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Federica Rolfo

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Home: Turin (Italy)

ABOUT MYSELF

I have a master's degree in Chemistry and a bachelor's degree in Chemistry and Chemical Technologies at University of Turin. During my studies, I have gained a solid knowledge in the technical-scientific field, which includes theoretical concepts and the use of advanced laboratory instruments.

WORK EXPERIENCE

Curricular internship

University of Turin [01/06/2022 – 01/06/2023]

City: Turin | **Country:** Italy

Thesis: "Positive binding cooperativity in molecularly imprinted polymers".

The experimental degree thesis was based on a one-year research project carried out in the laboratories of the Department of Chemistry of Turin in the Bioanalytical Chemistry research group. The aim of the thesis was to investigate the presence of positive binding cooperativity in molecularly imprinted polymers (MIP), which are mimics of natural antibodies, capable of selectively binding the template molecule. They were printed on the ciprofloxacin molecule (an antibiotic belonging to the fluoroquinolone family) and also using danofloxacin, which is a structural analogue, as an analyte.

I dealt with the synthesis of MIPs in solid phase, starting from the preparation of the support, up to the purification and separation of the product obtained. I performed equilibrium partition tests for various ligand concentrations and ran the analyzes through an HPLC-FLD (High Performance Chromatography with Fluorescence Detector). The data obtained from the binding isotherms were processed using Excel and Table Curve software.

Research Technician

University of Turin [13/11/2023 – 12/11/2024]

City: Turin | **Country:** Italy

I was mainly involved in project management and technical-scientific and financial reporting activities for the SUS-MIRRI.IT project, for the strengthening of the MIRRI Italian Research Infrastructure for Sustainable Bioscience and Bioeconomy, financed by the National Recovery and Resilience Plan (PNRR) and granted by the NextGenerationEU program of the European Commission. Furthermore, I managed the communication with the partners and consultancy activities in the execution of the project's provisions.

The optimized management of bioresources, coupled with the use of digital platforms and a data conservation/sharing strategy, will lead to further scientific progress and the establishment of innovative solutions and products of biotechnological interest, supporting the bio-circular economy. SUS-MIRRI.IT is coordinated by the University of Turin and involves 15 institutions with 24 OUs. The project has a total budget of approximately €17,000,000. (https://www.sus-mirri.it/it/)

Research Technician

University of Turin [13/11/2024 – Current]

City: Turin | **Country:** Italy

Currently, I am involved in the Solid State Physics Group's activities at Physics Department of Turin.

EDUCATION AND TRAINING

Master's degree in Chemistry

University of Turin [24/10/2023]

City: Turin | **Country:** Italy | **Field(s) of study:** Analytical chemistry | **Final grade:** 108/110 | **Level in EQF:** EQF level 7 | **Thesis:** Positive binding cooperativity in molecularly imprinted polymers

- Electron microscopy and Optical Spectroscopy
- Clinical and forensic analytical chemistry
- Pharmaceutical chemistry
- Chemistry of macromolecules and combustion processes
- Biochemical methodologies

Bachelor's degree in Chemistry and Chemical Technologies

University of Turin

City: Turin | **Country:** Italy | **Level in EQF:** EQF level 6 | **Thesis:** Curcumin: strategies to increase bioavailability and new perspectives in organic chemistry.

- REACH regulation
- Chemistry of resources and raw materials
- Inorganic and organic chemistry
- Physics
- Chemistry of metals and polymers
- Environmental chemistry

Classical High School Diploma

V. Alfieri High School

City: Turin | **Country:** Italy

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING B2 **READING** B2 **WRITING** B2

SPOKEN PRODUCTION B2 **SPOKEN INTERACTION** B2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

DIGITAL SKILLS

Microsoft Office / Statistical Data Analisys / GANTT diagram / GEA Platform