2021) *Profiles of Volatile and Phenolic Compounds as Markers of Ripening Stage in Candonga Strawberries*. Foods 2021, 10, 3102. <https://doi.org/10.3390/foods10123102>

Cozzolino R, Cefola M, Laurino C, Pellicano MP, Palumbo M, Stocchero M and Pace B (2021) *Electronic-Nose as Non-destructive Tool to Discriminate "Ferrovìa" Sweet Cherries Cold Stored in Air or Packed in High CO₂ Modified Atmospheres*. Front. Nutr. 8, 720092. <https://doi.org/fnut.2021.720092>

Cozzolino R, Malorni L, Martignetti A, et al. *Comparative analysis of volatile profiles and phenolic compounds of Four Southern Italian onion (Allium cepa L.) Landraces* J Food Comp Anal 2021, 101, 103990 <https://doi.org/10.1016/j.jfca.2021.103990>

Cozzolino R, Mari A, Ramezani S, et al. *Assessment of volatile compounds as potential markers of water deficit stress of two wild ecotypes of Salvia reuterana Boiss* J Food Comp Anal 2021, 100, 103939 <https://doi.org/10.1016/j.jfca.2021.103939>

Cozzolino R, Martignetti A, De Giulio B, et al. *SPME GC-MS monitoring of volatile organic compounds to assess typicity of Pecorino di Carmasciano ewe-milk cheese* Int J Dairy Technol 2021, 74, 383 <https://doi.org/10.1111/1471-0307.12756>

Cozzolino R, De Giulio B, Pellicano MP, et al. *Volatile, quality and olfactory profiles of fresh-cut polignano carrots stored in air or in passive modified atmospheres* LWT- Food Sci Technol 2020, 137 <https://doi.org/10.1016/j.lwt.2020.110408>

Cozzolino R, De Giulio B, Petriccione M, et al. *Comparative analysis of volatile metabolites, quality and sensory attributes of Actinidia chinensis fruit*. Food Chem 2020, 316, 126340 <https://doi.org/10.1016/j.foodchem.2020.126340>

Cozzolino R, Martignetti A, Cefola M, et al. *Volatile Metabolites, Quality and Sensory Parameters of "Ferrovìa" Sweet Cherry Cold Stored in Air or Packed in High CO₂ Modified Atmospheres*. Food Chem 2019, 286, 659. <https://doi.org/10.1016/j.foodchem.2019.02.022>.

Nazzaro F, Fratianni F, **Cozzolino R**, et al. *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. <https://doi.org/10.3390/microorganisms7090321>

Fratianni F, **Cozzolino R**, Martignetti A, et al. *Biochemical composition and antioxidant activity of three extra virgin olive oils from the Irpinia Province, Southern Italy*. 2019 Food Sci Nutr 2019, 7, 3233. <https://doi.org/10.1002/fsn3.1180>

Cozzolino R, Cefola M, Pace B, et al. *Quality, sensory and volatile profiles of fresh-cut big top nectarines cold stored in air or modified atmosphere packaging* Int J Food Sci Technol 2018, 1. <https://doi.org/10.1111/ijfs.13758>.

Cozzolino R, De Giulio B, Marena P, et al. *Urinary volatile organic compounds in overweight compared to normal-weight children: results from the Italian I.Family cohort*. Sci Rep. 2017, 15636. <https://doi.org/10.1038/s41598-017-15957-7>

Fratianni F, Cefola M, Pace B, **Cozzolino R**, et al. *Changes in visual quality, physiological and biochemical parameters assessed during the postharvest storage at chilling or non-chilling temperatures of three sweet basil (Ocimum basilicum L.) cultivars*. Food Chem 2017 229, 752. <https://doi.org/10.1016/j.foodchem.2017.02.137>

Cozzolino R, Pace B, Cefola M, et al. *Assessment of volatile profile as potential marker of chilling injury of basil leaves during postharvest storage* Food Chem 2016 213, 361.

<https://doi.org/10.1016/J.FOODCHEM.2016.06.109>

Cozzolino R, Martignetti A, Pellicano MP, et al. *Characterization of volatile profile and sensory analysis of fresh-cut ‘Radicchio di Chioggia’ stored in air or modified atmosphere* Food Chem 2016, 192, 603. <https://doi.org/10.1016/j.foodchem.2016.06.109>

Malorni L, Martignetti A, **Cozzolino R** *Volatile Compound Profiles by HS GC-MS for the Evaluation of Postharvest Conditions of a Peach Cultivar*. Ann Chromatogr Sep Tech. 2015, 1, 1007.

Cozzolino R, Ramezani S, Martignetti A, et al. *Determination of volatile organic compounds in the dried leaves of Salvia species by solid-phase microextraction coupled to gas chromatography mass spectrometry* Nat Prod Res 2015, 30, 841.

<https://doi.org/10.1080/14786419.2015.1076817>

Cozzolino R, De Magistris L, Saggese P, et al. *Use of solid-phase microextraction coupled to gas chromatography–mass spectrometry for determination of urinary volatile organic compounds in autistic children compared with healthy controls*. Anal Bioanal Chem 2014, 406, 4649. <https://doi.org/10.1080/10.1007/s00216-014-7855-z>

Boscaino F, Acierno V, Saggese P, **Cozzolino R**, et al. (2014) *Effectiveness of vacuum devices for home storage of rainbow trouts from game fishing lakes*. African J Sci Res 2, 16-22 ISSN: 2306-5877

R. Giacco, B. De Giulio, M. Vitale, **R. Cozzolino** (2013) *Functional Foods: Can Food Technology Help in the Prevention and Treatment of Diabetes?* Food and Nutrition Sciences 4, 827-837

Sorrentino A., Boscaino F., **Cozzolino R.**, et al. (2013) *Characterization of Free Volatile Compounds in Fiano Wine Produced by Different Selected Autochthonous Yeasts* Chemical Engineering Transactions 32, 1837-1842

Sorrentino A., Boscaino F., **Cozzolino R.**, et al. (2012) *Autochthonous Fermentation Starters for the Production of Aglianico Wines* Chemical Engineering Transactions 27, 211-216

Rocco M., Malorni L., **Cozzolino R.**, et al. (2011) *Proteomic Profiling of Human Melanoma Metastatic Cell Line Secretomes* J. Proteome Res 10, 4703-4714

Cozzolino R. e De Giulio B. (2011) *Application of ESI and MALDI-TOF MS for triacylglycerols analysis in edible oils* Eur. J. Lipid Sci. Technol. 113, 160–167

Cozzolino R., Malvagna P., Spina E., et al. (2006) *Structural analysis of the polysaccharides from Echinacea angustifolia radix* Carbohydrate Polymer. 65, 263

Cozzolino R., Gallagher R. T., Drewello T. (2006) *Efficient clustering of cyclic sulphonium salts applying liquid secondary ion mass spectrometry* European Journal of Mass Spectrometry 12, 31

Mazzone MG., Santocono M., Perez M., Messina A., **Cozzolino R.**, et al. (2005) *Proteomics of Human Tear Fluids in Healthy and Patological Conditions* The Ocular Surface 3, S91

Alberghino G., **Cozzolino R.**, Fisichella S., et al. (2005) *Proteomics of gluten: mapping of the 1Bx7 glutenin subunit in Chinese Spring cultivar by matrix-assisted laser desorption/ionization* Rapid Commun. Mass Spectrom. 19, 2069

Cozzolino R., Perez M., Messina A., et al. “Proteomic Analysis of Human Tear Fluids in Healthy and Pathological Conditions” 53th ASMS Conference on Mass Spectrometry and Allied Topics, San Antonio, Texas, 5-9, Giugno, 2005 (Primo Autore)

Cozzolino R., Passalacqua S., Salemi S., et al. “Identification of some adulteration in milk and in water buffalo mozzarella cheese by MALDI TOF MS” 51st Conference on Mass Spectrometry and Allied Topics, Montreal, Canada, Giugno 2003 (Primo Autore)

Cozzolino R., Passalacqua S., Salemi S., et al. (2002) *Identification of adulteration in water buffalo mozzarella and in ewe cheese by using whey proteins as biomarkers and matrix-assisted laser desorption/ionisation mass spectrometry* J. Mass Spectrom. 37, 985

Malvagna P., Impallomeni G., **Cozzolino R.**, et al. (2002) *New results on matrix-assisted laser desorption/ionisation mass spectrometry of widely polydisperse hydrosoluble polymers* Rapid Commun. Mass Spectrom. 16, 1599

Malvagna P., Impallomeni G., **Cozzolino R.**, et al. “New Results on MALDI MS of Widely Polydisperse Hydrosoluble Polymers” 50th ASMS Conference on Mass Spectrometry and Allied Topics, Orlando, Florida, 2-6 Giugno, 2002

Cozzolino R., Enea V., Mazzone M.G., Garozzo D. “Identification of High Molecular Mass Proteins in Tear Fluid by MALDI MS” 50th ASMS Conference on Mass Spectrometry and Allied Topics, Orlando, Florida, 2-6 Giugno, 2002

Cozzolino R., Passalacqua S., Salemi S., et al. (2001) *Identification of adulteration in milk by MALDI-TOF MS* J. Mass Spectrom. 36, 1031

Cozzolino R., Di Giorgi S., Fisichella S., et al. (2001) *Proteomics of gluten: mapping of subunit 1Ax2* in Cheyenne cultivar by matrix-assisted laser desorption/ionization* Rapid Communication in Mass Spectrometry 15, 1129

Cozzolino R., Di Giorgi S., Fisichella S., et al. (2001) *Matrix-assisted laser*

- desorption/ionization mass spectrometric peptide mapping of high molecular weight glutenin subunits 1Bx7 and 1Dy10 in Cheyenne cultivar* Rapid Communication in Mass Spectrometry 15, 778
- Spina E., **Cozzolino R.**, Ryan E., Garozzo D. (2000) *Sequencing of oligosaccharides by collision-induced dissociation matrix-assisted laser desorption/ionization mass spectrometry* J. Mass Spectrom. 35, 1042
- Garozzo D., Spina E., **Cozzolino R.**, et al. (2000) *Studies on the primary structure of short polysaccharide using SEC-MALDI mass spectrometry* Carbohydrate Research 323, 139
- Garozzo D., **Cozzolino R.**, Di Giorgi S., et al. (1999) *Use of hydroxyacetophenones as matrices for the analysis of high molecular weight glutenin mixtures by matrix-assisted laser desorption/ionization mass spectrometry* Rapid Communication in Mass Spectrometry 13, 2084
- Bonomo R.P., Boudet A.M., **Cozzolino R.**, et al. (1998) *A comparative study of two isoforms of laccase secreted by the "white-rot" fungus Rigidoporus Lignosus, exhibiting significant structural and functional differences* Journal of Inorganic Biochemistry 71, 205
- Amoresano A., Andolfo A., Siciliano R.A., **Cozzolino R.**, et al. (1998) *Analysis of Human Serum Albumin variants by mass spectrometry procedures* Biochimica et Biophysica Acta 1384, 79 (continued as BBA-Proteins Proteom.)
- Scaloni A., Camoni L., di Giorgio D., Scortichini M., **Cozzolino R.**, Ballio A. (1997) *A new syringopeptin produced by a Pseudomonas Syringae PV. Syringae strain isolated from diseased twigs of laurel* Physiological and Molecular Plant Pathology 51, 259
- Cozzolino R.**, Belgacem O., Drewello T., et al. (1997) *Laser desorption/ionization of fluorinated fullerenes* European Mass Spectrometry 3, 407

Date, 06 December 2021

Main publications

- Cozzolino R**, Cefola M, Laurino C, Pellicano MP, Palumbo M, Stocchero M and Pace B (2021) *Electronic-Nose as Non-destructive Tool to Discriminate “Ferrovia” Sweet Cherries Cold Stored in Air or Packed in High CO₂ Modified Atmospheres*. *Front. Nutr.* 8:720092. <https://doi.org/fnut.2021.720092>
- Cozzolino R**, Malorni L, Martignetti A, et al. *Comparative analysis of volatile profiles and phenolic compounds of Four Southern Italian onion (Allium cepa L.) Landraces* *J Food Comp Anal* 2021, 101, 103990 <https://doi.org/10.1016/j.jfca.2021.103990>
- Cozzolino R**, Mari A, Ramezani S, et al. *Assessment of volatile compounds as potential markers of water deficit stress of two wild ecotypes of Salvia reuterana Boiss* *J Food Comp Anal* 2021, 100, 103939 <https://doi.org/10.1016/j.jfca.2021.103939>
- Cozzolino R**, Martignetti A, De Giulio B, et al. *SPME GC-MS monitoring of volatile organic compounds to assess typicity of Pecorino di Carmasciano ewe-milk cheese* *Int J Dairy Technol* 2021, 74, 383 <https://doi.org/10.1111/1471-0307.12756>
- Cozzolino R**, De Giulio B, Pellicano MP, et al. *Volatile, quality and olfactory profiles of fresh-cut polignano carrots stored in air or in passive modified atmospheres* *LWT- Food Sci Technol* 2020, 137 <https://doi.org/10.1016/j.lwt.2020.110408>
- Cozzolino R**, De Giulio B, Petriccione M, et al. *Comparative analysis of volatile metabolites, quality and sensory attributes of Actinidia chinensis fruit*. *Food Chem* 2020, 316, 126340 <https://doi.org/10.1016/j.foodchem.2020.126340>
- Cozzolino R**, Martignetti A, Cefola M, et al. *Volatile Metabolites, Quality and Sensory Parameters of “Ferrovia” Sweet Cherry Cold Stored in Air or Packed in High CO₂ Modified Atmospheres*. *Food Chem* 2019, 286, 659. <https://doi.org/10.1016/j.foodchem.2019.02.022>.
- Nazzaro F, Fratianni F, **Cozzolino R**, et al. *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. <https://doi.org/10.3390/microorganisms7090321>
- Fratianni F, **Cozzolino R**, Martignetti A, et al. *Biochemical composition and antioxidant activity of three extra virgin olive oils from the Irpinia Province, Southern Italy*. *2019 Food Sci Nutr* 2019, 7, 3233. <https://doi.org/10.1002/fsn3.1180>
- Cozzolino R**, Cefola M, Pace B, et al. *Quality, sensory and volatile profiles of fresh-cut big top nectarines cold stored in air or modified atmosphere packaging* *Int J Food Sci Technol* 2018, 1. <https://doi.org/10.1111/ijfs.13758>.
- Cozzolino R**, De Giulio B, Marena P, et al. *Urinary volatile organic compounds in overweight compared to normal-weight children: results from the Italian I.Family cohort*. *Sci Rep.* 2017, 15636. <https://doi.org/10.1038/s41598-017-15957-7>
- Fratianni F, Cefola M, Pace B, **Cozzolino R**, et al. *Changes in visual quality, physiological and biochemical parameters assessed during the postharvest storage at chilling or non-chilling temperatures of three sweet basil (Ocimum basilicum L.) cultivars*. *Food Chem* 2017 229, 752. <https://doi.org/10.1016/j.foodchem.2017.02.137>
- Cozzolino R**, Pace B, Cefola M, et al. *Assessment of volatile profile as potential marker of chilling injury of basil leaves during postharvest storage* *Food Chem* 2016 213, 361. <https://doi.org/10.1016/J.FOODCHEM.2016.06.109>
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- Malorni L, Martignetti A, **Cozzolino R** *Volatile Compound Profiles by HS GC-MS for the Evaluation of Postharvest Conditions of a Peach Cultivar*. *Ann Chromatogr Sep Tech.* 2015, 1, 1007.
- Cozzolino R**, Ramezani S, Martignetti A, et al. *Determination of volatile organic compounds in the dried leaves of Salvia species by solid-phase microextraction coupled to gas chromatography mass spectrometry* *Nat Prod Res* 2015, 30, 841. <https://doi.org/10.1080/14786419.2015.1076817>
- Cozzolino R**, De Magistris L, Saggese P, et al. *Use of solid-phase microextraction coupled to gas chromatography–mass spectrometry for determination of urinary volatile organic compounds in autistic children compared with healthy controls*. *Anal Bioanal Chem* 2014, 406, 4649. <https://doi.org/10.1080/10.1007/s00216-014-7855-z>