

PERSONAL INFORMATION

MASSIMO SERRA



University of Pavia
Department of Drug Sciences
Via Taramelli 12
27100 Pavia, Italy

+390382987746

massimo.serra@unipv.it

[State personal website\(s\)](#)

<https://unipv.unifind.cineca.it/individual?uri=http%3A%2F%2Firis.unipv.it%2Fresource%2Fperson%2F663917>



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

WORK EXPERIENCE

- 2024-2025 **Professor** under contract (Biotechnological Drugs and Vaccines, cdL Industrial Nanobiotechnologies for Pharmaceuticals) at the Department of Drug Sciences of the University of Pavia, Italy.
- 2022 - current **Professor** under contract (Organic Chemistry 1, and Principle and Pharmaceutical Applications of Organic Catalysis cdL Pharmaceutical Chemistry and Technology) at the Department of Drug Sciences of the University of Pavia, Italy.
- 2011 - 2021 **Professor** under contract (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".

EDUCATION AND TRAINING

- 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 **2nd 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 University of Pavia, working at the synthesis of RGD-based integrin antagonists with potential applications in anticancer therapy.

His research activity was initially focused on new patentable synthesis of active pharmaceutical ingredients (API) exploiting transition metals catalysed coupling reactions, under direct supervision of the grant providing pharmaceutical industry. During this period, Dr. Serra gained experience concerning patent research and patent drafting. Multi-year collaborations with pharmaceutical industries as external consultant allowed him to gain knowledge regarding strategic problem solving and requirements related to industrial production of drug intermediates and API.

In late 2008 he started his work as Research Technician in the group of organic synthesis led by Prof. Lino Colombo at the Department of Drug Sciences of the University of Pavia.

Since 2011, he was appointed as a contract Professor of Organic Chemistry at faculty of Pharmacy. During the last years he spent some time as visiting researcher at the Centre for Amyloidosis and Acute Phase Proteins, UCL (London, UK), to investigate protein-ligand interactions in amyloidosis using advanced NMR techniques.

His research is focused on the development of novel synthetic methods for the obtainment of medicinal relevant compounds, including the asymmetric synthesis of mannose-based oligosaccharides, C-glycosyl- and quaternary amino acids. Dr. Serra is particularly interested in the design of fast synthetic strategies to gain constrained peptide mimics such as azabicycloalkane amino acids.

Another topic of his research activity is the development of one-pot processes exploiting cascade metathetic transformations as key reactions to gain biologically active compounds.

He is also involved in international research programs aimed at the preparation of new peptide anticancer agents, cancer-associated glycopeptides, and chemically modified nanosystems for active drug delivering.

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 53 experimental Degree Thesis in Pharmaceutical Chemistry and Technology and Pharmacy in the 2008-2023 period, among which 4 Erasmus Thesis, and 3 Industrial Thesis.

He has been co-tutor of 2 Ph.D. Thesis in Chemical and Pharmaceutical Sciences and Industrial Innovation. Nowadays he is co-tutor of 2 Ph.D. students.

Editorial activity

Referee activity for scientific journals: *Tetrahedron Letters*, *Tetrahedron: Asymmetry*, *Current Organic Synthesis*, *Chirality*, *Catalysts*, *Molecules*, *European Journal of Organic Chemistry*.

Oral presentations

- "Chemical mannosylation of antigenic elastin-like recombinamers for the development of new glyco-nanovaccine against tuberculosis", The 4th Molecules Medicinal Chemistry Symposium, Barcelona, Spain, 24-26th 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, 25-28th October, 2023.
- "Design and development of cRGD-decorated nanosystems as drug delivery platforms for cancer treatment", 19th Asian Chemical Congress, Istanbul, Türkiye 9-14th July, 2023.
- "Azabicycloalkane lactams: versatile scaffolds through versatile syntheses", Peptides and conjugates for tumor targeting, therapy and diagnosis, RiminiPeptides2018, Rimini, 16-18th 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, 14-16th 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, 1-6th July, 2007. (Selected poster for oral presentation)

- Grants** Dr. Serra was actively involved in the following research projects funded at national or European level:
- "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: **44**

total number of citations: **728**

H index (Scopus): **17**

Massimo Serra ORCID: <https://orcid.org/0000-0002-6724-4355>

Scopus Author ID: 24336323600

<http://www.scopus.com/inward/authorDetails.url?authorID=24336323600&partnerID=MN8TOARS>

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, 05-07-2024

Massimo Serra

