

DANIELA ROSSI

Date of birth: 27/08/1974.

Place of birth: Vigevano (PV-Italy).

Nationality: Italian.

CURRENT POSITION: Associate professor at the Department of Drug Sciences (DDS), University of Pavia (Italy).

EDUCATION AND WORKING EXPERIENCE

January 2022-present: Associate Professor at DDS, University of Pavia (Italy).

November 2006-december 2021: Assistant Professor at DDS, University of Pavia (Italy).

April 2018: National Scientific Habilitation (ASN) for Associate Professor of Medicinal Chemistry (CHIM/08) – Italian Ministry of Research and University.

2003- 2006: Analyst at Merck Sharp & Dohme, Pavia (Italy)-Development and validation of analytical methods suitable for cleaning validation purposes.

2003: Research Chemist at NiKem Research srl, Baranzate di Bollate, Milan (Italy) – Synthesis and chemical characterization of small molecules active on central nervous system.

1999-2002: PhD in Medicinal Chemistry and Pharmaceutical Technology, University of Pavia (Italy) – PhD thesis “Synthesis and antinociceptive activity of pyrrolidinylnaphthalenes”.

January-April 2002: Academic Visitor at “Central Chemistry Laboratory”, Chemistry Department, Oxford University (UK).

1999: Degree in Medicinal Chemistry and Pharmaceutical Technology (*summa cum laude*), University of Pavia (Italy)

MAIN RESEARCH TOPICS AND PROFESSIONAL SKILLS

Research activities are performed in the Medicinal Chemistry field, combining molecular modeling, chemical design and synthesis with biological investigations. The main focus is constituted by drug design and structure-activity relationship studies of new biologically-active compounds potentially useful for i) neurodegenerative diseases and cancer treatment and ii) fighting antibiotic resistance.

In this context, research lines are directed towards the discovery of sigma receptor modulators and small molecules able to interfere with the protein kinase C(PKC)/ELAV proteins/mRNA cascade. The drug discovery from natural sources (extraction, isolation and identification of biologically-active molecules) represents an additional research topic. In the frame of this whole research activity, a specific focus concerns the study of the role of chirality in the biological activity of the compounds investigated.

Long expertise in compound library synthesis (traditional chemical techniques, solid-phase-, polymer-assisted solution phase-, microwave-assisted organic synthesis), purification (crystallization, flash chromatography, solid-phase extraction) and characterization (UV, IR, NMR, HPLC, LC/MS, GC) of biologically active small molecules and peptides. Good experience in the preparation (via asymmetric synthesis, enantioselective chromatography, crystallization of diastereoisomeric salts) and chiro-optical characterization of chiral compounds.

MANAGEMENT ACTIVITIES

2007-todate: Member of the Teaching Staff and the Scientific Committee of the Italian Level II Master Course in “Drug Design and Development”, University of Pavia (<https://psfmaster.unipv.it/>).

2010-2013: Member of the Teaching Staff (and proposing teacher) of the PhD Course in “Medicinal Chemistry and Pharmaceutical Technology”, University of Pavia.

2017-todate: Member of the Teaching Staff (and proposing teacher) of the PhD Course in “Chemical and Pharmaceutical Sciences and Industrial Innovation”, University of Pavia.

September 2020- todate: Member of the Committee for the admission of students to “Laurea Magistrale plus” (Degree plus) in Medicinal Chemistry and Pharmaceutical Technology (CTF LM+), University of Pavia (<http://scienzedelfarmaco.unipv.it/ctf-lm-plus/>).

December 2020-todate: Member of the Tutoring Committee for the Degree in Pharmacy and the Degree in Medicinal Chemistry and Pharmaceutical Technology of the University of Pavia.

PUBLICATIONS

Daniela Rossi is author of 81 scientific publications on refereed international journals, 2 book chapter. Bibliometric indicators (as of February 02, 2024: H index = 21 (Scopus); citations 1485 (Scopus). ORCID iD 0000-0002-2458-3728.

TECHNOLOGY TRANSFER

1. Collina S., **Rossi D.**, Marra A., Peviani M., Curti D. (2015). Use of arylalkanolamines as sigma1 receptor antagonists. WO2015132733 A1; EP3113768A1; US20170015640
2. Collina S., **Rossi D.**, Linciano P., Rossino G., Listro R., Peviani M., Rossi S., Vigani B. (2021). Substituted vinyl piperazine-piperidine urea derivatives as anticancer agents. EP21201359

FUNDINGS

- 2022-2025 project NODES which has received funding from the MUR – M4C2 1.5 of PNRR funded by the European Union - NextGenerationEU (Grant agreement no. ECS00000036) Role WP leader – flagship project VINO, Spoke 6
- 2008 -2010 PRIN 2007- (2007E8CRF3_004, role: partecipant).
- 2012-2013 SaNeT-ALS Sigma-1 receptor as a new potential therapeutic target for ALS-2011 (Agenzia Italiana per le ricerche sulla SLA - ARiSLA). (role: key personnel for scale up synthesis).
- 2017 Fondo di Finanziamento delle Attività Base di Ricerca (FFABR 2017) - ANVUR n. 20/2017 (15-06-2017).