

ANNA GAMBINI

Personal Information



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Via Ventimiglia 140, 41125 Modena (MO)



WORK EXPERIENCE

PhD Student – Models and Methods for Material and Environmental Sciences | 1 Nov

2023 - Current

Università degli Studi di Modena e Reggio Emilia - Dipartimento DSCG

Title: **“Application of NMR-based Metabolomics to environmental issues”**

Research Fellow | 1 Jul 2023 - 31 Oct 2023

Gruppo Italiano Discussione Risonanza Magnetica - UniBo, Dipartimento QuVi

Title: **“NMR- based metabolomics in rare diseases: the case of MNGIE”**

ACTIVITIES

- Metabolomics analysis with **HR-MAS NMR** on liver tissue
- Metabolomics analysis with **liquid NMR** on lipophilic and hydrophilic liver extract
- Data elaboration using: **TopSpin, Mnova, Matlab** and **Metaboanalyst**
- **Chemometrics Analysis**
- **Turin NMR School** 03/07/2023 - 07/07/2023

Research Fellow | 1 Jul 2022 - 30 Jun 2023

Università degli Studi di Modena e Reggio Emilia - Dipartimento CHIMOMO

Title: **"Analisi metabolomiche ed immunologiche per la rilevazione dell'interazione di pathways metabolici e infiammatori tra psoriasi e artrite psoriasica"**

ACTIVITIES

- Performing Metabolomics analysis with **HR-MAS NMR** on oral mucosa biopsies
- Data elaboration using: **TopSpin, Mnova, Matlab** and **Metaboanalyst**
- **Chemometrics Analysis**



EDUCATION AND TRAINING

Master's Degree in Chemistry | Sep 2018 - Oct 2021

Università degli studi di Modena e Reggio Emilia

Final grade: **110 Cum Laude**

Thesis: *Machine Learning for NMR Shielding Constant and Forces in Silica Glasses*

I worked in a research team with the objective to implement a neural network for the calculations of NMR shielding constant and the forces in silica glasses. I was in charge of running the calculations, collect and process the data and verify the consistency of the results.

Bachelor's degree in Chemistry | Aug 2015 - Jul 2018

Università degli studi di Modena e Reggio Emilia

Final grade: **110 Cum Laude**

Thesis: *Double florescence in a bipolar compound: study of the dependence of the optical and photophysical properties on the polarity of the solvent*

I studied the photophysical properties of a new organic molecule. The peculiarity of this molecule was the fluorescence: one article reported a double florescence emission. To investigate the phenomenon, I characterized the properties of the molecule using spectrophotometry and spectrofluorimetry.



PUBLICATIONS

Metabolic Profile of Whole Unstimulated Saliva in Patients with Sjögren's Syndrome | 2023

Setti, G.; Righi, V.; Mucci, A.; Panari, L.; Bernardelli, G.; Tarentini, E.; **Gambini, A.**; Consolo, U.; Generali, L.; Magnoni, C.; Meleti, M.; Sandri, G.; Bellini, P. Metabolic Profile of Whole Unstimulated Saliva in Patients with Sjögren's Syndrome. *Metabolites* **2023**, 13, 348. <https://doi.org/10.3390/metabo13030348>



COMUNICATIONS AT CONFERENCES

NMR Metabolomics based study on oral malignant disorders - Poster | 2023

Presented at the 50th National Congress on Magnetic Resonance in Rome by GIDRM



SCHOOLS AND SEMINARS

NMR Turin School | 3 Jul 2023- 7 Jul 2023 | Turin



DIGITAL SKILLS

Spectral Elaboration

TopSpin | Mnova

Data analysis

Matlab | MetaboAnalyst

Data Presentation

Microsoft Word, Excel, PowerPoint | LaTeX



LANGUAGE SKILLS

Mother tongue: **Italian**

ENGLISH B2