

PERSONAL INFORMATION

Francesca Rinaldi



📍 University of Pavia
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Sex Female | *Date of birth* 26/07/1990 | *Nationality* Italian

Research fellow

WORK EXPERIENCE

2022-present

Research fellow (CHIM/08)

Department of Drug Sciences, University of Pavia, Italy.

2021-2022

Research grant (b type)

Department of Drug Sciences, University of Pavia, Italy.

Program: "Sviluppo di supporti innovativi per l'estrazione selettiva di farmaci". Funding: CE4WE (Regione Lombardia, Call "Hub Ricerca e Innovazione"). Grant attributed by public competition (CHIM/08).

2020-2021

Research grant (a type)

Department of Drug Sciences, University of Pavia, Italy.

Program: "Monoclonal antibodies affinity isolation and remodelling: an integrated polyHIPEs-based platform". Funding: Fondo Ricerca Giovani MIUR. Grant attributed by public competition (CHIM/08).

2019-2020

Research scholarship

Department of Drug Sciences, University of Pavia, Italy.

Topic: "Messa a punto di metodiche analitiche per lo studio di macromolecole di interesse farmaceutico".

2017-2019

Research scholarship

Department of Drug Sciences, University of Pavia, Italy.

Topic: "BIOFLOW: an innovative platform for the in-flow biocatalytic preparation of high value chemicals" (2016-0731 project funded by Fondazione Cariplo).

Teaching activity

Teaching activity for the following courses: Biotechnological drugs and vaccines (Industrial nanobiotechnologies for pharmaceuticals), 3 CFU; Analisi Farmaceutica 2 (Farmacia), 2 CFU (laboratory)

Lectures for the following courses: Drug discovery and biotechnological drugs (Medical and Pharmaceutical Biotechnologies), 2022/2023; Analisi dei Farmaci Biotecnologici (Biotecnologie), 2021/2022, 2020/2021

Training for the staff of Centro Nazionale per il Controllo e la Valutazione dei Farmaci dell'Istituto Superiore di Sanità (Roma): 2 seminars, 2021/2022

Seminars for laboratories within the following courses: Analisi Farmaceutica 2 (Farmacia), 2021/2022, 2020/2021; Analisi Farmaceutica 2 (CTF), 2020/2021, 2018/2019; Analisi Farmaceutica 1 (CTF), 2019/2020, 2018/2019

Co-supervisor of 7 thesis in the following degree programs: Chimica e Tecnologia Farmaceutiche 2022/2023, 2021/2022, 2020/2021, 2019/2020; Biotecnologie Mediche e Farmaceutiche 2019/2020

Tutoring activity for laboratories within the following courses: Analisi Farmaceutica 2 (Farmacia), 2016/2017, 2015/2016, 2014/2015 (40 h/academic year); Chimica e Analisi Farmaceutica 3 (CTF), 2013/2014 (20 h)

EDUCATION AND TRAINING

2020

Subject expert (CHIM/08)

2014-2018

PhD in Chemical and Pharmaceutical Sciences XXX cycle (Excellent)

University of Pavia, Italy.

PhD Thesis: Innovative analytical methodologies for the development of new antitubercular agents. Tutor: Prof. Enrica Calleri. Co-tutor: Prof. Caterina Temporini.

- 2016-2017 **Research stay in Germany within the PhD course**
Steinbeis Centre for Biopolymer Analysis and Biomedical Mass Spectrometry, Rüsselsheim Am Main, Germany. Supervisor: Prof. Michael Przybylski.
- 2012-2014 **Master Degree in Medical and Pharmaceutical Biotechnology (110/110 L)**
University of Pavia, Italy.
MSc. Thesis: Rational design, synthesis and structural characterization by LC-MS of a new glycovaccine against tuberculosis. Supervisor: Prof. Caterina Temporini. Co-supervisor: Dott. Luciano Piubelli.
- 2009-2012 **Bachelor Degree in Biotechnology (110/110L)**
University of Pavia, Italy.
Bc. Thesis: Test di biocompatibilità e di "wound healing" in vitro applicati alla valutazione di una formulazione gel. Supervisor: Prof. Maria Cristina Bonferoni.

WORK ACTIVITIES

- Awards and grants** Best poster award (2° APP-MS 2015) allowing the free participation to the practical session at the Shimadzu laboratories in Kyoto (Japan).
Conference fellowships (RDPA 2015; 9° MS Pharmaday 2016; 2nd IMaSS Network 2017; NMMC27 2022).
International mobility grant (University of Pavia) from September 2016 to February 2017.
Residential fellowship (Ghislieri College) from January 2017 to December 2017.
- Editorial activity** Reviewer for several peer reviewed journals (Analytical Biochemistry, Journal of Pharmaceutical and Biomedical Analysis, Analytica Chimica Acta, Environments, International Journal of Molecular Sciences, Biomolecules, Separations).
- Conferences** Presenter of 10 oral communications and 16 posters during national and international conferences.

PERSONAL SKILLS

- Mother tongue(s)** Italian
- Other language(s)** English: intermediate level. Preliminary English Test (11/2007)
French: basic level
- Job-related skills** Solid expertise in the use of HPLC-UV and HPLC-DAD (Agilent HP-1100 and 1200 series, Thermo Scientific Dionex-UltiMate 3000), MS and MS/MS (Thermo Scientific LTQ, Bruker Autoflex III Smartbeam). Good knowledge of the use of SPR instrumentation (Reichert SR7500DC).
- Digital skills** Google Chrome, Internet Explorer, Firefox; Microsoft Office™; ChemStation (Agilent), Chromeleon (Thermo Scientific), Xcalibur software (Thermo Scientific), flexControl (Bruker), mMass - Open Source Mass Spectrometry Tool, TraceDrawer (Ridgeview Instruments AB); PubMed, Google Scholar.

ADDITIONAL INFORMATION

- Statement of Research Interests** My scientific and research activity is based on the use of both established analytical techniques and innovative experimental approaches, which are applied to research lines addressing different analytical-pharmaceutical issues which come along the entire drug discovery and development process. I have been involved in different projects ranging from the development and characterization of glycoproteins for the design of TB vaccines by applying complementary LC-UV, LC-MS and SPE-MS methodologies, to the characterization of drugs (small molecules and biopharmaceuticals), the set-up of biochromatographic systems by enzyme immobilization for different medicinal chemistry applications and the investigation of innovative solid supports (polymerized High Internal Phase Emulsions - polyHIPEs) for applications in the pharmaceutical field.
- Publications** total number of publications in peer-review journals: 22
total number of citations (Scopus): 201
H index (Scopus): 8