

Federica Vacondio

Curriculum Vitae

Personal Data

Nationality Italian
Affiliation Department of Food and Drug, University of Parma, Parco Area delle Scienze 27/a, I-43124 Parma, Italy
Current Position Associate Professor (SSD CHEM-07/A – Medicinal Chemistry)

Education

1998 MSc *cum laude* in Pharmaceutical Chemistry and Technology, University of Parma
2002 PhD in Pharmaceutical Chemistry and Technology, University of Pavia

Professional career

2001-2004 Temporary Researcher, Faculty of Pharmacy, University of Parma, Italy
2001 Visiting research fellow, Institut de Chimie Thérapeutique, University of Lausanne, Switzerland
2004-2014 Researcher, Faculty of Pharmacy, University of Parma, Italy
2004 Visiting research fellow, CNR-Institute of Molecular Sciences and Technologies (CNR-ISTM), Padua, Italy
2007 Visiting research fellow, Department of Pharmacology, Gillespie Neuroscience Research Facility, University of California Irvine (UCI), Irvine, CA, USA
2014-present Associate Professor, Department of Food and Drug, University of Parma, Italy

Main research interests

Setup and application of High-Resolution Mass Spectrometry analytical methods for profiling Drug Metabolic pathways and metabolomic and lipidomic Profiles in biological samples from preclinical *In Vivo* models or clinical settings.

Structure-property (SPR) relationships on pharmacologically active compounds with a particular focus on the investigation of physico-chemical and ADME properties for the pharmacokinetic optimization of lead candidates.

Research Areas

- Central and peripheral endocannabinoid- and fatty acid ethanolamide-mediated signaling, with particular focus on the effects of inhibitors of degrading enzymes Fatty Acid Amide Hydrolase (FAAH), Monoacylglycerolipase (MGL) and N-acylethanolamine acid amidase (NAAA).
- Investigation of cell resistance mechanisms to Epidermal Growth Factor Receptor (EGFR) Tyrosine Kinase inhibitors.
- Physico-chemical characterization and in vivo PK investigation of non-peptide small molecule antagonists of the Eph-ephrin system.
- Microbiota-derived drug metabolism and metabolomics

Teaching tasks

- 2001-2005 "Drug Analysis I" (8 CFU) in MSc Pharmaceutical Chemistry and Technology, University of Parma
- 2005-present "Drug Analysis II" (8 CFU) in MSc Pharmaceutical Chemistry and Technology, University of Parma
- 2010-2017 "Impurities in Drug Substances and Drug Products" (1 CFU) in II level MSc in "Pharmaceutical Technology and Regulatory Affairs", University of Parma
- 2011 "The role of structure-property relationships in drug discovery" ULLA Summer School for post-graduate training in pharmaceutical sciences, Parma.
- 2011-present "Medicinal Chemistry of drugs in pain therapy" (1 CFU) in Specialization School in Hospital Pharmacy, University of Parma
- 2018 "Stability-indicating methods and impurity assessment in drug substances and products" (1 CFU) II level MSc in "Pharmaceutical and regulatory strategies in medicinal products development"
- 2022-present "Pharmacokinetic Optimization in Drug Research: physico-chemical properties and in vitro ADME", PhD Course in "Drug Sciences", University of Parma.
- 2024 "Drug Analysis" (2 CFU) in Specialization School in Hospital Pharmacy, University of Parma

Institutional tasks

- 2007-2012 Member of the committee of the PhD course in "Design and Synthesis of Biologically Active Compounds", University of Parma
- 2012-present Member of the committee of the PhD course in "Drugs, Biomolecules and Health Products", University of Parma
- 2012-present Member of the committee of the PhD course in "Drug Sciences", University of Parma
- 2010-2017 Member of the executive committee of the II level MSc in "Pharmaceutical Technology and Regulatory Affairs" co-organized by the Universities of Parma, Pavia, Perugia
- 2018 Member of the executive committee of the II level MSc course in "Pharmaceutical and regulatory strategies in medicinal products development", University of Parma

Experience in peer reviewing international literature

Associate Editor for Basic Sciences for Cannabis and Cannabinoid Research, Mary Ann Lieber Editor.

Regular reviewer for journals in the medicinal chemistry and pharmaceutical analysis field including ChemMedChem, European Journal of Medicinal Chemistry, Journal of Pharmaceutical and Biomedical Analysis, Talanta, Journal of Separation Science, Drug Metabolism Reviews, PLOS One.

2018 MSc Thesis Evaluator, University of Bordeaux, France.

Affiliation to scientific societies and academies

Member of the Italian Chemical Society (SCI), Medicinal Chemistry Division

Member of the Italian Mass Spectrometry Society (IMASS)

Parma, 15/10/2024

