

Jessica Brandi, PhD

Curriculum Vitae

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Current Position

01/09/2022 – Present

Temporary Assistant Professor (Analytical Chemistry, CHEM-01/A)

Department of Biotechnology, University of Verona

Course Coordinator: "Analytical Chemistry Applied to Food" (SSD CHEM-01/A) — 6 CFU theory (48 h) + 2 CFU lab (16 h), Bachelor's Professional Degree L-P02 ISPIA

Education

2012–2014

Department of Biotechnology, University of Verona

Doctorate in Molecular, Industrial and Environmental Biotechnology (XXVII cycle), obtained on May 5th, 2015.

Thesis: "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" (SSD CHEM-01/A).

Supervisor: Prof. D. Cecconi, Coordinator: Prof. R. Bassi.

2008–2011

Department of Biotechnology, University of Verona

Master's Degree in Molecular and Industrial Biotechnology, obtained on 28 March 2011.

Thesis: "Proteomic analysis of phosphorylated and total proteins in pancreatic cancer cells treated with synthetic cannabinoids". Supervisor: Prof. D. Cecconi.

Grade: 108/110

2005–2008

Department of Biotechnology, University of Verona

Bachelor's Degree in Agro-Industrial Biotechnology, obtained on 1 December 2008.

Thesis: "Study of wheat protein allergens in relation to their state of denaturation".

Supervisor: Prof. C. Rizzi.

Grade: 100/110

2000–2005

Scientific High School ISI Leonardo da Vinci, Cerea (Italy)

Scientific High School Diploma

Diploma. Grade: 92/100

National and International Research Fellowships

- 01/11/2020 –
31/10/2021 **Post-doctoral Research Fellow — University of Verona**
Project: "Analysis of histone modifications in progressively de-differentiated cancer stem cells derived from pancreatic ductal adenocarcinoma cell lines" (SSD CHEM-01/A).
Supervisor: Prof. D. Cecconi.
- 01/05/2020 –
31/10/2020 **Post-doctoral Research Fellow — University of Verona**
Project: "Proteomic analysis of UV light effects on residual whey from Grana Padano and Parmigiano Reggiano", funded by POR-FESR 2014-2020. Supervisor: Prof. D. Cecconi.
- 01/05/2019 –
30/04/2020 **Post-doctoral Research Fellow — University of Verona**
Project: "Protective and immunomodulatory effects of lactobacilli on keratinocytes", funded by Joint Project 2017 (SSD CHEM-01/A). Supervisor: Prof. D. Cecconi.
- 01/05/2018 –
30/04/2019 **Post-doctoral Research Fellow — University of Verona**
Project: "Medicated bioactive spray for skin healing", funded by Joint Project 2017. Supervisor: Prof. D. Cecconi.
- 01/05/2017 –
30/04/2018 **Post-doctoral Research Fellow — University of Verona**
Project: "Secretome analysis of pancreatic cancer cells with mutant p53" (SSD CHEM-01/A). Supervisor: Prof. D. Cecconi.
- 01/01/2017 –
30/04/2017 **Post-doctoral Research Fellow — University of Verona**
Project: "Characterization of microencapsulated vegetable oils", funded by Joint Project 2014. Supervisor: Prof. G. Zoccatelli.
- 01/07/2016 –
31/12/2016 **Post-doctoral Research Fellow — University of Verona**
Project: "From secretome knowledge to personalized therapy in pancreatic cancer patients with mutant p53", funded by Joint Project 2015. Supervisor: Prof. M. Donadelli.
- 01/01/2016 –
30/06/2016 **Post-doctoral Research Fellow — University of Verona**
Project: "Purification and characterization of bacteriocins of *Lactobacillus salivarius* (SGL03)", funded by Joint Project 2014. Supervisor: Prof. D. Cecconi.
- 01/01/2015 –
31/12/2015 **Post-doctoral Research Fellow — University of Verona**
Project: "Analysis of protein molecular markers of pancreatic cancer by shotgun proteomic approach" (SSD CHEM-01/A). Supervisor: Prof. D. Cecconi.
- 24/08/2013 –
24/11/2013 **Visiting PhD Student — University of Liverpool, Liverpool Cancer Research, UK**
Funded by EPC Fellowship. Project: "Shotgun proteomics analysis of secretome and lysate of CSC by iTRAQ approach". Supervisor: Prof. E. Costello.

Research Activity

Research Interests

Dr. Jessica Brandi is a fixed-term researcher (Type A) (SSD CHEM-01/A) with extensive experience in the development and/or application of analytical methodologies for the qualitative and quantitative compositional determination of protein matrices. Her main areas of expertise include:

- Separation and spectrometric methods: electrophoretic techniques (mono- and bidimensional 2-DE, isoelectric focusing, SDS-PAGE), chromatographic techniques (HPLC, UHPLC, nanoHPLC, nanoUHPLC), and mass spectrometry (LC-MS/MS) with label-based and label-free approaches.
- Chemometric tools and bioinformatics analysis: processing and interpretation of mass spectrometry data using dedicated software, with a particular focus on multivariate statistical analysis for assessing the quality and significance of chemical information (*J. Agric. Food Chem.* 2021, 69, 38, 11512–11522).
- Development of peptide fractionation methods (*Analytical Biochemistry*, 2017, 537:72–77) or new analytical techniques (see patent for 2-PE) for quantitative protein analysis.

Participation and Collaboration in Scientific Research Projects

- 2025 — PI of the UniVR unit for the doctoral project: "Proteomics and Lipidomics to shed light on the Mechanism of Action of Percutaneous Electrolysis (PE) and Neuromodulation (PENS)". PhD student: Roberto Corino (Real Madrid University). [SSD CHEM-01/A]
- 2024 — Ecosystem of Innovation Project ECS00000043 "Interconnected Nord-Est Innovation Ecosystem (iNEST)": identification of biomarkers of cardiometabolic risk and oxidative stress in adolescents. [SSD CHEM-01/A]
- 2023 — PNRR NextGenerationEU — "A multiscale integrated approach to the study of the nervous system in health and disease" (MNESYS). [SSD CHEM-01/A]
- 2022 — PNRR NextGenerationEU — "Health Extended Alliance for Innovative Therapies, Advanced Lab-research, and Integrated Approaches of Precision Medicine" (HEAL ITALIA). [SSD CHEM-01/A]
- 2021 — "Analysis of histone modifications in progressively de-differentiated cancer stem cells derived from PDAC cell lines". European Consortium EPIC-XS (PI: Prof. I. Dando). [SSD CHEM-01/A]
- 2017 — "Medicated bioactive spray for skin healing", Joint Project 2017 (PI: Prof. D. Cecconi).
- 2015 — "From secretome knowledge to personalized therapy in pancreatic cancer patients with mutant p53", Joint Project 2015 (PI: Prof. M. Donadelli).
- 2014 — "Nuovo piano industriale del lattiero-caseario Veneto", POR-FESR 2014-2020 (PI of unit: Prof. D. Cecconi). [SSD CHEM-01/A]
- 2014 — "Production of meat-based functional foods enriched with micro- and nano-encapsulated omega-3 fatty acids", Joint Project 2014 (PI: Prof. G. Zoccatelli).
- 2013 — "Shotgun proteomics analysis of secretome and lysate of CSC by iTRAQ approach", EPC Fellowship winner (PI: Prof. E. Costello). [SSD CHEM-01/A]

Professional Societies

- Supporting Member — Analytical Chemistry Division, Mass Spectrometry Division and Bioanalytical Chemistry Division of the Italian Chemical Society (SCI).

Editorial Board of Scientific Journals

- Associate Editor — "Reviews in Analytical Chemistry" (IF: 3.8, Scopus), since 2020.

Referee Activity for Scientific Journals

- Reviews in Analytical Chemistry, • Analytical and Bioanalytical Chemistry, • Frontiers in Chemistry, section Analytical Chemistry

Awards

- Fellowship to attend the XXVII National Congress of the Italian Chemical Society (SCI), September 2021.
- Best Oral Presentation — "SWATH-MS based label-free quantitative analysis to investigate the proteomic effects of lactic acid bacteria on keratinocytes". MASSA 2020, Virtual Pre-Congress, Division of Mass Spectrometry (DSM) of SCI.

Contribution to the Development of Patents

The results obtained from the research activity (directed by Prof. D. Cecconi) provided the scientific prerequisites for the following patents:

- "Elettroforesi 2D-P Dimensional-Seconda Dimensione" — patent of Elektrofor s.a.s. (Rovigo).
- "Lactobacillus kefir SGL13" — patent n° WO 2019/220329A1 — Sintal Dietetics s.r.l., Castelnuovo Vomano (Teramo).
- "Lactobacillus salivarius SGL03" — patent n° WO 2018/100035A1 — Sintal Dietetics s.r.l., Castelnuovo Vomano (Teramo).

Conference Activities

Scientific and Organizing Committees

- Scientific and Organizing Committee — "International Proteomics and Metabolomic Conference: MS-based omics in ageing and age-related disease", DSM-SCI, 2–3 October 2023, Novara.
- Organizing Committee — "2° MS-based untargeted proteomics and metabolomics: cancer metabolism, therapeutic targets and biomarkers", DSM-SCI, 1–2 July 2019, Verona.

Scientific Production

Author h-index: 22

Scientific Publications in Indexed Journals with Impact Factor:

- 1) A Portable D-Shaped POF-SPR Sensor Integrated with NanoMIPs for High-Affinity Detection of the SARS-CoV-2 RBD Protein**
Marinangeli A, [Brandi J*](#), Maniglio D, Bossi AM.. *Applied Sciences*. 2026; 16(4):1853. (*co-first author)
- 2) 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 Communication and Signaling*, 2025, 23 (1):19.
- 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* 16, 766 (2025).
- 4) CD103⁺CD8⁺ T cells promote neurotoxic inflammation in Alzheimer's disease via granzyme K-PAR-1 signaling.**
Terrabuio 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](#), Varelzakis N, Mainieri F, Calore A, Angelini G, Bonetti B, Constantin G. *Nat Commun*. 2025 Sep 24;16(1):8372.
- 5) 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. *International Journal of Molecular Sciences*. 2025; 26(17):8247.
- 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 *Journal of Hazardous Materials*, 2025, 485:136780.
- 7) Analysis of veterinary drugs and pesticides in food using liquid chromatography-mass spectrometry.**
[Brandi J](#), Siragusa G, Robotti E, Marengo E, Cecconi D. *TrAC - Trends in Analytical Chemistry*, 2024, 179:117888.

- 8) **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. *International Journal of Molecular Sciences*, 2024, 25 (12):6790.
- 9) **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, Fabbri 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 Jan 26;25(3):1509.
- 10) **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 Dec 21;10(6)
- 11) **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 Aug 16;1678:463352.
- 12) **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.
- 13) **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.
- 14) **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.
- 15) **Integrated lipidomics and proteomics reveal cardioplipin alterations, upregulation of HADHA and long chain fatty acids in pancreatic cancer stem cells.**
Di Carlo C, Sousa B.C., Manfredi M, [Brandi J.](#), Dalla Pozza E, Marengo E, Palmieri M, Dando I, Wakelam M.J.O., Lopez-Clavijo A.F., Cecconi D. *Sci Rep* 2021,11;13297.
- 16) **Exploring the wound healing, anti-inflammatory, anti-pathogenic and proteomic effects of lactic acid bacteria on keratinocytes.**
[Brandi J.](#), Cheri S, Manfredi M, Di Carlo C, Vita Vanella V, Federici F, Bombiero E, Bazaj A, Rizzi E, Manna L, Cornaglia G, Marini U, Valenti M.T., Marengo E, Cecconi D. *Sci Rep* 2020, 10:11572.
- 17) **Progressively De-Differentiated Pancreatic Cancer Cells Shift from Glycolysis to Oxidative Metabolism and Gain a Quiescent Stem State.**
Ambrosini G, Dalla Pozza E, Fanelli G, Di Carlo C, Vettori A, Cannino G, Cavallini C, Carmona-Carmona C.A, [Brandi J.](#), Rinalducci S, Scupoli M.T., Rasola A, Cecconi D, Palmieri M, Dando I. *Cells* 2020, 9; 1572.
- 18) **The Mutant p53-Driven Secretome Has Oncogenic Functions in Pancreatic Ductal Adenocarcinoma Cells.**
Butera G, [Brandi J.](#), Cavallini C, Scarpa A, Lawlor R.T, Scupoli M.T., Marengo E, Cecconi D, Manfredi M, Donadelli M. *Biomolecules* 2020, Jun 9;10(6): E884.
- 19) **Proteomic and Ultrastructural Analysis of Cellulite-New Findings on an Old Topic.** Conti G, Zingaretti N, Amuso D, Dai Prè E, [Brandi J.](#), Cecconi D, Manfredi M, Marengo E, Boschi F, Riccio M, Amore R, Iorio EL, Busato A, De Francesco F, Riccio V, Parodi PC, Vaienti L, Sbarbati A. *Int J Mol Sci* 2020, Mar 18;21(6):2077.
- 20) **Runx2 stimulates neoangiogenesis through the Runt domain in melanoma.**
Cecconi D, [Brandi J.*](#), Manfredi M, Serena M, Carbonare LD, Deiana M, Cheri S, Parolini F, Gandini A, Marchetto G, Innamorati G, Avanzi F, Antoniazzi F, Marengo E, Tiso N, Mottes M, Zipeto D, Valenti M.T. *Sci Rep* 2019, May 29;9(1):8052. (*co-first author)
- 21) **Investigating the Proteomic Profile of HT-29 Colon Cancer Cells After *Lactobacillus kefir* SGL 13 Exposure Using the SWATH Method.**
[Brandi J.](#), Di Carlo C, Manfredi M, Federici F, Bazaj A, Rizzi E, Cornaglia G, Manna L, Marengo E, Cecconi D. *J Am Soc Mass Spectrom* 2019, Sep;30(9):1690-1699.
- 22) **The Anti-Apoptotic Effect of ASC-Exosomes in an In Vitro ALS Model and Their Proteomic Analysis.**
Bonafede R, [Brandi J.*](#), Manfredi M, Scambi I, Schiaffino L, Merigo F, Turano E, Bonetti B, Marengo E, Cecconi D, Mariotti R. *Cells* 2019, Sep 14;8(9). (*co-first author)
- 23) **Integrated serum proteins and fatty acids analysis for putative biomarker discovery in inflammatory bowel disease**
Manfredi M, Conte E, Barberis E, Buzzi A, Robotti E, Caneparo V, Cecconi D, [Brandi J.](#), Vanni E, Finocchiaro M, Astegiano M, Gariglio M, Marengo E, DeAndrea M. *J Proteomics* 2019, Mar 20;195:138-149.
- 24) **Mining cancer biology through bioinformatic analysis of proteomic data.**

Manfredi M, Brandi J, Di Carlo C, Vita Vanella V, Barberis E, Marengo E, Patrone M, Cecconi D. *Expert Rev Proteomics* 2019, Sep;16(9):733-747.

- 25) **Extracellular Vesicles Mediate Mesenchymal Stromal Cell-Dependent Regulation of B Cell PI3K-AKT Signaling Pathway and Actin Cytoskeleton.**
Adamo A, Brandi J, Caligola S, Delfino P, Bazzoni R, Carusone R, Cecconi D, Giugno R, Manfredi M, Robotti E, Marengo E, Bassi G, Takam Kanga P, Dal Collo G, Gatti A, Mercuri A, Arigoni M, Olivero M, Calogero R A, Krampera M. *Frontiers in Immunology* 2019, 10:446.
- 26) **Pancreatic cancer stem cells: Perspectives on potential therapeutic approaches of pancreatic ductal adenocarcinoma.**
Di Carlo C, Brandi J*, Cecconi D. *World J Stem Cells* 2018, 10(11): 172-182. (*corresponding author)
- 27) **Myristic acid induces proteomic and secretomic changes associated with steatosis, cytoskeleton remodeling, endoplasmic reticulum stress, protein turnover and exosome release in HepG2 cells.**
Speziali G, Liesinger L, Gindlhuber J, Leopold C, Pucher B, Brandi J, Castagna A, Tomin T, Krenn P, Thallinger GG, Olivieri O, Martinelli N, Kratky D, Schittmayer M, Birner-Gruenberger R, Cecconi D. *J Proteomics* 2018, 181:118-130.
- 28) **Proteomic approaches to decipher cancer cell secretome.**
Brandi J, Manfredi M, Speziali G, Gosetti F, Marengo E, Cecconi D. *Semin Cell Dev Biol* 2018, Jun;78:93-101.
- 29) **New Insights into the Runt Domain of RUNX2 in Melanoma Cell Proliferation and Migration.**
Deiana M, Dalle Carbonare L, Serena M, Cheri S, Parolini, F, Gandini A, Marchetto G, Innamorati G, Manfredi M, Marengo E, Brandi J, Cecconi D, Mori A, Mina M M, Antoniazzi F, Mottes M, Tiso N, Malerba G, Zipeto D, Valenti M.T. *Cells* 2018, Nov, 7(11): 220.
- 30) **Trichostatin A alters cytoskeleton and energy metabolism of pancreatic adenocarcinoma cells: An in depth proteomic study.**
Dalla Pozza E, Manfredi M, Brandi J, Buzzi A, Conte E, Pacchiana R, Cecconi D, Marengo E, Donadelli M. *J Cell Biochem* 2018, Mar;119(3):2696-2707
- 31) **An integrated approach identifies new oncotargets in melanoma.**
Cecconi D, Carbonare LD, Mori A, Cheri S, Deiana M, Brandi J, Degaetano V, Masiero V, Innamorati G, Mottes M, Malerba G, Valenti M.T. *Oncotarget* 2018 Feb; 9(14):11489-11502
- 32) **Purification and characterization of ribosomal proteins L27 and L30 having antimicrobial activity produced by the Lactobacillus salivarius SGL03.**
Pidutti P, Federici F, Brandi J, Manna L, Rizzi E, Marini U, Cecconi D. *J Appl Microbiol* 2018, Feb;124(2):398-407
- 33) **IEF peptide fractionation method combined to shotgun proteomics enhances the exploration of rice milk proteome.**
Manfredi M, Brandi J*, Conte E, Pidutti P, Gosetti F, Robotti E, Marengo E, Cecconi D. *Anal Biochem* 2017, Nov; 537:72-77. (*co-first author)
- 34) **Proteomic analysis of pancreatic cancer stem cells: Functional role of fatty acid synthesis and mevalonate pathways.**
Brandi J, Dando I, Pozza ED, Biondani G, Jenkins R, Elliott V, Park K, Fanelli G, Zolla L, Costello E, Scarpa A, Cecconi D, Palmieri M. *J Proteomics* 2017, Jan; 150: 310-322.
- 35) **The antioxidant uncoupling protein 2 stimulates hnRNPA2/B1, GLUT1 and PKM2 expression and sensitizes pancreas cancer cells to glycolysis inhibition.**
Brandi J, Cecconi D, Cordani M, Torrens-Masc M, Pacchiana R, Pozza ED, Butera G, Manfredi M, Marengo E, Oliver J, Roca P, Dando I, Donadelli M. *Free Radical Biology and Medicine* 2016, Dec; 101: 305–316.
- 36) **Secretome protein signature of human pancreatic cancer stem-like cells.**
Brandi J, Dalla Pozza E, Dando I, Biondani G, Robotti E, Jenkins R, Elliott V, Park K, Marengo E, Costello E, Scarpa A, Palmieri M, Cecconi D. *J Proteomics*, Mar; 136:1-12.
- 37) **Pancreatic ductal adenocarcinoma cell lines display a plastic, ability to bi-directionally convert into cancer stem cells.**
Dalla Pozza E, Dando I, Biondani G, Brandi J, Costanzo C, Zoratti E, Fassan M, Boschi F, Melisi D, Cecconi D, Scupoli MT, Scarpa A, Palmieri M. *Int J Oncol* 2015, Mar;46(3):1099-108
- 38) **Tissue proteomics of splenic marginal zone lymphoma.**
Polati R, Brandi J, Dalai I, Zamò A, Cecconi D. *Electrophoresis* 2015, Apr; 36 (14): 1612-21.
- 39) **Comparative proteomic and phosphoproteomic profiling of pancreatic adenocarcinoma cells treated with CB1 or CB2 agonists.**
Brandi J, Dando I, Palmieri M, Donadelli M, Cecconi D. *Electrophoresis* 2013, May;34(9-10):1359-68.

Book Chapters:

- Cecconi D, Di Carlo C, Brandi J*. Protein Secretion Prediction Tools and Extracellular Vesicles Databases. *Methods Mol Biol* 2021; 2361:213–227. (*corresponding author)

Contributions and Abstracts in Conference Proceedings (Scopus and/or WoS indexed):

- Adamo A, Brandi J, ...Krampera M. Molecular characterization of MSC-derived extracellular vesicles. *CYTOTHERAPY* 2018; 20(5):S22. ISCT Annual Meeting, Montreal, 2–5 May 2018.
- Manfredi M, Butera G, ...Brandi J, ...Donadelli M. Proteomic Signature of PDAC Cells with Mutant p53. *FASEB J* 2018; 32. ASBMB Annual Meeting, San Diego, 21–25 April 2018.
- Adamo A, Brandi J, ...Krampera M. Characterization of MSC-derived EVs and immunosuppressive properties towards B cells. *HAEMATOLOGICA* 2018; 103:S65–S66.
- Dando I, ...Brandi J, ...Palmieri M. Pancreatic cancer stem cells characterization and secretome analysis. *FEBS J* 2014; 281:780. *FEBS EMBO* 2014, Paris, 30 Aug–4 Sep 2014.

Conferences — Oral Presentations

- "Integration of NanoMIPs on D-Shaped POF-SPR Platform for High-Affinity SARS-CoV-2 RBD Sensing". *Giornate di Bioanalitica* 2026, SCI, 13–14 April 2026, Torino.
- "nanoUHPLC-HRMS with a Q-LIT-Orbitrap Tribrid MS for characterizing astaxanthin-loaded nanoparticles in ocular applications". *EUROANALYSIS* 2025, XXII European Conference on Analytical Chemistry, 31 Aug–4 Sep 2025, Barcelona.
- "Evaluating Astaxanthin-Loaded Nanoparticles as Drug Delivery Systems for Ocular Diseases: an LC-MS/MS-Based Investigation". *AMYC-BIOMED* 2025, SCI, 23–25 June 2025, Palermo.
- "Optimization of a GeLC-MS/MS approach for analysis of ancient proteins from medieval 'Pietra Ollare' vessels". XXVIII Congress of Italian Chemical Society (SCI), 26–30 August 2024, Milano.
- "Exploring the epi-proteomic landscape of pancreatic cancer stem cells by super SILAC-based mass spectrometry". *International Proteomics and Metabolomic Conference, DSM-SCI*, 2–3 October 2023, Novara.
- "SWATH-MS analysis revealed mutant p53 secreted proteins influence on pancreatic cancer cells". *AMYC-BIOMED* 2021, Virtual Congress, SCI, 3–5 November 2021.
- "Identification of protein biomarkers responsible for meat tenderness in bovine Longissimus dorsi muscle by Kohonen self-organizing maps and multivariate analysis". *SCI* 2021, XXVII National Congress, September 2021.
- "Lactic acid bacteria and skin health: a proteomic study". *AMYC-BIOMED* 2020, Virtual Congress, SCI, 13–14 October 2020.
- "SWATH-MS based label-free quantitative analysis to investigate the proteomic effects of lactic acid bacteria on keratinocytes". *MASSA* 2020, Virtual Pre-Congress, DSM-SCI, September 2020. ★ Best Oral Presentation
- "Isolation and drug sensitivity of cancer stem cells obtained from pancreatic adenocarcinoma cell lines". 25° Annual Conference AICC, 21–23 November 2012, Palermo.

Poster Presentations (selection):

- Brandi J et al. "SWATH-MS based label-free approach for identification of biomarkers of beef tenderness". *Workshop MSOmics* 2022, DSM, 6 December 2022, Bologna.
- Brandi J et al. "Shotgun label-free proteomic analysis of HaCaT human keratinocytes treated with LAB". *ItPA Young Investigators (Virtual) Day*, 30 April 2021.
- Brandi J et al. "Proteomic profile of HT-29 colon cancer cells after *Lactobacillus kefir* SGL13 exposure (SWATH)". 2° MS-based untargeted proteomics and metabolomics, *DSM-AICC*, 1–2 July 2019, Verona.
- Brandi J et al. "Proteomic profiling of extracellular vesicles derived from MSC". *XXII International Mass Spectrometry Conference, DSM*, 26–31 August 2018, Firenze.
- Brandi J et al. "Secretome analysis of pancreatic CSC by iTRAQ — ceruloplasmin as a promising biomarker". *IX Annual Congress EuPA*, 23–28 June 2015, Milano.
- Brandi J et al. "Shotgun proteomic analysis of pancreatic cancer stem cells". *13th HUPO World Congress*, 5–8 October 2014, Madrid.
- Brandi J et al. "Characterization of cancer stem cells derived from PDAC cell lines". *VIII Annual Conference ItPA*, 18–21 June 2013, Padova.

Teaching Activity

Department of Biotechnology, University of Verona

AA 2025-2026, 2024-2025, 2023-2024, 2022-2023:

- Coordinator — "Analytical Chemistry Applied to Food" (SSD CHEM-01/A): 6 CFU theory (48 h) + 2 CFU laboratory (16 h). Bachelor's Professional Degree (L-P02) in "Innovation and Sustainability in Industrial Food Production" (ISPIA).

AA 2022-2023:

- Laboratory module instructor — "Organic Chemistry" (SSD CHEM-05/A), 2 CFU (24 total hours), coordinator: Prof. M. Assfalg — Bachelor's Degree in Biotechnology (L2).
- Laboratory module instructor — "General and Inorganic Chemistry" (SSD CHEM-03/A), 1 CFU (12 total hours), coordinator: Prof. A. Speghini — Bachelor's Degree in Viticulture and Enology Science and Technology (L25).

PhD Lectures and Co-teaching:

- **AA 2025-2026** — "Advanced Biophysical and Proteomic Approaches to Unravel Protein Interactions", PhD Program in Molecular, Industrial and Environmental Biotechnology (22 May 2026).
- **AA 2023-2024** — "Introduction to Mass Spectrometry and Proteomics" (1 CFU, 4 h), PhD Program in Biotechnology (24–25 June 2024).
- **AA 2022-2023** — "Introduction to Mass Spectrometry and Proteomics" (1 CFU, 4 h), PhD Program in Biotechnology (21 and 28 April 2023).
- **AA 2022-2023 to 2018-2019** — "Pharmacoproteomics into Early-Phase Clinical Development" (2 h co-teaching) in the course "Clinical Proteomics", coordinator: Prof. D. Cecconi — Master's Degree in Molecular and Medical Biotechnology (LM9).

Teaching for Advanced Schools:

- "Hands-on: proteomics data pathway enrichment (Cytoscape), protein secretion (SecretomeP, SignalP, Vesiclepedia)". Advanced school on bioinformatics tools for MS-based omic data, DSM-SCI, Verona, 1–2 July 2019.
- "Case studies in proteomics". Advanced school on MS-based proteomics, DSM-SCI, Novara, 25–26 June 2018.

Thesis Co-Advisor:

- Dr. Riccardo Bertola — "Analysis of Proteins Involved in Epigenetic Events in Pancreatic Cancer Stem Cells". Bachelor's in Biotechnology, UniVR (AA 2023/2024).
- Dr. Eleonora Bombiero — "Exploring the proteomic effects of lactic acid bacteria on keratinocytes". Master's in Molecular and Medical Biotechnology, UniVR (AA 2019/2020).
- Dr. Alexei Garbuz — "Proteomic analysis of HT-29 colon cancer cells after Lactobacillus kefir SGL13 exposure". Bachelor's in Biotechnology, UniVR (AA 2018/2019).
- Dr. Francesco Avanzi — "Proteomic analysis of a RUNX2 domain knockout melanoma cell line". Bachelor's in Biotechnology, UniVR (AA 2016/2017).
- Dr. Camilla Rossa — "Proteomic characterization of exosomes derived from murine adipose tissue mesenchymal stem cells". Bachelor's in Biotechnology, UniVR (AA 2016/2017).

Institutional Assignments

University of Verona:

- Member of the Scientific and Technological Department Board of the Department of Biotechnology (representative of researchers).
- Member of the Teaching Committee of the Professional Bachelor's Degree (L-P02) in "Innovation and Sustainability in Industrial Food Production" (ISPIA).
- Member of the Biotechnology Departmental Council.

Verona, 2026

Jessica Brandi

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