

## PERSONAL INFORMATION

## MASSIMO SERRA



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Sex **Male** | 07/02/1978 | Nationality **Italian**

## WORK EXPERIENCE

- 2026- **Tenure-Track Researcher (RTT)** at the Department of Drug Sciences of the University of Pavia, holding official responsibility for the courses of Organic Chemistry 1 (cdL Pharmaceutical Chemistry and Technology), Principles and Pharmaceutical Applications of Organic Catalysis (cdL Pharmacy/Pharmaceutical Chemistry and Technology), and Organic Chemistry (cdL Industrial Nanobiotechnologies for Pharmaceuticals).
- 2025 - 2026 **Professor** under contract of Organic Chemistry 1, (cdL Pharmaceutical Chemistry and Technology) at the Department of Drug Sciences of the University of Pavia, Italy.
- 2024 - 2026 **Professor** under contract of Principles and Pharmaceutical Applications of Organic Catalysis (cdL Pharmacy/Pharmaceutical Chemistry and Technology) and Biotechnological Drugs and Vaccines (cdL Industrial Nanobiotechnologies for Pharmaceuticals) at the Department of Drug Sciences of the University of Pavia, Italy.
- 2022 - 2024 **Professor** under contract of Organic Chemistry 1, (cdL Pharmaceutical Chemistry and Technology) at the Department of Drug Sciences of the University of Pavia, Italy.
- 2011 - 2021 **Professor** under contract of Organic Chemistry 2 with Principles of Spectroscopy, (cdL Pharmaceutical Chemistry and Technology) at the Department of Drug Sciences of the University of Pavia, Italy.
- 2008 - current **Lecturer** in "Advanced Organic Chemistry course" within the "II Level Master Degree in Drug Design and Development" at the University of Pavia.
- 2008 - current **Lecturer** of organic chemistry and NMR in various academic courses and seminars within the Faculty of Pharmacy, University of Pavia.
- 2008 **Research Technician** at the Department of Drug Sciences of the University of Pavia, Italy.
- 2008 **Italian co.co.co.** (continuous collaboration contract). Project: "Functionalization of silicon surfaces with organic compounds". Department of Drug Sciences of the University of Pavia, Italy.
- 2007 - 2008 **Scholarship** awarded by Regione Lombardia: "Low Environmental Impact processes for the stereoselective synthesis of active principles". Department of Drug Sciences of the University of Pavia, Italy.
- 2006 - 2007 **Teaching Assistant** of "Organic Chemistry 1" and "Organic Chemistry 2" courses within the Degree Course in Pharmaceutical Chemistry and Technology (CTF), Faculty of Pharmacy, University of Pavia.
- 2004 - 2008 **Tutor** of "Organic Chemistry 1" course within the Degree Course in Pharmaceutical Chemistry and Technology (CTF), Faculty of Pharmacy, University of Pavia
- 2004 **Scholarship** awarded by Dipharma Francis, Baranzate (Milan): "Synthesis of new patentable tetrazole-based active pharmaceutical ingredients".

## ACADEMIC EDUCATION AND QUALIFICATIONS

- 2026 **Tenure-Track Researcher (RTT)** in Organic Chemistry, University of Pavia
- 2025 **National Scientific Qualification (ASN) for Associate Professorship in Organic Chemistry** (SSD CHEM-05/A), awarded by the Italian Ministry of University and Research.
- 2008 **Appointment as “Cultore della Materia”** in Organic Chemistry.
- 2008 **Ph.D.** in “Pharmaceutical Chemistry and Technology” at the University of Pavia (EQF level 8).
- 2007 **2<sup>nd</sup> Level Master Degree** in “Drug Design and Development” at the University of Pavia (EQF level 8).
- 2004 **Qualified pharmacist.**
- 2003 **Degree with honours in Pharmaceutical Chemistry and Technology**, at the University of Pavia (EQF level 7).

## WORK ACTIVITIES

### Statement of scientific research topics and activity

Massimo Serra received his *summa cum laude* Laurea degree and Ph.D. in Pharmaceutical Chemistry and Technology from the University of Pavia, working on the synthesis of RGD-based integrin antagonists with potential applications in anticancer therapy.

His early research activity focused on the development of novel patentable synthetic routes to active pharmaceutical ingredients (APIs) exploiting transition metal-catalyzed coupling reactions, under the direct supervision of the sponsoring pharmaceutical industry.

In late 2008, he joined the organic synthesis group led by Prof. Lino Colombo at the Department of Drug Sciences, University of Pavia, as Research Technician. Over the years, this position also enabled him to establish long-term collaborations with pharmaceutical companies as an external consultant, allowing him to acquire expertise in strategic problem solving and in the requirements related to the industrial production of drug intermediates and APIs.

Since 2011, he has served as Contract Professor of Organic Chemistry at the Faculty of Pharmacy. During the last years, he also spent time as a visiting researcher at the Centre for Amyloidosis and Acute Phase Proteins (London, UK), investigating protein–ligand interactions in amyloidosis using advanced NMR techniques.

Since 2026, he has been a Tenure-Track Researcher in Organic Chemistry (CHEM-05/A) at the Department of Drug Sciences, University of Pavia.

His research activity focuses on the development of novel synthetic methodologies for the preparation of medicinally relevant compounds. His current research interests include the design and synthesis of peptidomimetics able to induce protein turn conformations, the synthesis of integrin inhibitors and their covalent conjugates with anticancer agents, and the asymmetric synthesis of oligosaccharides, quaternary amino acids, and C-glycosyl amino acids.

Another area of his research activity concerns the preparation of glycopeptides and glycoproteins with potential anticancer and vaccine applications, as well as the synthesis of molecularly imprinted polymers (MIPs) for the early detection of cancer biomarkers. He is also involved in the development and functionalization of nanosystems for targeted drug delivery and theranostic applications.

### Organizational and management activities

Organization and supervision of the laboratory of organic synthesis of the department of Drug Sciences, University of Pavia. Coordination of formation activities for undergraduate and graduate students who carry out research in organic synthesis and medicinal chemistry.

Dr. Serra has been tutor or co-tutor of 54 experimental Degree Thesis in Pharmaceutical Chemistry and Technology and Pharmacy in the 2008-2026 period, among which 4 Erasmus Thesis, and 3 Industrial Thesis.

He has been co-tutor of 4 Ph.D. Thesis in Chemical and Pharmaceutical Sciences and Industrial Innovation.

### Editorial activity

Editorial Board Member for Scientific Reports, Nature Portfolio.

Referee activity for scientific journals: Chemistry-A European Journal, Chemistry-Methods, European Journal of Organic Chemistry, Scientific Reports, Tetrahedron Letters, Tetrahedron: Asymmetry, Current Organic Synthesis, Chirality, Catalysts, Molecules.

- Oral presentations**
- “*Chemical mannosylation of antigenic elastin-like recombinamers for the development of new glyco-nanovaccine against tuberculosis*”, The 4<sup>th</sup> Molecules Medicinal Chemistry Symposium, Barcelona, Spain, 24-26<sup>th</sup> April, 2024.
  - “*Synthesis of cRGD functionalized nanosystems for tumor site-specific delivery of anticancer agents*”, The SMS 2023 / Sensors 2023 / EGF 2023 / NanoMed 2023 Joint International Conferences, Albufeira, Portugal, 25-28<sup>th</sup> October, 2023.
  - “*Design and development of cRGD-decorated nanosystems as drug delivery platforms for cancer treatment*”, 19<sup>th</sup> Asian Chemical Congress, Istanbul, Türkiye 9-14<sup>th</sup> July, 2023.
  - “*Azabicycloalkane lactams: versatile scaffolds through versatile syntheses*”, Peptides and conjugates for tumor targeting, therapy and diagnosis, RiminiPeptides2018, Rimini, 16-18<sup>th</sup> June, 2018. (Invited speaker)
  - “*New synthetic approaches for the obtainment of azabicycloalkane scaffolds en route to cRGD-based bioconjugates*”, Synthesis and biomedical applications of tumor-targeting peptidomimetics, Bologna, Italy, 14-16<sup>th</sup> February, 2016. (Invited Speaker)
  - “*Synthesis of Integrin Inhibitors*”, European School of Medicinal Chemistry (XXVII Advanced Course of Medicinal Chemistry and “E. Duranti” National Seminar for PhD students), Urbino, 1-6<sup>th</sup> July, 2007. (Selected poster for oral presentation)

**Grants** Dr. Serra was actively involved in the following research projects funded at national or European level:

- MIPrecise: “Robust biomarker binders, probes and assays for sustainable precision medicine” Horizon Europe Marie Skłodowska-Curie Doctoral Network (MSCA-DN). Grant Agreement No. 101226400. Call: HORIZON-MSCA-2024-DN-01. EU-funded project (2025–2029).
- “Investigating the role of microglia in oligodendrocyte maturation and myelination in cellular models of Alzheimer’s disease: a preclinical study with N acylethanolamines – MICROLAD”. ID progetto: 1673701, a part of Progetto MNESYS, Codice Bando PE00000006
- “Immunoterapia: cura e prevenzione di malattie infettive e tumorali (Immuno-HUB), codice progetto T4-CN-02, Traiettorie 4 del Piano operativo salute: “Biotecnologie, bioinformatica e sviluppo farmaceutico”;
- H2020-MSCA-ITN-2016, 722171 Project Biocapture (Associated partner);
- PRIN 2015 (prot. 20157WW5EH, “Tumor-targeting peptidomimetics: synthesis and biomedical applications”);
- PRIN 2010 (prot. 2010NRREPL, “Synthesis and biomedical applications of tumor-targeting peptidomimetics”);
- PRIN 2008 (prot. 2008J4YNJY, “Sintesi e applicazioni biomediche di ligandi delle integrine e loro coniugati”);
- Fondazione CARIPLO (2007-5151, “Sviluppo di un biosensore ottico per la rivelazione dell’interazione fra fibrille amiloidi e ligandi su matrice di silicio microstrutturato”);
- PRIN 2006 (prot. 2006030449\_001, “Design and synthesis of peptidomimetic ligands targeting integrins and conjugates for therapeutic applications”).

## PERSONAL SKILLS

Mother tongue(s)	Italian
Other language(s)	English
Job-related skills	Team working ability, team coordination ability

ADDITIONAL INFORMATION

**Publications**

total number of publications in peer-review journals (Scopus): **51**

total number of citations (Scopus): **1112**

H index (Scopus): **19**

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SciProfiles: 784640

<https://sciprofiles.com/profile/784640>

Google Scholar

<https://scholar.google.com/citations?user=afLGFVwAAAAJ&hl=it>

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.

Pavia, 11-05-2026

Massimo Serra

