

PERSONAL DATA:

Born in Palermo on [REDACTED]

Residing at [REDACTED]

Citizenship: Italian

CURRENT POSITION AND ROLE:

Associate Professor in SC 03/A1, SSD CHIM/01, at the Department of Biological, Chemical, and Pharmaceutical Sciences of the University of Palermo.

EDUCATION:

1996: Attended the NATO-ASI School on Advanced Mass Spectrometry.

1997: Graduated in Chemistry and Pharmaceutical Technology with a score of 110/110 cum laude.

1999: Recipient of a M.U.R.S.T. scholarship for a Ph.D. in Pharmaceutical Sciences.

2000: DSM Award for young researchers in mass spectrometry, received at the 20th Congress of the S.C.I. Attended the "4th Course on Mass Spectrometry for Ph.D. Students."

2001: Awarded a research grant in the scientific sector Chim/08 for the study of non-covalent complexes in the gas phase.

2002: Earned a Ph.D. in Pharmaceutical Sciences.

WORK EXPERIENCE:

Worked at Fort Dodge, a division of Whytt-Lederle S.p.A, from September 4, 2000, to January 31, 2002, as a QC Analyst.

In 2006, selected through a public examination for titles and exams, employed by the University of Palermo as a Research Fellow in the Department of Chemistry and Pharmaceutical Technologies.

QUALIFICATIONS:

In 2018, awarded National Eligibility as an Associate Professor for the competitive sector 03/A1 - Analytical Chemistry (from September 6, 2018, to September 6, 2027).

THESIS:

Graduated with an experimental thesis titled "Investigations on the double transposition mechanism of ortho-alkyl-substituted diphenyl methyl cations."

UNIVERSITY TEACHING ACTIVITIES:

Actively participated in university teaching activities since 2003, with various teaching assignments.

For the academic year 2003-2004, taught "Laboratory Analysis of Medicinals II" (9 CFU).

For the academic year 2004-2005, served as a tutor for the Basic Chemistry course for CTF and Pharmacy students.

In the academic years 2004-2005 and 2005-2006, taught "Synthetic and Analytical Techniques" (6 CFU) for the Chemistry program.

In the academic year 2008-2009, served as a substitute lecturer for the course "Instrumental Analysis Techniques with Laboratory Exercises" in the Chemistry program.

Taught "Analytical Chemistry" (8 CFU) for the Pharmacy program in the academic years 2009-2010, 2010-2011, 2011-2012, 2012-2013, 2013-2014, 2014-2015, 2015-2016, 2016-2017, 2017-2018, 2018-2019, 2019-2020, 2020-2021, 2021-2022, and 2022-2023.

During the period from 2009 to 2022, acted as supervisor for 8 experimental theses and is currently supervising 2 ongoing experimental theses.

Also served as a subject expert in Organic Chemistry Methods for the examination board for the Methods of Physical Chemistry course for students of the Specialist Degree in Chemistry and Pharmaceutical Technology for the academic years 2004-2009.

Additionally, was a lecturer for "Synthetic and Analytical Techniques" in all editions of the Master's program on "Synthesis and Quality Control of Radiopharmaceuticals" for the academic years 2004-2005, 2005-2006, and 2006-2007 at the University of Palermo.

Taught in all three editions (academic years 2007-2008, 2010-2011, 2012-2013) of the Second-Level Master's program "Mass Spectrometry Methodologies and Applications," covering topics such as general principles of mass spectrometry and interpretation of EI mass spectra. Also supervised two experimental projects within the same master's program.

In the academic year 2007-2008, served as a lecturer for the 2nd Residential Summer School: Chemistry and Conservation Science 2008 for the experimental module on LC-MSMS.

In the academic year 2013-2014, provided teaching as an expert in Analytical Chemistry and Mass Spectrometry for the modules "Interpretation of Mass Spectra" (total of 18 hours), "Principles of Chromatography and Couplings GC-MS and HPLC-MS-Laboratory Exercises" (total of 24 hours), "Principles of Chromatography and Couplings" (total of 24 hours), and "Applications of Mass Spectrometry in the Toxicological and Forensic Field-Laboratory Exercises" (total of 12 hours) as part of the training activities of the PON-FERS MEDCHHAB project at the University of Palermo.

In the academic year 2013-2014, provided teaching as an expert in Analytical Chemistry and Mass Spectrometry for the educational module "Determination of Organic Substances Obtained from Urban Solid Waste Release Tests" as part of the PON SIGLOD (Intelligent System for Supporting Waste Dump Management and Location and Management of Waste Facilities) training activities at the University of Palermo.

RESEARCH PROJECT LEADERSHIP:

Prof. David Bongiorno served as the Scientific Coordinator of the research unit operating at the Centro Grandi Apparecchiature (CGA-UNINETLAB-Unipa) for the PON project "Intelligent Systems to Support Waste Dump Management and Location and Management of Waste Facilities": SIGLOD. He was also the Scientific Coordinator of the research unit at the University of Palermo for the project "Cynara cardunculus L. as a Whole Plant Biorefinery in the Mediterranean Environment," funded by university funds.

PARTICIPATION IN PON AND POR RESEARCH PROJECTS FUNDED BY THE UNIVERSITY OF PALERMO

2020: Collaboration for research activities related to the project funded under the title: "PO FESR 2014-20 - Sicilian Region, Cosmetics from the Organic Vitivinicultural Chain – SMILING," organized by the Department of Biological, Chemical, and Pharmaceutical Sciences, University of Palermo, project no. 087219090480, CUP G18I17000160007.

2017: Collaboration for research activities related to the project funded under the title: "Study of Innovative Medical Therapeutic Strategies Guided by Imaging, Molecular, and Proteogenomics: Application in Oncology and Neurology" CIPE 2, D.M. 46965 dated 29/12/2007, unit: Department of Biological, Chemical, and Pharmaceutical Sciences, University of Palermo.

2014-2017: Participation in the PON project "Mediterranean Center for Human Health Advanced Biotechnologies (MEDCHHAB)" PONa3_00273.

2013-2016: Participation in the project "Enhancement of Typical Products of the Mediterranean Diet and Their Use for Health and Nutraceutical Purposes (DiMeSa)" PON02_00451_3361785 Research & Competitiveness 2007-2013, MIUR Notice 713/Ric., Axis I - Support for Structural Changes, Operational Objective - Networks for Strengthening the Scientific-Technological Potential of Convergence Regions.

2013-2016: Participation in the PON project "Development and Applications of Innovative Materials and Processes for the Diagnostics and Restoration of Cultural Heritage (DELIAS)" PON03PE_00214_2.

2012-2016: Participation in the project: "Smart Cities and Communities and Social Innovation - Intelligent System for Supporting Waste Dump Management and Location (SIGLOD), (Code PON4a2SIGLOD, D.D. Prot. No. 84/Ric. dated March 2, 2012).

2013-2016: Participation in the project "GREEN CLEAN Biodegradable Products and Packaging with Reduced Environmental Impact in the House Detergents and Personal Care Sectors" - PO FESR Sicilian Region 2007-2013 – Axis 4, Intervention Line 4.1.1.1.

PARTICIPATION IN NATIONAL AND INTERNATIONAL RESEARCH PROJECTS

Between 2005 and 2007: Co.R.I. Projects with the title "Characterization of Vegetable Oils by Innovative Mass Spectrometry Techniques" in collaboration with the Research Center for Chemistry of the Hungarian Academy of Sciences (Budapest) and the Mass Spectrometry Laboratory of the Department of Chemistry and Pharmaceutical Technologies at the University of Palermo.

Between 2013 and 2016 (2 years with a 2-year extension): Continued collaboration related to the characterization of olive oils through mass spectrometry methodologies, statistical analysis, and chemometrics. The research aimed to determine the product's origin, detect potential adulterations, and assess the oil's aging status.

CONTRACTS AND AGREEMENTS

Responsible for contract CON-0106, ID 30683, signed with ARPA Sicily titled: "Development of Analytical Methods for Compliance with the Quantification Limits specified in Legislative Decree No. 172/2015 for Monitoring Organic Contaminants (POPs) in Waters, Biota, and Marine Sediments."

Involved in the following contracts signed by the University of Palermo:

2020 – present, CON-0307, ID 35359: Study and Characterization of Organic Contaminants (POPs) in Waters, Biota, Sediments, Food, and Soils, within the "International Center for Advanced Studies on Environment, Ecosystem, and Human Health - CISAS" Project, CUP B62F15001070005. Supervised by Dr. Giuseppe Avellone.

2018-2019, CON-0030, ID 29059: Signed with IZS Sassari, titled "Development and Validation of Non-Target/Multi-Target Methods for the Identification and Determination of Per- and Polyfluoroalkyl Substances (PFAS) in the Food Chain for Risk Assessment." Supervised by Dr. Giuseppe Avellone.

2018 – present, COMM-0050, ID 28662: Signed with the Institute for Coastal Marine Environment of the National Research Council (IAMC-CNR), titled: "Study and Characterization of Organic Contaminants (POPs) in Waters, Biota, Food, Sediments, and Soils." Supervised by Dr. Giuseppe Avellone.

2011: Contract 2011-COMM-0091, ID 27728 for the authorization analysis of a medical-surgical product for commercial release. Supervised by Prof. Leopoldo Ceraulo.

02/25/2005: Consultancy for the National Institute of Geophysics and Volcanology (INGV), Palermo Section, for the development of analytical methods for the determination of polycyclic aromatic hydrocarbons and acrylamide in groundwater.

COLLABORATION WITH NATIONAL AND INTERNATIONAL RESEARCH GROUPS

Collaboration with the Central Research Institute for Chemistry, Budapest, Hungary, with Prof. Karoly Vekey from January 1, 2006, to the present.

Since 2008, collaboration with the Department of Chemistry and Chemical Technologies, University of Calabria, with Dr. Fabio Mazzotti, and the Department of Pharmacy and Health and Nutrition Sciences, University of Calabria, with Prof. Carlo Siciliano, as evidenced by the attached publication.

Scientific collaboration with researchers from other Italian universities, including Prof. A. Mele (Politecnico di Milano) and Prof. G. Giorgi (University of Siena), as documented by publications in recent years of research.

SCIENTIFIC ORGANIZATIONAL ACTIVITIES

Member of the Italian Chemical Society since 1997, affiliated with the divisions of Mass Spectrometry and Pharmaceutical Chemistry.

Elected as a member of the Board of the Mass Spectrometry Division for the three-year periods 2005-2007 and 2008-2010.

Appointed as the secretary of the Mass Spectrometry Division for the three-year period 2005-2007.

Member of the organizing committee for the 31st International Mass Spectrometry Conference (IMMS) held in Palermo from May 5 to 8, 2013.

Member of the organizing committee for the national congress Massa 2012 held in Palermo from July 1 to 5, 2012.

EDITORIAL ACTIVITIES

Dr. Bongiorno is currently part of the Editorial Board of the journal "FOODS" and served as a guest and main editor for various issues of the "E-Journal of Chemistry" for a three-year period.

He has also served as a referee for the following journals:

Analytical and Bioanalytical Chemistry

European Journal of Mass Spectrometry

Food Analytical Methods

Journal of Food Chemistry

Journal of Mass Spectrometry

Food Chemistry

Foods

CURRENT RESEARCH INTERESTS

The primary research interests encompass applications of Mass Spectrometry and other physical methods like Nuclear Magnetic Resonance in various fields of Analytical Chemistry, Environmental Toxicology Chemistry, Food Chemistry, with a specific focus on structural determinations, determination of drugs of abuse and contaminants in food, and characterization of food products. Research has included studies on gas-phase ionic chemistry, including investigations into the self-aggregation of surfactants in solution (using spectroscopic methods) and in the gas phase, employing mass spectrometry and ion mobility techniques. Studies have also delved into the behavior of chiral surfactant aggregates, which could be suitable for enantioselective entrapment of guest molecules inside the aggregates. Additionally, research has focused on the non-covalent interactions of biologically active molecules with models of bio-membranes, both in solution and in the gas phase. Another part of the research has involved the use of mass spectrometry in medical diagnostics and environmental toxicology analysis.

PUBLICATIONS

Prof. Bongiorno is the author or co-author of 66 articles in ISI or SCOPUS indexed journals and have presented 35 oral or poster communications at scientific conferences. I have also been invited to deliver a plenary lecture at the 20th National Congress of the Italian Chemical Society and two invited communications at the conference "New Frontiers in Mass Spectrometry: From Quantitative Analysis to Proteomics" (Attachment 18).

ACADEMIC QUALIFICATIONS

Bachelor's degree in Chemistry and Pharmaceutical Technology with a score of 110/110 cum laude.

National Scientific Qualification (ASN) obtained on 06/09/2018.

Licensed to practice as a Pharmacist.

Licensed to practice as a Chemist.

Certificate of attendance at the "NATO Advanced Study Institute on Mass Spectrometry."

Certificate of attendance at the "4th Course on Mass Spectrometry for Research Doctorates 2000."

DSM SCI 2000 Award for young professionals in the field of Mass Spectrometry.

Phd. in "Pharmaceutical Sciences"

SCIENTIFIC PUBLICATIONS IN ISI OR SCOPUS INDEXED JOURNALS

Author of 66 scientific publications in ISI or SCOPUS indexed journals. These publications can be accessed online through the following information:

Scopus Author ID: 6602576497,

ISI Researcher ID: G-6312-2012.

ORCID: <https://orcid.org/0000-0002-9856-356X>

