

Alice Marinangeli - Curriculum Vitae



Personal Information

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Address: Strada Le Grazie, 15, Department of Biotechnology,
University of Verona, 37134 Verona (VR)

Nationality: Italian

Date of birth: 24th November 1996

Education

- **PhD student in Biotechnology** Oct 2022 - present
Dept. of Biotechnology, University of Verona, Italy
Field: Optical sensor for the detection of pollutants in water.
Tutor: Prof. Alessandra Maria Bossi.
- **Master's Degree in Molecular and Medical Biotechnology** Oct 2019 - Mar 2022
Dept. of Biotechnology, University of Verona, Italy
Thesis title "Set up of a sandwich ELISA test for the detection of PTPRG in cells and body fluids".
Tutors Prof. Claudio Sorio and Prof. Daniela Cecconi.
- **Bachelor's Degree in Biotechnology** Oct 2016 - Apr 2019
Dept. of Biotechnology, University of Perugia, Italy
Thesis title "Characteristics and functions of haemoglobin: from physiology to pathophysiology. Comparative description of the main hemoglobinopathies in humans and in pets".
Tutor Prof Leonardo Leonardi.
- **High school Diploma** Sep 2010 - Jun 2016
Liceo scientifico Piero della Francesca, Sansepolcro, Arezzo (AR), Italy
- **Diploma in transverse flute** Sep 2009 - Sep 2017
Conservatorio Francesco Morlacchi of Perugia, Istituto di Alta Cultura, Italy

Research experience

- **PhD student in Biotechnology, PNRR D.M. 351/2022** Oct 2022 - Present
Dept. of Biotechnology, University of Verona, Italy
Tutor Prof. Alessandra Maria Bossi
Field: Optical sensor for the detection of pollutants in water.
The PhD project aims to develop an innovative generation of optical sensors based on the use of Molecularly Imprinted Polymers (MIPs) and fluorescence for the detection of protein contaminants.
- **Visiting PhD student at the Biosensors Laboratory** Oct 2023 - Present
School of Aerospace, Transport and Manufacturing, Cranfield University, UK
Tutor Dr. Iva Chianella
Field: Sensor for the detection of traces protein contaminants.
The project aims to develop an electrochemical sensor for the detection of estradiol.

- **Research fellowship at the University of Trento**

Apr 2022 - Oct 2022

Dept. of Industrial Engineering, University of Trento, Italy

Tutor Prof. Devid Maniglio

Field: Optical sensor for the detection of SARS-CoV-2.

The research focused on the development of an optical sensor based on the use of Molecular Imprinted Polymers (MIPs) and time-resolved fluorescence spectroscopy for the detection of viral charges of SARS-CoV-2 within biological samples.

- **Internship in General Pathology Laboratory**

Mar 2021 – Mar 2022

Dept. of Medicine and Surgery, University of Verona

Tutor Prof. Claudio Sorio

The project aims to optimize a new colorimetric immunoassay (Enzyme Linked Immuno Sorbent Assay-ELISA assay) to specifically detect the extracellular domain (ECD) of receptor protein tyrosine phosphatase gamma (PTPRG) using a series of available antibodies designated to recognize the ECD of human and murine PTPRG with a focus on its detection in human plasma. During this internship, I joined PhD Christian Boni on his PhD thesis which aims to measure the kinase activity of BCL2-ABL1 in patients with CML and Ph+ ALL.

- **Laboratory technician**

Jun 2019 – Sep 2019

KEMON S.p.a. San Giustino (PG)

Technician in the laboratory of quality control and in the microbiological laboratory.

- **Internship in Veterinary Pathology Laboratory**

Oct 2018 – Feb 2019

Department of Veterinary Medicine, University of Perugia

Tutor Prof. Leonardo Leonardi

During this experience I was able to learn all the phases of work in a laboratory of veterinary pathology: from work in sector room, to catalogue organs and samples and analyse them with histochemical and immunohistochemical techniques.

Tutoring experience in academia

- Laboratory tutor for Molecular sensors course

May 2023

Master's degree in Biotechnology for Bio-resources and Sustainable Development, University of Verona.

Prof. Alessandra Maria Bossi and Dr. Mimimorena Seggio

- Laboratory tutor for Omic Sciences course (Proteomic Module)

Jan 2023

Master's degree in Agri-food Biotechnology, University of Verona.

Prof. Alessandra Maria Bossi

Technical Skills

- Synthesis of Fluorescent Molecularly Imprinted Polymers (MIPs) in the nanometric format as biomimetic materials.
- Physical characterization: Dynamic light scattering (DLS) using Zetasizer Nano ZS Malvern Panalytical and Scanning Electron Microscope (SEM) analysis using SEM-FEG Zeiss SUPRA 40.
- Spectroscopic analysis: Steady-state fluorescence spectroscopy and time-resolved fluorescence spectroscopy using JASCO FP-8200 fluorimeter and Nanolog/Fluorolog-3-2iHR320 Horiba-Jobin Yvon Spectrofluorimeter.

- Interactions analysis: Isothermal Titration Calorimetry (ITC) using Nano ITC TA instruments and MicroCal PEAQ-ITC Malvern Panalytical.
- Surface modification: functionalization of solid surface and grafting of nanoparticles on solid surface.
- Immunological analysis: ELISA tests.
- Culture of different cell lines (lymphoblast cell K-562, pro-B cell Ba/F3 and murine intestinal organoids), DNA, RNA and protein extraction, PCR analysis and Western Blot (images acquisition with Image Quant LAS 4000 biomolecular imager).

Scientific publications

- Bossi, A.M.; Marinangeli, A.; Quaranta, A.; Pancheri, L.; Maniglio, D. Time-Resolved Fluorescence Spectroscopy of Molecularly Imprinted Nanoprobes as an Ultralow Detection Nanosensing Tool for Protein Contaminants. *Biosensors* 2023, 13, 745. <https://doi.org/10.3390/bios13070745>.

Attended Conferences, Workshop and Schools

- 11th International Workshop on Surface Modification for Chemical and Biochemical Sensing (SMCBS2023) 3-7 Nov 2023
Łochów, Poland
Oral presentation “Molecularly imprinted nanoparticles and time-resolved fluorescence for the detection of protein contaminants” Marinangeli A., Bossi A.M., Quaranta A., Pancheri L., Maniglio D. <https://www.smCBS.pl/>
- 4th European BioSensor Symposium 2023 (EBS2023) 27-30 Aug 2023
Aachen, Germany
Poster contribution “Molecularly imprinted nanoparticles and time-resolved fluorescence for the ultra-low detection of human serum albumin” Marinangeli A., Quaranta A., Pancheri L., Maniglio D., Bossi A.M. <https://www.fh-aachen.de/forschung/institute/inb/4th-european-biosensor-symposium-2023>
- Nanoparticles core and coat design Symposium 2 Feb 2023
Verona, Italy
- Summer School “Advances in Biotechnology and new Horizons for Industry” 4-17 Jun 2022
Ile d’Oléron, France
[Home | Advances in Biotechnology and new horizons for Industry 2022 \(alvarogarciaconsulti.wixsite.com\)](http://alvarogarciaconsulti.wixsite.com)

Membership of Scientific Societies

Member of the Società Chimica Italiana (SCI) 2023 - present

Courses

- Safety course “Prevention and safety on work: Training course on general concept” according to the art. 37 of Legislative Decree 81/08.

Languages

Italian: Mother tongue

English: Fluent (level B2, CLA certification)

France: Base level

Soft Skills

- Demonstrate proactivity, mental elasticity, excellent communication and interpersonal skills and as well as spirit of team and ability to establish priorities by organising the work in a manner rigorous and oriented to achievement of the objectives.
- Passion for music. I am contact with music since I was born and began to approach the flute through the age of 6 years, graduating in 2017, at the Conservatorio "Morlacchi" of Perugia.
- Passion for the mountains and nature. One of my greatest hobbies is outdoor activities (hiking, climbing, mountaineering). This passion has taught me to be patient, resistant to fatigue and at the same time determined in achieving goals, even ambitious.
- Volunteer work. During my high school years, I worked as a volunteer in the Croce Rossa Italiana CRI. In addition, I have been a member and regular donor of AVIS since the age of 18.
- Passion for travel. Since high school I realized, thanks to my family, study trips abroad (Europe and USA), then continuing with pleasure trips. I believe that travelling is a way to enrich your cultural background, to get to know people and build new connections with them.

Autorizzo al Trattamento dei Dati Personali da parte dell'Ateneo di Verona ai sensi di quanto previsto dal D.Lgs. n. 196/2003 e Autorizzo alla pubblicazione del CV sul sito istituzionale dell'Ateneo secondo quanto previsto dall'art. 15 del D.Lgs. n° 33/2013.

Verona, October 2023