

# FRANCESCA SEBASTIANI

## ANALYTICAL CHEMIST

### CONTACT

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### EDUCATION

#### PhD student in Environmental and Evolutionary Biology

#### University of Rome "La Sapienza"

November 2022-present

Phd Title: "Risk assessment for occupational exposure to nanomaterials through a multidisciplinary strategy of characterization of airborne dust and evaluation of the effects".

#### License to enroll in the Chemistry Order "Ordine dei Chimici e dei Fisici di Roma"

2022

#### Master's degree in Analytical Chemistry

#### University of Rome "La Sapienza"

2019-2021

Thesis Title: "Metodo per l'analisi elementare di capelli ed unghie: prestazioni analitiche e qualità del dato nell'ambito di uno studio di biomonitoraggio umano".

#### Bachelor's degree in Chemistry

#### University of Rome "La Sapienza"

2016-2019

Thesis title: "POPs cosa sono e come si accrescono nell'uomo una volta immessi nell'ambiente".

### SKILLS

Microsoft Office (Excel, Word, PowerPoint).

R-projecting for statistical computing.

### LANGUAGES

Italian: Mother tongue

English: Advanced

### WORK EXPERIENCE

#### PhD

University of Rome "La Sapienza" | INAIL research Center of Monte Porzio Catone November 2022-present

- Characterisation of airborne nanoparticles (NPs) using direct reading instruments (DRIs) and time-integrated devices (Cascade Impactors).
- Optimisation of Single Particle ICP-MS/MS quantification method for NPs airborne samples analysis.
- Asymmetrical Flow Field-Flow fractionation (AF4) method optimisation for nanoparticles size-separation.
- Dinamic-Light-Scattering (DLS) for nanoparticle's size determination.
- Time-of-Flight Aerosol Chemical Speciation Monitor (TOF-ACSM) for real-time determination of airborne non-refractory nanoparticles.
- Optimization of an aerosol generation method for inhalation exposure studies.
- Determination of oxidative potential of nano-powders using acellular tests.
- Determination of oxidative stress levels on model organisms exposed to airborne nanoparticles.

#### Curricular internship

University of Rome "La Sapienza" March 2021-December 2021

- Development and validation of analytical protocols for elemental analysis of complex matrices (hair and nails) using coupled plasma mass /optical spectrometer - ICP-MS/OES, atomic fluorescence spectroscopy - AFS, atomic absorption with graphite furnace - GF-AAS, and automatic instrumentation for the analysis of mercury - Automatic Mercury Analyzer - AMA).

### CERTIFICATIONS AND QUALIFICATIONS

- Workplace risk management course | University of Rome "La Sapienza": "Formazione generale salute e sicurezza sul lavoro per lavoratori ed equiparati" (2024).
- Scholarship winner | University of Rome "La Sapienza": "Valutazione ambientale di inquinanti organici emergenti, quali ritardanti di fiamma bromurati e sostanze perfluoroalchiliche in ambienti di lavoro" (2022).
- Cambridge First Certificate in English Level B2 (2015).