CURRICULUM VITAE Prof. FRANCESCA MARINI

Dept. Pharmaceutical Sciences,University of Perugia – Via del Liceo, 1 Perugia -06126, Italy
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30/03/1990	**Master degree (summa cum lode) in Pharmaceutical Chemistry and Technology,** University of Perugia
May-October 1990	**Fellowship Mediolanum Farmaceutici S.p.A**. Research topic: "Synthesis of Heterocyclic Derivatives of Biological Interest", supervisor Prof. A. Fravolini
June 1994	**Ph.D degree in Chemical Sciences** with a Doctoral Thesis titled: "Cyclization reactions promoted by organoselenium compounds. New syntheses of heterocyclic compounds." Supervisor Prof. M. Tiecco

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Position in Academy

November 1994 - October/2006	**Assistant Professor** University of Perugia (ex Faculty of Pharmacy),
November 2006-present	**Associate Professor** Department of Pharmaceutical Science, University of Perugia

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Teaching and traininig activities

a.y. 2009/2010 - present	**Organic Chemistry I** (9 CFU), Master degree in Pharmaceutical Chemistry and Technology
a.y.2013/2014 - present	**"Bioorganic Chemistry"** (6 CFU), Master degree in Pharmaceutical Biotechnologies
a.y. 2012/13	**Organic Chemistry of Natural Compounds** (6 CFU), Master degree in Pharmacy
a.y 2005/2006 – 2008/2009	**"Stereochemistry and Fundamentals of Asymmetric Synthesis"** (3 CFU), Master degree in Pharmaceutical Biotechnology
a.y 2001/2002-2008/2009	"**Organic Chemistry"** (10 CFU), bachelor degree in Quality Control – CQSIFA
a.y 1998/1999-2000/2001	**"Heterocyclic Chemistry",** Master degree in Pharmaceutical Chemistry and Technology
From november 1994 to october 2005	Teaching assistant for "Organic Chemistry 1" "Organic Chemistry 2" and "Physical Methods for Organic Chemistry", Master degree in Pharmaceutical Chemistry and Technology
a.y 1997/1998 - present	Advisor and co-advisor for experimental diploma thesis work
	Supervisor of 5 Ph.D students
	Supervisor of 1 post-doc researcher.

Coordination Activity

March 2013-October 2019	Delegate Member of the board of Interuniversity Consortium CINMPIS (National Interuniversity Consortium for Innovative Methodologies and Processes of Synthesis)
June 2017-October 2022	ViceCoordinator of the PhD in Pharmaceutical Sciences
a.y. 2022-2023 - present	Member AQ PhD Program in Phamaceutical Sciences

Membership

Società Chimica Italiana (SCI)

International Network for Multidisciplinary Research on Selenium Sulfur and other Redox Catalyst (SeS Redox and Catalysis)

Scientific Activity The scientific interest of Prof. Marini is mainly focused on the development of new synthetic methodologies promoted or catalyzed by organoselenium reagents and its application to the synthesis of molecules of biological significance. Her research activities involve important topics of modern organic synthesis such as domino reactions, asymmetric organocatalysis, chemo and stereoselective methodologies and eco-sustainable syntheses. Prof. Marini is co-author of 101 scientific articles published in International Journals, 3 chapters and monographies, and several communications at national and international meetings. She has been member of national research projects and has linked collaborations with several national and international research groups, also in the framework of the International Network for Multidisciplinary Research on Selenium Sulfur and other Redox Catalysts (SeS Redox and Catalysis). Prof. Marini has been application reviewer for MIUR-Italian Ministry of University and Research. She serves as reviewer for several international scientific journals such as Organic Lett., Advanced Synthesis & Catalysis, Organic and Biomolecular Chemistry, European Journal of Organic Chemistry, ChemCatChem, Tetrahedron Lett., Catalysis Science & Technology, Synthesis, Symmetry, Molecules.
She is section board member of Molecules (section Organic Chemistry) and guest Editor of three special Issues in the same journal.

Awards and citations

Citation in Synfacts "Highlights in Current Synthetic Organic Chemistry" 2011, 12, 1349.

Citation in Synfacts "Highlights in Current Synthetic Organic Chemistry" 2008, 7, 728.

Citation in Organic Chemistry Highlights-Organic Chemistry Portal, February, 8, 2010, www.organic-chemistry.org/Highlights.

Tetrahedron Asymmetry: Most Cited Paper 2004-2007. (see list of publications)

Bibliometric indicators (at October 2024)

Number of indexed publications: 106 in Scopus; 108 in WOS.
Total number of citations: 3215 (Scopus); 3116 (WOS).
H-index: 34 (Scopus)); 34 (WOS).

List of publications

106) M. Palomba, A. Angeli, R. Galdini, A. J. Hughineata, G. Perin, E. J. Lenardão, F. Marini, C. Santi, C. T. Supuran, L. Bagnoli. Iodine/Oxone® oxidative system for the synthesis of selenylindoles bearing a benzenesulfonamide moiety as carbonic anhydrase I, II, IX, and XII inhibitors *Org. Biomol. Chem*., **2024**, *22, 6532-6542*. https://doi.org/10.1039/D4OB00826J

105) L. Bagnoli, O. Rosati, F. Marini, C. Santi, L. Sancineto. Selenosulfones, a Meetup of Chalcogens: A Journey Into Their Recent Chemistry. *Eur. J. Org. Chem*. **2024**, *27*, e202400169. https://doi.org/10.1002/ejoc.202400169

104) I. F. C. Dias, G. Allegrini, E. Wielgus, J. Drabowicz, E. J. Lenardão, L. Bagnoli, C. Santi, F. Marini* Cyclopropanation of Aryl and Styryl Acetonitriles With Selenium-Based Dielectrophiles *Eur. J. Org. Chem*. **2024**, 27, e202400187. https://doi.org/10.1002/ejoc.202400187 Articolo su invito, Special Issue: New-Generation Methodologies in Organic Chemistry: A Focus on Italy.

103) B. G. Singh, K. P. Prasanthkumar, F. Mangiavacchi, F. Marini, C. Santi. Reactivity of oxidants towards phenyl and benzyl substituted 5-selanylpentanoic acids: radiolytic and theoretical insights. *New Journal of Chemistry* **2024**, *48*, 36. https://doi.org/10.1039/D3NJ04487D.

102) Benedetto Tiz D., Bagnoli L., Rosati O., Marini F., Sancineto L., Santi C. Top Selling (2026) Small Molecule Orphan Drugs: A Journey into Their Chemistry. *Int J Mol Sci.* **2023**, 24, 930. doi: 10.3390/ijms24020930.

101) Palomba, M., Dias, I.F.C.; Cocchioni, M.; Santi, C.; Marini, F:; Bagnoli, L.
Vinylation of N-Heteroarenes through Addition/Elimination Reactions of Vinyl Selenones
Molecules, 2023, 28(16), 6026

100) Benedetto Tiz, D.; Bagnoli, L.; Rosati, O.; Marini, F.; Sancineto, L.; Santi, C.
New Halogen-Containing Drugs Approved by FDA in 2021: An Overview on Their Syntheses and Pharmaceutical Use.
Molecules **2022***, 27*, 1643. https://doi.org/10.3390/molecules27051643.

99) Mangiavacchi,F; Mazzeo, G.; Graziani, M. C.; Marini, F.; Drabowicz, J.; Wielgus, E.; Sancineto, L.; Longhi, G.; Vivani, R.; Abbate, S.; Santi, C. A Vibrational and Electronic Circular Dichroism Study of Chiral Seleno Compounds Prepared from a Novel Naphthol based Diselenide.
Eur. J. Org. Chem. 2022, e202200282. https://doi.org/10.1002/ejoc.202200282.

98) Mangiavacchi, F., Botwina, P., Menichetti, E., Bagnoli, L.; Rosati, O.; Marini, F.; Fonseca; S. F.; Abenante, L.; Alves, D.; Dabrowska, A.; Kula-Pacurar, A.; Ortega-Alarcon, D.; Jimenez-Alesanco, A.; Ceballos-Laita, L.; Vega, S.; Rizzuti, B.; Abian, O.; Lenardão, E. J.; Velazquez-Campoy, A.; Pyrc, K.; Sancineto, L., Santi, C.
Seleno-Functionalization of Quercetin Improves the Non-Covalent Inhibition of Mpro and Its Antiviral Activity in Cells against SARS-CoV-2 International Journal of Molecular Sciences, 2021, 22(13), 704895. Scopus: 2-s2.0-85108891346; WOS:000671135800001. https://www.mdpi.com/1422-0067/22/13/7048.

97) Palomba, M.; Franco Coelho Dias, I.; Rosati, O.; Marini, F.
Modern Synthetic Strategies with Organoselenium Reagents: A Focus on Vinyl Selenones.
Molecules 2021, 26, 3148.Scopus: 2-s2.0-85107425475; WOS:000660368800001. https://www.mdpi.com/1420-3049/26/11/3148.

96) Palomba, M.; De Monte, E.; Mambrini, A.; Bagnoli, L.; Santi, C.; Marini, F.
A Three component [3 + 2]-Cycloaddition/Elimination Cascade for the Synthesis of Spirooxindole-pyrrolizines. Org. Biomol.Chem., 2021, 19, 667–676. Scopus: 2-s2.0-85100261456; WOS:000612478400020.
https://pubs.rsc.org/en/content/articlelanding/2021/ob/d0ob02321c

95) Marini, F. Exploring Selenones for Heterocycle Synthesis Targets in Heterocycle Systems, 2021, 25, 365. Scopus: 2-s2.0-85124759571.
https://www.soc.chim.it/sites/default/files/ths/25/chapter_16.pdf.

94) Mangiavacchi, F.; Dias, I. F. C.; Di Lorenzo, I.; Grzes, P.; Palomba, M.; Rosati, O.; Bagnoli, L.;

Marini, F.; Santi, C.; Lenardao, E. J.; Sancineto, L.
Sweet Selenium: Synthesis and Properties of Selenium-Containing Sugars and Derivatives. Pharmaceuticals 2020, 13 (9), 1–28. Scopus: 2-s2.0-85089847460; WOS:000580239200001. https://www.mdpi.com/1424-8247/13/9/211

93) Mangiavacchi, F.; Crociani, L.; Sancineto, L.; Marini, F.; Santi, C.
Continuous Bioinspired Oxidation of Sulfides. Molecules 2020, 25, (11), 2711. Scopus: 2-s2.0-85086686489; WOS:000553858800248. https://www.mdpi.com/1420-3049/25/11/2711

92) Nascimento, V.; Cordeiro, P. S.; Arca, M.; Marini, F.; Sancineto, L.; Braga, A. L.; Lippolis, V.; Iwaoka, M.; Santi, C.
Fast and Easy Conversion of ortho Amidoaryldiselenides into the Corresponding Ebselen-like Derivatives Driven by Theoretical Investigations.
New Journal of Chemistry **2020**, 44 (22), 9444–9451.
WOS:000540929200036. https://pubs.rsc.org/en/content/articlelanding/2020/nj/d0nj01605e86)

91) M. Palomba, E. Scarcella, L. Sancineto, L. Bagnoli, C. Santi, F. Marini.* Synthesis of Spirooxindole Oxetanes via a Domino Reaction of 3-Hydroxyoxindoles and Phenyl Vinyl Selenone. *Eur. J. Org. Chem*. **2019**, 5396–5401. https://doi.org/10.1002/ejoc.201900499. Articolo su invito, Special Issue: Heterocyclic Chemistry .

90) V. Mimini, F. Ianni, F. Marini, H. Hettegger, R. Sardella, W. Lindner. Electrostatic attraction-repulsion model with Cinchona alkaloid-based zwitterionic chiral stationary phases exemplified for zwitterionic analytes. *Anal. Chim. Acta*, **2019**, *1078*, 212-220.
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89) M. Palomba, F. Mangiavacchi, F. Marini.* Recent advances in selenium promoted or catalyzed electrophilic aminations of alkenes and alkynes. *Arkivoc* **2019**, part ii, 114-143. https://doi.org/10.24820/ark.5550190.p011.075.

88) M. Palomba, F. Trappetti, L. Bagnoli, C. Santi, F. Marini.* Oxone mediated oxidation of vinyl selenides in water. Eur. J. Org. Chem. 2018, 3914–3919. https://doi.org/10.1002/ejoc.201800498.

87) M. Palomba, L. Sancineto, F. Marini. C. Santi, L. Bagnoli. A domino approach to pyrazino-indoles and pyrroles using vinyl selenones. *Tetrahedron* **2018**, 74, 7156-7163, https://doi.org/10.1016/j.tet.2018.10.044.

86) F. Mangiavacchi, L. Mollari; L. Bagnoli, F. Marini, C. Santi. Condensation of 2-aminomethylaniline with aldehydes and ketones for the fast one-pot synthesis of a library of 1,2,3,4-tetrahydroquinazolines under flow conditions. Chem. Heterocycl. Compd. 2018, 54, 478-481. https://doi.org/10.1007/s10593-018-2292-0.

85) M. Palomba, F. Trappetti, L. Bagnoli, C. Santi, F. Marini.
Oxone mediated oxidation of vinyl selenides in water.
Eur. J. Org. Chem., **2018**,

84) L. Sancineto, F. Mangiavacchi, C. Tidei, L. Bagnoli, F. Marini, A. Gioiello, J. Scianowski, C. Santi
Selenium-Catalyzed Oxacyclization of Alkenoic Acids and Alkenols
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83) G. Mazzeo, G. Longhi, S. Abbate, M. Palomba, L. Bagnoli, F. Marini, C. Santi, J.L. Han, V.A. Soloshonok, E. Di Crescenzo, R. Ruzziconi
Solvent-free, uncatalyzed asymmetric "ene"reactions of N-tert-butylsulfinyl-3,3,3-trifluoroacetaldimines: a general approach to enantiomerically pure α-(trifluoromethyl) tryptamines
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81) B. Monti, C. Santi, L. Bagnoli, F. Marini, L. Sancineto
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80) C. Tomassini, F. Di Sarra, B. Monti, L. Sancineto, L. Bagnoli, F. Marini, C. Santi
Kinetic resolution of 2-carbomethoxy-3-alkenols through a stereoselective cyclofunctionalization promoted by an enantiomerically pure electrophilic selenium reagent
Arkivoc, **2017**, published on line Sep 29 2016, 303-312.

79) G. Perin, A. M. Barcellos, T. J. Peglow, P. C. Nobre, R. Cargnelutti, E. J. Lenardao, F. Marini, C. Santi Tellurium-promoted stereoselective hydrodebromination of 1,1-dibromoalkenes: synthesis of (E)-bromoalkenes
RSC Adv. **2016**, *6*, 103657-103661.
78) M. Palomba, E. Vinti, F. Marini, C. Santi, L. Bagnoli Synthesis of oxazino[4,3-a]indoles by domino addition-cyclization reactions of (1H-indol-2-yl)methanols and vinyl selenones in the presence of 18-crown-6
Tetrahedron, **2016**, *72*, 7059-7064.
77) G. Bellino, M. Scisciani, J. P. Vargas, L. Sancineto, L. Bagnoli, F. Marini, D. S. Ludtke, E. . J Lenardao, C. Santi
Reaction of Acyl Chlorides with In Situ Formed Zinc Selenolates: Synthesis of Selenoesters versus Ring-Opening Reaction of Tetrahydrofuran
Journal of chemistry, **2016**, DOI: 10.1155/2016/284914
76) M. Palomba, L. Rossi, L. Sancineto, E. Tramontano, A. Corona, L. Bagnoli, C. Santi, C. Pannecouque, O. Tabarrini, F. Marini*
A New Vinyl Selenone-Based Domino Approach to Spirocyclopropyl Oxindoles Endowed with Anti-HIV RT Activity
Organic & Biomolecular Chemistry, **2016**, *14*, 2015-2024.
75) L. Sancineto, C. Tidei, L. Bagnoli, F. Marini, V. Lippolis, M. Arca, E. J. Lenardão, C. Santi
Synthesis of Thiol Esters Using PhSZnBr as Sulfenylating Agent: A DFT-Guided Optimization of Reaction Conditions
Eur. J. Org. Chem., **2016**, 2999–3005
74) L. Sancineto, M. Palomba, L. Bagnoli, F. Marini, C. Santi
Advances in Electrophilic Organochalcogen Reagents
Curr. Org. Chem. **2016**, 20, 122-135.
73) M. Palomba, L. Bagnoli, F. Marini C. Santi, L. Sancineto
Recent Advances in the Chemistry of Vinyl Chalcogenides
Phosphorus Sulfur Silicon & rel. el. **2016,** 191, Issue 2, 235-244.
72) L. Sancineto, A. Mariotti, L. Bagnoli, F. Marini, J. Desantis, N. Iraci, C. Santi, C. Pannecouque, Oriana Tabarrini
Design and Synthesis of DiselenoBisBenzamides (DISeBAs) as Nucleocapsid Protein 7 (NCp7) Inhibitors with anti-HIV Activity
J. Med. Chem., **2015**, 58, 9601-9614.
71) L. Sancineto, C. Tidei, L. Bagnoli, F. Marini, E. J Lenardão, C. Santi
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Molecules, **2015**, 20 (6), 10496-10510.
70) C. Tidei, L. Sancineto, L. Bagnoli, B. Battistelli, F. Marini, C. Santi
A Recyclable Biphasic System for Stereoselective and Easily Handled Hydrochalcogenations
Eur. J. Org. Chem., **2014**, 5968–5975.
69) R. Sardella, F. Ianni, A. Lisanti , S. Scorzoni, F. Marini, S. Sternativo, B. Natalini
Direct Chromatographic Enantioresolution of Fully Constrained β-Amino Acids: Exploring the Use of High-molecular Weight Chiral Selectors
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68) S. Sternativo, B. Battistelli, L. Bagnoli, C. Santi, L. Testaferri, F. Marini*
Synthesis of γ-Lactams via a Domino Michael Addition/Cyclization Reaction of Vinyl Selenone with Substituted Amides
Tetrahedron Lett. **2013***, 54*, 6755-6757.
67) S. Propersi, C. Tidei, L. Bagnoli, F. Marini, L. Testaferri, C. Santi
On Water Thiolysis of Epoxides Promoted by PhSZnBr
Journal of Sulfur Chemistry, **2013**, 34, 671-676.
66) L. Bagnoli, S. Casini, F. Marini, C. Santi, L. Testaferri
Vinyl selenones: annulation agents for the synthesis of six-membered benzo-1,4-heterocyclic compounds.
Tetrahedron **2013**, *69*, 481-486
65) F. Marini,* S. Sternativo
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Synlett. **2013**, *24*, 11-19 (invited Account).
64) S. Sternativo, O. Walczak, B. Battistelli, L. Testaferri, F. Marini*

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63) S. Sternativo, A. Calandriello, F. Costantino, L. Testaferri, M. Tiecco, F. Marini*
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Citato su **Synfacts** "Highlights in Current Synthetic Organic Chemistry" **2011**, *12*, 1349.

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Org. Lett. **2011,** *13*, 3052-3055.

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Synthesis of Enantiomerically Pure β-Azidoselenides Starting from Natural Terpenes.
Tetrahedron, **2007** 12373-12378.

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Stereocontrolled Synthesis of Substituted N-Arenesulfonyl Azetidines from γ-(Phenylseleno)alkyl Arylsulfonamides
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A Simple Synthesis of (*R*)-3-Aminooctanoic acid (D-BAO) from (*S*)-1-Octyn-3-ol.
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Eur. J. Org. Chem., **2006**, 4867-4873.

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