

Personal Information

Citizenship: Italian

Status: Siena, resident

Position and work address: Assistant Professor in Medicinal Chemistry
Department of Biotechnology, Chemistry and Pharmacy
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Education

2021: Corso “TAT: The Art of Teaching@UNISI”, per lo sviluppo professionale e di approfondimento di metodi per la facilitazione dei processi di apprendimento e di assessment in online e blended learning.

2017: Training course “Use and Abuse of Supplements in Sports” (Kern School Milano).

2015: Training course “Modulation of the Endocannabinoid System in the Treatment of Spasticity and Associated Symptoms in Multiple Sclerosis” (valid for E.C.M. credits), Polo Didattico Le Scotte, Siena.

2013: Training course “For the Protection of Health and Safety of Workers Exposed to Cancer and Mutagen Agents”, Polo Scientifico San Miniato, Siena, 2013.

2012: Waystage 3 Level at the Wall Street Institute of Siena.

2002: PhD in Pharmaceutical Chemistry with a final dissertation on new HIV-1 integrase inhibitors.

1997: Achieving certification of Pharmacist.

1997: Pharmaceutical and Applied Chemistry Honours Degree with a thesis in Organic Chemistry, Correlator Dr. R. S. Ward, Reader in Chemistry at the “Organic Chemistry Department”, University of Wales, Swansea.

Work Experience

2022-2023: Designated as “Professore Aggregato” at the Department of Biotechnology, Chemistry and Pharmacy, keeping the course of “Analisi Quantitativa dei Medicinali”.

2016-2022: Designated as “Professore Aggregato” at the Department of Biotechnology, Chemistry and Pharmacy, keeping the course of “Analisi dei Medicinali I”.

2018: teaching attribution for the Master's degree in Fisioterapia Applicata allo Sport (Ma.F.S.), “Alimentazione e Integratori nella pratica sportiva” (4 h).

2012-2016: Designated as “Professore Aggregato” at the Department of Biotechnology, Chemistry and Pharmacy, keeping the course of “Analisi dei Medicinali II”.

2007-2012: Designated as “Professore Aggregato” at the Faculty of Pharmacy, keeping courses on “Analisi Qualitativa e Quantitativa delle Sostanze Naturali”, “Laboratorio di Analisi Chimica delle Sostanze con Attività Biologica” and “Analisi dei Medicinali II”.

2007 (October 1th): Designated as university researcher at the Department of Pharmaceutical and Applied Chemistry, working on design and synthesis of cannabinergic modulators.

2006-2007: Research grant at the Department of Pharmaceutical and Applied Chemistry on “Synthesis of selective ligands for central and peripheral nervous system”.

2002-2005: Research grant at the Department of Pharmaceutical and Applied Chemistry on “Synthesis of compound analogous of Anandamide”.

1994-1995: Erasmus grant as PhD student working on natural antitumoral compounds (synthesis stereoselective of Podophyllotoxin derivatives) at the Department of Organic Chemistry, University of Wales, Swansea (UK).

Research Fields

In continuity with previous years, the main lines of research concerned the study of the endovanilloid and endocannabinoid systems. These two endogenous systems, characterized by a high anatomical-functional promiscuity, are of particular interest from a physio-pathological point of view as they are intimately involved and connected in the modulation of processes in which pain and inflammation play an important role. In particular, my research was aimed at the design and synthesis of molecules capable of interacting with the TRPV1 receptor channel and of molecules capable of inhibiting the FAAH enzyme and, therefore, the degradation of one of the main endocannabinoids, namely the anandamide.

During these studies, molecules with dual activity (TRPV1 agonists and FAAH inhibitors) and molecules capable of interacting with other TRP receptors, such as TRPA1 and TRPV4, were also identified.

In addition, for some years, I have also approached the study of fatty acid receptors, specifically the GPCR120 receptor and the GPCR40 receptor, important therapeutic targets in metabolic pathologies, as they are able to control blood glucose levels and sensitivity of cells to insulin.