



**FIRST CONFERENCE
OF THE ITALIAN
BIOINORGANIC
CHEMISTRY GROUP**

PROGRAMME

SEPTEMBER 7-9, 2026

COMPLESSO DEI SS. MARCELLINO E FESTO

Conference Center of the University of Naples Federico II

NAPLES, ITALY



**Società
Chimica
Italiana**

Gruppo Tematico di
Chimica Bioinorganica



SCIENTIFIC COMMITTEE

Francesco Paolo Fanizzi

Università del Salento

Angelina Lombardi

Università degli Studi di Napoli Federico II

Tiziana Marino

Università della Calabria

Riccardo Pettinari

Università degli Studi di Camerino

Alessandro Pratesi

Università di Pisa

Michele Saviano

Consiglio Nazionale delle Ricerche



ORGANIZING COMMITTEE

Angelina Lombardi (co-chair)

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UNIVERSITÀ DEGLI STUDI DI NAPOLI
FEDERICO II



Tuesday, **September 8th, 2026**

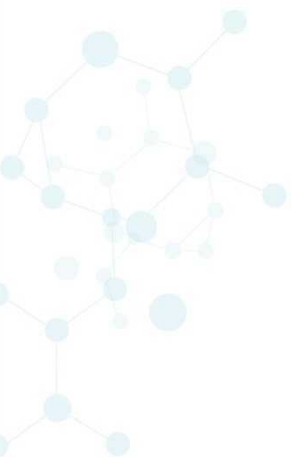
SESSION 4a Metals in Medicine and Diagnostics Chairs: Alessandro Pratesi and Stefania Galdiero	
14:30 – 15:00	[KL04] • Fabio Carniato Dipartimento di Scienze ed Innovazione Tecnologica Università degli Studi del Piemonte Orientale, Italy Novel Mn(II)- and Fe(III)-based probes as alternatives to conventional Gd(III) MRI contrast agents
15:00 – 15:20	[GOC03] • Luigi Messori Università degli Studi di Firenze Metal compounds as prospective antibacterial agents. Case Studies
15:20 – 15:35	[*OC09] • Thomas Scattolin Università degli Studi di Padova Gold(I)–NHC Complexes Bearing Non-Steroidal Anti-Inflammatory Drugs: An Innovative Synthetic Approach and Antitumor Activity
15:35 – 15:50	[*OC10] • Marilena Carbone Università degli Studi di Roma Tor Vergata NAM-Oriented In Silico Dermatokinetic Modeling of TiO₂ and Cu-Phthalocyanine Tattoo Pigments for Risk Assessment
15:50 – 16:00	[OC06] • Simone Braccia Università degli Studi di Napoli Federico II Fe(III) coordination and membrane interaction drive the enhanced antimicrobial activity of a siderophore-peptide conjugate
16:00 – 16:30	Coffee Break and Poster Session

SESSION 4b

Metals in Medicine and Diagnostics

Chairs: Riccardo Pettinari and Maria Pia Donzello

16:30 – 16:45	[*OC11] • Diego Tesauo Università degli Studi di Napoli Federico II Insights into on the behaviour of N-Heterocyclic Carbene (NHC) Gold(I) complexes targeting the Thioredoxin System
16:45 – 17:00	[*OC12] • Lara Massai Università degli Studi di Firenze Metal-Based Anticancer Drugs Targeting Cytochrome c: Molecular Insights and Clinical Perspectives
17:00 – 17:15	[*OC13] • Erika Ferrari Università di Modena e Reggio Emilia Charge Matters: A Sulfonated TACN Chelator Enabling Neutral and Stable Cu(II) Complexes for ⁶⁴Cu radiopharmaceuticals
17:15 – 17:30	[*OC14] • Gina Elena Giacomazzo Università degli Studi di Firenze From Metal Complexes to Clinical Application: Ru(II)- and Os(II)-based Photosensitizers for PDT of Vulvar Intraepithelial Neoplasia
17:30 – 17:40	[OC07] • Erika Stefàno Università del Salento NMR-Based Metabolomic Approach revealed different response of Pancreatic Ductal Adenocarcinoma cells to [Pt(O,O'-acac)(γ-acac)(DMS)] and cisplatin treatment
17:40 – 17:50	[OC08] • Lorenzo Risolo Università del Piemonte Orientale Fluoride Coordination in Metal Complexes: Thermodynamic, Kinetic and Structural Insights for Sensing and Diagnostic Applications
17:50 – 18:00	[OC09] • Giulia Marcolli Politecnico di Milano Enhanced metal ion recognition with bispidine-based fluorinated chemosensors



HORIBA

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PERSONAL
INFORMATIONS

Erika Stefàno

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Gender Female | **Date of birth** 02/05/1992 | **Nazionalità** Italian |

C.F. STFRKE92E42B936S

WORK
EXPERIENCE

February 2024 – July 2026

Postdoctoral fellowship

“Application of nanotechnologies for sustainable growth of the stability of products in the cosmetic and analytical sector” (ANASTASIA)

CUP: B89J23001360005

University of Salento, Department of Science and Technology, Biology and Environment (DISTEBA) (S.P. 6., Lecce-Monteroni, 73100 Lecce)

- Phytochemical profiling of agroindustrial waste extracts and selection of pigments using NMR Spectroscopy and analysis of heavy metals contamination using Inductively coupled plasma atomic emission spectroscopy (ICP-AES).

▪ SSD: **CHIM/07**

March 2022 - January 2024

Postdoctoral fellowship

“Development of Diagnostic Biomarkers for Precision Medicine and Personalized Therapy” (BIO-D)

CUP: B82C20000360005

University of Salento, Department of Science and Technology, Biology and Environment (DISTEBA) (S.P. 6., Lecce-Monteroni, 73100 Lecce)

- Synthesis and characterization of organometallic complexes using NMR Spectroscopy and evaluation of their anticancer effects on immortalized cancer and normal cell lines.
- Study of drug delivery systems based on human red blood cell through the internalisation of platinum-based compounds.

▪ SSD: **CHIM/03**

November 2018 - February 2022

PhD in Biological and Environmental Sciences and Technologies

University of Salento, Department of Science and Technology, Biology and Environment (DISTEBA) (S.P. 6., Lecce-Monteroni, 73100 Lecce)

- *In vitro* studies of the anti-proliferative and anti-metastatic activity of new platinum(II) complexes containing phenantroline on several immortalized cancer cell lines.
- Study of metabolic alteration induced by cisplatin and a new platinum(II) complex in neuroblastoma cells (SH-SY5Y) using NMR Spectroscopy.

▪ SSD: **BIO/09**

EDUCATION AND TRAINING

- 2015-2018 **Master's degree in Medical Biotechnology and Nanobiotechnology (LM-9)** (Biomedical Curricula),
110/110 cum laude
University of Salento - Biological and Environmental Sciences and Technologies
- Internship** at the Analysis Laboratory of the Francesco Ferrari Civil Hospital "F. Ferrari Hospital",
Viale Francesco Ferrari, 73042, Casarano – LE (July 2017- August 2017).
- Internship** at the Cellular Pathology Laboratory, Department of Biological and Environmental
Sciences and Technologies, S.P. 6., Lecce-Monteroni, 73100 Lecce (September 2017- March
2018).
- Thesis title:** "CCL20 promotes migration and invasion in primary cultures of human breast cancer cells"
- 2011-2015 **Bachelor's Degree in Biotechnology** (Medical-Pharmaceutical Curriculum),
98/110
University of Pavia - Mathematics, Physics and Natural Sciences
- Internship** at the Histology and Embryology Laboratory, Department of Public Health,
Experimental and Forensic Medicine, Via Forlanini, 12, 27100 Pavia (May 2014- March
2015).
- Thesis title:** "Electron microscopy: ultrastructural analysis of frozen human seminal fluid using
two different methods"
- 2006-2011 **High School Diploma in Social, Psycho-Pedagogical Studies**
Liceo "Rita Levi Montalcini" Casarano - LE

SCIENTIFIC AND
TECHNICAL SKILLS

- Expertise in the maintenance and cultivation of several immortalized cell lines (BxPC-3, Caco-2, Caki-1, HeLa, Hep-G2, HK-2, HLE, HLF, MCF-7, MG-63, MIA PaCa-2, PANC-1, Raji, SH-SY5Y, SKOV-3, YAPC, ZL-24, ZL-55).;
- Application of physiological techniques for the study of cellular responses to treatment with metal-based drugs or plant extracts: optical and fluorescence microscopy, cell vitality assays, clonogenic assays, migration/invasion assays (2D and 3D), flow cytometry analysis, ROS detection assay, protein assays, gene and protein expression studies.
- Use of NMR Spectroscopy for the analysis of complex biological matrices;
- Use of NMR Spectroscopy for metallo-drugs characterization;
- Use of ICP-AES for element analysis;
- Knowledge of Office and statistical analysis software (GraphPad).

CONFERENCES AND
SEMINARS

- 20 June – 02 July 2025 Bioinorganic Chemistry Congress (GICB), Caserta (Oral Presentation)
- 05-06 June 2025 2nd Italian Pancreatic Cancer Symposium IPCC, Lecce (Poster Presentation)
- 19-20 Dicembrer 2024 Chimica Sotto l'Albero 2024 - Innovation for a Green, Healthy, and Digital World, Bari (Oral Presentation)
- 26-30 August 2024 XXVIII National Congress of Inorganic Chemistry, Milan (Poster Presentation)

- 11-15 September 2023 XLIX National Congress of Inorganic Chemistry, Perugia (Poster Presentation)
- 15-16 April 2021 XX Workshop on Pharmacobiometallic - Chemistry of Metal Ions in Biological Systems (C.I.R.C.M.S.B.) (Oral Presentation)
- 20-21 February 2020 XIX Workshop on Pharmacobiometallic - Chemistry of Metal Ions in Biological Systems (C.I.R.C.M.S.B.), Ancona (Presentazione Poster)

PUBLICATIONS

1. Stefàno E, De Castro F, Girelli CR, Mele G, Rovito G, Benedetti M, Muscella A, Marsigliante S, Fanizzi FP. Differential Metabolic Reprogramming Induced by [Pt(O,O'-acac)(γ-acac)(DMS)] and Cisplatin in Pancreatic Ductal Adenocarcinoma Cells: a ¹H NMR study. *Journal of Biological Inorganic Chemistry* (Submitted).
2. Rovito G, Stefàno E, Ali A, Migoni D, De Castro F, Muscella A, Fanizzi FP, Benedetti M, Marsigliante S. Evaluation of the cytotoxic and antimetastatic activity induced by [Pt(1-hexyl-1H-imidazole)(η¹-C₂H₄OEt)(phen)]Cl in pancreatic ductal adenocarcinoma cells. *International Journal of Molecular Sciences* (Under Review).
3. Bisconti E, Barozzi F, Stefàno E, Serra I, Vari F, Vergine G, Damato M, Placi R, Fanizzi FP, Lofrumento DD, Di Sansebastiano GP, Baldassarre F, Vergara D, Giudetti AM, Ciccarella G. An Aqueous Extract of Beta vulgaris subsp. Vulgaris Beetroot Group Reduces Lipid Accumulation in Human Keratinocyte Cells. *International Journal of Molecular Sciences*, **2026**, 27(11), 4816. Doi: 10.3390/ijms27114816.
4. Stefàno E, De Castro F, Ali A, Benedetti M, Fanizzi FP. The Role of Metallodrugs in Enhancing Neuroendocrine Neoplasm Therapies: The Promising Anticancer Potential of Ruthenium-Based Complexes. *Molecules*, **2025**, 30(18):3828. Doi: 10.3390/molecules30183828.
5. Ali A, Rovito G, Stefàno E, De Castro F, Ciccarella G, Migoni D, Panzarini E, Muscella A, Marsigliante S, Benedetti M, Fanizzi FP. Synthesis, structural characterization, and cytotoxic evaluation of monofunctional cis-[Pt(NH₃)₂(N7-guanosine/2'-deoxyguanosine)X] (X = Cl, Br, I) complexes with anticancer potential. *Dalton Trans.* **2025**, 54(21): 8612-8624. Doi: 10.1039/d5dt00616c.
6. Stefàno E, Rovito G, Cossa LG, De Castro F, Vergaro V, Ali A, My G, Migoni D, Muscella A, Marsigliante S, Benedetti M, Fanizzi FP. Novel Pt(II) Complexes with Anticancer Activity against Pancreatic Ductal Adenocarcinoma Cells. *Bioinorganic Chemistry and Applications*, **2024**, 2024: 5588491. Doi: 10.1155/bca/5588491.
7. Muscella A, Cossa LG, Stefano E, Rovito G, Benedetti M, Fanizzi FP, Marsigliante S. Different Cytotoxic Effects of Cisplatin on Pancreatic Ductal Adenocarcinoma Cell Lines. *International Journal of Molecular Sciences*, **2024**, 25(24): 13662. Doi: 10.3390/ijms252413662.
8. Stefàno E, De Castro F, Ciccarese A, Muscella A, Marsigliante S, Benedetti M, Fanizzi FP. An Overview of Altered Pathways Associated with Sensitivity to Platinum-Based Chemotherapy in Neuroendocrine Tumors: Strengths and Prospects. *International Journal of Molecular Sciences*, **2024**, 25(16): 8568. Doi: 10.3390/ijms25168568.
9. Ali A, Stefàno E, De Castro F, Ciccarella G, Rovito G, Marsigliante S, Muscella A, Benedetti M, Fanizzi FP. Synthesis, Characterization, and Cytotoxicity Evaluation of Novel Water-Soluble Cationic Platinum(II) Organometallic Complexes with Phenanthroline and Imidazolic Ligands. *Chemistry - A European Journal*. **2024**, 30(38): e202401064. Doi: 10.1002/chem.202401064.
10. De Castro F, Stefàno E, Fanizzi FP, Di Corato R, Abdalla P, Luchetti F, Nasoni MG, Rinaldi R, Magnani M, Benedetti M, Antonelli A. Compatibility of Nucleobases Containing Pt(II) Complexes with Red Blood Cells for Possible Drug Delivery Applications. *Molecules*. **2023**, 28(19): 6760. Doi: 10.3390/molecules28196760.
11. Stefàno E, Cossa LG, De Castro F, De Luca E, Vergaro V, My G, Rovito G, Migoni D, Muscella A, Marsigliante S, Benedetti M, Fanizzi FP. Evaluation of the Antitumor Effects of Platinum-

- Based $[Pt(\eta^1-C_2H_4-OR)(DMSO)(phen)]^+$ (R = Me, Et) Cationic Organometallic Complexes on Chemoresistant Pancreatic Cancer Cell Lines. *Bioinorganic Chemistry and Applications*. **2023**, 2023(2):1-14. Doi: 10.1155/2023/5564624.
12. De Castro F, Stefàno E, De Luca E, Benedetti M, Fanizzi FP. Platinum-Nucleos(t)ide Compounds as Possible Antimetabolites for Antitumor/Antiviral Therapy: Properties and Perspectives. *Pharmaceutics*. **2023**, 15(3):941.
 13. Bellucci S, Fracchiolla G, Pannunzio A, Caponio A, Donghia D, Corbo F, Capobianco L, Muscella A, Manno DE, Stefàno E, Marsigliante S, Trapani A. Dopamine and Antioxidant Grape Seed Extract loaded chitosan nanoparticles: A preliminary in vitro characterization. *Nano and Medical Materials*. **2023**, 3: 40. Doi: 10.59400/nmm.v3i1.40.
 14. Stefàno E, De Castro F, De Luca E, Muscella A, Marsigliante S, Benedetti M, Fanizzi FP. Synthesis and comparative evaluation of the cytotoxic activity of cationic organometallic complexes of the type $[Pt(\eta^1-CH_2-CH_2-OR)(DMSO)(phen)]^+$ (R = Me, Et, Pr, Bu). *Inorganica Chimica Acta*. **2022**, 546: 121321. Doi: 10.1016/j.ica.2022.121321.
 15. Trapani A, Corbo F, Stefàno E, Capobianco L, Muscella A, Marsigliante S, Cricenti A, Luce M, Becerril D, Bellucci S. Oxidized Alginate Dopamine Conjugate: A Study to Gain Insight into Cell/Particle Interactions. *J Funct Biomater*. **2022**, 13(4):201. Doi: 10.3390/jfb13040201.
 16. De Castro F, Stefàno E, De Luca E, Muscella A, Marsigliante S, Benedetti M, Fanizzi FP. A NMR-Based Metabolomic Approach to Investigate the Antitumor Effects of the Novel $[Pt(\eta^1-C_2H_4OMe)(DMSO)(phen)]^+$ (phen = 1,10-Phenanthroline) Compound on Neuroblastoma Cancer Cells. *Bioinorg Chem Appl*. **2022**, 2022:8932137. Doi: 10.1155/2022/8932137.
 17. Stefàno E, Muscella A, Benedetti M, De Castro F, Fanizzi FP, Marsigliante S. Antitumor and antimigration effects of a new Pt compound on neuroblastoma cells. *Biochem Pharmacol*. **2022**, 202:115124. Doi: 10.1016/j.bcp.2022.115124.
 18. Muscella A, Stefàno E, Calabriso N, De Pascali SA, Fanizzi FP, Marsigliante S. Role of epidermal growth factor receptor signaling in a Pt(II)-resistant human breast cancer cell line. *Biochem Pharmacol*. **2021**, 192:114702. Doi: 10.1016/j.bcp.2021.114702.
 19. Trapani A, Corbo F, Agrimi G, Ditaranto N, Cioffi N, Perna F, Quivelli A, Stefàno E, Lunetti P, Muscella A, Marsigliante S, Cricenti A, Luce M, Mormile C, Cataldo A, Bellucci S. Oxidized Alginate Dopamine Conjugate: In Vitro Characterization for Nose-to-Brain Delivery Application. *Materials (Basel)*. **2021**, 14(13):3495. Doi: 10.3390/ma14133495.
 20. Muscella A, Stefàno E, De Bellis L, Nutricati E, Negro C, Marsigliante S. Antitumor and antimigration effects of Salvia clandestina L. extract on osteosarcoma cells. *Ann N Y Acad Sci*. **2021**, 1500(1):34- 47. Doi: 10.1111/nyas.14601.
 21. De Castro F, Stefàno E, Migoni D, Iaconisi GN, Muscella A, Marsigliante S, Benedetti M, Fanizzi FP. Synthesis and Evaluation of the Cytotoxic Activity of Water-Soluble Cationic Organometallic Complexes of the Type $[Pt(\eta^1-C_2H_4OMe)(L)(Phen)]^+$ (L = NH₃, DMSO; Phen = 1,10- Phenanthroline). *Pharmaceutics*. **2021**, 13(5):642. Doi: 10.3390/pharmaceutics13050642.
 22. Muscella A, Stefàno E, Marsigliante S. The effects of training on hormonal concentrations and physical performance of football referees. *Physiol Rep*. **2021**, 9(8):e14740. Doi: 10.14814/phy2.14740.
 23. Muscella A, Stefàno E, Lunetti P, Capobianco L, Marsigliante S. The Regulation of Fat Metabolism During Aerobic Exercise. *Biomolecules*. **2020**, 10(12):1699. Doi: 10.3390/biom10121699.
 24. Muscella A, Stefàno E, Marsigliante S. The effects of exercise training on lipid metabolism and coronary heart disease. *Am J Physiol Heart Circ Physiol*. **2020**, 319(1):H76-H88. Doi: 10.1152/ajpheart.00708.2019.
 25. Muscella A, Stefàno E, Di Maglie A, Marsigliante S. Referees' physical performance over a soccer season. *Sport Sciences for Health*, **2020**, 16(13). Doi: 10.1007/s11332-020-00655-1.
 26. Muscella A, Vetrugno C, Spedicato M, Stefàno E, Marsigliante S. The effects of training on hormonal concentrations in young soccer players. *J Cell Physiol*. **2019**, 234(11):20685-20693. Doi: 10.1002/jcp.28673.

27. Stefàno E, Marsigliante S, Vetrugno C, Muscella A. Is mitochondrial DNA profiling predictive for athletic performance? *Mitochondrion*. **2019**, 47:125-138. Doi: 10.1016/j.mito.2019.06.004.

I give consent to process my data with the purpose of the recruitment process, in accordance to the Regulation of the European Parliament 679/2016, regarding the protection of natural persons and free movement of such data.

Giulia Marcolli

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Fiscal code: MRCGLI99S43A940H

Education

- 2025-Present **PhD in Industrial Chemistry and Chemical Engineering (XLI cycle)**, Politecnico di Milano - Synthesis of new bispidine-based ligands for chemosensing applications
- 2022-2024 **Master of Science in Chemical Engineering**, Politecnico di Milano
- 2018-2022 **Bachelor of Science in Chemical Engineering**, Politecnico di Milano

Work experience

- 2025-Present **PhD Research Project**, Politecnico di Milano
- June-July 2025 **INSTM Scholarship Holder**, Politecnico di Milano - Synthesis of fluorinated nitrogen-containing molecules for metal cations and their NMR study
- 2024-2025 **Research Fellowship**, Politecnico di Milano - Extraction and valorisation of high value-added materials from food by-products/scrap PNRR-PE10-ON FOODS MODELS FOR SUSTAINABLE FOODS-PE000003 SPOKE 2-CUP
D43C22003060001_2024_ASSEGNI_DCMC_11
- May 2024 **CoCoCo Autonomous Collaboration Assignment**, Politecnico di Milano - Synthesis and characterisation of new guanidino-bispidin derivatives

Teaching and Supervising

Laboratory assistant

Supported the organization and delivery of chemistry laboratory sessions as part of the Pharmaceutical Chemistry Technology and Organic Chemistry courses from 2024. Assisted in the preparation of materials and guided students during experimental activities.

Co-supervision and Mentoring

Formally and informally training and coordination activities in the chemistry laboratories for Master's thesis students in Chemical Engineering, carried out from the period of my Master's thesis through to my PhD including investigative and practical support.

Skills

Expertise in the organic synthesis of small molecules, processing and extraction of antioxidants from food waste and synthesis of metal-organic nanoparticles.

Chemical-analytical laboratory instrumentation: ^1H , ^{19}F , ^{13}C NMR – Bruker, Topspin interface, TLC and column chromatography and Isolera (Biotage), Biotage® Initiator+ microwave, Rigaku-Synergy single-crystal diffractometer

Softwares: ChemDraw, MestreNova and ACDLabs, Reaxys and SciFinder, Office

Language: English (B1)

Conferences and seminars

Oral communications: "Synthesis of bispidine-based fluorinated chemosensors for selective metal ion recognition" (Merck Young Chemists Symposium 2025 – 1-3 December 2025, Rimini, Italy); "Harnessing biomasses from agri-food waste" (Merck Young Chemists' Symposium 2024 – 13-15 November 2024, Rimini, Italy); "Synthesis and characterization of guanidino bispidinone derivatives as promising antimicrobial lead compounds" (1st edition OSCMLab Day – 21 June 2024, Milan, Italy).

Flash communications: "Enhanced metal ion recognition with bispidine-based fluorinated chemosensors" (SCI-DCT 2026 – 16-19 June 2026, Rome, Italy); "Synthesis of bispidine-based fluorinated chemosensors for selective analytes recognition" (EuChems2026 – 12-16 July 2026, Antwerp, Belgium).

Posters: "Innovative hydrophilic ligands for the selective recovery of Am(III) from spent nuclear fuel" (EuChems2026 – 12-16 July 2026, Antwerp, Belgium); "Character-Bio: Comprehensive characterization of bioactive compounds and/or macromolecules from food by-products and wastes" (OnFoods – Spoke2 Annual – 25-26 June 2024, Piacenza, Italy); Poster: "Extra-Bio: Extraction of bioactive compounds and/or macromolecules from food by-products and wastes" (OnFoods – Spoke2 Annual – 25-26 June 2024, Piacenza, Italy).

Project dissemination activities OnFoods (PNRR-PE10-ON FOODS MODELLI PER UNA ALIMENTAZIONE SOSTENIBILE-PE00000003 SPOKE 2-CUP D43C22003060001) with workshops for primary school children: "Cibo e imballaggi: quanto è davvero "spreco?" (Festival Internazionale dell'Ingegneria – 14 September 2024, Milan, Italy).

Organization of international and seminars

Member of the conference organising committee: EuroCD 2025 – 8th European Cyclodextrin Conference 9-12 September 2025, Milan, Italy <https://indico.chem.polimi.it/event/98/>

Appealing to groups/associations

Member of the Italian Chemical Society (SCI) – Division of Chemistry for Technology, membership number 29211 (from January 2025), INSTM member from July 2024, member of Gli Harmonici Choir ("Dire Fare Musicare" Association).

Luigi Messori

MSSLGU58C25D612D

SHORT CV

Luigi Messori, PhD, is a full professor of general and inorganic chemistry in the Department of Chemistry at the University of Florence. His main research interests lie in the field of bioinorganic chemistry. Early in his career, he studied the behaviour of metalloproteins in solution using paramagnetic nuclear magnetic resonance (NMR) spectroscopy, within the research group of Ivano Bertini. He focused on metal carrier/storage proteins (e.g. transferrins and metallothioneins), as well as selected cobalt-substituted zinc enzymes (e.g. carbonic anhydrases and carboxypeptidases). Between 1989 and 1990, he spent approximately one year working in the biophysical chemistry laboratory at the University of Frankfurt under the guidance of Prof. H. Rüterjans, learning 2D NMR techniques. He then turned his attention to the role of metal ions in medicine and medicinal inorganic chemistry. In particular, he has focused on a few experimental antitumour metal complexes (mainly ruthenium and gold complexes) and their interactions with potential protein targets mainly analysed by mass spectrometry. He has conducted mechanistic studies on metal-based anticancer drugs, taking advantage of the implementation of omics techniques. More recently, he has expanded his research to include antimicrobial metal compounds. He has delivered several lectures on these topics in Italy and abroad. He is the author of over 380 papers published in international scientific journals.



Thomas Scattolin

Curriculum Vitae

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C.F. SCTTMS90E30B563O

Thomas Scattolin was born in Camposampiero (Padova, Italy) on 30/05/1990.

He obtained his high school diploma as “Industrial Chemist” at the Enrico Fermi Institute of Treviso in 2009 (marks: 100/100 with honours).

He received his bachelor and master’s degrees in chemistry, “*summa cum laude*” in both cases, from the Ca’ Foscari University of Venice in 2012 and 2014, respectively.

His theses focused on the synthesis, structural characterization and reactivity of palladium allyl and palladacyclopentadienyl complexes bearing thioquinolines or phosphoquinolines ligands toward halogens or interhalogens (oxidative addition-reductive elimination) and isocyanides (insertion across the Pd-C bond). The reaction mechanism of each reaction was investigated by means of spectroscopic techniques (e.g. NMR and UV-VIS spectroscopies) and DFT calculations.

From 15/04/2015 to 18/06/2015 he was a teacher of Natural Sciences, Physics and Chemistry at the Leonardo Da Vinci high school of Belluno (Italy).

Thomas Scattolin earned his Ph.D. degree in Chemistry under the supervision of Prof. Fabiano Visentin at the University of Trieste in 2019 (inter-university programme with the Ca’ Foscari University of Venice). His final dissertation focused on the synthesis of palladium organometallic compounds bearing *N*-heterocyclic carbenes as promising anticancer agents.

In 2018 he was visiting scientist in the laboratories of Prof. Antonio Togni at the ETH in Zurich, Switzerland. Throughout this period, he developed a straightforward route to allyl palladium complexes stabilized by *N*-trifluoromethyl NHCs which proved to restrain the growth of high grade serous ovarian cancer tumoroids.

From 01/03/2019 to 31/01/2020 he was a postdoctoral researcher at the Ca’ Foscari University of Venice. During this period, he studied more in detail the reactivity of organopalladium compounds

with promising anticancer activity in collaboration with Profs. Flavio Rizzolio and Luigi Messori (University of Florence).

From 01/02/2020 to 28/02/2021 he joined the laboratory of Prof. Steven P. Nolan at the Ghent University (synthesis and catalytic activity of *N*-heterocyclic carbene complexes).

In 2021, he worked as postdoc researcher at CRO Aviano, Italy, within the CaTHENa project (Cancer THERapy by Nanomedicine).

Since 2022 he is assistant professor in Inorganic Chemistry at the University of Padova. His research is primarily focused on the synthesis and reactivity of late transition metal complexes with applications in homogeneous catalysis and medicinal chemistry.

Thomas Scattolin has supervised more than 40 master/bachelor students and 3 PhD students. He has published more than 100 articles in international peer-reviewed journals and two patent applications.

His scientific results were also reported in several national and international conferences. Within this context he was member of the local organizing committee of the XXXVII National Conference of Organic Chemistry, 18-22 September 2016 (Venice).

Marilena Carbone is Full Professor of General and Inorganic Chemistry at the University of Rome Tor Vergata, where she leads the Startnetics research group. Her research focuses on nanomaterials, tattoo inks safety, sustainable materials, and advanced inorganic functional materials. She serves as International President of the BfR Tattoo Inks Commission and coordinates national and European research initiatives. She has authored over 150 scientific publications with more than 3,800 citations (h-index 36). She has been recognized among the Stanford–Elsevier World's Top 2% Scientists over the last four years.

CRBMLN69D49D643G

CURRICULUM VITAE ET STUDIORUM: ERIKA FERRARI



Personal data:

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ORCID ID: <https://orcid.org/0000-0001-7627-2502>

EDUCATION

- **July 1999** Master Degree in Chemistry (*summa cum laude*) at the University of Modena and Reggio Emilia with a thesis entitled “Sintesi e Proprietà Ferro-chelanti di Curcuminoidi”, under the supervision of Prof. Romano Grandi.
- **February 2003** PhD in Chemistry the University of Modena and Reggio Emilia with a thesis entitled “Metal Binding of Biomolecules for Pharmaceutical Use”, under the supervision of Prof. Monica Saladini.

PREVIOUS POSITIONS AND FELLOWSHIPS

- **December 2020 – today** Associate Professor in Inorganic Chemistry at the Department of Chemistry (until 2013) and at the Department of Chemical and Geological Sciences (2013-today) of the University of Modena and Reggio Emilia.
- **February 2006 – November 2020** Assistant Professor of Inorganic Chemistry at the Department of Chemistry (until 2013) and at the Department of Chemical and Geological Sciences (2013-2020) of the University of Modena and Reggio Emilia.
- **June 2004-February 2006** Scientific Technician at the Department of Chemistry of the University of Modena and Reggio Emilia.

MATERNITY/PARENTAL LEAVES

- **2014** Parental Leave from 07/07/2014 to 22/07/2014 (art. 32 D.Lgs. 151/2001) (D.R. n. 0126 del 31/07/2014).
- **2013** Parental Leave from 01/07/2013 to 12/07/2013 (art. 32 D.Lgs. 151/2001) (D.R. n. 0134 del 18/10/2013).
- **2011-2012** Maternity leave (art. 16 D.Lgs. 151/2001) from 19/08/2011 to 25/01/2012 + Parental leave (art. 32 D.Lgs. 151/2001) dal 26/01/2012 al 10/03/2012 e dal 11/03/2012 al 16/03/2012 – disposto con D.R. n. 074 del 30/03/2012 (**7 months**).
- **2008** Maternity leave (art. 16 D.Lgs. 151/2001) dal 20/03/2008 al 20/08/2008, disposto con D.R. n. 0317 del 29/09/2008 (**5 months**).

VISITS AND STAYS

- **May 2017** Visiting scientist at the Institute of Nuclear Chemistry of Johannes Gutenberg-Universität Mainz (Mainz, Germany);
- **October 2016** Visiting scientist at the Department of Biophysics of the Institute of Experimental Physics SAS (Košice, Slovakia);
- **February 2008** Visiting scientist at the Institute of Organic and Analytical Chemistry of the Université d'Orléans.

BRIEF DESCRIPTION OF THE RESEARCH ACTIVITY

Prof. Ferrari's research is situated at the interface of coordination chemistry, bioinorganic chemistry, and medicinal inorganic chemistry. Her scientific program is characterized by a strong interdisciplinary approach to the design, synthesis, and thermodynamic characterization of metal-ligand systems derived from both natural and synthetic sources.

In particular, the research covers the following topics:

- Metal-based drugs
- Metal trafficking in vitro (thermodynamic characterization of metal complexes in solution)
- Development of novel metal-chelating agents for theranostics
- Development and characterization of iron-based drugs
- Organic, inorganic and metal-organic synthesis
- Development of advanced NMR techniques for complex matrices
- Inorganic Drug Delivery Systems (IDDS)

Her early career contributions significantly advanced the development of curcumin-based metallodrugs, specifically addressing challenges in chemical stability and bioavailability for oncological applications. Over the past decade, her research has shifted toward the design of innovative radiopharmaceuticals for PET imaging and theranostics. This field involves the strategic use of various radiometals - including copper, gallium, scandium, silver, and lead - to develop targeting agents that integrate specific molecular vectors with therapeutic/diagnostic metal cores.

MAJOR COLLABORATIONS

National:

Mattia Asti - Nuclear Medicine Unit, Oncology and Advanced Technologies Department - IRRCS – Santa Maria Nuova Reggio Emilia.

Ornella Francioso - University of Bologna.

Carol Imbriano, Maria Cristina Menziani, Gianluca Malavasi - University of Modena and Reggio Emilia.

International:

Raphael Tripier - Université de Bretagne Occidentale (FR)

Carlos Platas-Iglesias – Universidade da Coruña (SP)

Sofia Gama – University of Lisbon (P)

Zuzana Gazova - Institute of Experimental Physics, Slovak Academy of Sciences, Kosice (SK)

Hanne Hjorth Tønnesen – School of Pharmacy – University of Oslo (N)

FUNDING AND PROJECTS

- **2024-2026** Funding agent: FONDO DI ATENEO PER LA RICERCA ANNO 2024 (FAR2024)
Title: Transcriptional reprogramming of lactate metabolism in prostate cancer: druggable vulnerabilities for therapeutic and diagnostic applications. *Role:* Co-investigator; PI: Silvia Belluti (UNIMORE)
- **2011-present** Funding agent: IRRCS –Santa Maria Nuova Reggio Emilia
Title: PHYTORAD: NUOVE STRATEGIE NELLO SVILUPPO DI RADIOTRACCIANTI (in collaboration with Dr. Mattia ASTI - Nuclear Medicine Unit, Oncology and Advanced Technologies Department - IRRCS – Santa Maria Nuova Reggio Emilia). *Role:* co-PI
- **2016-2019** Funding agent: MIUR (PRIN-2015)
Title: ZAPPING. High-pressure nano-confinement in Zeolites: the Mineral Science know-how APPLIED to engineerING of innovative materials for technological and environmental applications. *Role:* Participant PI: Gianmario Martra (UNITO)
- **2016-2018** Funding agent: FONDO DI ATENEO PER LA RICERCA ANNO 2015 (FAR2015)

Title: Rational design of curcumin-based bifunctional ligands for early diagnosis and therapy of Alzheimer's disease. *Role*: Participant; PI: Maria Cristina Menziani (UNIMORE)

- **2017** Funding agent: MIUR (Finanziamento delle attività base di ricerca - art. 1, commi 295 e seguenti, della Legge 11 dicembre 2016). *Role*: PI
- **2015-2017** Funding agent: FONDAZIONE DI VIGNOLA

Title: Diagnosi precoce della malattia di Alzheimer: nuovi agenti diagnostici bi-modali per *imaging*: RAD (radiotracers for Alzheimer's Disease) *Role*: PI

- **2012-2013** Funding agent: FONDAZIONE DI VIGNOLA

Title: Vetri bioattivi: nuovi materiali per il rilascio controllato di antitumorali derivati dalla curcumina. *Role*: Co-investigator, PI: Gianluca Malavasi (UNIMORE)

TEACHING ACTIVITIES

- A.A. 2023/24- present "Chimica dei Composti di Coordinazione" (Corso di Laurea Magistrale in Scienze Chimiche - Università di Modena e Reggio Emilia, 6 CFU - 48 h);
- A.A. 2019/20- present "Chimica Generale ed Inorganica" (Corso di Laurea in Chimica - Università di Modena e Reggio Emilia, A.A. 2019/20-2021/22 3 CFU - 36 h Laboratorio; A.A. 2022/23 3CFU - 30h Lezioni frontali);
- A.A. 2017/18-present "Inorganic Industrial and Environmental Chemistry" (Corso di Laurea in Chimica - Università di Modena e Reggio Emilia, 6 CFU - 48 h; Language: ENGLISH);
- A.A. 2019/20- 2021/22 "Chimica Generale e Inorganica" (Corso di Laurea in Chimica e Tecnologia Farmaceutiche - Università di Modena e Reggio Emilia, 9 CFU - 72 h);
- A.A. 2022/23 "Chimica" (Corso di Laurea in Fisica - Università di Modena e Reggio Emilia, 6 CFU - 48 h);
- A.A. 2015/16-2018/19 "Laboratorio di Chimica" (Corso di Laurea in Scienze Naturali - Università di Modena e Reggio Emilia, 1 CFU - 12 h);
- A.A. 2013/14-2016/2017 "Chimica Inorganica Industriale e Ambientale" (Corso di Laurea in Chimica - Università di Modena e Reggio Emilia, 6 CFU - 48 h);
- A.A. 2009/10; 2012/13 "Chimica Generale con elementi di Chimica Inorganica" (Corso di Laurea in Scienze e Tecnologie Erboristiche - Università di Modena e Reggio Emilia, 7 CFU - 56 h); "Introduzione al Laboratorio chimico" (Corso di Laurea in Scienze e Tecnologie Erboristiche - Università di Modena e Reggio Emilia, 2 CFU - 16 h);
- A.A. 2006/07-2008/09 "Elementi di Chimica Generale ed Inorganica" (Corso di Laurea in Tecniche Erboristiche - Università di Modena e Reggio Emilia, 9 CFU - 72 h); "Introduzione al Laboratorio chimico" (Corso di Laurea in Tecniche Erboristiche - Università di Modena e Reggio Emilia, 2 CFU - 16 h)
- A.A. 2006/07-2012/13 "Composti di coordinazione di interesse farmaceutico" (12 h), Teaching activity for PhD students of the Doctorate School "Scienze e tecnologie dei prodotti per la salute" (Università di Modena e Reggio Emilia).
- A.A. 2006/07-2008/09 Lecturer for the SicurMORE project "Formazione a distanza, portale FAD626 (FAD 81)"
- A.A. 2006/07 Lecturer for "Master universitario di I livello in presenza o a distanza Prevenzione dei rischi e gestione della sicurezza del lavoro - Safety Management".
- A.A. 2005/2006 "Chimica Analitica" (Corso di Laurea in Farmacia e CTF - Università di Modena e Reggio Emilia, 5 CFU - 40 h)

SUPERVISION OF PhD STUDENTS AND FELLOWSHIPS

- **2025-present** Supervisor of post-doctoral fellowship Dr Matteo Mari (Project: “Transcriptional reprogramming of lactate metabolism in prostate cancer: druggable vulnerabilities for therapeutic and diagnostic applications”)
- **2023-present** Co-Supervisor of Dr Jennifer Storchi, M3ES PhD Student (XXXIX Cycle) committed to the PhD project “Lead-212 and Titanium-45 as emerging isotopes for radiopharmaceutical applications: production and development of new bifunctional chelators”
- **2022-2024** Supervisor of Dr Matteo Boniburini, M3ES PhD Student (XXXVIII Cycle) committed to the PhD project “Development of new bimodal imaging agents based on Mn(II)”
- **2021-2024** Supervisor of Dr Matteo Mari, M3ES PhD Student (XXXVII Cycle) committed to the project “Development of new PET radiotracers based on monocarboxylate transporter inhibitors for theranostic applications in oncology”
- **2021-2024** Co-Supervisor of Debora Carrozza, M3ES PhD Student involved in the project “Development of hybrid bio-materials for theranostic applications”
- **2021** Supervisor of post-graduated fellowship, Dr Debora Carrozza, working on a project entitled “Development of iron-citrate metal complexes for therapeutic applications”.
- **2017-2018** Supervisor of post-doctoral fellowship (Dr Luca Rigamonti) working on a project entitled “Development of curcumin-based radiotracers for nuclear medicine applications”.
- **2015-2018** Supervisor of PhD Student, Dr Giulia Orteca working on a thesis “New smart materials for metal trafficking control.”
- **2011-2012** Supervisor of post-doctoral fellowship (Dr Maurizio Bonavia) working on a project entitled “Development of radiotracers for nuclear medicine applications”.
- **2010-2012** Co-Supervisor of PhD Student, Dr Ettore Venturi working on the research project: “Sintesi e caratterizzazione di composti beta-dichetonici di interesse farmaceutico”
- **2008-2010** Co-Supervisor of PhD Student, Dr Francesca Pignedoli working on a thesis entitled “Il ruolo della chimica di coordinazione nello sviluppo di potenziali agenti terapeutici derivati dalla Curcumina.”
- **2006-2008** Co-Supervisor of PhD Student, Dr Sandra Lazzari, working on a thesis entitled: “Synthesis, characterization and coordinative properties of new molecules of pharmaceutical interest”

AWARDS

- **2018** National Scientific Enabling (ASN) for the position of Full Professor in the sector **03/B1** (FONDAMENTI DELLE SCIENZE CHIMICHE E SISTEMI INORGANICI).
- **2026:** selected abstract for oral presentation at “XI Congresso Nazionale del Gruppo Interdisciplinare di Chimica dei Radiofarmaci (GICR) - Pisa 8-10 Maggio 2026”
- **2018:** best abstract for oral presentation “VII Congresso Nazionale del Gruppo interdisciplinare di Chimica dei Radiofarmaci (GICR) - Ferrara 11-12 Maggio 2018”.
- **2017:** National Scientific Enabling (ASN) for the position of Associate Professor in the sector **03/B1** (FONDAMENTI DELLE SCIENZE CHIMICHE E SISTEMI INORGANICI)

FACULTY MEMBERSHIPS AND INSTITUTIONAL POSITIONS

- Member of the Faculty of Doctorate School “**MODELS AND METHODS FOR MATERIAL AND ENVIRONMENTAL SCIENCES – M3ES**” of the University of Modena and Reggio Emilia (from the academic years 2013/2014 to present)
- Quality Management Responsible and President of the Committee for Quality Assurance and Management of the Department of Chemical and Geological Sciences (2020-present)
- Member of the Committee for “Quality Assurance, Management and Review” of M3ES PhD Course (2023 – present)
- Member of the Committee for Education of M3ES PhD Course (2018-2025)
- Representative for the Department of Chemical and Geological Sciences in the Faculty of “Centro Interdipartimentale Grandi Strumenti – C.I.G.S. UNIMORE” (2020-2022)

- Member of the Committee for “Research and Development” of the Department of Chemical and Geological Sciences (2018-2019)
- Member of the Doctorate School **"SCIENZE E TECNOLOGIE DEI PRODOTTI PER LA SALUTE"** of the University of Modena and Reggio Emilia (from the academic years 2006/2007 to 2011/2012)
- Tutor for the Master Degree in *Chimica e Tecnologia Farmaceutiche* (2019-oggi)
- Member of the *Commissione Sviluppo e Ricerca* of DSCG (2018-2019)
- Member of the Web Committee of DSCG (2012-2018)
- Member of the Self-Evaluation Committee of the Pharmacy Faculty (2006-2012)
- Member of the *Commissione Immagine* of the Pharmacy Faculty (2007-2012)
- Tutor for the Degree in *Tecniche Erboristiche* and *Scienze e Tecnologie Erboristiche* (2007-2012)
- Member of the *Commissione per la valutazione delle conoscenze in ingresso e test di ammissione ai corsi di laurea in Farmacia, Chimica e Tecnologia Farmaceutiche* (2008-2012)

MEMBERSHIPS AND APPOINTMENTS

- Management Committee Substitute and Participant of the **COST ACTION CA 18202 – NECTAR – Network for Equilibria and Chemical Thermodynamics Advanced Research**. (<https://cost-nectar.eu/>)
- PEER Reviewer- Area Chimica (GEV03) – VQR 2011-2014
- REPRISE (albo degli esperti scientifici istituito presso il MIUR) (“Ricerca di Base” 2018-oggi)
- Management Committee of the *Società Chimica Italiana - Sezione Emilia Romagna* (2012-2014)
- Management Committee (Secretary/ Treasurer) of the *Società Chimica Italiana Sezione Emilia Romagna* (2009-2011)
- Member of the Inorganic Chemistry and Nuclear Magnetic Resonance Divisions of the Italian Chemical Society.
- Member of GICR “Gruppo Interdisciplinare di Chimica dei Radiofarmaci”.
- Member of the Biogest Siteia Technopole consortium (UNIMORE).
- Member of CRIS - Centro di Ricerca Interdipartimentale sulla Sicurezza e Prevenzione dei Rischi di UNIMORE (2012-)
- Member of CIPRAL - Centro Interdipartimentale di Prevenzione dei Rischi negli Ambienti di Lavoro – UNIMORE (2008-2010)

ORGANISATION OF SCIENTIFIC MEETINGS AND SCHOOLS

- Scientific committee “Network di Ricerca in Radiochimica: 2° meeting internazionale italiani in sede e italiani all'estero – 21 Marzo 2020”
- Organizer of the PhD course “Introduction to Radiochemistry” (1-3 Ottobre 2018, Modena).
- XIV Giornata della Chimica dell'Emilia Romagna, Parma – 18 December 2014 (Scientific Committee)
- XIII Giornata della Chimica dell'Emilia Romagna Area della Ricerca del CNR di Bologna - 18 December 2013 (Scientific Committee)
- XII Giornata della Chimica dell'Emilia Romagna - 17 December 2012, Dipartimento di Scienze Chimiche e Farmaceutiche dell'Università di Ferrara (Scientific Committee)
- Celebration of the International Year of Chemistry: “Il concetto di responsabilità: Etica, Chimica, Ambiente” - Modena, 28-30 April 2011 (Organizing Committee).
- X Giornata della Chimica dell'Emilia Romagna – Parma, 26 November 2010 (Scientific Committee)
- IX Giornata della Chimica in Emilia Romagna – Bologna, 4 December 2009 (Scientific Committee)

ACTIVITIES IN REFERRED SCIENTIFIC JOURNALS.

- *Editorial Board Member for Molecules* (<https://www.mdpi.com/journal/molecules/editors>)
- *Guest-Editor* Special Issue “25th Anniversary of Molecules-Recent Advances in Inorganic Chemistry” https://www.mdpi.com/journal/molecules/special_issues/molecules_25th_Anniversary_of_Molecules_Inorganic_Chemistry
- *Guest-Editor* Special Issue “Curcumin” in Molecules journal http://www.mdpi.com/journal/molecules/special_issues/molecules_Curcumin2019)

- Reviewer for the peer-reviewed journals: Journal of Medicinal Chemistry; Inorganic Chemistry; European Journal of Medicinal Chemistry; Dalton Transactions; Molecules; International Journal of Molecular Sciences; Journal of Inorganic Biochemistry; Journal of Bioinorganic Chemistry; Journal of Nanomaterials; Molecules; Arabian Journal of Chemistry; International Journal of Molecular Structure.

TECHNOLOGICAL TRANSFER

2021 ITALIAN PATENT 102021000005132 “Materiale fotoassorbente ad ampio spettro, procedimento per la sua preparazione ed usi relativi” INVENTORS: R. Arletti, G. Vezzalini, A. Zambon, E. Ferrari, R. Fantini, C. Baraldi, L. Mino, M. Fabbiani, R. Cavalli, M. Argenziato, Deposit Date (04/03/21)

2020 INVENTION PATENT (BREVETTO D'INVENZIONE nr.102018000002279) “Sintesi di derivati della curcumina con un gruppo chelante per la complessazione di metalli e radionuclidi.” Submission date: 31st January 2018, Approval date: 17th March 2020. Inventors: Mattia Asti, Giulia Orteca, Erika Ferrari, Sara Rubagotti, Michele Iori, Pier Cesare Capponi.

2011-2013 PROGETTO SPINNER2013 - idea imprenditoriale innovativa e/o ad alto contenuto di conoscenza: BIT4ENERGY (PI: Erika Ferrari)

2009-2010 PROGETTO SPINNER DI RICERCA INDUSTRIALE: H2STIT (PI: Erika Ferrari)

PUBLIC ENGAGEMENT

- Proponent and chief of the organizing committee of the “Global Women’s Breakfast @UNIMORE” (<https://iupac.org/gwb/>) (2024-present)
- Lectures for UniJunior (2025-present)
- Participant to the project PLS, leading seminars and laboratory activities for high school students (2011-present).
- Seminars for high school teachers (2007, 2014, 2017)
- Participant to the project “ACQUA FONTE DI VITA NELLO SPAZIO E NEL TEMPO...” financially supported by the Fondazione Cassa di Risparmio di Modena. Scuola primaria “KING” - ISTITUTO COMPRENSIVO MODENA 3 (November 2015)
- Seminars, laboratorial activities and guided tours during the temporary exhibition: CRISTALLI AI RAGGI X (Modena, 24 January - 29 March 2015).
- The European Night of Research (2015-present).

LIST OF PUBLICATIONS AND CONTRIBUTIONS

Authors of more than 70 papers in peer-reviewed journals and more than 100 contributions (oral and poster) to national and international conferences. Scopus citation overview (06/07/2026): documents 80, citations 2299, h-index 28.

For updated publications visit <https://unimore.unifind.cineca.it/get/person/090199>

Modena, 6th July 2026



BRIEF CURRICULUM VITAE

FABIO CARNIATO

Education

Dipartimento di Scienze e Innovazione Tecnologica
Università del Piemonte Orientale "Amedeo Avogadro"
Viale Teresa Michel 11, 15121 Alessandria, Italy
Phone: (+39) 0131-360217
fabio.carniato@uniupo.it

Via B. Graziani 24
15122 Litta Parodi, AL, Italy
Phone: (+39) 3384616017
CF: CRNFBA80P13A182M

1999-2002	Laurea in Chemistry (1° level), University of Eastern Piedmont, Italy
2002-2004	Laurea (2° level) "Magna cum Laude" in Applied Chemistry, University of Eastern Piedmont, Italy
2004-2008	PhD degree in Chemistry. Thesis Title: "Synthesis and Structural-Morphological Study of Innovative Organic/Inorganic Hybrids Materials".

Career Positions

2020-:	Associate Professor, Università del Piemonte Orientale
2013-2020:	Assistant Professor (Researcher), Università del Piemonte Orientale
2008-2013:	Post-doc, Università del Piemonte Orientale

Teaching activities and PhD supervision

Teaching of laboratory of Inorganic Chemistry for the Course of Chemistry of the Università del Piemonte Orientale since 2025.

Teaching of General and Inorganic Chemistry since 2015 for the Course of Materials Science (2015-2020) and Green Chemistry (since 2021) of the Università del Piemonte Orientale.

Teaching of laboratory of General and Inorganic Chemistry for the Course of Chemistry of the Università del Piemonte Orientale since 2019.

2016: teaching of Materials Chemistry and Laboratory for the Course of Materials Science of the Università del Piemonte Orientale.

2009-2012: teaching of Catalysis for the Course of Chemistry of the Università del Piemonte Orientale.

Supervisor of three PhD students and many Master students.

Administrative role and position responsibility

2021: Coordinator of the 16th European Researchers' Night, University of Eastern Piedmont.

2022 – 2024: Member of the Departmental Committee for the organization of the "UPO Science Slam" (as part of the "Research Week 2022" initiative).

2022 – Nov 2024: Head of the Public Engagement and Communication Committee (Commissione Terza Missione e Comunicazione), Department of Sciences and Technological Innovation.

2022 – Present: Departmental Quality Assurance Representative for Public Engagement (Responsabile della Qualità del Dipartimento per la Terza Missione - RQDTM).

2022 – Present: Chemistry Area Representative, Library Committee of the Department of Sciences and Technological Innovation.

Nov 2024 – Present: Member of the Student Orientation Committee, Department of Sciences and Technological Innovation.

Nov 2024 – Present: Member of the University Patent and Spin-Off Committee.

Nov 2025 – Present: Member of the Scientific Committee of the "ORIZZONTI VERDI" ETS Association.

Dec 2025 – Present: Member of the University Public Engagement Committee (Commissione Terza Missione di Ateneo).

Dec 2025 – Present: Rector's Delegate for Technology Transfer.

Dec 2025 – Present: Board Member of the Piemonte e Valle d'Aosta Section, Italian Chemical Society (SCI).

Scientific organisations/Coordination of academic activities

2026: Member of the Organizing Committee for the 51st Congress of the Inorganic Chemistry Division & 2nd Edition of the Italian–French Coordination Chemistry Days (September 1-4, 2026, Turin).

May 2024: Member of the Organizing Committee for the GIDRM Workshop: "Exploring diagnostic probes and procedures beyond Gd(III) for MRI applications" (May 31, 2024, Alessandria).

2022: member of the GIDRM commission for the awarding of an award for the best degree and doctoral thesis focused on topics related to magnetic resonances.

2014: Co-organizer of the Workshop "NMR Relaxometry: Principles and Applications", promoted in the Università del Piemonte Orientale.

Scientific Activity

Number of papers in refereed journals: 156; Number of books: 4 chapter; 1 national patent, 2 International patent

H-Index: 34

Main Research Topics: Coordination Chemistry, lanthanides chelates, Inorganic Materials, Relaxometry, MRI probes.

Editorial Activity:

2022: Guest Editor of "Processes" journal; Special Issue: Multifunctional Inorganic Nanoparticles Design for Biomedical and Environmental Applications.

2021-: Member of the Editorial Board of the "Processes" journal from MDPI.

2020: Guest Editor of "Processes" journal; Special Issue: Development of Innovative Micro and Mesoporous Materials.

2024: Guest Editor of "Processes", Special Issue: Magnetic Nanoparticles: Synthesis, Assembly and Applications.

2026: Guest Editor of "Frontiers in Nanotechnology", Special Issue: Organic Nanoparticles from Natural Substrates: Biomedical Advances.

Membership of Scientific Societies

- Member of the Società Chimica Italiana – Divisione Chimica Inorganica.

- Member of Gruppo Italiano Discussione Risonanze Magnetiche – GIDRM

- Member of the Working Group (WG2) COST Action CA15209: "European Network on NMR Relaxometry".

- 2014-: member of the "Collegio Docenti" of the PhD program in CHEMISTRY & BIOLOGY of the Università del Piemonte Orientale.

- 2019, 2022, 2024 and 2026: member of the European Society for Molecular Imaging (ESMI).

Funding (current and past)

2018: Principal Investigator of Project "Finanziamento delle attività base di ricerca" - MIUR

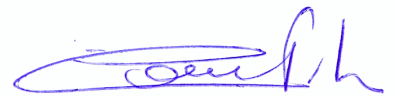
2019: Principal Investigator of Project “Nuovi materiali a struttura lamellare per applicazioni in ambito diagnostico e ambientale” – Università del Piemonte Orientale

2023: Co-Principal Investigator: Bando Ricerca UPO 2022 - “Metabolomics approach for predicting response to immunotherapy in patients with lung cancer”.

2023: Principal Investigator (Unit UPO): Bando PRIN PNRR 2022 (P20224R8YZ). “Exploring Spin Dynamics of Earth Abundant Transition Metal Ion Complexes as MRI Diagnostic Probes” – STARS.

Alessandria, 07-07-2026

FIRMA

A handwritten signature in blue ink, appearing to be 'G. P. H.', is written below the 'FIRMA' label.

Curriculum Vitae

PERSONAL INFORMATION

Gina Elena Giacomazzo



E-mail ginaelena.giacomazzo@unifi.it

Citizenship Italian

Date and place of birth 14th March 1992, San Miniato (PI), Italy

Tax Identification N° GCMGLN92C54I046Y

ORCID: 0000-0001-5308-404X | **Scopus:** 57211269724 | **WoS:** KJM-8179-2024

Bibliometrics

21 peer-reviewed international publications; H-index: 11, Citations: 274

Patents: Italian patent No **102022000023862** (granted), **WO 2024/105603 A1** – PCT international application

Grants & Fellowships

Fondazione Umberto Veronesi Post-Doctoral Fellowship 2026, Experimental - Annual

Project Title: *Advancing Metal-Based Photodynamic Therapy for Vulvar Intraepithelial Neoplasia: A Translational Strategy Targeting HPV-Positive Lesions*

Fondazione Umberto Veronesi Post-Doctoral Fellowship 2025, Experimental - Annual

Project Title: *Novel metal-based prodrugs in Photodynamic Therapy of Vulvar Intraepithelial Neoplasia: remission rates and HPV clearance*

(Maternity leave May 19th–Oct 19th, 2025)

Research Experience

Feb 2024-Jan 2025 | Research Fellow – University of Florence

Supervisor: Prof. Luigi Messori

Topic: Design and synthesis of metal complexes as potential antibacterial agents.

Feb 2023-Jan 2024 | Research Fellow – University of Florence

Supervisor: Prof. Paola Turano

Topic: Design of Gd(III)/Eu(II) complexes as paramagnetic relaxation enhancement agents for NMR metabolomics.

Jan-Feb 2022 | International research experience – University of Burgos (Spain)

Supervisor: Prof. Tomas Torroba

Research stay focused on synthesis of fluorescent dyes for metal complexes.

Nov 2019-Jan 2023: PhD in Chemical Sciences – University of Florence

PhD conferred on **June 19th, 2023**

Supervisor: Prof. Claudia Giorgi

Topic: Ruthenium(II) polypyridyl complexes as light-responsive therapeutic agents (PDT/PACT)
Focus on photodynamic therapy (PDT) and photoactivated chemotherapy (PACT) applications in medicinal inorganic chemistry.

Feb-Jul 2019 | Research Fellow – INSTM, University of Florence

Supervisor: Prof. Barbara Richichi

Topic: Development of green, solvent-free synthetic methods for biopolymeric materials and nanostructured antimicrobial systems.

Publications

1. G.E. Giacomazzo, F. Ponte, V. Ceccherini, L. Gianassi, G. Mulas, E. Sicilia, F. Cencetti, B. Valtancoli, L. Conti, C. Giorgi; Ruthenium or osmium? On the role of the metal in carbonylchlorido complexes for photodynamic therapy; *Chem. Comm.* **2026**, 62, 3592-3596 DOI: [10.1039/D5CC06225J](https://doi.org/10.1039/D5CC06225J)
2. G.E. Giacomazzo, V. Ceccherini, V. Vitali, L. Conti, F. Vaccaro, F. Coscione, E. Perrin, M. Fondi, L. Massai, C. Giorgi, L. Messori; Playing with Structural Parameters in the Design of Ruthenium(II)-p-Cymene Complexes as Potential Antibacterial Agents; *Inorg. Chem.* **2025**, 64, 48, 23414–23425 DOI: [10.1021/acs.inorgchem.5c03505](https://doi.org/10.1021/acs.inorgchem.5c03505)
3. G. Sambucari, C. Coutant, A. Di Michele, G. E. Giacomazzo, P. Nun, V. Sol, N. Renard, T.-S. Ouk, V. Coeffard, M. Di Donato; Triarylphosphonium BODIPY-Based [2]Rotaxanes Nanoparticles for Light-Driven Antibacterial Applications; *Adv. Opt. Mater.* **2025**, 13, 13, 2403076 DOI: [10.1002/adom.202403076](https://doi.org/10.1002/adom.202403076)
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5. L. Casula, G. E. Giacomazzo, L. Conti, M. Fornasier, B. Manca, M. Schlich, C. Sinico, T. Rheinberger, F. R. Wurm, C. Giorgi, S. Murgia; Polyphosphoester-stabilized cubosomes encapsulating a Ru(II) complex for the photodynamic treatment of lung adenocarcinoma; *J. Colloid Interface Sci.* **2024**, 670, 234-245 DOI: [10.1016/j.jcis.2024.05.088](https://doi.org/10.1016/j.jcis.2024.05.088)
6. G. E. Giacomazzo, L. Conti, D. Paderni, P. S. Sfragano, L. Quadrini, E. Macedi, C. Andreini, C. Donati, C. Bernacchioni, G. Mulas, B. Valtancoli, I. Palchetti, L. Giorgi, V. Fusi, F. Cencetti, C. Giorgi; Ruthenium(II) polypyridyl complexes with benzoxazole derivatives and non-innocent ligands as effective antioxidants in human neuroblasts; *Chem.-A Eur. J.*, **2024**, e202400834 DOI: [10.1002/chem.202400834](https://doi.org/10.1002/chem.202400834)
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8. D. Paderni, E. Macedi, G. E. Giacomazzo, M. Formica, L. Giorgi, B. Valtancoli, P. Rossi, P. Paoli, L. Conti, V. Fusi, C. Giorgi; A new biphenol-dipicolylamine based ligand and its dinuclear Zn²⁺ complex as fluorescent sensors for ibuprofen and ketoprofen in aqueous solution; *Dalton Trans.*, **2024**, 53, 9495-9509 DOI: [10.1039/d4dt00935e](https://doi.org/10.1039/d4dt00935e)
9. M. Lippi, P. Paoli, L. Conti, G. E. Giacomazzo, E. Macedi, J. Ceccarelli, J. Morais Missina, C. Fagorzi, P. Rossi; Ibuprofen: A multi-purpose active pharmaceutical ingredient as versatile ligand for zinc(II) and Copper(II). Solid state and solution studies; *Inorganica Chim. Acta*, **2024**, 566, 122034 DOI: [10.1016/j.ica.2024.122034](https://doi.org/10.1016/j.ica.2024.122034)

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11. G. E. Giacomazzo, L. Conti, C. Fagorzi, M. Pagliai, C. Andreini, A. Guerri, B. Perito, A. Mengoni, B. Valtancoli, C. Giorgi; Ruthenium(II) Polypyridyl Complexes and Metronidazole Derivatives: a Powerful Combination in the Design of Photoresponsive Antibacterial Agents Effective under Hypoxic Conditions; *Inorg. Chem.* **2023**, *62*, 20, 7716-7727. DOI: [10.1021/acs.inorgchem.3c00214](https://doi.org/10.1021/acs.inorgchem.3c00214)
12. G. E. Giacomazzo, D. Paderni, L. Giorgi, M. Formica, L. Mari, R. Montis, L. Conti, E. Macedi, B. Valtancoli, C. Giorgi, V. Fusi; A new family of Macrocyclic polyamino biphenolic ligands: acid-base study, Zn(II) coordination and glyphosate/AMPA binding; *Molecules* **2023**, *28*(5), 2031 DOI: [10.3390/molecules28052031](https://doi.org/10.3390/molecules28052031)
13. M. Verrucchi, G. E. Giacomazzo, P. S. Sfragano, S. Laschi, L. Conti, M. Pagliai, C. Gellini, M. Ricci, E. Ravera, B. Valtancoli, C. Giorgi, I. Palchetti; Characterization of a Ruthenium(II) Complex in Singlet Oxygen-Mediated Photoelectrochemical Sensing; *Langmuir* **2023**, *39*, 1, 679-689 DOI: [10.1021/acs.langmuir.2c03042](https://doi.org/10.1021/acs.langmuir.2c03042)
14. L. Conti, G. E. Giacomazzo, B. Valtancoli, M. Perfetti, A. Privitera, C. Giorgi, P. Severin Sfragano, I. Palchetti, S. Pecchioli, P. Bruni, F. Cencetti; Highly charged Ru(II) polypyridyl complexes as photosensitizer agents in photodynamic therapy of epithelial ovarian cancer cells; *Int. J. Mol. Sci.*, **2022**, *23*(21), 13302 DOI: [10.3390/ijms232113302](https://doi.org/10.3390/ijms232113302)
15. L. Conti, S. Ciambellotti, G. E. Giacomazzo, V. Ghini, L. Casottini, E. Puliti, M. Severi, E. Fratini, F. Cencetti, P. Bruni, B. Valtancoli, C. Giorgi, P. Turano; Ferritin nanocomposites for selective delivery of photosensitizing ruthenium-polypyridyl compounds to cancer cell; *Inorg. Chem. Front.*, **2022**, *9*, 1070-1081 DOI: [10.1039/D1QI01268A](https://doi.org/10.1039/D1QI01268A)
16. G. Reina, A. Ruiz, B. Richichi, G. Biagiotti, G. E. Giacomazzo, L. Jacquemin, Y. Nishina, C. Ménard-Moyon, W. T Al-Jamal, A. Bianco; Design of a graphene oxide-BODIPY conjugate for glutathione depletion and photodynamic therapy; *2D Mater.*, **2022**, *9*, 015038 DOI: [10.1088/2053-1583/ac4572](https://doi.org/10.1088/2053-1583/ac4572)
17. G. E. Giacomazzo, L. Conti, A. Guerri, M. Pagliai, C. Fagorzi, P. S. Sfragano, I. Palchetti, G. Pietraperzia, A. Mengoni, B. Valtancoli, C. Giorgi; Nitroimidazole-Based Ruthenium(II) Complexes: Playing with Structural Parameters to Design Photostable and Light-Responsive Antibacterial Agents; *Inorg. Chem.*, **2021**, *61*, 18, 6689-6694 DOI: [10.1021/acs.inorgchem.1c03032](https://doi.org/10.1021/acs.inorgchem.1c03032)
18. L. Conti, A. Mengoni, G. E. Giacomazzo, L. Mari, M. Perfetti, C. Fagorzi, L. Sorace, B. Valtancoli, C. Giorgi; Exploring the potential of highly charged Ru(II)- and heteronuclear Ru(II)/Cu(II)-polypyridyl complexes as antimicrobial agents; *J. Inorg. Biochem.*, **2021**, *220*, 111467 DOI: [10.1016/j.jinorgbio.2021.111467](https://doi.org/10.1016/j.jinorgbio.2021.111467)
19. L. Conti, L. Mummolo, G. M. Romano, C. Giorgi, G. E. Giacomazzo, L. Prodi, A. Bencini; Exploring the Ability of Luminescent Metal Assemblies to Bind and Sense Anionic or Ionizable Analytes A Ru(phen)2bipy-Based Dizinc Complex for Bisphenol A (BPA) Recognition; *Molecules*, **2021**, *26*(3), 527. DOI: [10.3390/molecules26030527](https://doi.org/10.3390/molecules26030527)
20. P. Andreozzi, L. Tamberi, E. Tasca, G. E. Giacomazzo, M. Martinez, M. Severi, M. Marradi, S. Cicchi, S. Moya, G. Biagiotti, B. Richichi; The B & B approach: Ball-milling conjugation of dextran with phenylboronic acid (PBA)-functionalized BODIPY; *Beilstein J. Org. Chem.* **2020**, *16*, 2272-2281 DOI: [10.3762/bjoc.16.188](https://doi.org/10.3762/bjoc.16.188)
21. G. E. Giacomazzo, P. Palladino, C. Gellini, G. Salerno, V. Baldoneschi, A. Feis, S. Scarano, M. Minunni, B. Richichi; A straightforward synthesis of phenyl boronic acid (PBA) containing BODIPY dyes: new functional and modular fluorescent tools for the tethering of the glycan domain of antibodies; *RSC Adv.*, **2019**, *9*, 30773-30777, DOI: [10.1039/c9ra07608e](https://doi.org/10.1039/c9ra07608e)

Professional Service

Reviewer for *Journal of Inorganic Biochemistry* (since 2023)

Co-supervision of Master's theses in Chemistry (since 2024)

Teaching Activity

Teaching assistant and teaching grants in General and Inorganic Chemistry (2024–26), University of Florence.

Communications at Conferences

1. **XXVIII Congresso Nazionale SCI2024**, Milan Aug 26-30, 2024. Oral: *Light-Activated Therapeutics: Designing Photoresponsive Bioactive Compounds with Ruthenium(II) Polypyridyl Complexes*
2. **ISMEC2024 International Symposium on Metal Complexes**, Nice June 9-13, 2024. Poster: *Harnessing Ruthenium(II) Polypyridyl Complexes and Light to design advanced photoresponsive bioactive molecules*
3. **XLIX Congresso Nazionale di Chimica Inorganica** Perugia Sept 12-15, 2023. Poster: *Nitroimidazole-based ruthenium(II) polypyridyl complexes: turn on the light for fighting anaerobic bacteria diseases*
4. **ISMEC2023 International Symposium on Metal Complexes** Urbino Jun 11-14, 2023. Oral: *Ruthenium(II) polypyridyl complexes as versatile tools in the design of photoresponsive therapeutic agents*
5. **ICCC2022 44th International Conference on Coordination Chemistry** Rimini, Aug 28-Sept 2, 2022. Poster: *Inhibition of Ca^{2+} -ATPase transport activity mediated by a photoactivable ruthenium (II) polypyridyl complex*
6. **Supramol2022 XV Italian Conference on Supramolecular Chemistry** Salerno Jun 28-Jul 1, 2022. Poster: *Ruthenium(II)-containing nanocarriers as effective photosensitizers in antitumoral photodynamic therapy*
7. **MYCS2021 Merck Young Chemists' Symposium XX** Rimini Nov 22-24, 2021. Oral: *Ruthenium (II) polypyridyl complexes as promising light-responsive antimicrobial agents*
8. **WICS 1st Women in Supramolecular Chemistry workshop** Cagliari Sept 6-8, 2021. Poster: *Nitroimidazole-based ruthenium(II) complexes: playing with structural parameters to design photostable and light-responsive antibacterial agents*
9. **XXVII Congresso Nazionale SCI2021** Sept 14-23, 2021. Poster: *New molecular systems for the monitoring of environmental pollutants*

07/07/2026

Giulia Elguasconi

Lorenzo Risolo's CV

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Current position:

Ph.D. student in Chemistry & Biology (XXXIX cycle) at the University of Eastern Piedmont "A. Avogadro" (DiSIT), Alessandria, Italy

Subject: "Paramagnetic metal ion complexes and nanosystems as NMR relaxation agents"

Supervisors: Prof. Mauro Botta and Prof. Daniela Lalli

Education:

2023 M.Sc. Degree in Chemical Sciences at the University of Eastern Piedmont "A. Avogadro" (DiSIT), Alessandria, Italy – (10/2023) 110/110 cum laude et mentione.

Title of the thesis: "Multinuclear and multifrequency NMR study of the interaction between Ln(III) ions complexes and fluoride anions".

Supervisors: Prof. Mauro Botta and Prof. Daniela Lalli

2021 B.Sc. Degree in Chemistry at the University of Eastern Piedmont "A. Avogadro" (DiSIT), Alessandria, Italy – (10/2021) 110/110 cum laude.

Title of the thesis: "Synthesis and characterization of linear and star methacrylic copolymers by reverse micellar polymerization"

Supervisor: Prof. Katia Sparnacci

Experiences abroad:

2026 at the Interdisciplinary Center for Chemistry and Biology (CICA), University of A Coruña, Galicia (Spain) during the period 01/2026-08/2026 (6 month).

List of publications:

- Ricci, M; Risolo, L; Carniato, F; Lalli, D; Platas-Iglesias, C.; Botta, M. Field-Dependent ¹H Relaxometry as a General Probe of Hydration Dynamics in Paramagnetic Ln³⁺ Complexes. *Inorg. Chem. Front.* **2026**, 13(10), 4464–4477.
- Dahman, B.; Szucs, D.; Risolo, L.; Fekete, A.; Szikra, D.; Bányai, I.; Tircso, G.; Baranyai, Z.; Botta, M.; Tóth, I. A Comprehensive Study of the Sc(III)-OPC2A – Fluoride Interaction: Equilibrium, Kinetics, and ⁴⁴Sc-Labeling. *Inorg. Chem.* **2025**, 64(44), 21834–21848.
- Risolo, L.; Ricci, M.; Lalli, D.; Platas-Iglesias, C.; Botta, M. Fluoride binding in unlikely partners: The formation of anion-anion complexes with [M(EGTA)][−] and [M(OBETA)][−] (M = Gd³⁺, Y³⁺). *Inorg. Chem. Front.* **2025**, 12, 1187–1199.

CURRICULUM VITAE ET STUDIORUM

Prof. Diego Tesauro

Dr Tesauro obtained his master degree in Chemistry at University of Napoli Federico II with the maximum of the points in 1991. He completed his PhD studies in Chemistry in 1994, defending a thesis on reactivity of d^8 ions coordination complexes. He spent six month as Scientist in the Roche Company in Basel (CH) involved in catalysis process research.

Since 1995 he carried out research activities in inorganic complexes reactivity as postdoctoral researcher at department of Chemistry in Naples.

In 1999 he earned the position of lecturer in Inorganic Chemistry at the University of Naples (Faculty of Sciences).

In 2018 he was appointed associate professor of inorganic Chemistry at department of Pharmacy of the University of Naples.

In the last decades research activities were focused on peptide conjugates chemistry. The synthesis and characterizations of tools based on peptides as contrast agents for cancer diagnose and therapies have been object of his investigations using a multidisciplinary approach (peptide design, peptide chemistry, chemical physical characterization) with a wide variety of experimental techniques.

Furthermore the research activity was directed to the formulation of new supramolecular aggregates like specific contrast agents in MRI and like tools to delivery drugs in cancer cells. In last years the research has focused on peptide materials for trapping metal ions or complexes for various applications.

He was involved in many international and national research projects.

These topics have been aroused the interest filling 5 patent applications.

He is the author more than 80 scientific publications in peer reviewed journals and wide number of proceedings at international congress. He directed PhD students and post-docs. He is acting as referee for national and international funds agencies as well as for wide number of peer reviewed journals.

ACCADEMIC POSITION

2018-at present Associate Professor at the Department of Pharmacy, University of Naples "Federico II"

2012 –2017 Researcher of Chemistry at the Department of Pharmacy, University of Naples "Federico II"

2001 - 2012 Researcher of Inorganic Chemistry at the Department of Biological Science-Biostructures Section, Faculty of Sciences University of Naples "Federico II"

1999- 2001 Researcher of Inorganic Chemistry at the Department of Chemistry Faculty of Sciences University of Naples "Federico II"

TEACHING ACTIVITIES

1999- present

General and Inorganic Chemistry, Formal course to undergraduates students Faculty of Sciences and Department of agricultural sciences.

Stechiometry: Formal course to undergraduates students.

Inorganic Chemistry Laboratory: Formal course to undergraduates students of Faculty of Sciences.

Environmental Matrix and their chemical composition.

PUBLICATIONS ON ONCOLOGIC TOPICS IN THE LAST DECADE

- 1) Paola Ringhieri, Alessandra Pannunzio, Angelina Boccarelli, Giancarlo Morelli, Mauro Coluccia & **Diego Tesauro** "Effect of Cisplatin containing Liposomes on Gynecological tumour cells" *Journal of Liposome Research* DOI:10.3109/08982104.2015.1127257
- 2) M. Vincenzi, S. Costantini, S. Scala, **D. Tesauro**, A. Accardo. M. Leone , G. Colonna, J.Guillon, L. Portella A.M. Trotta, L. Ronga , F. Rossi "Conformational Ensembles Explored Dynamically from Disordered Peptides Targeting Chemokine Receptor CXCR4" *Int. J. Mol. Sci.* **2015**, *16*, 12159-12173; doi:10.3390/ijms160612159.
- 3) Marian Vincenzi,, Antonella Accardo, Susan Costantini, Stefania Scala,, Luigi Portella, Annamaria Trotta, Luisa Ronga, Jean Guillon, Marilisa Leone, Giovanni Colonna, Filomena Rossi, **Diego Tesauro** "Intrinsically disordered amphiphilic peptides as potential targets in drug delivery vehicles" *Molecular Biosystems*, **2015**, *11*, 2925--2932 DOI: 10.1039/C5MB00358J
- 4) A. Accardo, L.Aloj, M. Aurilio G. Morelli **D. Tesauro**,. "Receptor binding peptides for target-selective delivery of nanoparticles encapsulated drugs" *Int. J Nanomedicine* **2014**, *9*:1537-1557
- 5) A. Accardo, P. Ringhieri, N. Szekely, V. Pipich, A. Luchini, L. Paduano, **D. Tesauro**, "Structural insights on Nanoparticles containing Gadolinium complexes as potential theranostic" *Colloid and Polymer Science* **2014**, *292*:1121–1127. DOI: 10.1007/s00396-013-3159-7.
- 6) A. Accardo, M. Vitiello, E. Finamore, R. Mansi, M. Galdiero, **D. Tesauro**, G. Morelli "Self-assembled or mixed peptide amphiphile micelles from Herpes Simple Virus glycoproteins as potential immunomodulatory treatment.", *Int. J Nanomedicine* **2014**; *9*: 2137–2148
- 7) A. Accardo,;R. Mansi, G.; Salzano,; A. Morisco, M. Aurilio, A. Parisi, F. Maione, C. Cicala, B. Ziaco, **D. Tesauro**, L. Aloj, G. De Rosa, G. Morelli. "Bombesin peptide antagonist for target-selective delivery of liposomal doxorubicin on cancer cells" *Journal Drug Targeting*, **2013**, *21*, 240-249.
- 8) A. Accardo, E. Gianolio, F. Arena, S. Barnert, R. Schubert, **D. Tesauro**, G. Morelli *Nanostructures based on monoolein or diolein and amphiphilic gadolinium complexes as MRI contrast agents* *Journal of Materials Chemistry B* **2013**, *1*, 617–628
- 9) A. Accardo, **D. Tesauro**, G. Morelli. "Peptide-based targeting strategies for simultaneous imaging and therapy with nanovectors" *Polymer Journal*, **2013**, doi:10.1038/pj.2012.215\
- 10) A. Accardo, G. Mangiapia, L. Paduano, G. Morelli, **D. Tesauro** Octeotride Labeled Aggregates Containing Platinum Complexes as Nanovectors for Drug Delivery *Journal of Peptide Science* **2013**, *19*, 190-197 10.1002/psc.2481.
- 11) C. Falciani, J. Brunetti, B. Lelli, A. Accardo, **D. Tesauro**, G. Morelli, L. Bracci "Nanoparticles exposing neurotensin tumor-specific drivers" *Journal of Peptide Science* **2013**, *19*, 198-204 DOI 10.1002/psc.2493.

- 12) A. Accardo, P. Ringhieri, **D. Tesauero**, Giancarlo Morelli “Liposomes derivatized with tetrabranch Neurotensin peptide via click chemistry reactions” *New Journal of Chemistry* **2013** 37 (11), 3528 – 3534
- 13) A. Accardo, G. Salsano, A. Morisco, M. Aurilio, A. Parisi, F. Maione, C. Cicala, **D. Tesauero**, L. Aloj, G. De Rosa, G. Morelli, “Peptide-modified liposomes for selective targeting of bombesin receptors overexpressed by cancer cells: a potential theranostic agent” *International Journal of Nanomedicine* **2012**, 7 2007–2017
- 14) A. Morisco, A. Accardo, **D. Tesauero**, R. Palumbo, E. Benedetti, G. Morelli, “Peptide labeled supramolecular aggregates as selective doxorubicin carriers for delivery to tumor cells” *Biopolymers Peptide Science* **2011**, 86, 88-96
- 15) A. Accardo, A. Morisco, E. Gianolio, **D. Tesauero**, G. Mangiapia, A. Radulescu, A. Brandt G. Morelli “Nanoparticles containing octreotide peptides and gadolinium complexes for MRI applications” *Journal of Peptide Science* **2011**, 16, 154-162.
- 16) A. Accardo, A. Morisco, **D. Tesauero**, C. Pedone, G. Morelli “Nanosomes: A New Class of Peptide Derivatized Target Selective Multimodal Nanoparticles for Imaging and Therapeutic Applications” *Therapeutic Delivery* **2011**, 2, 235-257.
- 17) A. Accardo, A. Morisco, P. Palladino, R. Palumbo, **D. Tesauero**, Giancarlo Morelli “Amphiphilic CCK peptides assembled in supramolecular aggregates: structural investigations and in vitro studies.” *Molecular Biosystems*, **2011**, 7, 862-870.
- 18) A.L. Tornesello, M. Aurilio, A. Accardo, L. Tarallo, A. Barbieri, C. Arra, **D. Tesauero**, G. Morelli, L. Aloj “Gastrin and Cholecystokinin peptide based radiopharmaceuticals: an in vivo and in vitro comparison” *Journal of Peptide Science* **2011**, 16, 405-412
- 19) C. Falciani, A. Accardo, J. Brunetti, **D. Tesauero**, B. Lelli, A. Pini, L. Bracci, G. Morelli “Target Selective Drug Delivery through Liposome Labeled with Oligobranch Neurotensin Peptides” *ChemMedChem* **2011**, 6, 268-275
- 20) L. Aloj, M. Aurilio, V. Rinaldi, L. D'Ambrosio, **D. Tesauero**, P. Peitl, Theodosia Maina, R. Mansi, E. Von Guggenberg, L. Joosten, J. Sosabowski, W.A.P. Breeman, E. De Blois, S. Koelewijn, M. Melis, B. Waser, J.C. Reubi, M. de Jong “Comparison of the binding and internalization properties of 12 DOTA-coupled and ¹¹¹In-labelled CCK2/Gastrin receptor binding peptides: a collaborative project under COST Action BM0607” *Eur J Nucl Med Mol Imaging* **2011**, 38, 1417–1425
- 21) A. Accardo, R. Mansi, A. Morisco, G. Mangiapia, L. Paduano, **D. Tesauero**, A. Radulescu, M. Aurilio, L. Aloj, C. Arra, G. Morelli, “Peptide modified nanocarriers for selective targeting of bombesin receptors” *Molecular Biosystems*, **2010**, 6, 878–887.
- 22) A. Morisco, A. Accardo, E. Gianolio, **D. Tesauero**, E. Benedetti, G. Morelli “Micelles derivatized with octreotide as potential target-selective contrast agents in MRP” *Journal of Peptide Science* **2009**, 15, 242-250.
- 23) A. Accardo, **D. Tesauero**, A. Morisco, G. Mangiapia, M. Vaccaro, E. Gianolio, R.K. Heenan, L. Paduano, G. Morelli “Micelles Obtained by Aggregation of Gemini Surfactants

- Containing the CCK8 Peptide and a Gadolinium Complex*” *Journal of Biological Inorganic Chemistry* **2009**, *14*, 577-589.
- 24) A. Accardo, **D. Tesauero**, L. Aloj, C. Pedone, G. Morelli “*Supramolecular aggregates containing lipophilic Gd(III) complexes as contrast agents in MRI.*” *Coordination Chemistry Reviews* **2009**, *253*(17-18), 2193-2213
 - 25) A. Accardo, **D. Tesauero**, L. Aloj, L. Tarallo, C. Arra, G. Mangiapia, M. Vaccaro, C. Pedone, L. Paduano, and G. Morelli “*Peptide Containing Aggregates as Selective Nanocarriers for Therapeutics*” *ChemMedChem* **2008**, *3*, 594-602
 - 26) A. Accardo, **D. Tesauero**, L. Del Pozzo, G. Mangiapia, L. Paduano, and G. Morelli “*Micelles by Self-assembling Peptide Conjugate Amphiphile: Synthesis and Structural Characterization*” *Journal of Peptide Science* **2008**, *14*, 903-910
 - 27) M. Vaccaro, G. Mangiapia, A. Accardo, **D. Tesauero**, E. Gianolio, H. Frielinghaus, G. Morelli, L. Paduano. “*Polymerized mixed aggregates containing gadolinium complex and CCK8 peptide*”. *Colloid and Polymer Science* **2008**, *286*, 1643–1652
 - 28) A. Accardo, **D. Tesauero**, G. Morelli, E. Gianolio, S. Aime, M. Vaccaro, G. Mangiapia, L. Paduano, K. Schillen. “*High-relaxivity supramolecular aggregates containing peptide and Gd complexes agents in MRI.*” *Journal of Biological Inorganic Chemistry* **2007**, *12*, 267-276
 - 29) A. Accardo, **D. Tesauero**, G. Mangiapia, C. Pedone and G. Morelli, “*Nanostructures by Self-assembling Peptide Amphiphile as Potential Selective Drug Carriers*” *Biopolymers (Peptide Science)* **2007**, *88*, 115-121
 - 30) S. Agostini, C. Bolzati, E. Didonè, M. Cavazza-Ceccato, F. Refosco, L. Aloj, C. Arra, M. Aurilio, A. L. Tornesello, **D. Tesauero** and G. Morelli “*The [Tc(N)(PNP)]²⁺ metal fragment labeled cholecystokinin-8 (CCK8) peptide for CCK-2 receptors imaging: in vitro and in vivo studies*” *Journal of Peptide Science* **2007**, *13*, 211-219.
 - 31) **D. Tesauero**, A. Accardo, E. Gianolio, L. Paduano, J. Teixeira, K. Schillén, S. Aime, and G. Morelli “*Peptide derivatized lamellar aggregates as target specific MRI contrast agents*” *ChemBioChem* **2007**, *8*, 950-955
 - 32) M. Vaccaro, A. Accardo, G. D’Errico, K. Schillén, A. Radulescu, **D. Tesauero**, G. Morelli and L. Paduano. “*Peptides and Gd Complexes containing Colloidal Assemblies as Tumor Specific Contrast Agents in MRI: Physicochemical Characterization*” *Biophysical journal* **2007**, *93*, 1736-1746
 - 33) M. Vaccaro, G. Mangiapia, L. Paduano, E. Gianolio, A. Accardo, **D. Tesauero** and G. Morelli “*Structural and Relaxometric Characterization of Peptide Aggregates Containing Gadolinium Complexes as Potential Selective Contrast Agents in MRI*” *ChemPhysChem* **2007**, *8*, 2526-2538.

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Date of Birth: March 28, 1980
CF: MSSLRA80C68A390D

Bibliographic Data: Publications =92 (2012- today); H-Index = 26 (Scopus 07/07/2026); Citations = 2092(Scopus 07/07/2026)

Current Position and Habilitation

- September 2023 – Present: Ricercatore a tempo determinato (RTD-A) SSD CHEM-03/A, General and Inorganic Chemistry, University of Florence.
- Italian National Scientific Habilitation as a Full Professor SSD CHEM-03/A - Fascia I – validity 26.05.2026 to 26.05.2038.

Education and Academic Career

- Jan 2015 – Aug 2023: Postdoctoral Fellow – University of Florence, Italy.
- Jan 2012 – Dec 2014: PhD in Chemical Sciences – University of Florence, Italy.
- Oct 2013 – Jan 2014: Exchange Visitor / Research Fellow – City University of New York, USA.

Research Track Record and Technical Expertise

- Since 2012, she has consistently contributed to mentoring and training young scientists within the Chemistry, Biotechnology, and Biology degree programs.
- Co-tutor to 2 PhD students in Chemical Sciences (XLI course | XXXVIII course);
- Supervisor to 3 thesis students (Chemistry and Biotechnology);
- Co-supervisor to 14 undergraduate thesis students across Chemistry, Biotechnology, and Biology.
- *Dissemination:* 18 conference communications (15 oral presentations, 3 posters).
- *Invited Talks:* 2 PhD Seminars (IPREM at University of Pau, France; Department of Pharmacy at University of Pisa, Italy).

Dr. Massai's research mainly focuses on the synthesis, characterization, and biological evaluation of gold-based metal complexes (metalloodrugs). She possesses extensive expertise in investigating metallodrug/protein interactions, a field in which she has developed advanced analytical protocols by combining spectrometric and spectroscopic techniques with biochemical and pharmacological assays. Her core skills include: i) Mass Spectrometry (MS) applied to macromolecular systems; ii) UV-vis and CD spectroscopy; iii) Coordinating national and international scientific collaborations to identify and validate biological targets.

Editorial Activities

- Frontiers in Chemistry: Review Editor in Inorganic Chemistry
- Frontiers in Chemistry: Associate Editor in Inorganic Chemistry from 18/07/23
- Guest Associate Editor for a Frontiers Research Topic "The Golden Future in Medicinal Chemistry: Perspectives and Resources from Old and New Gold-Based Drug Candidates"

(2020)

- Guest Associate Editor for a Frontiers Research Topic: Women in Inorganic Chemistry 2022

Relevant Research Projects

- Project b/2024/0241 Fondo di Beneficenza Intesa Sanpaolo: “*Indagini meccanicistiche sull'attività antitumorale di composti metallo-farmaceutici a base di oro e platino: Focus sul ruolo del citocromo c proapoptotico*”; P.I. Lara Massai
- AIRC Project IG26169 (2022–2026): “*A multi-Omics approach to establish the molecular mechanisms of Anticancer Gold Compounds in the Systems Biology Era*” (PI: Prof. L. Messori). Role: Scientific and administrative coordinator and research team member.
- AIRC-ECRF 19650 (2017–2019): “*Advanced mass spectrometry tools for cancer research: novel applications in proteomics, metabolomics and nanomedicine*” (PI: Prof. L. Messori). Role: Research team member

Selected Publications

1. Vitali V, Chiaverini L, Severi M, Trincavelli ML, Messori L, **Massai L***, Marzo T*, Giacomelli C.. “The impact of albumin conjugation on the cytotoxic properties of cisplatin, oxaliplatin and auranofin in cancer cells”. *Inorg. Chem. Front.*, (2026) 13, 106. doi.org/10.1039/d5qi01487e
2. Giacomazzo GE, Ceccherini V, Vitali V, Conti L*, Vaccaro F, Coscione F, Perrin E, Fondi M, **Massai L***, Giorgi C, Messori L. “Playing with Structural Parameters in the Design of Ruthenium(II)-p-Cymene Complexes as Potential Antibacterial Agents”. *Inorg Chem.* (2025), 64(48), 23414-23425. DOI: 10.1021/acs.inorgchem.5c03505.
3. Vitali V, **Massai L***, Geri A, Cosottini L, Mannelli M, Severi M, Turano P, Gamberi T, Messori L*. “Oxaliplatin bioconjugates with human ferritin obtained by protein surface decoration: Characterization and biological evaluation”. *J Inorg Biochem.* (2025) 273:113019. DOI: 10.1016/j.jinorgbio.2025.113019
4. Geri A, Zineddu S, **Massai L***, Ronga L, Lobinski R, Gailer J, Messori L*. “Mercury binding to proteins disclosed by ESI MS experiments: The case of three organomercurials”. *J Inorg Biochem.* (2024) 252:112479. DOI:10.1016/j.jinorgbio.2024.112479.
5. Geri A, **Massai L***, Novinec M, Turel I, Messori L*. “Reactions of Medicinal Gold Compounds with Cathepsin B Explored through Electrospray Mass Spectrometry Measurements”. *Chempluschem.* (2024) 89(2):e202300321. DOI: 10.1002/cplu.202300321.
6. **Massai L**, Grifagni D (¥), De Santis A, Geri A, Cantini F, Calderone V, Banci L, Messori L. “Gold-Based Metal Drugs as Inhibitors of Coronavirus Proteins: The Inhibition of SARS-CoV-2 Main Protease by Auranofin and Its Analogs”. *Biomolecules.* (2022) 12(11):1675.DOI: 10.3390/biom12111675.
7. **Massai L**, Scattolin T, Tarchi M, Visentin F, Messori L. “Reactions of proteins with a few organopalladium compounds of medicinal interest”. *RSC Adv.* (2022) 12(41):26680-26685.DOI: 10.1039/d2ra05332b.
8. **Massai, L.**, Messori, L., Carpentieri, A., Amoresano, A., Melchiorre, C., Fiaschi, T., Modesti, A., Gamberi, T., Magherini, F. “The effects of two gold-N-heterocyclic carbene (NHC) complexes in ovarian cancer cells: a redox proteomic study” *Cancer Chemotherapy and Pharmacology* (2022) DOI: 10.1007/s00280-022-04438-y
9. Tolbatov, I., Cirri, D., Tarchi, M., Marzo, T., Coletti, C., Marrone, A., Messori, L., Re,

- N., **Massai, L.** “Reactions of Arsenoplatin-I with Protein Targets: A Combined Experimental and Theoretical Study” *Inorganic Chemistry*, (2022) , 61 (7), 3240-3248. DOI: [10.1021/acs.inorgchem.1c03732](https://doi.org/10.1021/acs.inorgchem.1c03732)
10. Sacco, F., Tarchi, M., Ferraro, G., Merlino, A., Facchetti, G., Rimoldi, I., Messori, L., **Massai, L.** “Reactions with proteins of three novel anticancer platinum(II) complexes bearing N-heterocyclic ligands” *Int. J. Mol Sciences*, (2021) 22 (19). 10551, DOI: 10.3390/ijms221910551
 11. Gamberi, T., Pratesi, A., Messori, L.*, **Massai, L.*** “Proteomics as a tool to disclose the cellular and molecular mechanisms of selected anticancer gold compounds” *Coordination Chemistry Reviews*, (2021) 438, 213905. DOI: 10.1016/j.ccr.2021.213905
 12. Zoppi, C., **Massai, L.***, Cirri, D., Gabbiani, C., Pratesi, A.*, Messori, L. “Protein metalation by two structurally related gold(I) carbene complexes: An ESI MS study” *Inorganica Chimica Acta*, (2021) 520, 120297. DOI: 10.1016/j.ica.2021.120297
 13. **Massai, L.**, Zoppi, C., Cirri, D., Pratesi, A., Messori, L. “Reactions of medicinal gold(III) compounds with proteins and peptides explored by electrospray ionization mass spectrometry and complementary biophysical methods” *Frontiers in Chemistry*, (2020) 8, 581648, 1-14. DOI: 10.3389/fchem.2020.581648
 14. **Massai, L.**, Messori, L., Micale, N., Schirmeister, T., Maes, L., Fregona, D., Cinellu, M.A., Gabbiani, C. “Gold compounds as cysteine protease inhibitors: perspectives for pharmaceutical application as antiparasitic agents” *BioMetals*, (2017) 30 (2), 313-320. DOI: 10.1007/s10534-017-0007-0
 15. Bazzicalupi, C., Ferraroni, M., Papi, F., Massai, L., Bertrand, B., Messori, L., Gratteri, P., Casini, A. “Determinants for Tight and Selective Binding of a Medicinal Dicarbene Gold(I) Complex to a Telomeric DNA G-Quadruplex: A Joint ESI MS and XRD Investigation” *Angewandte Chemie - International Edition*, (2016) 55 (13), 4256-4259. DOI: 10.1002/anie.201511999
 16. **Massai, L.***, Cirri, D., Michelucci, E., Bartoli, G., Guerri, A., Cinellu, M.A., Cocco, F., Gabbiani, C., Messori, L.* “Organogold(III) compounds as experimental anticancer agents: chemical and biological profiles” *BioMetals*, (2016) 29 (5), 863-872. DOI: 10.1007/s10534-016-9957-x
 17. Marzo, T., Scaletti, F., Michelucci, E., Gabbiani, C., Pescitelli, G., Messori, L.*, **Massai, L.*** “Interactions of the organogold(III) compound Aubipyc with the copper chaperone Atox1: A joint mass spectrometry and circular dichroism investigation” *BioMetals*, (2015) 28 (6), 1079-1085. DOI: 10.1007/s10534-015-9887-z
 18. **Massai, L. (¥)**, Fernández-Gallardo (¥), J., Guerri, A., Arcangeli, A., Pillozzi, S., Contel, M., Messori, L. “Design, synthesis and characterisation of new chimeric ruthenium(ii)-gold(i) complexes as improved cytotoxic agents” *Dalton Transactions*, (2015), 44 (24), 11067-11076. DOI: 10.1039/c5dt01614b

Sesto Fiorentino, 07/07/2026

Lara Massai





Simone Braccia

Date of birth: 24/07/1998 | **Place of birth:** Sant'Angelo dei Lombardi, Italy |

Nationality: Italian | **Gender:** Male | **Phone number:** (+39) 3398472979 (Mobile) |

Email address: simone.braccia@unina.it |

Address: 83054, Sant'Angelo dei Lombardi, Italy (Home)
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WORK EXPERIENCE

TYPE A TUTORING ACTIVITY – 2021 – 2022 – NAPLES

Address: Department of Pharmacy, University of Naples Federico II, Italy, 80131, Naples

TYPE B TUTORING ACTIVITY – 2022 – 2023 – NAPLES, ITALY

Address: Department of Pharmacy, University of Naples Federico II, 80131, Naples, Italy

EDUCATION AND TRAINING

10/2017 – 10/2020 Naples, Italy

BACHELOR'S DEGREE IN BIOTECHNOLOGIES FOR HEALTH University of Naples Federico II

10/2020 – 09/2022 Naples, Italy

MASTER'S DEGREE IN PHARMACEUTICAL BIOTECHNOLOGY University of Naples Federico II

01/10/2022 – 11/02/2026 Naples, Italy

PHD IN PHARMACEUTICAL SCIENCES Department of Pharmacy, University of Naples Federico II

05/2023 – 06/2023 Łódź, Poland

VISITING PHD STUDENT Department of General Biophysics, University of Łódź

09/2024 – 03/2025 Philadelphia, United States

VISITING PHD STUDENT Sbarro Health Research Organization (S.H.R.O.), Temple University

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B2	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

PUBLICATIONS

List of publications

1. Bellavita R, Maione A, **Braccia S**, Sinoca M, Galdiero S, Galdiero E, Falanga A. Myxinidin-Derived Peptide against Biofilms Caused by Cystic Fibrosis Emerging Pathogens. Int J Mol Sci. 2023 Feb 4;24(4):3092. doi: 10.3390/ijms24043092.

2. Bellavita R, **Braccia S**, Galdiero S, Falanga A. Glycosylation and Lipidation Strategies: Approaches for Improving Antimicrobial Peptide Efficacy. *Pharmaceuticals* (Basel). 2023 Mar 14;16(3):439. doi: 10.3390/ph16030439.
3. Galdiero S, Falanga A, **Braccia S**, Bellavita R. An Overview of Supramolecular Platforms Boosting Drug Delivery. 2023 Nov 13;2023:8608428. doi: 10.1155/2023/8608428.
4. Falanga A, Bellavita R, **Braccia S**, Galdiero S. Hydrophobicity: The door to drug delivery. *J Pept Sci*. 2023 Dec 19; doi: 10.1002/psc.3558.
5. Bellavita R, Esposito S, **Braccia S**, Madrid L, Ortega P, D'Auria G, Zarrilli F, Amato F, Galdiero S, de la Mata J, Falcigno L, Falanga A. Targetable domains for the design of peptide-dendrimer inhibitors of SARS-CoV-2. *Int J Pharm*. 2024;124389. doi: 10.1016/j.ijpharm.2024.124389.
6. Bellavita R, **Braccia S**, Imbò LE, Grieco P, Galdiero S, D'Auria G, Falanga A, Falcigno L. Exploring Fe(III) coordination and membrane interaction of a siderophore-peptide conjugate: Enhancing synergistically the antimicrobial activity. *Int J Pharm*. 2024. doi: 10.1016/j.jinorgbio.2024.112658.
7. Bellavita R, Falcigno L, **Braccia S**, D'Auria G, Falanga A, Galdiero S. Metal-Antimicrobial Peptides combo: promising weapons to combat bacteria invaders. *Front Drug Discov*. 2024;4:1440378. doi: 10.3389/fddsv.2024.1440378.
8. Bellavita R, **Braccia S**, Piccolo M, Bialecki P, Ferraro MG, Graziano SF, Esposito E, Donadio F, Bryszewska M, Irace C, Pedziwiatr-Werbicka E, Falanga A, Galdiero S. Shielding siRNA by peptide-based nanofibers: An efficient approach for turning off EGFR gene in breast cancer. *Int J Biol Macromol*. 2024 Dec 27:292:139219. doi: 10.1016/j.ijbiomac.2024.139219.
9. Bellavita R, Barra T, **Braccia S**, Prisco M, Valiante S, Lombardi A, Leone L, Pisano J, Esposito R, Nastri F, D'Errico G, Falanga A, Galdiero S. Engineering Multifunctional Peptide-Decorated Nanofibers for Targeted Delivery of Temozolomide across the Blood-Brain Barrier. *Mol Pharm*. 2025 Apr 7;22(4):1920-1938. doi: 10.1021/acs.molpharmaceut.4c01125.
10. Martinelli C, Ercoli A, Vizzielli G, Burk SR, Cuomo M, Satasiya V, Kacem H, **Braccia S**, Mazzarotti G, Miriello I, Tchamou MN, Restaino S, Arcieri M, Poli A, Tius V, Parisi S, Pergolizzi S, Iatì G, Conti Nibali C, Pizzimenti C, Pepe L, Ieni A, Cortellino S, Giordano A. Liquid biopsy in gynecological cancers: a translational framework from molecular insights to precision oncology and clinical practice. *J Exp Clin Cancer Res*. 2025;44:140. doi: 10.1186/s13046-025-03371-1.
11. **Braccia S**, Ajayi OE, Palladino S, Imbò LE, Bellavita R, Falanga A, Alfano L, Giordano A, Galdiero S. Current advances and future vision of drug delivery systems for cancer. *Ann Res Oncol*. 2025;5(2):57-74. doi: 10.48286/aro.2025.106.
12. Ajayi, O.E.; Bellavita, R.; Imbò, L.E.; Palladino, S.; **Braccia, S.**; Falanga, A.; Galdiero, S. Boosting AMPs' Power: From Structural Engineering to Nanotechnology-Based Delivery. *Molecules* 2025, 30, 2979. <https://doi.org/10.3390/molecules30142979>.
13. **Braccia, S.**, Bellavita, R., Ajayi, O.E. et al. Engineering myxinidin-based supramolecular architectures for advanced antifungal applications in food protection. *Chem. Biol. Technol. Agric*. 12, 162 (2025). doi: 10.1186/s40538-025-00880-1.
14. Bellavita, R., Benigno, D., Piccolo, M., **Braccia, S.**, et al. Modulating STAT3 pathway in breast cancer: Improved activity of T40214 aptamer by peptide-based nanofibers delivering. *Int. J. Biol. Macromol*. 2026 May;364:152317. doi: 10.1016/j.ijbiomac.2026.152317.
15. **Braccia, S.**, Alfano, L., Ragosta, MC., Bellavita, R., D'Auria, G., Esposito, E., et al. Bio-inspired self-assembly of omega-3 fatty acids and peptides for responsive drug delivery. *Int. J. Pharm. X*. 2026 May;100558. doi:10.1016/j.ijpx.2026.100558.

● CONFERENCES AND SEMINARS

List of conferences and talks

Oral Communications

23 November 2022 – Scientific Day of CIRPeB, Mineralogy Museum, Naples (IT)

Self-assembling peptide-based nanofiber for on-demand drug release against TNBC

Authors: S. Braccia, R. Bellavita, A. Falanga, I. Chourpa, S. Galdiero

16-18 July 2023 – MedChem 2023, XII Paul Ehrlich Euro-PhD Network Meeting, Thessaloniki (GR)

Myxinidin-derived peptide efficacious in fighting cystic fibrosis emerging pathogens

Authors: S. Braccia, R. Bellavita, A. Maione, S. Galdiero, E. Galdiero, A. Falanga

8 November 2023 – Scientific Day of CIRPeB, Mineralogy Museum, Naples (IT)

Peptide-based nanofibers for a selective delivery in Glioblastoma

Authors: S. Braccia, R. Bellavita, T. Barra, S. Valiante, M. Prisco, F. Nastri, A. Falanga, S. Galdiero

19 July 2024 – The Contribution of Young Chemists in Campania, DISTABiF, University of Campania "Luigi Vanvitelli"

Peptide-based nanofibers for a selective drug delivery in glioblastoma treatment

Authors: S. Braccia, R. Bellavita, T. Barra, S. Valiante, M. Prisco, F. Nastri, A. Falanga, S. Galdiero

22-26 June 2025 - GFPP24 and ItPS5 Joint Meeting on Peptides and Proteins, Aussois (FR)

Peptide-based nanofibers for a selective drug delivery in glioblastoma treatment

Authors: S. Braccia, R. Bellavita, S. Valiante, M. Prisco, F. Nastri, A. Falanga, S. Galdiero

3 July 2025 - Il Contributo dei Giovani Chimici in Campania, Salerno (IT) Optimization of a peptide-based nanofiber incorporating WMR-4 and gH625 for enhanced antimicrobial activity

Authors: S. Braccia, E. O. Ajayi, R. Bellavita, A. Falanga, E. Buommino, S. Galdiero

Poster Presentations

27 February 2023 – V Workshop “The Chemists for Biotechnologies”, Italian Chemical Society

Myxinidin-derived peptide efficacious in fighting cystic fibrosis emerging pathogens

Authors: S. Braccia, R. Bellavita, A. Maione, S. Galdiero, E. Galdiero, A. Falanga

16-18 July 2023 – MedChem 2023, XII Paul Ehrlich Euro-PhD Network Meeting, Thessaloniki (GR)

Myxinidin-derived peptide efficacious in fighting cystic fibrosis emerging pathogens

Authors: S. Braccia, R. Bellavita, A. Maione, S. Galdiero, E. Galdiero, A. Falanga

6-8 September 2023 – 10th International Meeting on Antimicrobial Peptides, Trieste (IT)

Myxinidin-derived peptides as weapons to fight antibiotic resistance in Cystic Fibrosis

Authors: S. Braccia, R. Bellavita, A. Maione, S. Galdiero, E. Galdiero, A. Falanga

12 September 2025 - Biopolymers Meet Metals: Interdisciplinary Approaches for Biomedicine and Catalysis, Naples (IT)

Iron (III)-chelating peptide derivatives for the inhibition of *Pseudomonas aeruginosa* biofilm

Authors: S. Braccia, R. Bellavita, B. Casciaro, L. Falcigno, G. D'Auria, A. Falanga, S. Galdiero

9-12 September 2025 - 50th Conference of the Divisione di Chimica Inorganica

Iron (III)-chelating peptide derivatives for the inhibition of *Pseudomonas aeruginosa* biofilm

Authors: S. Braccia, R. Bellavita, B. Casciaro, L. Falcigno, G. D'Auria, A. Falanga, S. Galdiero

Participations

December 2021 – Online Workshop “Biotechnologies and the Job Market”

24-25 May 2023 – Spring School on Transferable Skills, Department of Pharmacy, University of Naples Federico II

October 2023 – ACS on Campus Italy Road Show, CNR Naples (IT)

26-28 October 2023 – Workshop “Sorrento 2013–2023: A Decade of Peptide Materials”, Sorrento (IT)

19-20 February 2024 – First School on NMR for the Study of Small Organic Molecules, Department of Pharmacy, University of Naples Federico II

26 October 2024 – NIAF's 49th Anniversary, “Science and Legacy: Federico II's 800 Years and Breakthroughs in Pain Management”, Washington D.C. (USA)

2 November 2024 – ILICA Cultural Event, “XX - Artificial Harmonies: Seeking New Pathways”, New York City (USA)

5-9 May 2025 - *NAnoPhotOLI* 2025, Naples (IT).

● SKILLS

Technical Skills

Experience in solid-phase peptide synthesis (SPPS), including peptide cleavage, purification and analytical characterization.

Analytical and preparative HPLC.

Skilled in the use of UV spectrophotometers, fluorimeters, circular dichroism (CD), fourier-transform infrared spectroscopy (FTIR), Nuclear Magnetic Resonance (NMR).

Familiar with specific experimental protocols related to peptide and drug delivery systems.

Hands-on experience in cell biology and cell culture management, with strong proficiency in techniques such as Western Blotting, cloning, immunofluorescence, and the use of optical and electron microscopes for advanced analysis.

Cell culture and *in vitro* biological assays.

Familiar with bioinformatics tools and molecular visualization software, such as PyMOL, for the analysis and representation of biomolecular structures.

Experienced in scientific writing and manuscript preparation, including the drafting of original research articles, reviews and graphical abstracts for international peer-reviewed journals.

● MEMBER OF THE SOCIETIES

06/2023 – CURRENT

Member of the Italian Peptide Society (ItPS).

05/2023 – CURRENT

Member of the Italian Chemical Society (SCI), Division of Inorganic Chemistry.

● ONGOING RESEARCH

Current research focuses on the design and development of advanced drug delivery platforms aimed at improving antimicrobial and anticancer therapies, with particular attention to nanosystems for personalized medicine approaches.

Patent pending

Braccia S, Bellavita R, Falanga A, Galdiero S, Giordano A. Patent application, PA109031IT01- Sbarro Health Research Organization. 7/10/2025

Place and date:

Naples, 27/05/2026

Signature:

A handwritten signature in black ink, appearing to read 'Simone Braccia', written over a horizontal line.

PhD, Simone Braccia