Curriculum Vitae

Education and Current Position

Graduated *cum laude* in Chemistry and Pharmaceutical Technology (CTF) at the Faculty of Pharmacy, University of Parma in 1998.

In the same year, enrolled in the Ph.D. course in "Medicinal Chemistry and Pharmaceutical Technology" at the University of Pavia having as a research theme "the study of structure-property relationships for series of new chemical entities, as antagonists of the H3 receptor of histamine".

In 2001 Assistant Professor at the Faculty of Pharmacy of the University of Parma.

In 2002 visiting research fellow at the Institut de Chimie Thérapeutique, Université de Lausanne, Switzerland, to carry out a research project aimed to study the relationships between chemical structure, physico-chemical (lipophilicity, H-bond capacity, pKa) and pharmacokinetic properties of H3 antagonists.

In 2006 visiting researcher at the Laboratory of Molecular Sciences and Technologies, CNR, Padua to carry out studies in the field of covalent enzyme-inhibitor complex characterization by MALDI-ToF mass spectrometry.

In 2008 visiting research fellow at the Department of Neuroscience, University of California, Irvine (UCI), USA getting insight into the endocannabinoid system pharmacology, with particular reference to the characterization by mass spectrometry of small molecule inhibitors of Fatty Acid Amide Hydrolase (FAAH) and Monoacylglycerol Lipase (MGL), enzymes involved in the termination of the endocannabinoids anandamide (AEA) and 2-arachidonoylglycerol (2-AG) signaling.

Since 2014, Associate Professor of Medicinal Chemistry/Pharmaceutical Analysis at the Department of Pharmacy (now Food and Drug Department) of the University of Parma.

The research activity is focused on the study of structure-activity (SAR) and structure-property (SPR) relationships of new chemical entities (NCE) endowed with pharmacological activity, with a particular reference to the following areas:

Modulation of the endocannabinoid- (ECB) and fatty acid ethanolamide (FAE)-mediated signaling system by means of small molecule inhibitors of its degrading enzymes, with particular emphasis to inhibitors of Fatty Acid Amide Hydrolase (FAAH), Monoglyceridelipase (MGL) and N-acylethanolamine acid amidase (NAAA), which are considered the main responsible for the hydrolysis of the ECB anandamide (AEA) and 2-arachidonoylglycerol (2-AG) and of the PPAR-alpha agonist, palmitoylethanolamide (PEA).

Anti-proliferative and anti-angiogenetic agents with particular focus on the characterization of novel covalent inhibitors of the kinase domain of mutant Epidermal Growth Factor Receptor EGFR, such as those selected by acquired mutations due to Tyrosine Kinase inhibitors and to the characterization, SPR and in vivo PK investigation of small molecule ligands of the Eph-ephrin complex, an emerging target in cancer drug discovery.

Application of high resolution mass spectrometry to the characterization of drug metabolites in vitro and in vivo in preclinical species and to the metabolomic analysis of complex biological matrices.