

Daniela Cecconi

curriculum vitae

<i>Work address:</i>	<i>University of Verona, Dept. of Biotechnology, Strada le Grazie 15, 37134 Verona, Italy</i>	<i>Phone:</i>	<i>0039-045-8027056</i>
		<i>e-mail:</i>	<i>daniela.cecconi@univr.it</i>
		<i>Skype:</i>	<i>daniela.cecconi</i>
		<i>ORCID ID:</i>	0000-0002-7314-8941

ITALIAN NATIONAL SCIENTIFIC HABILITATION (ASN):

since 2018, 28th March (Bando 2016, DD n. 1532/2016):

- as Full Professor in Analytical Chemistry (scientific sector 03/A1)
- as Full Professor in Biochemistry (scientific sector 05/E1)

ACADEMIC APPOINTMENTS:

15/5/2017 – to present

Associate Professor of Analytical Chemistry 03/A1, SSD CHIM/01 (new code CHEM-01/A), at the Department of Biotechnology, University of Verona.

1/3/2007 – 14/5/2017

Assistant Professor in Analytical Chemistry 03/A1, SSD CHIM/01, at the Faculty of Mathematical, Physical and Natural Sciences, Department of Biotechnology, University of Verona.

1/1/2005 – 28/2/2007

Research Fellow at the Scientific and Technological Department of the University of Verona. Research project title: "Proteomic Analysis of Pancreatic Adenocarcinoma: Potential Epigenetic Events and Antitumor Drugs" (PI: Prof. P.G. Righetti, Prof. M. Chilosi). Research Fellowship funded by AIRC.

1/1/2002 – 31/12/2004

PhD Fellow with a scholarship from the MIUR for the PhD in Industrial-Environmental Biotechnology at the University of Verona, XVII cycle (Supervisor: Prof. P.G. Righetti).

1/9/2001 – 31/12/2001

Research Fellow at the Scientific and Technological Department, University of Verona. Research project title: "Implementation of Miniaturized Prefractionation Methodology in Proteomic Analysis Using Microchips" (PI: Prof. P.G. Righetti). The position was funded by the European Union (EU project "Microproteomics", number QLG2-CT-2001-01903).

EDUCATION:

2002 - 2004

Doctorate in Environmental and Industrial Biotechnologies (University of Verona, Italy). Title of PhD Thesis: “Comparative proteomics analysis: innovative approaches and biomedical applications”. Supervisor: Prof. P.G. Righetti; Coordinator: Prof. H. Monaco.

- Grade: *excellent*

1995 - 2001

Master Degree in Biotechnology, 24th July 2001 (University of Verona, Italy). Title of research Thesis: “Comparative analysis of rat-plasma and serum after chronic treatment with nicotine or saline solution”. Supervisors: Prof. P.G. Righetti and Dr. E. Domenici (Dept. of Molecular Medicine, GlaxoSmithKline).

- Grade: *110/110 cum laude*

1990 - 1995

Diploma as Technician of chemical-biological laboratory Professional Institute “E. Fermi” (Verona, Italy).

- Grade: *60/60*

RESEARCH ACTIVITY

MANAGEMENT AND COORDINATION OF RESEARCH GROUPS

Since 2007, Prof. Daniela Cecconi (C.D.) has directed and coordinated the research group of the Laboratory of Proteomics and Mass Spectrometry, at the Department of Biotechnology, University of Verona. Currently, the research group is composed of a researcher rtdA CHIM/01 (Dr. J. Brandi), a PhD student in Biotechnology, a research fellow, and students of the CdLM in Molecular and Medical Biotechnologies and the CdL in Biotechnology of Univr.

The research activity is carried out in the field of analytical chemistry, and is characterized by the development and application of techniques and methodologies for the qualitative and quantitative determination of protein/peptide extracts (and to a lesser extent of metabolites) in samples of biological and biotechnological interest.

The reference analytical techniques are electrophoretic (e.g. 2D-PAGE, IEF), chromatographic (e.g. UPLC, HPLC, nanoHPLC, nanoHPLC on Chip) and mass spectrometry (e.g. Ion trap, Orbitrap MS). The statistical tools applied, and in some cases developed through collaborations, in relation to the treatment and interpretation of data obtained with LC-MS/MS and 2D-PAGE analysis, are those of chemometrics.

Funding for research activities

Scientific Coordinator or Unit Leader - Competitive Calls

- 16/10/2023-15/10/2025 Bando PRIN 2022 “iSonitriles: innovative pHarmacOphoric GroUps as aNtibacterial agents against multidrug resistance pathogenic bacteria (SHOGUN)” (€41.272,00). Role: Unit Leader, Substitute Principal Investigator.
- 2022-2025 "Heal Italia" (Hub founder UniPA). Three-year Extended Partnership project in Diagnostics and Precision Medicine within the Italian National Recovery and Resilience Plan (PNRR), Mission 4 “Education and Research”, Component 2 “From Research to Business”, funded by the European Union – NextGenerationEU (€221.316). Role: Unit Leader, Department of Biotechnology (Spoke 6 – University of Verona).
- 6/11/2017-30/06/2020, POR-FESR 2014-2020 Fondo Europeo di Sviluppo Regionale “Nuovo piano industriale del lattiero-caseario Veneto” (€51.000,00). Role: Head of research unit of Univr.
- 1/12/2017-30/11/2019 Joint Project con Sintal Dietetics s.r.l., Bando di Ateneo per progetti congiunti con Imprese ed Enti “Medicated bioactive spray for skin healing” (€44.665,00). Role: Principal Investigator.
- 23/10/2014-22/10/2016 Joint Project con Sintal Dietetics s.r.l., Bando di Ateneo per progetti congiunti con Imprese ed Enti “Probiotic-containing chewing-gum production: purification and characterization of bacteriocins of *Lactobacillus salivarius*” (€46.750,00). Role: Principal Investigator.
- 2010 FIRB programma "Futuro in ricerca" “Next generation technologies for the investigation of B-cell lymphoma”. (valutato positivamente ma non finanziato). Role: Principal Investigator.
- 1/12/2009-1/12/2011, Joint Project con Caseificio Elda s.r.l., Bando di Ateneo per progetti congiunti con Imprese ed Enti “Identificazione e caratterizzazione di proteine e peptidi bioattivi poco abbondanti del siero di latte” (€41.000,00). Role: Principal Investigator.

Research Group Leader or External Collaborator in Research Projects

- 2020 EPIC-XS project "Analysis of histone modifications in progressively de-differentiated cancer stem cells derived from pancreatic ductal adenocarcinoma cell lines" funded by the European Union's Horizon 2020 programme H2020-EU.1.4 (ID progetto 823839). Role: External collaborator.
- 2012-2017, COST Action (BM1204) EU Pancreas "An integrated European platform for pancreas cancer research: from basic science to clinical and public health interventions for a rare disease". Role: Expert member for Italy of working group 3, WG3: Translational research.
- 2011-2014 "Verona Nanomedicine Initiative" progetto triennale finanziato da Fondazione Cariverona. Role: Head of the WP2 research group for the analysis of "Biomarkers for the diagnosis of cardiovascular diseases through proteomic approach"
- 2009-2010, REGIONE VENETO, Patto di sviluppo del metadistretto alimentare Veneto mis.2B "Prototipi molecolari per la trasparenza e qualità alimentare". Role: Head of research group dealing with two-dimensional electrophoresis, mass spectrometry, western blotting.
- 2008 AIRC "An integrated approach to the study of mantle cell lymphoma". Role: External collaborator.

Scientific Manager of Research, Third-Party, or Consultancy Contracts

- 2024 Service contract for analyses and testing signed with Prof. Emilio Marengo for "Proteomics Analysis for the ESA/ASI project 4th-stage MDS-LDC STUDY" (Euro 3,057).
- 2023 Service contract for analyses and testing signed with Prof. Emilio Marengo for "Proteomics Analysis for the ESA/ASI project 4th-stage MDS-LDC STUDY" (Euro 2,000).
- 2023 Commissioned research contracts signed with Lunella Biotech, Inc. (Ottawa, Canada) for "Proteomic analysis of breast cancer cell lines and fibroblast cell lines" (Euro 4,700 and Euro 1,543).
- 2019 Technical-scientific assistance contract signed with Zeta Farmaceutici S.p.A. for the "Development of a method for protein precipitation from syrup and their quantification" (Euro 12,580).
- 2017 Third-party contract signed with CIBIO – Centre for Integrative Biology, Trento. Client: Dr. Sonia Garritano, quotation dated 19/09/2017 (Euro 1,220).
- 2015 Third-party contract signed with EURAC Research, Bolzano. Client: Dr. Mattia Volta, quotation dated 04/11/2015 (Euro 1,000.40).
- 2014 Technical-scientific consultancy contract with Caseificio Elda S.r.l. for the "Study of proteins and their modifications (oxidation and/or glycosylation) during ricotta shelf-life" (Euro 3,660).
- 2013 Commissioned research contract signed with Sintal Dietetics S.r.l. for the "Qualitative identification and isolation of small peptides from bacterial culture broths with presumed bacteriostatic and/or concentration-dependent bactericidal activity using proteomic analytical techniques" (Euro 14,000).
- 2012 Third-party contract signed with Fondazione Edmund Mach, San Michele all'Adige (Trento). Client: Dr. Claudio Moser, quotation dated 23/03/2012 (Euro 453.75).
- 2011 Third-party contract signed with the Department of Medicine, Rheumatology Section, University of Verona. Client: Prof. Lisa Bambara, quotation dated 03/03/2011 (Euro 800).
- 2010 Commissioned research contract signed with the Department of Public Health, Comparative Pathology and Veterinary Hygiene, University of Padua for the "Study of post-mortem proteolysis products in muscle tissue of beef cattle raised in Veneto" (Euro 10,000).

- 2010 Third-party contract signed with the Department of Neurological, Neuropsychological, Morphological and Motor Sciences, Section of Anatomy and Histology, University of Verona. Client: Dr. Mirco Galiè, quotation dated 11/10/2010 (Euro 1,000).

Scientific Supervisor for Funding Obtained for PhD Scholarships, Research Fellowships, and Research Grants:

- 2024 Ministerial PhD Scholarship, XL cycle.
- 2023 Doctoral Scholarship by the European Union – NextGenerationEU, PNRR, XXXVIII cycle.
- 2020 Ministerial PhD Scholarship, XXXVI cycle.
- 2020 Research Grant funded by POR-FESR 2014-2020 European Regional Development Fund.
- 2020 Annual Research Fellowship funded by the Department (FUR), ssd CHIM/01.
- 2019 Annual Research Fellowship financed by a donation from Eucare s.r.l., ssd CHIM/01.
- 2018 Annual Research Grant funded by the Joint Project 2017 call.
- 2017 Ministerial PhD Scholarship, XXXIII cycle.
- 2017 Annual Research Grant funded by the Department (FUR), ssd CHIM/01.
- 2016 Six-month Research Grant funded by the Joint Project 2014 call.
- 2016 Annual Research Fellowship financed by Sintal Dietetics s.r.l., ssd CHIM/01.
- 2015 Ministerial PhD Scholarship, XXX cycle.
- 2015 Annual Research Fellowship funded by the Department (FUR), ssd CHIM/01.
- 2015 Annual Research Fellowship funded by the Joint Project 2014 call, ssd CHIM/01.
- 2014 Annual Research Fellowship financed by the company MD'E s.r.l., ssd CHIM/01.
- 2013 Annual Research Fellowship funded by the Vr Nanomedicina Initiative call, ssd CHIM/01.
- 2012 Ministerial PhD Scholarship, XXVII cycle.
- 2011 Annual Research Fellowship funded by the Department (FUR), ssd CHIM/01.

EDITORIAL ACTIVITIES

Editorial boards of scientific journals

- 2022-present: **Member of the Editorial Board** for the Analytical Chemistry area for “Scientific Reports”, publisher Nature portfolio, IF: 4,997.
- 2021: **Guest Editor** for the book “Proteomics Data Analysis” In Methods in Molecular Biology Volume 2361. Humana Press, New York, NY. ISSN: 10643745.
- 2017-present: **Member of the Editorial Board** “Journal of Proteomics”, publisher Elsevier, IF: 3,855.
- 2012-present: **Associated Editor** for “Journal of Integrated OMICS – a methodological journal”, publisher Proteomass Scientific Society, ISSN 2182-0287, journal indexed on Scopus.

Reviewer activity for scientific journals

He has worked and works as a reviewer for scientific journals with IF (es. *Nature Communications*, *Food Chemistry*, *Scientific Reports*, *PLoS ONE*, *Journal of Proteomics*, *Journal of Proteome Research*, *Expert Review of Proteomics*, *Proteomics and Clinical Applications*, *Proteomics*, *Biochemical Pharmacology*, *Food Microbiology*, *Functional & Integrative Genomics*, *International Journal of Cancer*, *International Journal of Experimental Pathology*, *Journal of Integrative Plant Biology*, *Molecular Biology Reports*, *Molecular Biotechnology*, *Oncology Reports*, *Seminars in Cancer Biology*).

PARTICIPATION IN PATENT DEVELOPMENT

- EP-3547851-B1; WO2018100035, Priority date: 2016-11-30. Grant date: 2021-04-21. Owner: Sintal Dietetics s.r.l. "*L. salivarius* SGL03: probiotic activities and production of antimicrobial proteins".

Link to Espacenet: <https://bit.ly/3Souw6H>

Link to WIPO Patentscope: <https://bit.ly/3lLr16Q>

- CN101111762B; WO2006056861, Priority date: 26/11/2004. Grant date: 12/01/2012. Owner: ELETTRFOR s.a.s. "Method and apparatus for the simultaneous separation of biological molecules by bidimensional electrophoresis"

Link to Espacenet: <https://bit.ly/3XRUmW>

Link to WIPO Patentscope: <https://bit.ly/3EuhQVU>

AWARDS AND RECOGNITIONS

- **First Poster Award**, "Analysis of rat serum proteome after chronic nicotine treatment" Cecconi, D., Carboni, L., Domenici, E., Righetti, P.G., al *Congresso ICES International Council of Electrophoresis Societies 2001: An Electrophoretic Odyssey* (GlaxoSmithKline, Verona, 10-13 giugno 2001).

EVALUATION ACTIVITIES

Evaluator activity for national and international funding programs

- 2021: 8 postdoctoral fellowships funded by the Fondazione CRT Cassa di Risparmio di Torino.
- 2020: one postdoctoral fellowship funded by the Research Foundation Flanders, Belgium.
- 2019: 5 research projects funded by the Fundació La Marató de TV3, Spain.
- 2018: one research project funded by the French National Research Agency (ANR), France.
- 2016: one senior research fellowship funded by university funds from the University of Insubria.
- 2013: 2 three-year research projects funded by the MIUR, FIRB 2013 "Futuro in Ricerca" call.

ORGANIZATION AND/OR PARTICIPATION IN CONGRESSES AND CONVENTIONS

Organization through Committee Participation and Co-Chairing Activities

- **Scientific Committee and Organizing Committee and Co-chair** of the "3rd International Proteomics and Metabolomics Conference and Advanced Proteomic School" of the Mass Spectrometry Division of the SCI Italian Chemical Society NOVARA 2 3 October 2023).
- **Scientific Committee and Organizing Committee** of the conference "MASSA 2020VIP" of the Mass Spectrometry Division of the SCI Italian Chemical Society (online, 1 October 2020).
- **Co-chair** of the 7th Annual Conference of AnalytiX-2019 (Berlin, Germany, 13-15 November 2019).
- **Scientific Committee and Organizing Committee and Co-chair** of the "2nd International Proteomics and Metabolomics Conference and Advanced Proteomic School" of the Mass Spectrometry Division of the SCI Italian Chemical Society (University of Verona, 1-2 July 2019).

- **Scientific Committee and Organizing Committee and Co-chair** of the “1st International Proteomics and Metabolomics Conference and Advanced Proteomic School” of the Mass Spectrometry Division of the SCI Italian Chemical Society (University of Novara, June 25-26, 2018).
- **Scientific Committee** of “Organoid models and applications in biomedical research” of the Italian Cell Culture Association (University of Verona, March 8, 2018).
- **Organizing Committee** of 1st Congress of the Italian Proteome Society (Verona, May 27-29, 2004).

Participation as a Speaker at Congresses and Conventions

- "Super SILAC-based epiproteomic and label-free Quantitative SWATH-MS analysis of pancreatic cancer stem cells" *XXX Congresso della Divisione di Chimica Analitica della SCI Società Chimica Italiana* (Palazzo D'Avalos, Vasto, 17-21 settembre 2023).
- "The histone code of pancreatic cancer stem cells by nanoLC-MS/MS based epiproteomics" *Congresso della Divisione di Chimica Analitica della EuChemS Società Europea di Chimica, Euroanalysis XXI* (Geneva, Switzerland 27-31 agosto 2023).
- "Analysis of histone PTMs in pancreatic cancer stem cells by super-SILAC strategy using an EASY Spray™-nLC-MS/MS", *Convegno "MSomics" della Divisione di Spettrometria di Massa della SCI Società Chimica Italiana* (Università degli studi di Bologna, 6 dicembre 2022).
- "Integrated lipidomics and proteomics reveal cardiolipin remodelling, upregulation of HADHA and long chain fatty acids in pancreatic cancer stem cells", *XXVII Congresso Nazionale della SCI Società Chimica Italiana* (online, 14-23 settembre 2021).
- "Investigating the proteomic profile of HT-29 colon cancer cells after *Lactobacillus kefir* SGL 13 exposure using the SWATH method", *7th International Caparica Conference on Analytical Proteomics* (collegata da remoto Caparica-Portugal, 12-15 luglio 2021). Invited speaker.
- "Investigating the Proteomic Profile of HT-29 Colon Cancer Cells after *Lactobacillus kefir* SGL 13 Exposure Using the SWATH Method", *7th Annual Conference of AnalytiX-2019 Europe* (Berlino, Germania, 13-15 novembre 2019). Invited speaker.
- "Investigating the Proteomic Profile of HT-29 Colon Cancer Cells after *Lactobacillus kefir* SGL 13 Exposure Using the SWATH Method", *XXVIII Congresso della Divisione di Chimica Analitica della SCI Società Chimica Italiana* (Università degli studi di Bari, 22-26 settembre 2019).
- "Evaluation and comparison of gel-based and gel-free approaches for the in-depth exploration of milk rice proteome", *XXVI Congresso Nazionale della SCI Società Chimica Italiana* (Paestum, Salerno, 10-14 settembre 2017).
- "Elettroforesi bidimensionale e spettrometria di massa per analisi proteomiche di batteri lattici enologici e per lo studio dei meccanismi molecolari nelle interazioni pianta-patogeno" *Associazione Nazionale Biotecnologi Italiani ANBI Conference* (Università degli Studi di Bologna, 9 novembre 2011). Invited speaker.
- "Proteomic strategies to analyze mantle cell lymphoma", *XXII Congresso della Divisione di Chimica Analitica della SCI Società Chimica Italiana* (Università degli Studi dell'Insubria, Como, 12-16 settembre 2010).
- "Analisi di campioni di interesse biomedico tramite approccio proteomico 2D-PAGE", *Ricerca Genomica e Proteomica: Sinergie tra Tecnologie* (Bio-Rad Laboratories Srl, Segrate, Milano, 20 novembre 2008).

- “Analisi proteomica di linfoma a cellule del mantello: dalla patogenesi alla proposta di una terapia innovativa”, *Nuove tecnologie e sviluppi nell’analisi del Proteoma, VI edizione* (Università degli studi di Verona, 18 novembre 2008).
- “Analisi di campioni di interesse biomedico tramite approccio proteomico 2D-PAGE”, *Ricerca Genomica e Proteomica: Sinergie tra Tecnologie* (Bio-Rad Laboratories Srl, Segrate, Milano, 7 giugno 2007; 15 novembre 2007).
- “Serum proteomic analysis during nicotine self-administration, withdrawal, extinction and relapse in rats”, *XI Convegno della Società Italiana di Farmacologia (SIF), Neurofarmacologia e Neurobiologia delle Dipendenze* (Università degli Studi di Bologna, 9 settembre 2005).
- “Proteomic analysis of pancreatic ductal carcinoma cells after a combined treatment with Gemcitabine and Trichostatin-A”, *Seconda edizione Tour Europeo di seminari, Proteomics Alliance* (Università degli Studi di Verona, 6 luglio 2005).
- “Proteomic analysis of pancreatic ductal carcinoma cells after a combined treatment with Gemcitabine and Trichostatin-A”, *II° Congresso dell’Italian Proteome Society (IPSo)* (Università degli Studi della Tuscia, Viterbo, 31 maggio 2005).
- “Carcinoma Pancreatico: Analisi Proteomica degli eventi epigenetici e trattamento con farmaci antitumorali”, *Giornate di Scienza delle Separazioni in collaborazione con SCI Società Chimica Italiana* (CNR, Roma, 15 dicembre 2003).

OTHER TITLES

Membership in Scientific Societies

- Member of the Italian Chemical Society (SCI).
- Full Member of the Division of Analytical Chemistry of the Italian Chemical Society (SCI).
- Associate Member of the Division of Mass Spectrometry of the Italian Chemical Society (SCI).
- From 2002 to 2013 she was a member for some years (not continuously) of: Italian Society of Proteomics (Itpa), European Proteomics Association (EuPA), and Human Proteome Organization (HUPO).

SCIENTIFIC PRODUCTION

Scopus Author h-index: 35

For the complete list of publications (110 documents), please refer to the Scopus profile (ID: 6602237804).

International Peer-Reviewed Articles with Impact Factor (selection last 5 years)

- 1) "Mutant p53 affects the mitochondrial proteome, promoting mitochondrial fragmentation and OXPHOS in pancreatic ductal adenocarcinoma cells" Poles M, Pacchiana R, Mortali C, Cisterna B, Mullappilly N, Celesia A, Danzi F, Gaspari M, Cecconi D, Donadelli M, Fiore A. *FEBS J.* 2026; 293:156-174.
- 2) "CD103-CD8+T cells promote neurotoxic inflammation in Alzheimer's disease via granzyme K-PAR-1 signaling" Terrabuo E, Pietronigro EC, Bani A, Della Bianca V, Laudanna C, Rossi B, Finotti G, Santos-Lima B, Zenaro E, Turano E, Tosadori G, Calgaro M, Vitulo N, Castellucci M, Cecconi D, Brandi J, Vareltzakis N, Mainieri F, Calore A, Angelini G, Bonetti B, Constantin G. *Nature Communications* 2025;16(1):8372.
- 3) "Chemotherapy enhances HMGA1 secretion through the mutant p53-CK2 axis in pancreatic ductal adenocarcinoma cells" Danzi F, Butera G, Sutton D, Perricone MD, Hu Y, Celesia A, Manfredi M, Brandi J, Pourmandi N, Nelson NS, Lin L, Bevere M, Pacchiana R, Pea A, Salvia R, Scarpa A, Luchini C, Cecconi D, Ugel S, Lyssiotis CA, Fiore A, Donadelli M. *Cell Death Dis.* 2025;16(1):766.
- 4) "Comparative Analysis of the Fecal Proteome in Two Canine Breeds: Dalmatians and Weimaraners" Cerquetella M, Pinnella F, Morazzini R, Rossi G, Marchegiani A, Gavazza A, Mangiaterra S, Di Cerbo A, Sorio D, Brandi J, Cecconi D, Vincenzetti S. *Int J Mol Sci.* 2025; 26:8247.
- 5) "In vitro effect of hCG on cryptorchid patients' gubernacular cells: a predictive model for adjuvant personalized therapy" Errico A, Ambrosini G, Vinco S, Bottani E, Dalla Pozza E, Marroncelli N, Brandi J, Cecconi D, Decimo I, Migliorini F, Zampieri N, Dando I. *Cell Commun Signal.* 2025; 23:19.
- 6) "Sensitive and accurate determination of 32 PFAS in human serum using online SPE-UHPLC-HRMS" Belay MH, Robotti E, Ghignone A, Fabbris A, Brandi J, Cecconi D, Masini MA, Dondero F, Marengo E. *J Hazard Mater.* 2025; 485:136780.
- 7) "Multi-Omics Approaches for Freshness Estimation and Detection of Illicit Conservation Treatments in Sea Bass (*Dicentrarchus Labrax*): Data Fusion Applications. Benedetto A, Robotti E, Belay MH, Ghignone A, Fabbris A, Goggi E, Cerruti S, Manfredi M, Barberis E, Peletto S, Arillo A, Giaccio N, Masini MA, Brandi J, Cecconi D, Marengo E, Brizio P. *Int J Mol Sci.* 2024; 25:1509.
- 8) "Analysis of veterinary drugs and pesticides in food using liquid chromatography-mass spectrometry" Brandi J, Siragusa G, Robotti E, Marengo E, Cecconi D. *Trends in Analytical Chemistry* 2024; 179,117888
- 9) "Triphenylphosphonium-Conjugated Palmitic Acid for Mitochondrial Targeting of Pancreatic Cancer Cells: Proteomic and Molecular Evidence" Siragusa G, Brandi J, Rawling T, Murray M, Cecconi D. *Int J Mol Sci.* 2024;25(12):6790
- 10) "Multi-Omics Approaches for Freshness Estimation and Detection of Illicit Conservation Treatments in Sea Bass (*Dicentrarchus Labrax*): Data Fusion Applications" Benedetto A, Robotti E, Belay MH, Ghignone A, Fabbris A, Goggi E, Cerruti S, Manfredi M, Barberis E, Peletto S, Arillo A, Giaccio N, Masini MA, Brandi J, Cecconi D, Marengo E, Brizio P. *Int J Mol Sci.* 2024; 25(3):1509.
- 11) "Fecal Proteome Profile in Dogs Suffering from Different Hepatobiliary Disorders and Comparison with Controls" Cerquetella M, Mangiaterra S, Pinnella F, Rossi G, Marchegiani A, Gavazza A, Serri E, Di Cerbo A, Marini C, Cecconi D, Sorio D, Marchetti V, Vincenzetti S. *Animals (Basel).* 2023; 13:2343.
- 12) "Advances in enrichment methods for mass spectrometry-based proteomics analysis of post-translational modifications" Brandi J, Noberini R, Bonaldi T, Cecconi D. *J Chromatogr A.* 2022; 1678:463352.
- 13) "Plant Signals Anticipate the Induction of the Type III Secretion System in *Pseudomonas syringae* pv. *actinidiae*, Facilitating Efficient Temperature-Dependent Effector Translocation" Puttilli MR, Danzi D, Correia C, Brandi J, Cecconi D, Manfredi M, Marengo E, Santos C, Spinelli F, Polverari A, Vandelle E. *Microbiol Spectr.* 2022;10(6):e0207322.
- 14) "Glucose/Ribitol Dehydrogenase and 16.9 kDa Class I Heat Shock Protein 1 as Novel Wheat Allergens in Baker's Respiratory Allergy" Olivieri M, Spiteri G, Brandi J, Cecconi D, Fusi M, Zanoni G, Rizzi C. *Molecules* 2022;27(4):1212.
- 15) "Tumor Suppressor Role of Wild-Type P53-Dependent Secretome and Its Proteomic Identification in PDAC" Butera G, Manfredi M, Fiore A, Brandi J, Pacchiana R, De Giorgis V, Barberis E, Vanella V, Galasso M, Scupoli MT, Marengo E, Cecconi D, Donadelli M. *Biomolecules* 2022;12(2):305.

- 16) "Kohonen Artificial Neural Network and Multivariate Analysis in the Identification of Proteome Changes during Early and Long Aging of Bovine Longissimus dorsi Muscle Using SWATH Mass Spectrometry" Brandi J, Robotti E, Manfredi M, Barberis E, Marengo E, Novelli E, Cecconi D. *J Agric Food Chem.* 2021; 69(38):11512-11522.
- 17) "Integrated lipidomics and proteomics reveal cardiolipin alterations, upregulation of HADHA and long chain fatty acids in pancreatic cancer stem cells" Di Carlo C, Sousa BC, Manfredi M, Brandi J, Dalla Pozza E, Marengo E, Palmieri M, Dando I, Wakelam MJO, Lopez-Clavijo AF, Cecconi D. *Scientific Reports* 2021; 11(1): 13297.

Book Chapters

- 1) Cecconi D., Di Carlo C., Brandi J. (2021) "Protein Secretion Prediction Tools and Extracellular Vesicles Databases" Capitolo 13, pp. 213-227. In: Cecconi D. (Editor) *Proteomics Data Analysis. Methods in Molecular Biology* Volume 2361. Humana Press, New York, NY. ISSN: 10643745.
- 2) Cecconi D., Bini L., Bianchi L., (2021) "Elettroforesi bidimensionale" Capitolo 10, pp. 101-117. In Alberio T., Fasano M., Roncada P. (Editors) *Proteomica*. EdiSES, Italia, ISBN: 9788836230495.
- 3) Righetti, P.G., Antonioli, P., Campostrini, N., Cecconi, D. (2019) "Omics, quantitative proteomics" pp. 90-98. In: Worsfold, P., Townshend, A., Poole, C., and Miro M. (Editors) *Encyclopedia of Analytical Science*, 3rd Edition, Oxford, Elsevier Science Ltd. ISBN: 978-008101983-2; 978-008101984-9.
- 4) Cecconi D. (2016) "Comparative Evaluation of Software Features and Performances", Capitolo 4, pp 69-78. In: Marengo E. and Robotti E. (Editors) *2D PAGE Map Analysis - Methods in Molecular Biology* Volume 1384. Springer, New York, ISBN: 978-1-4939-3255-9.
- 5) Castagna, A., Cecconi, D., Boschetti, E., Righetti, P.G. (2009) "Prefractionation of urinary proteins", Capitolo 15, pp. 201-217. In: Thongboonkerd V. (Editor) *Renal and Urinary Proteomics: Methods and Protocols*, New York, Wiley-VCH, ISBN: 978-3-527-31974-9.
- 6) Righetti, P.G., Cecconi, D., Campostrini, N., Antonioli, P. (2007) "Omics: Proteomics/Pre-fractionation for Hidden Proteome", pp. 1-11. In: Colin F. Poole and Ian D. Wilson (Editors) *Encyclopedia of Separation Science*, first online update, Oxford, Elsevier Science Ltd. ISBN: 978-0-12-226770-3.
- 7) Righetti, P.G., Antonioli, P., Campostrini, N., Cecconi, D. (2007) "Omics: Proteomics/Quantitative Proteomics", pp. 1-10. In: Colin F. Poole and Ian D. Wilson (Editors) *Encyclopedia of Separation Science*, first online update, Oxford, Elsevier Science Ltd. ISBN: 978-0-12-226770-3.
- 8) Righetti, P.G., Bossi, A., Castagna, A., Antonucci, F., Cecconi, D., Campostrini, N. (2004) "Conventional isoelectric focusing in gel slabs and capillaries and immobilized pH gradients" Capitolo 13. In: J.C. Janson & L. Rydén (Editors) *Protein Purification: Principles. High-resolution Methods and Applications*. 1st Edition, New York, Wiley-VCH. ISBN: 978-0-471-74661-4.

Conference Proceedings (indexed Scopus and/or WoS, with ISSN/ISBN)

- 1) "Super SILAC-based epiproteomic and label-free Quantitative SWATH-MS analysis of pancreatic cancer stem cells" G.Siragusa, J.Brandi, E.Dalla Pozza, R.Noberini, T.Bonaldi, M.Manfredi, E.Marengo, I.Dando, D.Cecconi. In: Atti del XXX Congresso della Divisione di Chimica Analitica della SCI Società Chimica Italiana (2023) ISBN: 9788894952384
- 2) "Insights into metabolism alteration associated with pancreatic cancer stem cells" Di Carlo C, Sousa B, Brandi J, Dalla Pozza E, Dando I, Palmieri M, Wakelam M, Lopez-Clavijo A, Cecconi D. In: *Frontiers Abstract Book*, edited by Ira Skvortsova. (2020). 3rd Int. Conference "Cancer Stem Cells: Impact on Treatment, December 13–17, 2020, Seefeld, Tyrol, Austria. DOI: 10.3389/978-2-88963-598-6, ISBN: 978-2-88963-598-6.
- 3) "Characterization of mesenchymal stromal cell-derived extracellular vesicles and correlation with their immunosuppressive properties towards B cells" Adamo, A., Brandi, J., Carusone, R., Bazzoni, R., Caligola, S., Cecconi, D., et al. (2018) *HAEMATOLOGICA*, vol. 103 Suppl: 3, pag. S65-S66, Meeting Abstract: CO094. In: 15th Congress of the Italian-Society-of-Experimental-Hematology, Rimini, Italia, 18-20 Oct 2018; ISSN: 0390-6078.
- 4) "Proteomic Signature of PDAC Cells with Mutant p53" Manfredi, M., Butera, G., Buzzi, A., Brandi, J., Cecconi, D., Marengo, E., Donadelli, M., (2018) *FASEB JOURNAL*, vol. 32, Meeting Abstract: 804.38. In: *ASBMB*

Annual Meeting of American Society for Biochemistry and Molecular Biology, San Diego, CA, 21-25 April 2018; ISSN: 0892-6638.

5) "Molecular characterization of MSC-derived extracellular vesicles and correlation with their immunomodulatory potential" Adamo, A., Brandi J., Carusone R., Caligola S., Cecconi D., Giugno R., Manfredi M., Robotti E., Marengo E., Dal Collo G., Bazzoni R., Arigoni M., Calogero R., Gatti A., Takam Kanga P., Mercuri A., Krampera M. (2018) CYTOTHERAPY, vol. 20 (5), p.S22; In: International Society for Cellular Therapy ISCT Annual Meeting, Montreal Canada, 2-5 May 2018; doi: 10.1016/j.jcyt.2018.02.049, ISSN: 1465-3249.

6) "Proteomic study of the outer layer of biogenic selenium nanoparticles" Bulgarini, A., Cecconi, D., Lampis, S., Vallini, G. (2016) World congress on recent advances in nanotechnology, 1p; In: Proceedings of the World Congress on Recent Advances in Nanotechnology RAN 2016, Prague Czech Republic, 1-2 April 2016, doi: 10.11159/icnnfc16.114, ISSN: 23715308.

7) "Myristic acid plasma levels are strongly correlated with triglyceride and Apolipoprotein C-III plasma concentration in a cohort of subjects with or without coronary artery disease" Speziali, G., Cecconi, D., Martinelli, N., Olivieri, O., Castagna, A., Guarini, P. (2016) ATHEROSCLEROSIS, vol. 252, p. e119, In: 84th Congress of European Atherosclerosis Society (EAS), Innsbruck Austria, 29 May-1 June 2016, ISSN: 0021-9150.

8) "Apolipoprotein C-III glycoforms correlate heterogeneously with plasma lipid profile in subjects with coronary artery disease" Chiariello, C., Castagna, A., Martinelli, N., Guarini, P., Manfredi, M., Ranzato, E., Martinotti, S., Marengo, E., Cecconi, D., Olivieri, O. (2016) ATHEROSCLEROSIS, vol. 252, p. e100, In: 84th Congress of European Atherosclerosis Society (EAS), Innsbruck Austria, 29 May-1 June 2016, ISSN: 0021-9150.

9) "Elemental selenium nanoparticles efficiently bio-synthesized by Stenotrophomonas maltophilia SeITE02 possess promising antimicrobial activity" Lampis, S., Zonaro, E., Bertolini, C., Cecconi, D., Turner, R., Vallini, G. (2015) in Book of Abstracts of the 6th European Bioremediation Conference , Technical University of Crete , Proceedings of "6th European Bioremediation Conference", Chania - Crete, Greece , June 29 - July 2, 2015, pp. 297-297. ISBN: 9789608475236

10) "Grapevine-mould Plasmopara viticola infection (downy mildew) elicits the expression of allergenic PR-proteins" Zoccatelli, G., Avesani, S., Giacomo, R., Cecconi, D., Lovato, A., Conte, M., Martelli, P., Villalta, D. (2015) ALLERGY, vol. 70 p.325-326. In: Congress of the European Academy of Allergy and Clinical Immunology, Barcelona, Spain 6-10 June 2015, ISSN: 0105-4538.

11) "Pancreatic cancer stem cells characterization and secretome analysis" Dando, I., Biondani, G., Dalla Pozza, E., Brandi, J., Costanzo, C., Cecconi, D., Palmieri, M. (2014) FEBS JOURNAL, vol. 281, p. 780. In: FEBS EMBO 2014 Conference. Paris, France, 30 August - 4 September 2014. ISSN: 1742-464X.

12) "Phospho-tyrosine profiling of mantle cell lymphoma cells suggests the BCR signalling pathway as a potential therapeutic target" Zamò, A., Pighi, C., Gu, T.-L., Mancini, F., Parolini, C., Pedron, S., Bertolaso, A., Parisi, A., Barbi, S., Polackiewicz, R., Cecconi, D., Chilosi, M., Menestrina, F. (2009) VIRCHOWS ARCHIV, In: 22nd European Congress of Pathology, Firenze, 4-9 Sept 2009, vol. 455, p. 252. ISBN: 1148546456, ISSN: 0945-6317.

13) "Pancreatic endocrine tumours, a proteomic investigation of the trichostatin-A antitumoral effect" Cecconi D., Donadelli M., Rinalducci S., Zolla, L., Scarpa A., Palmieri M., Bossi A., Righetti P.G. (2006) MOLECULAR & CELLULAR PROTEOMICS, In: Hupo - Human Proteome Organisation. 5th Annual World Congress, 2006. Long Beach, October 28th to November 1st, 2006, vol. 5, ISSN: 1535-9476.

14) "Anticancer activity of a novel histone deacetylase inhibitor against human colorectal cancer cells" Campostrini, N., Cecconi D., Milli, A., Vindigni, A., Bossi, A., Righetti P.G. (2006) MOLECULAR & CELLULAR PROTEOMICS, In: Hupo - Human Proteome Organisation. 5th Annual World Congress, 2006. Long Beach, October 28th to November 1st, 2006, vol. 5, ISSN: 1535-9476.

15) "Serum proteomic analysis during nicotine self-administration, withdrawal, extinction and relapse in rats" Carboni L., Cecconi D., Willè D.R., Zoli M., Righetti P.G., Tessari M. (2005) EUROPEAN NEUROPSYCHOPHARMACOLOGY, In: 18th Congress of the European College of Neuropsychopharmacology, 25-26 October 2005, vol. 15, ELSEVIER SCIENCE BV, Amsterdam, Netherlands, ISSN: 0924-977X.

TEACHING ACTIVITIES

LECTURE-BASED TEACHING ACTIVITIES

Professor of Courses for Bachelor's (CdL) and Master's (CdLM) degree programs

Since 2006 – initially as Teaching Assistant/Subject Expert (post-doc), from 2007 as Researcher, and from 2017 as Associate Professor.

Annual teaching load (lectures + laboratory classes): 148 hours (2017/18), 136 (2018/19), 101 (2019/20), 120 (2020/21), 120 (2021/22–present). The teaching commitment for the current academic year (see link <https://bit.ly/3K2CXCC>) is 120 hours annually (116 hours for bachelor's/master's programs and 4 hours for doctoral programs).

Lecture-based Teaching in the Last 5 Academic Years::

from AY 2020/21 – to AY 2024/25 (present):

- "Tecniche analitiche di chimica clinica" CdL in Biotecnologie: 6 CFU (5 CFU theory equal to 40 hours + 1 CFU laboratory equal to 12 hours), total 52 h, ssd CHIM/01.
- "Clinical Proteomics" CdLM in Molecular and Medical Biotechnology: 6 CFU (5 CFU theory equal to 40 hours + 1 CFU laboratory for two shifts equal to 24 hours), total 64 h, ssd CHIM/01.

Teaching for Advanced training courses

AY 2015/16 – AY 2016/17:

Coordinator for the "Chemistry" course in the Advanced Training and Professional Development Program for Orthopedic Technicians, organized by the Department of Medicine, University of Verona. The course was worth 2 CFU of theory, total 16 hours, ssd CHIM/01.

Teaching for MUR accredited doctoral courses

Member of the PhD Board (SSD CHIM/01) continuously since 2007.

Lectures on advanced analytical methodologies (electrophoresis, chromatography, LC-MS/MS) for the analysis of protein extracts in biomedical applications: 4 hours/year (from AY 2019/20 to present), 3 hours (AY 2016/17).

SUPPLEMENTARY EDUCATIONAL ACTIVITIES

Supervisor of PhD thesis

- **AY 2024/25-present:** Supervisor of the PhD thesis of Dr. Gloria Gatto. Thesis topics: pancreatic cancer, proteomics, ferroptosis, cuproptosis, mutated p53. PhD in Biotechnology (XL cycle).
- **AY 2022/23-2024/25:** "Cibo e cucina in età medievale: analisi dei residui organici nei contenitori in pietra ollare e ceramici" Dott. Dario Monaco, PhD in Scienze archeologiche, storico-artistiche e storiche (XXXVIII ciclo), ssd L-ANT/08.
- **AY 2020/21-2023/24:** "Identification of Therapeutical Targets and Novel Drug Candidates for Pancreatic Ductal Adenocarcinoma" Dr. Giuliana Siragusa, PhD in Biotechnology (XXXVI cycle), ssd CHIM/01.

- **AY 2017/18-2019/20:** "A multi-omics approach identifies the pivotal role of cardiolipin remodelling, alpha subunit of the mitochondrial trifunctional protein and long chain fatty acids in stem cells of pancreatic cancer" Dr. Claudia Di Carlo, PhD in Biotechnology (XXXIII cycle), ssd CHIM/01.
- **AY 2015/16-2017/18:** "Myristic acid: in vivo evaluation of connection with cardiovascular risk factors and in vitro proteomic investigations of its biochemical effects" Dr. Giulia Speziali, PhD in Biotechnology (XXX cycle), ssd CHIM/01.
- **AY 2012/13-2014/15:** "In-depth characterization of the secretome of pancreatic cancer stem cells by iTRAQ-based shotgun proteomics and identification of potential markers for early diagnosis of pancreatic cancer" Dr. Jessica Brandi, PhD in Industrial and Environmental Molecular Biotechnology (XXVII cycle), ssd CHIM/01.
- **AY 2009/10-2011/12:** "Discovery and quantification of proteins of biological relevance through differential proteomics and biosensing" Dr. Francesco Lonardoni, PhD in Industrial and Environmental Molecular Biotechnology (XXIV cycle), ssd BIO/10.
- **AY 2006/07-2008/09:** "2D-PAGE coupled to mass spectrometry for proteomic analysis of human, microbial and plant samples" Dr. Alberto Milli, PhD in Industrial and Environmental Molecular Biotechnology (XXI cycle), ssd BIO/10.

Supervisor of Bachelor's or Master's degree thesis:

Since the AY 2006/07 to present, CD has been the supervisor of many (>40) theses for the Master's degree courses in Molecular and Medical Biotechnology, Bioinformatics and Medical biotechnology, Industrial and molecular biotechnology, and in Agro-food biotechnology; as well as for the Bachelor's degree in Biotechnology.

PARTICIPATION IN COMMITTEES

Profit exam and degree exam committees

- Since 2006, C.D. has served as Chair of the Committees for examinations in the courses she teaches for both the Bachelor's and Master's degree Courses of Univr (reported in the frontal teaching section).
- Since 2007 C.D. has participated as a member of the committees for final examinations for undergraduate and master's degrees at UniVr, where she coordinates lecture-based teaching activities.
- Currently she is Chair of the profit exam Committee for "Clinical Proteomics" and "Analytical techniques of clinical chemistry" at UniVr, both ssd CHIM/01.

Doctoral Committees

Committees for PhD Admissions at University of Verona

- AY 2024/25: Chair of the Examination Committee for admissions to the PhD program in "Biotechnology" (XL cycle).
- AY 2022/23: Chair of the Examination Committee for admissions to the PhD program in "Biotechnology" (XXXVIII cycle).
- AY 2020/21: Secretary of the Examination Committee for admissions to the PhD in "Biotechnology" (XXXVI cycle).

- AY 2017/18: Member of the Examination Committee for admissions to the PhD in "Biotechnology" (XXXIII cycle).
- AY 2012/13: Member of the Examination Committee for admissions to the PhD in "Industrial and environmental molecular biotechnology" (XXVII cycle).

Evaluation Committees and PhD Final Examination Boards

- 2007–present: Internal member of annual Evaluation Committees for PhD theses in Biotechnology, University of Verona.
- 2007–present: External member of Evaluation Committees for PhD theses at other universities (e.g., PhD in Chemistry and Biology, University of Eastern Piedmont; PhD in Biological and Molecular Sciences, University of Milan; PhD in Molecular Medicine, University of Catania).
- 2025: External examiner for the PhD final examination of Zahra Moftakhar, PhD in Biological Sciences, University of Salford Manchester, UK.

PUBLIC ENGAGEMENT ACTIVITIES (Third Mission)

- **BiotechWeek 2025**: participation with a presentation of the PRIN project "*Isonitrili: innovative pharmacophoric groups against multidrug-resistant bacteria (SHOGUN)*".
- **UniStem Day 2025**: RadioVR interview during the programme "*Radio Verona in affitto*".
- **Geni a Bordo 2023**: outreach initiative bringing STEM and biotechnology to high-school students.
- **Social media management – Department of Biotechnology**: Facebook page (2020–2025); Twitter/X profile (2022–2025).
- **European Researchers' Night**: organisation of guided tours of the Proteomics and Mass Spectrometry laboratories for schools and the general public (editions 2011, 2012, 2013, 2014, 2015).

INSTITUTIONAL AND ACADEMIC GOVERNANCE ROLES AND SERVICE

Institutional Roles

- **Rector's Representative for Research Centres and Labs Development** (2025–present)
- **Member of the University Research Committee** (2025–present)
- **Member of the Quality Assurance Committee for the PhD Programme** in Molecular, Industrial and Environmental Biotechnology (2025–present)
- **Deputy Coordinator of the PhD Board** in Molecular, Industrial and Environmental Biotechnology (2024–present)
- **Member of the Executive Board of the University Center for Technological Platforms** (2021–present)
- **Member of the Communication Committee** of the Department of Biotechnology (2021–2025)
- **Academic Senate** – Representative of Associate Professors, “Science and Engineering” area (two terms: 2018–21, 2021–24)
- **REPRISE Expert Evaluator** – MUR Register of Independent Scientific Experts (2015–present)
- **Department Council** – Department of Biotechnology (2007–present)
- **PhD Board** – Biotechnology Programme (2007–present)
- **Teaching Boards** (BSc Biotechnology; MSc Molecular and Medical Biotechnology) (2007–present)

Previous Institutional Roles

- Joint Student–Faculty Committee – Department of Biotechnology (2013–2017)
- Department Executive Committee – Representative of Researchers (2009–2012)
- Teaching and Student Affairs Committee – BSc Biotechnology; MSc Agro-Food Biotechnology (2008–2010)
- Technical-Scientific Referent for the nanoHPLC-Chip/ion trap MS system, University Center for Technological Platforms (2004–2017)

Selection Committees for Academic Recruitment (SSD CHEM-01/A)

- 2025: Chair, Selection Committee for Associate Professor, University of Eastern Piedmont
- 2023: Secretary, RTDa Selection Committee, University of Milano-Bicocca (Code: 2022-RTDAPNRR-084/01)
- 2021: Chair, RTDa Selection Committee, University of Verona (Code: 2021rtdaPON22)
- 2021: Chair, RTDa Selection Committee, University of Verona (Code: 2021rtdaPON07)

Verona, April 2026



Daniela Cecconi