Laura Russo





Associate Professor - Università degli Studi di Milano-Bicocca School of Medicine and Surgery

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e-mail: laura.russo@unimib.it

Website: <u>http://bioorgunimib.com/btbs/</u> <u>https://scholar.google.com/citations?user=0tp0M1AAAAAJ&hl=it</u>

Researcher unique identifier(s): SCOPUS Author ID: 55757784441, ORCID ID: 0000-0002-5914-766X

Summary – Biographical sketch

Laura Russo (LR) is Associate Professor at University of Milano-Bicocca. Her research is focused on biomaterials for biomedical applications, including 3D in vitro tissue models for regenerative medicine, patient-personalized drug screeening and biosensors. Her research experience dates to 2010, as PhD student in the BioOrganic research group of the University of Milano-Bicocca, developing multidisciplinary projects exploiting glycoscience in the field of nano- and biomaterials for tissue engineering. In 2010 LR was Visiting Researcher at Imperial College of London, studying hybrid biomaterials for osteochondral tissue regeneration. From 2013 to 2015, as Post Doc Fellow, at University of Milano-Bicocca, she was unit coordinator of a research project on smart biomaterials for organoid cell cultures for cardiac tissue engineering. In October 2016 LR awarded a SFI Starting Investigator Research Grant (SIRG) at Curam, National University of Ireland - Galway - where she started her research as Principal Investigator on Glycoconjugates biomaterials for tissue engineering applications and cell biology studies. In March 2017 she got a position of Assistant professor at the University of Milano - Bicocca and maintained the position of visiting researcher at Curam. She was also appointed Adjunct Lecturer at the National University of Ireland - Galway. LR has awarded the prestigious Junior Research Award for Organic Chemistry in Life Science of the Italian Chemical Society for her scientific contribution on organic chemistry applied to the life science field. From 2022 she is Associate Professor at University of Milano - Bicocca and from October 2023 visiting researcher at Imperial College of London

Education and Training

- **2012**, PhD in Industrial Biotechnologies at the University of Milano-Bicocca, Department of Biotechnology and Biosciences.
- **2007**, School of R&D Management at SDA Bocconi University (Supply Chain Management; R&D Project Selection; Operation Performance Measurement).
- **2006**, MSc in Industrial Biotechnologies Processes and Products at the University of Milano-Bicocca, Department of Biotechnology and Biosciences ("Enzymes for the production of Vitamin C: studying isolation through affinity chromatography", Prof. Francesco Nicotra).

Professional Experience

- 2023 Visiting Researcher at Imperial College of London, Department of Materials.
- 2023 2034 National Scientific Habilitation (ASN) as Full Professor call 2021/2023 (MD n. 553/2021 and 589/2021) for the disciplinary field 03/C1 Organic Chemistry. (Academic Recruitment Field 03/C Organic, industrial and applied chemistry, according to the national classification) (15/06/2023 15/06/2034).
- **2022 Associate Professor** at University of Milano-Bicocca and Visiting Researcher at *Cùram Centre for Research in Medical Devices, National University of Galway, Ireland.*
- 2022 Founder of Resyde srl start-up on medical devices.
- 2021 Partner and Member of the Advisory Board of Biocompatibility Innovation (BCI) (<u>https://www.biocompatibility.bio/</u>)
- **2018 Adjunct Lecturer** at National University of Ireland, Galway (NUIG). Department of Chemistry.
- **2017 Assistant Professor** at University of Milano-Bicocca, and Visiting Researcher at *Cùram Centre for Research in Medical Devices, National University of Galway, Ireland.*
- 2016 Principal Investigator SFI Foundation SIRG scheme established "to support excellent researchers and innovative research ideas with potential economic and societal impact". Coordination of a research project focused on Glyco-functionalized hydrogels for tissue engineering applications. Cùram - Centre for Research in Medical Devices, National University of Galway, Ireland
- **2013** to **2015**, **Unit Coordinator** at University of Milan-Bicocca, Dept. Of Biotechnology and Biosciences, on project founded by CARIPLO Foundation on the design and synthesis of smart biomaterials for 3D cultures and Tissue Engineering.
- **2010**, **Visiting Researcher** at Imperial College of London, Department of Materials, on Design, Synthesis and Functionalization of new hybrid biomaterials for bone tissue engineering Dr Julian R. Jones.
- 2009 2012, PhD Student in Industrial Biotechnology at the University of Milano-Bicocca, Department of Biotechnology and Biosciences, (Project on Biomaterials and Glycobiomaterials synthesis and charcaterization – Mentor: Prof. L. Cipolla.
- **2007 2008**, fellowship at Technology Transfer Office of University of Milan Bicocca, (ILONET Project) Technology Transfer Activities (Patents, Spin-Offs and Research Valorisation in Business Community).
- **2007** stage at Notarbatolo e Gervasi S.p.A. (Patent Trademarks Designs, European Trademark Attorneys) on Assessment of patentability. Analysis, drafting and filing of applications for Italian, European or PCT international patents.

Research Experience and Achievements

LR research is focused on the development of advanced solution for regenerative medicine, drug screening and medical devices. LR has a multidisciplinary expertise, supported by a strong interest in bioorganic chemistry and glycoscience, material science and biotechnology at the service of medical/clinical progress. Fundamental aim is to find new solutions to unresolved clinical challenges through the development of new material-based tools, taking advantage also of last generation AI technologies. Specific interests concern biomaterials functionalization with signaling/targeting molecules such as glycans and peptides and their applications in drug delivery, regenerative medicine and 3D cell cultures. Her research activity to date allowed to design and set up different "click chemistry" strategies for covalent immobilization of several carbohydrates of biological interest on biomaterials for tissue engineering applications.

In 2023 LR introduced in her research pathway the support and implementation of AI models for collaborative and predictive synthesis – still the major time-consuming and limiting activity in the translation of smart biomaterials and medical devices. Here, in summary, selected recent research outputs of LR:

- A) Development of ECM mimics for cell fate modulation and 3D biomaterial-based 3D models. LR was among the pioneers in this field utilizing bioorganic chemistry and glycans-functionalized polymers to craft biomolecular personalized models for cell fate modulation and 3D models. Interest is recently devoted also to the development of *synthetic biomaterials-based 3D in vitro models*. LR developed different 3D models for drug screening and to study the effect of biomolecular features on tissue microenvironments and pathological onset. For the first time the specificity of ECM biomolecular identity specifically ECM glycosignature in cell fate modulation or pathological onset was demonstrated, opening the way to new paradigms in cancer research. Studies on brain, lung and gastrointestinal cancers have been performed. The same approach is under study for Inflammatory Bowel Diseases (IBD).
- **B)** Development of synthetic methodologies to implement medical devices properties. LR has extensive experience on chemistry of biomaterials applied to commercial or pre-clinical medical devices. She is involved in industrial activities aimed to improve implantable medical devices performance using biocompatible synthetic methodologies.

Awards and Honors:

- **2017** Award for innovation in research of the Italian Chemical Society "Organic Chemistry in Life Science" Award.
- **2018 XVI International Award Federichino 2018**. Federico II Foundation di Jesi, Palermo and Goppinghen.
- **2019 ITWIIN High Education Prize 2019.** ITWIIN Association (Italian Association of Women Inventors and Innovators)
- 2017 Recognition of Minister of State for Training, Skills and Innovation, John Halligan TD - as "next leaders of research in Ireland, shaping the research community both in Ireland and internationally"

- The research of Laura Russo gained a strong national and international recognition being reported by the media, including the *Tg1 and TG5 National Edition*, in which she was personally interviewed, and numerous foreign newspapers.

Institutional Responsibilities

- Member of PhD Program Board Medicina Traslazionale e Molecolare DIMET. Università degli Studi di Milano-Bicocca.
- **2023 Referent for Industrial Doctorate** establishment (Translational and Molecular Medicine Chapter) and **Member of PhD Board**.
- 2019 2024 President of Bicocca Alumni. Association of Alumni of University of Milano-Bicocca (<u>https://www.bicoccalumni.it/</u>).

Organization of Workshop/Conferences

- 1. Member of Organizing Committee of **Nanomedicine 2019**. Workshop on Nanomedicine at University of Milano-Bicocca. 2-3 May 2019.
- 2. Member of the International Advisory Board of the 6th World Conference on Tissue Engineering International and Regenerative (TERMIS), Maastricht 2021.
- 3. Chair of the Special Symposium on "BM6 Glycoscience in tissue engineering: from glycobiomaterials to glycosignature in regeneration", 6th World Conference on Tissue Engineering International and Regenerative (TERMIS), Maastricht 2021.
- Organiser and Chair of the next Special Symposium "Glycomodulation Approaches in Tissue Engineering", 22th European Conference on Tissue Engineering International and Regenerative (TERMIS), Cracovia, 28 June -1 July 2022
- 5. Member of the organizing committee of "Additive manufacturing in healthcare: from 3d printing to bioprinting" Lake Como School of Advanced Studies 5-9 June 2023

Project Involvement and Coordination

- **Ministero dell'Università e della Ricerca PRIN 2022.** "Dynamic multifunctional hydrogels for glioblastoma therapy (DINGO)", (**Coordinator**).
- Next Generation EU (NGEU) _PNNR Plan. ANTHEM Project "AdvaNced Technologies for Human-centEred Medicine" - PIANO NAZIONALE DEGLI INVESTIMENTI COMPLEMENTARI AL PNRR. Connecting patients and therapists through adaptive environments and intelligent sensors to enhance proximity medicine. (<u>Pilot 2.3 coordinator.</u> Smart wearable and portable sensors to monitor human healthiness and pathological states).
- Ministero della Salute, Ricerca Finalizzata RF-2021-12371959. "Tackling immunomodulatory properties of stromal cells to improve therapeutic strategies in lung cancer" (30.4.2023-29.4.2026)
- **Fondazione Italiana Diabete (FID)** "Bioengineering of a 3D bio-printed Vascularized Islet Construct for type 1 diabetes" (**Unit Coordinator**)

- POR-FESR 2014-2020 Innovazione e Competitività. PROGETTI STRATEGICI DI RICERCA, SVILUPPO E INNOVAZIONE, Azione I.1.b.1.3-IMMUN-HUB – Sviluppo di nuove molecole di seconda generazione per immunoterapia oncologica.
- COST Action CA18132, Functional Glyconanomaterials for the Development of Diagnostics and Targeted Therapeutic Probes. (Country Representative, MC Member UNIMIB PI Laura Russo, on going).
- Fondo di Ateneo, Quota Competitiva (III/2017). University of Milano-Bicocca. GLYcan functionalized Synthetic Extracellular Matrices GLYCOSEM. (Coordinator: Laura Russo).
- **Ministero della Salute, RICERCA FINALIZZATA 2016** RF-2016-02362946 (1/3/2018-28/2/2021) Theoryenhancing Projects. Title: Dissecting the link between pulmonary stromal changes and lung cancer progression for biomarkers discovery and therapeutic intervention.
- NMBP-15-2017 Nanotechnologies for imaging cellular transplants and regenerative processes in vivo: Project: Integration of Nano- and Biotechnology for beta-cell and islet Transplantation.
- Starting Investigator Research Grant (SIRG): Principal Investigator Award on the Project: Glyco-functionalised Hydrogel for Intervertebral Disc Tissue Repair. c/o National University of Ireland (NUI) Galway – Ireland (2016) (<u>Coordinator</u>)
- CARIPLO FOUNDATION: project 2012-0891 (3/2013-2/2015): Smart nanostructured hydrogelsystems for generation of contractile cardiac organoids (PI Marco Rasponi, Politecnico di Milano; (UNIMIB Coordinator).

Invited (IL), Plenary (PL) Keynote (KN) Lectures

- 1. IL. The importance of Glycosignature in ECM tissue models 8th China-Europe Symposium on Biomaterials In Regenerative Medicine (CESB 2024), Nuremberg (Germany).15-18 September 2024
- **2.** IL. Glyco-Biomaterials in medical translation: from organ inspired design to AI assisted synthesis. International Carbohydrate Symposium (ICS 2024), Shanghai, July 14-19, 2024.
- **3.** IL. XIV SISOC Spanish-Italian Symposium on Organic Chemistry. Glycobiomaterials for the generation of artificial patient-personalized tissues: from functionalization strategies to AI guided synthesis. 25-27 February 2024 Torino
- **4.** IL. 3D human tissue mimetics: from ECM mimics design to AI aided synthesis. **IUPAC** 13th International Symposium on Bioorganic Chemistry (ISBOC-13). 18-20 December 2023, Singapore.
- 5. KN. Hyaluronic acid/gelatin based, AI aided, synthesis of 3d human tissue mimetics. IUPAC International Symposium on the Chemistry of Natural Products, associated to the International Congress on Biodiversity (IUPAC ISCNP31 & ICOB11). October 15th -19th 2023 Napoli.
- 6. IL. Biomaterials for bioprinting (focus on in-vitro gut modeling). Additive manufacturing in healthcare: from 3d printing to bioprinting". Lake Como School of Advanced Studies 5-9 June 2023.
- **7.** IL. ECM mimetics for 3D Bioprinting applications: the importance of chemical and biomolecular features to guide cell fate. Nanoinnovation 2022, September 21-23, 2022 Rome
- **8.** IL. 3D Bioprinted tissue models by click chemistry approaches. School of Nanomedicine 2022. 8th to 10th June 2022, Rome, Italy.
- **9.** IL. Functionalization strategies and synthetic approaches in 3D printing-Bioprinting Winter School 2022 From printing set-up to laboratory analysis. 14-16 February 2022, Pavia Italy.
- IL. Generation of multifunctional nanoparticles for enhanced imaging properties of transplanted cells. International Embryo Technology Society. IETS – 48th annual Meeting Georgia, USA 10-13 January 2022.

- **11. KN**. Engineered bio-inks for 3D bioprinting: opportunities and challenges for tissue engineering and advanced cell models. 13th Biobarriers International Conference on Biological Barriers 7-8 September 2021.
- **12. IL**. Antibacterial and antiadhesive biomaterials: strategies and applications from nanomaterials to medical devices. Congresso Nazionale Biomateriali 11-14 July 2021, Lecce. Italy
- **13. IL.** Bioinks and polymers: biomolecular fingerprints, design, and synthesis of personalized 3D bioprintable ECM mimetics. IV Workshop Bioprinting: Dal Set-Up della Stampa alle Analisi in Laboratorio. 29 Settembre 2020.
- **14. IL.** XII edizione del Premio ITWIIN, organizzata da ITWIIN Associazione Italiana Donne Inventrici ed Innovatrici, in collaborazione con Assolombarda e STEAMiamoci. Milano, 17 e 18 novembre 2020
- **15. IL.** Pancreatic Tissue Engineering: 3D printing and Bioprinting in Diabetes research. 28° Congresso Nazionale Società Italiana Diabetologia (SID) Rimini, 2-5 Dicembre 2020.
- **16. IL.** Polymers and functionalization with respect the micro-environment. Bioprinting Winter School. Pavia 11-13 February 2020.
- **17. IL.** Functionalization of Biomaterials: From diagnostic to Tissue Engineering Applications. **IUPAC** International Symposium on Bioorganic Chemistry (ISBOC-12) 15-18 December 2019, Shenzhen, China.
- **18. IL.** Design and synthesis of Bioinks: new 3D bioprintable hybrids polymers. Cellink Collaborative Partnership Conference, May 10^{th,} 2019. Milan, Italy.
- **19.** IL. Biomaterials functionalization for nanomedicine applications. Nanomedicine 2019. 2-3 May Milan, Italy
- **20. IL.** "Design and synthesis of new bio printable hydrogels: challenges and opportunities of ECM mimetics. 2nd Bioprinting Workshop: From printing set-up to laboratory analysis. University of Pavia, 20 February 2019.
- **21. IL.** Materials to repair biology. Biomedical materials for the repair of tissues and organs. CarboMet 'GlycoMaterials' workshop. 24-25th January 2019, Grenoble, France.
- **22. IL.** Bioprintable inks: design, synthesis and preparation of new biomaterials for cell culture models and tissue engineering applications. 1st Bioprinting Workshop: From printing set-up to laboratory analysis. University of Pavia, 12 October 2018.
- PL. Glycans and biomaterials: from nanomedicine applications to 3D bioprinted cell culture models. XVI Convegno-Scuola Chimica dei Carboidrati (XVI CSCC 2018). Pontignano (SI) 17-20 June 2018.
- **24. PL.** When glycochemistry meets biomaterials: from design to application of synthetic glyco-tools. XXVI National Conference of Italian Chemical Society. Paestum 10-14 September 2017.
- **25. IL.** Neoglycosylated collagen for neuronal regeneration. 1° International Conference on the Glycobiology of Nervous System. September 2-5, Seoul, Korea 2017
- **26. IL.** Scaffolds for neuronal differentiation. (Nanomib University Milano-Bicocca). NanoInnovation 2016, Rome 20-23 September 2016.
- **27. IL.** Nuovo materiale ibrido 3D per ingegneria tissutale cartilaginea. Expò Sanità, 20° mostra al servizio della sanità, 18-21 May 2016 Bologna

Invited Seminars

- 1. Glycobiomaterials in translation: from synthetic strategies to AI assisted formulation. University of Bristol. 20th March 2024, UK.
- 2. Personalized 3D in vitro tissue mimetics: from smart biomaterials to AI assisted formulation strategies. Imperial College of London. 17th November 2023, London UK

- 3. Functional Biomaterials: synthetic efforts for the development of smart medical devices and 3D ECM mimics. Ronzoni Institute, 14th October 2021, Milan, Italy
- 4. Biomaterials for tissue engineering and 3D cell constructs: synthetic efforts and formulation strategies. 20 February 2020, National University of Galway, Ireland, Dept of Chemistry
- 5. Glyco-Biomaterials for regenerative medicine applications and 3D culture models. 21 February 2020 Maynooth University, Dublin Ireland
- 6. Synthetic efforts to generate biomaterials for tissue engineering and 3D bioprintable in vitro models. 4 October 2019 CNR, Catania.
- 7. Chemical Approach for personalized Medicine. University of Padua, Dept of Chemistry. 26 July 2017. Padua IT
- 8. Biomaterials and tissue engineering: synthetic approach for bioactive scaffolds. Dept of Chemistry 4 May 2017, National University of Ireland, Galway (NUIG) Ireland
- 9. Extracellular Matrix mimetics: from tissue engineering to cell cultures models" 13 November 2017. Fondazione Tettamanti, Monza. Milano.

Oral Communications

- Glycosignature in Human Tissue Model Libraries Aided by Artificial Intelligence. <u>L. Russo</u>, Convegno Scuola Chimica dei carboidrati (XVIII CSCC 2023) 25-28 June 2023. Pontignano (Siena).
- 2. 3D bioprinted colon cancer models: glycosignature induces cell fate. <u>L. Russo.</u> XL Convegno Nazionale della Divisione di Chimica Organica CDCO2022) 11-16th September 2022. Palermo
- 3. Engineered bio-inks for 3D bioprinting: opportunities and challenges for tissue engineering and advanced cell models. Debrecen Colloquium on Carbohydartes 2020 in 2022. 24-27th August 2022. Debrecen
- Glycans in tissue engineering: 3D Bioprintable glycopolymers. <u>L. Russo</u>. 4th GlycoBasque Meeting, November 11-12, San Sebastian, Spain.
- Chemoselective synthesis of triple-functionalizes nanoparticles for multimodal in vivo imaging of pancreatic β-cells. <u>L. Russo</u> et al. XXVII Conference of Italian Chemical Society (SCI2021) 14-23 September 2021, Milan.
- 6. Glycobiomaterials for development of medical devices: from printable 3D cultures to regenerative medicine. L. Russo, et al. 2nd COST Meeting GlycoNanoprobes. 16 Dicembre 2020
- Glyco-biomaterials for tissue engineering and 3D in vitro studies: Functionalization strategies and future outlook. <u>L. Russo</u>, et al. 1st Meeting COST ACTION 18132 GLYCOnanoPROBES 18th – 20th November 2019
- 8. 3D bioprintable Glycobiomaterials: design and synthesis of glycoconjugate polymers for 3D in vitro studies. <u>L. Russo</u>, et al. Eurocarb 2019. Leiden
- Design and synthesis of 3D printable biomaterials for tissue engineering and 3D in vitro models. <u>L. Russo</u>, et al. XXXIX Convegno Nazionale della Divisione di Chimica Organica, CDCO Torino 2019. 8-12 November 2019. Torino, Italy
- New 3D printable glyco-biomaterials: synthesis and characterization of scaffolds for advanced 3D organoids and in vitro models. 25 International Symposium on Glycoconjugates. <u>Russo, L</u>. et al. August 25th-31st 2019. Milan.
- Nanostructured glyco-ECM mimetics: glycosylated tools for lung cancer cell biology studies.
 <u>L. Russo</u>, et al. International School of Nanomedicine. "New trends in nanomedicine". Erice (TP) 8-13 April 2017
- Glyco-biomaterials for tissue engineering and 3D in vitro studies: Functionalization strategies and future outlook. <u>L. Russo</u>, et al. 1st Meeting COST ACTION 18132 GLYCOnanoPROBES 18th – 20th November 2019.
- Cartilage regeneration with neoglycosylated collagen patches. <u>L. Russo</u>, et al (2013). SISC XXXIII Congresso Nazionale 3-4 Ottobre, Pavia

14. Design of Smart Biomaterials. (2010) L. Russo, et al. Italian-Spanish Joint Workshop Milano (Italy), 22 April 2010.

Commission of Trust:

- Editorial Advisory Board Member of Carbohydrate Polymers Elsevier.
- Editorial Advisory Board Member of Chemistry Europe Wiley.
- Editorial Board Member of *Translational Oncology* (TRANON) Elsevier.
- **Board of Assistant Editors** of *Journal of Materials Science: Materials in Medicine* Springer Nature.
- Editorial Board Member of Organic Materials Georg Thieme Verlag KG Thieme Gruppe.
- **Guest Editor** of "Frontiers in Chemistry" Special Issue on "Glyco-tools to track unsolved medical needs".
- Referee for peer reviewed scientific journals: Journal of the American Chemical Society, Acta Biomaterialia, ACS Applied Materials & Interfaces, ACS Applied Biomaterials, Chemistry of Materials ACS, Langmuir, Biomacromolecules, Biomaterial Science (RSC), Macromolecules (ACS), Carbohydrate Polymers, Current Opinion in Chemical Biology, Carbohydrate Research, Colloids and Surfaces B: Biointerfaces, Digestive and Liver Disease, International Journal of Pharmaceutics, European Journal of Pharmaceutics and Biopharmaceutics, Journal of Colloid and Interface Science, Journal of the Royal Society Interface, The International Journal of Artificial Organs, Pure and Applied Chemistry, Journal of Functional Biomaterials.
- Grant referee for International and National Funding Agencies: H2020 ITN-IF CHEM, European Science Foundation, UK Research and Innovation (UKRI), La Caixa Foundation, Austrian Science Fund (FWF), Fundação para a Ciência e a Tecnologia, I. P. (FCT), IRC - Irish Research Council, Technology Croatian Science Foundation (HRZZ), National Science Centre, Poland (NCN), Banco di Sardegna, University of Florence, University of Camerino.
- **Panel Member for International and National Funding Agencies:** H2020 European Commission; FCT Panel Fundação para a Ciência e a Tecnologia, I. P. (FCT).

Membership of Scientific Societies and European Agencies Participation:

LR is Member of several Research Network: *"Società Chimica Italiana" (SCI)*; *"Gruppo Interdivisionale di Chimica dei Carboidrati – SCI*; *"Milan center for Neuroscience (Neuromi)*"; "European Innovation Partnership on Active and Healthy Ageing (EIP on AHA)" - European Commission.

Didactic activities

- 2023 2024 Professor Robotic and AI in Medicine, EU-PNNR course for high-school students.
- 2023 2024 Professor 3D Models for Glioblastoma Research. PhD in Neuroscience. UNIMIB.
- 2023 2024 Chemistry for Nanomedicine. I Semester- Chemistry for Nanomedicine. Chemistry.
- 2023 2024 Organic Chemistry Laboratory. Il Semester Organic Chemistry Laboratory Course, University of Milan-Bicocca; practical based course for undergraduate students of Biotechnology (I year).
- 2023 2024 Organic Chemistry Laboratory. Il Semester Organic Chemistry Laboratory Course, University of Milan-Bicocca; practical based course for undergraduate students of Biotechnology (I year).
- 2023 2024 Organic Chemistry Laboratory. I Semester Organic Chemistry Laboratory Course, University of Milan-Bicocca; practical based course for undergraduate students of Biological Science (I year).
- **2022 2023 Professor** II Semester Organic Chemistry Laboratory Course, University of Milan-Bicocca; practical based course for undergraduate students of Biotechnology (I year).
- **2022 2023 Professor** II Semester Organic Chemistry Laboratory Course, University of Milan-Bicocca; practical based course for undergraduate students of Biotechnology (I year).
- 2022 2023 Professor I Semester Organic Chemistry Laboratory Course, University of Milan-Bicocca; practical based course for undergraduate students of Biology (III year).
- 2022 2023 Professor I Semester– Chemistry for Nanomedicine. Chemistry.
- **2021 2022 Professor** II Semester Organic Chemistry Laboratory Course, University of Milan-Bicocca; practical based course for undergraduate students of Biotechnology (I year).
- 2021-2022- Professor. I Semester Chemistry for Nanomedicine. Chemistry.
- **2020 2021 Professor** I Semester Organic Chemistry Laboratory Course, University of Milan-Bicocca; practical based course for undergraduate students of Biological Sciences (I year).
- **2020-2021 Professor** II Semester Organic Chemistry Course University of Milano-Bicocca; Exercises of Organic Chemistry, Biotechnology Course (II Semester; I Year).
- **2020-2021 Professor.** I Semester. I Semester Chemistry for Nanotechnology. Chemistry (Nanomedicine module)
- **2019 2020 Professor** II Semester Organic Chemistry Course University of Milano-Bicocca; Exercises of Organic Chemistry, Biotechnology Course (II Semester; I Year).
- **2019-2020**. **Professor.** I Semester. I Semester Chemistry for Nanotechnology. Chemistry (Nanomedicine module)
- **2018 2019 Professor** II Semester Organic Chemistry Course University of Milano-Bicocca; Exercises of Organic Chemistry, Biotechnology Course (II Semester; I Year).
- **2018 2019 Professor** II Semester Organic Chemistry Course University of Milano-Bicocca; Exercises of Organic Chemistry, Chemistry Course (II Semester; I Year).
- **2018-2019**. **Professor.** I Semester. I Semester Chemistry for Nanotechnology. Chemistry (Nanomedicine module)
- **2017 -2018**. Second Semester Lessons on biomaterials and bioprinting. Department of Medicine and Surgery (Second Semester, Biochemistry course)
- 2017 -2018. First Semester– Lessons on biomaterials and bioprinting. Chemistry (First Semester, Nanotechnology)
- **2017 2018 Professor** II Semester Organic Chemistry Course University of Milano-Bicocca; Exercises of Organic Chemistry, Biotechnology Course (II Semester; I Year).
- 2017 2018 Professor II Semester Organic Chemistry Course University of Milano-

Bicocca; practical based course for undergraduate students of Biotechnology (I year, II Semester).

- 2015-2016 2016 Professor Grant Writing Course, PhD School, University of Milano Bicocca (III year PhD Course)
- 2015 2016 Contract Professor I Semester Organic Chemistry Laboratory Course, University of Milan-Bicocca; practical based course for undergraduate students of Biological Sciences (I year).
- 2015 2016 Contract Professor I Semester Organic Chemistry Laboratory Course, University of Milan-Bicocca; practical based course for undergraduate students of Biological Sciences (I year).
- **2013 2014 Tutor**, Organic Chemistry Laboratory Course. University of Milano-Bicocca Practical based course for undergraduate students of Biological Sciences
- **2013 Support Teacher** for Dyslectic Undergraduate students of Biological sciences. Organic Chemistry Course, University of Milano – Bicocca.
- **2012 2013 Tutor**, Organic Chemistry Laboratory Course. University of Milano-Bicocca Practical based course for undergraduate students of Biological Sciences.
- **2010 2011 Tutor**, Organic Chemistry Laboratory Course. University of Milano-Bicocca Practical based course for undergraduate students of Biotechnology.
- **2008 2009 Tutor**, Organic Chemistry Laboratory Course. University of Milano-Bicocca Practical based course for undergraduate students of Biotechnology.
- **2007 2008 Tutor**, Organic Chemistry Laboratory Course. University of Milano-Bicocca Practical based course for undergraduate students of Biotechnology.
- **2006 2007 Tutor**, Organic Chemistry Laboratory Course. University of Milano-Bicocca Practical based course for undergraduate students of Biological Sciences.
- **2005 2006 Tutor**, Organic Chemistry Laboratory Course. University of Milano-Bicocca Practical based course for undergraduate students of Biotechnology.
- **2005 2006 Tutor**, Organic Chemistry Laboratory Course. University of Milano-Bicocca Practical based course for undergraduate students of Biological Sciences.

Supervision of Graduate Students and Undergraduate fellows

UNIMIB: Tutor of **5** Post-Doc, **13** PhD students, **22** master's degree students in Chemistry, **8** Master Degree students in Industrial Biotechnology, **3** master's degree students in Material Science, **2** Erasmus students in Chemistry, **2** Erasmus Student in Biotechnology.

Cùram – National University of Galway: 4 PhD Students in Biomedical Engineering, 2 Post Doc, 2 Erasmus Undergraduate Students. Supervision of students on project related to biomaterials synthesis and glycosignature in pathologies.

PUBLICATIONS

Bibliometric indexes

Publications	*Corresponding Author	Invited Lectures	Invited Seminars
	21	27	9
68	^First Author	Oral Comm.	Book Chapters
	15	15	13

Bibliometric indexes: Scopus H-index 24, cit 1676 – Google Scholar H-index 25, cit 2007 Field - Weighted Citation Impact 2013 – 2023: FWCI:2.227 (Last Author) - (Source Scopus 2013-2022)

Ai sensi della legge 679/2016 del Regolamento del Parlamento Europeo del 27 aprile 2016, esprimo il mio consenso al trattamento e utilizzare i miei dati forniti in questo CV

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV

Milan 20/01/2024