

SHORT CURRICULUM VITAE VIRGINIA CARBONE

PERSONAL INFORMATION

Surname, Name **CARBONE VIRGINIA**
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Nationality **ITALIAN**

WORK EXPERIENCE

Period (from – to) **22 DECEMBER 2000 - 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**

RESEARCH ACTIVITIES

Main research activities of Virginia Carbone are focused on the development and application of advanced analytical methodologies based on mass spectrometry in the area of Food Science and Human Health. In particular, she is involved in studies on chemical and biological features of food and medicinal plants with a special focus on the structural characterization of secondary metabolites belonging to different classes by integrating chromatographic techniques (High Performance Liquid Chromatography-HPLC) coupled to UV spectroscopy and/or conventional (LC-MS), tandem (LC-MS/MS) and multistage (LC-MS/MSn) mass spectrometry. The aim of this research activity is the definition of molecular profiles useful for the promotion of food products through the identification of molecules with specific biological activities; comparison of different cultivars; monitoring changes in the qualitative and quantitative profiles during ripening, industrial treatments or in plants subjected to different biotic or abiotic stress conditions; identification of specific biomarkers for the assessment of food authenticity and quality.

EDUCATION

Period (from – to) **19 December 2006**
Name and type of organization providing education **University of Campania Luigi Vanvitelli (previously named Second University of Naples)**
Title of qualification awarded **PhD degree on "Food and Health: biotechnologies and methodologies applied to the Digestive Physiopathology"**

Period (from – to) **23 July 1991**
Name and type of organization providing education **University of Naples "Federico II"**
Title of qualification awarded **Degree in Pharmaceutical Chemistry and Technology with full marks (110/110)**

MOTHER TONGUE **ITALIAN**

OTHER LANGUAGES

ENGLISH
Reading **Good**
Writing **Good**
Talking **Good**

ORGANIZATIONAL CAPACITY

(main)

May 2019 – July 2021: Member of the panel of representatives of the Department of Bio-Agri-Food Sciences of the CNR (DISBA-CNR) for the European Food Safety Authority (EFSA) in the "Food additives, flavors and smoke flavors" Area.

June 2009 – March 2016: Member of Council of the Institute of Food Sciences

2007-2010: Responsible of the Unit "Proteomic and metabolomic studies for the characterization and selection of tomato varieties and genotypes" belonging to the "Genomic Public-Private Laboratory for innovation and valorisation of tomato chain (GenoPOM)" Project of the CNR-IGV Institute of Plant Genetics

2007-2012: Responsible of ISA CNR Node of the Campania Mass Spectrometry Network (RESMAC) for the management of the regional contribution for the maintenance costs of the equipment of the Campania Mass Spectrometry Network "RESMAC

Research Activities/Projects

(Recent)

METROFOOD-RI - Infrastructure for promoting Metrology in Food and Nutrition (Preparatory Phase) - H2020 INFRADEV-02-2019 CSA METROFOOD-PP project (2019-2022).

CNR-BiOmics - National Research Center in Bioinformatic for "Omics" Sciences - MIUR PON PIR01_00017, 2019 -2021 (2019-2021).

EcoNutraPrevention - New formulations of functional nutraceuticals for the primary prevention of oncological diseases associated with environmental pollutants in the Land of Fires, PO FESR 2014-2020, 2018 - 2019.

Teaching Activities

(main)

Professor on contract for the course of Analysis and Control of vegetable matrices of cosmetic interest at the University of Salerno (Master in Cosmetic Science and Technologies) AA 2016/2017; 2014/2015; 2010/2011; 2009/2010; 2008/2009; 2007/2008; 2006/2007.

Visiting professor at the Instituto de Quimica, Universidade Estadual Paulista, Campus de Araraquara (SP-Brasil) where she held the course on "Special Topics in Mass Spectrometry" March 2008.

Professor on contract for the course of Biological Chemistry and Clinical Biochemistry at the Medicine and Surgery Faculty of the University of Naples "Federico II" AA 2002/2003.

Professor on contract for the course of Advanced Technologies in Clinical Biochemistry at the Medicine and Surgery Faculty of the University of Naples "Federico II" AA 2001/2002.

Scientific dissemination activities

"Biotechnologies for Food Sciences: Plants as biofactories of bi-active molecules" - Laboratory/training for secondary schools, as part of the European Biotech Week - Federchimica Assobiotec, National Association for the development of biotechnologies. Avellino, CNR-ISA, 27/09/2019.

"Smart food for a Smart life: The new frontiers in food science" - Round table within the event "The Frontiers of Scientific Research for Food Sciences" EXPO 2015, Milan - EXPO 2015 exhibition area - Piazza Irpinia, 4/06/2015.

"Metabolomics" - Training Course for Quality Control Officer in the Food Industry, Avellino, from 18/03/2009 to 25/03/2009.

"Advanced Mass Spectrometry methodologies applied to the characterization of constituents of

plants of food and medicinal interest" - Training Course in "Research activity in the field of Genomics applied to the improvement and certification of plant species", Portici, 17/01/2008.

"Principles and application of Mass Spectrometry for the study of plant proteins" - III Training Course - The world of proteins: techniques and applications in the plant field, organized by the Department of Soil Sciences of the Plant and the Environment, Finalized Project "AGRONANOTECH" financed by MiPAF, Vico Equense (NA), 03/03/2005.

"Principles of gas chromatography and GC/MS coupling" - 10th Thermo-Week. Chromatography-Mass Spectrometry Course - Bio Agri-food Applications ", Acitrezza (CT), 22/06/2004.

"Principles of chromatography and GC-El-MS coupling" - Introductory Theoretical-Practical School in Mass Spectrometry, Experimental Station for the Industries of Essences and Citrus Derivatives, Reggio Calabria, 20/05/2002.

"Applications for human health: hemoglobinopathies and diagnostic techniques" - Theoretical-Practical Introductory School to Mass Spectrometry, Experimental Station for the Industries of Essences and Citrus Derivatives, Reggio Calabria, 01/06/2001.

"Principles of gas chromatography and GC/MS coupling" - 9th Thermo-Week. Chromatography-Mass Spectrometry Course, Acitrezza (CT), 08/03/2001.

"Interpretation of mass spectra and general factors affecting fragmentation" - Introductory Theoretical-Practical School to Mass Spectrometry, Experimental Station for the Industries of Essences and Citrus Derivatives, Reggio Calabria, 10/04/2000.

"Interpretation of mass spectra" - 8th Fisonsweek. Chromatography and Mass Spectrometry Course, Naples, 03/10/1995.

Publications

50 articles in International Scientific Journals (ISI WoS)

4 Chapters in books international,

2 Articles in National or not ISI Scientific Journals

90 abstracts in international or national congresses

1 international patents

10 December 2021

Main publications (Main, last 5 years)

Vijayalakshmi G., Raja M.M., Naik M.L., Carbone V., Russo G.L., Khan P.S.S.V. "Determination of antioxidant capacity and flavonoid composition of onion (*Allium cepa* L.) landrace 'Krishnapuram' bulb using HPLC-ESI-ITMS" *J. Biosci.*, 46, Issue 3, Article number 58, 2021.

Squillaci G., Zannella C., Carbone V., Minasi P., Folliero V., Stelitano D., La Cara F., Galdiero M., Franci G., Morana A. "Grape canes from typical cultivars of campania (Southern italy) as a source of high-value bioactive compounds: Phenolic profile, antioxidant and antimicrobial activities" *Molecules*, 26, Issue 91, Article number 2746, 2021.

B. Pace, I. Capotorto, M. Cefola, P. Minasi, N. Montemurro, V. Carbone "Evaluation of quality, phenolic and carotenoid composition of fresh-cut purple Polignano carrots stored in modified atmosphere" *J. Food Compos. Anal.*, 86, 103363, 2020.

A.M. Salzano, G. Renzone, A. Sobolev, V. Carbone, M. Petriccione, D. Capitani, M. Vitale, G. Novi, N. Zambrano, M.S. Pasquariello, L. Mannina, A. Scaloni "Unveiling kiwifruit metabolite and protein changes in the course of postharvest cold storage" *Frontiers in Plant Science*, 10, Article number 71, 2019.

A.M. Salzano, A. Sobolev, V. Carbone, M. Petriccione, G. Renzone, D. Capitani, M. Vitale, P. Minasi, M.S. Pasquariello, G. Novi, N. Zambrano, M. Scortichini, L. Mannina, A. Scaloni "A proteometabolomic study of *Actinidia deliciosa* fruit development" *Journal of Proteomics*, 172, 11-24, 2018.

G. Squillaci, R. Parrella, V. Carbone, P. Minasi, F. La Cara, A. Morana "Carotenoids from the extreme halophilic archaeon *Haloterrigena turkmenica*: identification and antioxidant activity" *Extremophiles*, 21, 933-945, 2017.

M. Russo, A. Milito, C. Spagnuolo, V. Carbone, A. Rosén, P. Minasi, F. Lauria, G.L. Russo "CK2 and PI3K are direct molecular targets of quercetin in chronic lymphocytic leukaemia" *Oncotarget*, 8, 42571-42587, 2017.