

CARBONE Virginia

Present position

December 2000- present: research scientist at the Institute of Food Science (ISA) of The National Research Council (CNR). Department of Bio-Agrifood Sciences (DiSBA).

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

June 2009 - present: Member of the ISA-CNR Council.

Education

1991: degree in Pharmaceutical Chemistry and Technology at the University of Naples "Federico II" with full marks;

2006: PhD degree on "Food and Health: biotechnology and methodology applied to the Digestive Physiopathology" at the Second University of Naples.

Previous Positions

1992: Awarded a grant in a national competition announced by the National Research Council (National Committee for Chemical Sciences);

1993: Visiting fellow at the Wallemborg Laboratory Environmental Chemistry - Stockholm University (Sweden) for the EEC "Biomonitoring of human population exposed to pesticides" program, contract EEC/CNR CT91-0161;

1995: Awarded a grant in a National Competition announced by the National Research Council (National Committee for Chemical Sciences);

1995: Visiting fellow at the Medical Research Council Toxicology Unit-Leicester University (UK);

1996: Awarded a grant in a national competition announced by the Italian Chemical Society;

1997- 1998: Researcher at the National Research Council with a two-year contract;

1999: Awarded a grant in a national competition announced by the Department of Organic and Biological Chemistry of the University "Federico II" of Naples;

1999- 2000: Researcher at the Department of Pharmaceutical Science of the University of Salerno with a contract co-financed by EU;

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

Teaching activities

2002: Professor on contract for the course of Biological Chemistry and Clinical Biochemistry at the Medicine and Surgery Faculty of the (Federico II) University of Naples;

2003: Professor on contract for the course of Advanced Technologies in Clinical Biochemistry at the Medicine and Surgery Faculty of the (Federico II) University of Naples;

2007: Professor on contract for the course of Analysis and Control of cosmetic products at the University of Salerno (Master in Cosmetic Science and Technologies);

2008: Professor on contract for the course of Analysis and Control of cosmetic products at the University of Salerno (Master in Cosmetic Science and Technologies);

2009: Professor on contract for the course of Analysis and Control of cosmetic products at the University of Salerno (Master in Cosmetic Science and Technologies);

2010: Professor on contract for the course of Analysis and Control of cosmetic products at the University of Salerno (Master in Cosmetic Science and Technologies);

2011: Professor on contract for the course of Analysis and Control of cosmetic products at the University of Salerno (Master in Cosmetic Science and Technologies).

Scientific activity

Virginia Carbone main research activities are focused on development and application of advanced analytical methodologies based on mass spectrometry in the field of Food Science and Human Health areas. In particular, she is involved in chemical and biological studies 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) and detection methods such as UV spectroscopy and conventional (LC-MS), tandem (LC-MS/MS) and multicollision (LC-MS/MSⁿ) mass spectrometry. She is co-author of several publications on peer-reviewed journals and participated as a speaker to Italian and International Congresses and Conferences. She has scientific cooperations with several Italian and foreign research groups.

Publications (2005-2014):

1. L. F. CIARMIELLO, M. F. MAZZEO, P. MINASI, A. PELUSO, A. DE LUCA, P. PICCIRILLO, R. A. SICILIANO, V. CARBONE (2014). Analysis of different European hazelnut (*Corylus avellana* L.) cultivars: authentication, phenotypic features, and phenolic profiles. *JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY*, vol. 62(26); p. 6236-6246, ISSN: 0021-8561.
2. C. M. FUERTES, A. BENAVIDES, C. PIZZA, A. NAPOLITANO, C. BASARELLO, S. PIACENTE, V. CARBONE (2012) Analytical chemical study of alkaloid fraction of methanolic extract of *Croton baillonianus* (Aubl) leaves. *REVISTA DE LA SOCIEDAD QUÍMICA DEL PERÚ*, vol. 78 (2); p. 138-143, ISSN: 1810-634X.
3. G. NOCCA, R. RAGNO, V. CARBONE., G. E. MARTORANA, D. V. ROSSETTI, G. GAMBARINI, B. GIARDINA, A. LUPI (2011). Identification of glutathione-methacrylates adducts in gingival fibroblasts and erythrocytes by HPLC-MS and capillary electrophoresis. *DENTAL MATERIALS*, vol. 27; p. e-87-e-98, ISSN: 0109-5641.
4. A. MARI, I. TEDESCO, A. NAPPO, G. L. RUSSO, A. MALORNI, CARBONE V. (2010). Phenolic compound characterisation and antiproliferative activity of "Annurca" apple, a southern Italian cultivar. *FOOD CHEMISTRY*, vol. 123; p. 157-164, ISSN: 0308-8146.
5. BENAVIDES, A., NAPOLITANO, C. BASSARELLO, CARBONE V., P. GAZZERRO, A. MALFITANO, P. SAGGESE, M. BIFULCO, S. PIACENTE, C. PIZZA (2009). Oxylipins from *Dracontium lorentense*. *JOURNAL OF NATURAL PRODUCTS*, vol. 72; p. 813-817, ISSN: 0163-3864.
6. L. CAMPANER DOS SANTOS, M. APARECIDO DA SILVA, C. M. RODRIGUES, CARBONE V., A. NAPOLITANO, C. BASSARELLO, A. MARI, S. PIACENTE, C. PIZZA AND W. VILEGAS (2009). Characterization of Flavonoid and Naphthopyranone derivatives from *Eriocaulon ligulatum* using Liquid Chromatography Tandem Mass Spectrometry. *NATURAL PRODUCT COMMUNICATIONS*, vol. 4; p. 1651-1656, ISSN: 1934-578X.
7. V. CÂNDIDA DA SILVA, M. J. SOARES MENDES GIANNINI, CARBONE V., S. PIACENTE, C. PIZZA, V. DA SILVA BOLZANI, AND M. NASSER LOPES (2008). New Antifungal Terpenoid Glycosides from *Alibertia edulis* (Rubiaceae). *HELVETICA CHIMICA ACTA*, vol. 91; p. 1355-1362, ISSN: 0018-019X.
8. W. CRAIG, P. LENZI, N. SCOTTI, M. DE PALMA, P. SAGGESE, CARBONE V., N. MCGRATH CURRAN, A. M. MAGE, P. MEDGYESY, T. A. KAVANAGH, P. J. DIX, S. GRILLO, T. CARDI (2008). Transplastomic tobacco plants expressing a fatty acid desaturase gene exhibit altered fatty acid profiles and improved cold tolerance. *TRANSGENIC RESEARCH*, vol. 17 (5); p. 769-782, ISSN: 0962-8819.
9. A. NAPOLITANO, CARBONE V., P. SAGGESE, K. TAKAGAKI, COSIMO PIZZA (2007). Novel galactolipids from leaves of *Ipomoea batatas* L.: Characterization by liquid chromatography coupled with electrospray ionization-quadrupole time of flight tandem mass spectrometry. *JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY*, vol. 55(25); p. 10289-10297, ISSN: 0021-8561.

10. E. ARANDA, I. GARCA-ROMERA, J.A. OCAMPO, CARBONE V., A. MALORNI, F. SANNINO, A. DE MARTINO, R. CAPASSO (2007). Reusing ethyl acetate and aqueous exhausted fractions of dry olive mill residues by saprobe fungi. *CHEMOSPHERE*, vol. 66; p. 67-74, ISSN: 0045-6535.
11. E. ARANDA, I. GARCA-ROMERA, J.A. OCAMPO, CARBONE V., A. MARI, A. MALORNI, F. SANNINO, A. DE MARTINO, R. CAPASSO (2007). Chemical characterization and effects on *Lepidium sativum* of the native and bioremediated components of dry olive mill residue. *CHEMOSPHERE*, vol. 69; p. 229-239, ISSN: 0045-6535.
12. G. CACCIAPUOTI, S. GORASSINI, M. F. MAZZEO, R. A. SICILIANO, CARBONE V., V. ZAPPIA, M. PORCELLI (2007). Biochemical and structural characterization of mammalian-like purine nucleoside phosphorylase from the *Archaeon Pyrococcus furiosus*. *THE FEBS JOURNAL*, vol. 274; p. 2482-2495, ISSN: 1742-464X.
13. M. SANNOMIYA, L. CAMPANER DOS SANTOS, CARBONE V., A. NAPOLITANO, S. PIACENTE, C. PIZZA, ALBA R. M. SOUZA-BRITO, W. VILEGAS (2007). Liquid chromatography/electrospray ionization tandem mass spectrometry profiling of compounds from the infusion of *Byrsonima fagifolia* Niedenzu. *RAPID COMMUNICATIONS IN MASS SPECTROMETRY*, vol. 21; p. 1393-1400, ISSN: 0951-4198.
14. CARBONE V., M. MUSUMECI, J. SIMPORE, P. SAGGESE, A. DAGATA, S. MUSUMECI (2006). Fatty acid composition of human colostrums of Burkinabe women. *PAKISTAN JOURNAL OF BIOLOGICAL SCIENCES*, vol. 9; p. 1028-1032, ISSN: 1028-8880.
15. F. FACCHIANO, D. D'ARCANGELO, K. RUSSO, V. FOGLIANO, C. MENNELLA, R. RAGONE, G. ZAMBRUNO, CARBONE V., D. RIBATTI, C. PESCHLE, M. C. CAPOGROSSI, A. FACCHIANO (2006). Glycated-FGF-2 is quickly produced in vitro upon low-millimolar glucose treatment and detected in vivo in diabetic mice. *MOLECULAR ENDOCRINOLOGY*, vol. 20; p. 2806-2818, ISSN: 0888-8809.
16. R. MARRA, P. AMBROSINO, V. CARBONE, F. VINALE, S. L. WOO, M. RUOCCO, R. CILIENTO, S. LANZUISE, S. FERRAIOLI, I. SORIENTE, S. GIGANTE, D. TURRA, V. FOGLIANO, F. SCALA, M. LORITO (2006). Study of the three-way interaction between *Trichoderma atroviride*, plant and fungal pathogens by using a proteomic approach. *CURRENT GENETICS*, vol. 50; p. 307-321, ISSN: 0172-8083.
17. PLAZA, A. PERRONE, C. BALESTRIERI, M. L. BALESTRIERI, G. BIFULCO, CARBONE V., A. HAMED, C. PIZZA, S. PIACENTE (2005). New antiproliferative 14,15-secopregnane glycosides from *Solenostemma argel*. *TETRAHEDRON*, vol. 61; p. 7470-7480, ISSN: 0040-4020.
18. L. BACCIGALUPI, A. DI DONATO, M. PARLATO, D. LUONGO, CARBONE V., M. ROSSI, E. RICCA, M. DE FELICE (2005). Small surface-associated factors mediate adhesion of a food-isolated strain of *Lactobacillus fermentum* to Caco-2 cells. *RESEARCH IN MICROBIOLOGY*, vol. 156; p. 830-836, ISSN: 0923-2508.
19. P. MONTORO, CARBONE V., C. PIZZA (2005). Flavonoids from the leaves of *Cyclanthera pedata*: two new malonil derivatives. *PHYTOCHEMICAL ANALYSIS*, vol. 16; p. 210-216, ISSN: 0958-0344.

National Scientific Journals

1. A. Napolitano, V. Carbone, C. Pizza "La patata dolce (Ipomea batatas), alimento dalla tradizione antica: un nuovo e promettente alleato per la salute umana" *Piante Medicinali*, Numero Speciale 2007-2008, 37-43. Pubblicazione periodica della Società Italiana di Fitoterapia

Patents

1. Napolitano Assunta; Carbone Virginia; Saggese Paola; Pizza Cosimo; Takagaki Kinya "Galactolipids isolated from sweet potato leaves and foods containing them"
 Patent Number WO 2008108001.
 Kind A1
 Date 12/09/2008
 Application No WO 2007-JP54598
 Date 02/03/2007

International Patent

Book chapters

1. G. Nocca, V. Carbone, A. Lupi, S. Rengo, G. Spagnuolo "HPLC analytical study of methacrylic monomers released from dental composite materials" in High-Performance Liquid Chromatography (HPLC) Principles, Practices and Procedures, Yuegang Zuo Editor, North Dartmouth (USA), Chapter 8, 193-205, 2014.
ISBN 978-1-62948-858-5
2. EG. Nocca, G. Spagnuolo, A. Lupi, D. V. Rossetti, V. Carbone, S. Rengo, C. Desiderio "Identification of Adducts of 2-Hydroxyethyl Methacrylate with N-Acetylcysteine or Glutathione through Capillary Electrophoresis Analysis" in Capillary Electrophoresis: Fundamentals, Techniques and Applications, Nova Science Publishers, New York (USA), Chapter 5, 101-116, 2012.
ISBN 978-1-62081-785-8
3. V. Carbone, G. Pocsfalvi, N. Sannolo and A. Malorni "Reactivity of antineoplastic drugs with model peptides studied by advanced mass spectrometry methodologies" in Selected Topics and Mass Spectrometry in the Biomolecular Sciences R. M. Caprioli et al. (eds.) NATO ASI Series; Series C: Mathematical and Physical Sciences, Kluwer Academic Publishers in the Netherland, 504, 413-425, 1997.
ISBN 0-7923-4849-4
4. N. Sannolo, V. Carbone, P. Ferranti, I. Fiume, D. Santoro and A. Malorni "The role of mass spectrometry in biomonitoring exposure to carcinogens" in Mass Spectrometry in Biomolecular Sciences R. M. Caprioli et al. (eds.) NATO ASI Series; Series C: Mathematical and Physical Sciences, Kluwer Academic Publishers in the Netherland, 475, 397-415, 1996.
ISBN 0-7923-3946-0