



## WORK EXPERIENCE

March 2024 –  
Present

### **University Orientation Activities**

*University of Genoa*

Active participation in strengthening incoming orientation activities to help prospective students make informed choices regarding the Bachelor's Degree in Biomedical Laboratory Techniques:

- Design, organization, and delivery of Pathways for Transversal Skills and Orientation (PCTO) aimed at guiding final-year high school students toward the labor market or further academic study, while developing transversal skills. The activity was designed to promote awareness of the Biomedical Laboratory Techniques degree program, the profession, and the university environment. Active teaching methodologies, laboratory sessions, and reflective tools were used to foster self-awareness and understanding of the academic and professional context. The PCTO involved 160 students from different high schools, for a total of 172 hours of activities, including interactive lectures, laboratory work, and shared reflection sessions.
- **Orientamenti Festival (13–15 November 2024, Genoa):** active participation provided the opportunity to address questions about the Biomedical Laboratory Techniques degree program and Health Professions courses. On this occasion, both the Bachelor's and Master's degrees in Biomedical Laboratory Techniques were presented during the Health Professions session.
- **Orientation meetings in high schools:** Istituto di Istruzione Superiore A. Gastaldi – G.C. Abba (Genoa); Liceo Scientifico e Classico Martin Luther King (Genoa); Liceo Statale Sandro Pertini (Genoa); Istituto Vittorio Emanuele II – Ruffini (Genoa); Istituto Superiore Statale Majorana – Giorgi (Genoa). During these meetings, the degree program, admission requirements, curriculum, internship organization, and the role of the Biomedical Laboratory Technician were presented. The activity was designed to foster an open and interactive environment, also through the use of the **Wooclap®** platform to engage participants.
- **University Open Days (10 and 13 May 2024):** presentation of the Bachelor's Degree in Biomedical Laboratory Techniques and the Master's Degree in Diagnostic Health Professions.
- **Creation of an orientation video** for the Biomedical Laboratory Techniques degree program to promote and disseminate information about the professional role. The video was produced using Blender® video-editing software, combining images, video sequences, and audio recorded during a visit to the hospital laboratories of San Martino University Hospital in Genoa.
- **Development of an informational brochure** about the Biomedical Laboratory Techniques degree program.

April 2025 –  
Present

### **Participation in National Working Group – Bachelor's Degree in Biomedical Laboratory Techniques**

*Permanent Conference of Health Professions Degree Classes*

April 2025–  
Present

**Role:** Member of the National Commission's working group for the Bachelor's Degree in Biomedical Laboratory Techniques, responsible for defining and harmonizing the curricula of the three-year degree programs in Biomedical Laboratory Techniques.

**Adjunct Lecturer (in agreement with the National Health Service)**

*University of Genoa – San Martino Polyclinic Hospital*

**Course taught:** *Healthcare Education* within the integrated course *Planning and Management of Training Processes in Healthcare* – Master's Degree in Diagnostic Health Professions Sciences.

- Learning objectives of the course: Describe the organization of training within the healthcare system; Present the legislative and historical development of Continuing Medical Education (CME); Outline the characteristics of regional and national CME providers, including minimum requirements and accreditation standards; Identify the criteria for the allocation of CME credits; Distinguish between the different types of CME activities; Design and outline a training program in the healthcare field; Implement the training project, taking into account all aspects necessary to achieve the predefined educational objectives.

March 2025

**External Tutor Lecturer**

*Marco Polo State Vocational Institute for Hospitality and Food Services, Genoa*

Tutor Lecturer for the project: *STEM Connection, Languages, and Educational Innovation* – National Recovery and Resilience Plan, Mission 4 – Education and Research – Component 1 – Strengthening the provision of education services. 3.1: New skills and new languages – actions to enhance STEM and multilingual competencies.

**Responsibilities:** Design and implementation of a laboratory-based learning pathway focused on microbiological cultures, molecular biology, and other reference analyses in the food and biomedical fields, through the use of active teaching methodologies, laboratory activities, and reflective tools.

**Duration:** 15 hours

September 2022  
– April 2025

**University Lecturer**

*University of Genoa – San Martino Polyclinic Hospital*

- Lecturer of the elective educational activity titled: *"Tools and Methods for Writing the Bachelor's Thesis: Part II"*. Didactic activity focused on designing the oral dissertation of the thesis in Biomedical Laboratory Techniques (TSLB), intended for third-year students enrolled in the program.

**Duration:** 8 hours

**Date:** 23 September 2024

- Lecturer of the elective educational activity titled: *"Tools and Methods for Writing the Bachelor's Thesis: Part I"*. Didactic activity aimed at supporting the drafting of the thesis in Biomedical Laboratory Techniques (TSLB), intended for third-year students enrolled in the program.

**Duration:** 8 hours

**Number of editions:** 2

**Dates:** 21 June 2024, 19 February 2025

- Lecturer of the elective educational activity titled: *"How to Create an Effective Project"*. Didactic activity focused on learning methods and strategies for project design in the Master's Degree in Diagnostic Health Professions Sciences.

**Duration:** 8 hours

**Number of editions:** 2

**Dates:** 23 March 2024, 1 April 2025

- Lecturer of the elective educational activity titled: *“Ag-Ab Reaction and Transfusion Compatibility: From Theory to Practice”*. Use of active teaching methodologies for learning antibody reactions of transfusion relevance.

**Duration:** 8 hours

**Date:** 14 September 2022

October 2024 –  
Present

## **Collaboration in Teaching Support Activities**

*University of Genoa*

- Teaching *“Active Teaching Methodologies”* in the Master’s Degree Program in Diagnostic Health Professions Sciences.

**Duration:** 16 hours

- Teaching *“Tutoring Methodologies”* in the Master’s Degree Program in Diagnostic Health Professions Sciences.

**Duration:** 16 hours

**Responsibilities:** Supporting the main instructor in the design, delivery, assessment, and student learning process regarding active teaching methodologies and tutoring methodologies.

March 2024 –  
Present

## **Internship Tutor**

*University of Genoa – San Martino Polyclinic Hospital*

Internship Tutor for the Master’s Degree Program in Diagnostic Health Professions Sciences.

**Responsibilities:** Stimulating students’ reflection, decision-making, operational responsibility, and evaluation of results throughout their academic path. Guiding, mentoring, and supporting students through clinical, pedagogical, and relational skills to ensure achievement of predefined learning objectives and facilitate learning in practice. Verifying final learning outcomes. In addition, specific teaching activities were designed and implemented to support and enhance project methodologies useful for internships in the fields of education, research, and management. Assisting students in the development of internship projects and thesis work within university and healthcare training.

Tutor for training projects for first- and second-year students:

- *“Analysis of Recruitment Challenges for Biomedical Laboratory Technicians and Possible Solutions through Professional Orientation”*
- *“Creation of an Elective Didactic Activity (EDA) aimed at Developing an Effective Study Method for Students in the Biomedical Laboratory Techniques Program”*
- *“Analysis of Internship Tutor Needs: Collection and Interpretation of Data Related to the Biomedical Laboratory Techniques Program at the University of Genoa”*

December 2023 –  
Present

## **Internship Tutor**

*University of Genoa – San Martino Polyclinic Hospital*

Internship Tutor for the Bachelor’s Degree in Biomedical Laboratory Techniques.

**Responsibilities:** Stimulating students’ reflection, decision-making, operational responsibility, and evaluation of results throughout the study program. Guiding, mentoring, and supporting students through clinical, pedagogical, and relational skills to ensure achievement of predefined learning objectives and to facilitate experiential learning. Assessing final learning outcomes. Additionally, specific teaching activities were designed and implemented to support and develop methodologies useful for conducting internships and for the creation and defense of the bachelor’s thesis. Orientation activities were also carried out at entry, during the course, and upon completion for students enrolled in the Biomedical Laboratory Techniques program and for upper secondary school students.

October 2021 –  
Present

## **Adjunct Lecturer (in agreement with the National Health Service)**

*University of Genoa – San Martino Polyclinic Hospital*

**Course taught:** *Immunohematology Techniques I*, within the integrated course *Clinical Pathology and Immunohematology I* – Bachelor's Degree in Biomedical Laboratory Techniques.

**Learning objectives:** Manage and handle blood bags in immunohematology; Describe the organization of the transfusion service and the blood bank; Recognize and list the competencies of the Biomedical Laboratory Technician (BLT) in these facilities; Distinguish and explain the processing and production procedures of first- and second-level blood components; List, compare, and differentiate the characteristics of blood components; List and describe the biological validation systems of blood components and the tests required to ensure the production of safe and effective blood components.

**Responsibilities:** Designing, planning, and delivering the training program using active teaching methodologies (interactive lectures, Case-Based Learning, Debate, Cooperative Learning); employing immediate engagement techniques (e.g., Wooclap) during lessons; and applying study method strategies (e.g., Tony Buzan's mind maps). Developing inclusive teaching materials tailored to students' educational needs, including color-coded slides, demonstration videos, and conceptual and mind maps. Assessing the achievement of learning objectives through a structured oral examination.

**Duration:** 10 hours

September 2020  
– February 2024

## **Biomedical Laboratory Technician**

*San Martino Polyclinic Hospital – Transfusion Medicine Laboratory*

**Responsibilities:** Production, storage, and distribution of first- and second-level blood components (management of whole blood and apheresis bags for the production of pre-storage leukodepleted red cells, buffy coat, plasma for clinical and industrial use, platelets obtained from apheresis procedures, pooled buffy coat platelets, Platelet-Rich Plasma). Execution of specific treatments on blood component units (irradiation, washing, plasma reduction). Management of blood component requests, packaging, and stock organization. Performance of quality and sterility controls on blood components through microbiological, cellular, and chemical analyses. Molecular biology investigations (extraction, amplification, and technical evaluation of results) using SSP-PCR for the detection and typing of rare groups and HPA in donors and patients of the Transfusion Immunohematology Service.

February 2022 –  
November 2023

## **Internship Supervisor**

*University of Genoa – San Martino Polyclinic Hospital*

Internship supervisor for first-year students enrolled in the Bachelor's Degree in Biomedical Laboratory Techniques, within the Transfusion Medicine Laboratory – “blood component production” sector.

**Responsibilities:** Practical guidance, supervising students during clinical activities, and providing instructions and practical demonstrations. Stimulating student learning through observation, practice, and reasoning, while offering continuous feedback and relational support. Mid-term learning assessment, verifying achievement of predefined objectives.

May 2018 –  
August 2020

## **Biomedical Laboratory Technician**

*ASL AL – San Giacomo Hospital, Laboratory of Analysis and Microbiology*

**Responsibilities:** Management of routine and emergency activities during 24/7 shifts in clinical pathology (clinical chemistry, immunoassays, hematology, coagulation, serology, electrophoresis, urinalysis, toxicological urine analysis, parasitology and

fecal occult blood testing, chain of custody for blood alcohol and drug testing, “pink code” for domestic violence cases, chemical, physical, and microbiological analysis of cerebrospinal fluid). Ordinary and extraordinary maintenance of equipment in the clinical chemistry and immunoassay sectors (AU5800, AU680, DXI 800, Beckman Coulter automation system). Quality and supply manager in the clinical chemistry sector. Training of newly hired staff in clinical chemistry and immunoassay and integration into 24/7 shifts.

Development and implementation of the rRT-PCR method for the detection of SARS-CoV-2 in oro/nasopharyngeal swab samples at the Microbiology Laboratory of Tortona, part of the ASL of Alessandria. Execution of the protocol from June 2020 to August 2020 (extraction, amplification, and technical validation of results) using GENEQUALITY® X120 AB ANALITICA instrumentation.

April 2016 – May  
2018

### **Chemistry and Biology Lecturer**

*Cordua Formazione*

Lecturer and Tutor in chemistry and biology at a school preparing students for the Medical School entrance exam.

Educational responsibilities: Teaching study method strategies and rapid learning techniques through memory techniques and mind maps based on Tony Buzan’s method. Preparing inclusive teaching materials for interactive lectures delivered in-person, online, and blended formats. Designing simulation tests for medical school admission preparation. Creating multiple-choice questions in biology and chemistry. Planning and structuring lessons and tutoring activities in chemistry and biology. Conducting lessons and tutorial activities for upper secondary school students (grades IV and V), in classroom, online, and blended formats (from 15 to 80 participants per course). Supporting, mentoring, and guiding students through coaching and counseling techniques acquired via specialized training. Delivering motivational sessions aimed at personal development, talent enhancement, and achieving higher levels of performance and satisfaction.

Organizational/managerial responsibilities: Managing and organizing teaching activities through detailed lesson planning. Coordinating teaching staff (12 members). Organizing and conducting periodic meetings. Recruiting and selecting newly hired teaching staff. Training and supporting new staff.

November 2013 –  
February 2015

### **Biology Intern**

*“Giannina Gaslini” Institute – Laboratory of Immunology of Rheumatic Diseases*

Collaboration in a research project involving the characterization of an NLRP3 knock-in animal model carrying the NLRP3 gene mutated at the same residues responsible for CAPS syndromes, with the aim of using it as a model of inflammasome dysregulation. The animal’s inflammatory phenotype and neonatal lethality were analyzed using appropriate clinical parameters and laboratory techniques. In addition, the mechanisms of inflammasome activation and the consequent secretion of IL-1 $\beta$  in peritoneal macrophages and bone marrow-derived dendritic cells from the NLRP3 knock-in mouse model were assessed and compared with wild-type control mice. Genotype analysis was performed using molecular biology methods (DNA extraction, quantification, PCR amplification, agarose gel electrophoresis, result interpretation, sequencing), while phenotype assessment included clinical evaluation of the animal model, immunological characterization through flow cytometry, generation of dendritic cells, and isolation of peritoneal macrophages using cell biology techniques.

September 2011

### **Biomedical Laboratory Technician**

*St. Mary’s Hospital, Lacor (Uganda) – Pathology Laboratory*

Responsibilities: Preparation of histological samples (processing, paraffin embedding, sectioning, and histological staining). Development of manual immunohistochemistry protocols for telepathology diagnosis of patients from the Pathology Department of St. Mary's Hospital in Lacor. Collection and analysis of data for the preparation of the bachelor's thesis, which compared laboratory methods used at St. Mary's Hospital and the Galliera Hospital in Genoa for the diagnosis of tropical diseases.

## EDUCATION

February 2024 – February 2025	<p><b>Master's Degree (First Level) in Tutorial Methodologies and Clinical Teaching</b></p> <p><i>Università degli Studi Internazionali di Roma</i></p> <p>Studies in tutorial methodologies, coordination and management of training processes for healthcare professionals, internship systems and clinical teaching, tutoring and coaching, human resources management and people management, communication in training, and financial resources for training.</p> <p><b>Thesis:</b> <i>"Professional Action to be Learned and Introduction of Reflective Tools in the Degree Course in Biomedical Laboratory Techniques"</i></p> <p><b>Final grade:</b> 110/110</p>
October 2021 – November 2023	<p><b>Master's Degree in Health Professions of Diagnostic Sciences (LM/SNT_3)</b></p> <p><i>University of Genoa</i></p> <p>Studies in healthcare management, law, research methodology, pedagogical and teaching methodologies, medical statistics, project design, healthcare management, laboratory techniques, medical radiology techniques, audiometry techniques, neurophysiopathology techniques.</p> <p><b>Thesis:</b> <i>"Active Teaching Methodologies for the Development of Competencies in the Bachelor's Degree in Biomedical Laboratory Techniques"</i></p> <p><b>Final grade:</b> 110/110 with honors</p>
October 2012 – March 2015	<p><b>Master's Degree in Molecular and Health Biology (LM-6)</b></p> <p><i>University of Genoa</i></p> <p>Studies in molecular biology, genetics, biotechnology, hygiene, food and applied hygiene, microbiology, molecular microbiology, molecular pathology, organic chemistry, biophysics, developmental biology.</p> <p><b>Thesis:</b> <i>"Effects of NLRP3 Gene Mutations in the Pathogenesis of Cryopyrin-Associated Periodic Syndromes (CAPS). Characterization of the NLRP3 Knock-in Animal Model"</i></p> <p><b>Final grade:</b> 110/110 with honors</p>
October 2008 – November 2011	<p><b>Bachelor's Degree in Biomedical Laboratory Techniques (SNT/3)</b></p> <p><i>University of Genoa</i></p> <p>Studies in laboratory medicine, transfusion medicine and immunohematology, pathology, biology, microbiology, clinical pathology, molecular biology, chromatographic techniques, flow cytometry.</p> <p><b>Thesis:</b> <i>"Tropical Diseases: Identification Techniques Used in Uganda and Italian Research Strategies – A Comparative Study"</i></p> <p><b>Final grade:</b> 110/110 with honors</p>
March 2018 – June 2018	<p><b>24 University Credits (CFU) for Teaching</b></p> <p><i>University of Genoa</i></p> <p>Studies in pedagogy, special pedagogy and inclusive teaching, psychology, anthropology, teaching methodologies and technologies.</p>

April 2016 – May 2018

## **Courses in Neuro-Linguistic Programming, Public Speaking, Counseling, and Strategic Coaching**

*Cordua Formazione*

Studies in strategic dialogue, strategic change, and strategic problem-solving using the Nardone method. Emotional, psychological, and social aspects of strategic coaching for talent development and overcoming personal limitations.

March 2016 – June 2016

## **13th Course in Human Nutrition and H.A.C.C.P.**

*Scuola di Nutrizione Salernitana*

Practical organization of nutritional consultations, development of classical dietary models, practical nutritional approaches, ketogenic diets, nutrition for women, dietary management of common pathologies, SNS protocol, food hygiene consulting, and management of the H.A.C.C.P. system.

July 2015

## **Professional Qualification as Biologist (Section A)**

*University of Genoa*

Present

## **Professional Development Courses**

ECM credits duly acquired

- WORKSHOP – Humor, Comedy, and Effective Communication. Public Speaking Has Never Been So Fun!  
10 and 17 January 2025
- General topics: Digital health, advanced computing, and scientific English. Healthcare regulations: ethical and civil principles of the Italian National Health Service (SSN) and regulations on matters related to individual health professions, including system-level knowledge acquisition.  
6 July 2023; 30 and 31 December 2024
- Healthcare system management. Managerial innovation and experimentation of organizational and management models.  
1 July 2023
- Safety and hygiene in workplaces and related pathologies. Radioprotection.  
2018, 2019, 2020, 2021, 2022, 2023, 2024
- Epidemiology – Prevention and Health Promotion – Diagnostics – Toxicology, with acquisition of technical-professional knowledge.  
15 September 2022
- Clinical documentation. Diagnostic and rehabilitative clinical-care pathways, care profiles, and assistance profiles.  
27 January 2021; 5 November 2021
- Application of Evidence-Based Practice (EBM – EBN – EBP) principles and procedures in daily practice.  
31 December 2022
- Epidemiology – Prevention and Health Promotion – Diagnostics – Toxicology, with acquisition of technical-professional knowledge.  
15 September 2022
- Patient safety, risk management, and professional responsibility.  
31 December 2021
- Technical-professional content (knowledge and skills) specific to each profession, specialization, and ultra-specialized activity, including rare diseases and gender medicine.  
4 April 2019
- Effective communication: Internal, external, and with patients. Privacy and informed consent.  
6 March 2019; 3 April 2019

- Guidelines – Protocols – Procedures.

18 October 2018

- Accreditation of healthcare facilities and professionals. Quality culture, procedures, and certifications, with acquisition of process knowledge.

4 October 2018

## SKILLS AND COMPETENCIES

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Communication skills	Public speaking, tutoring, teamwork, team building, neuro-linguistic programming, leadership..
Organizational and management skills	Personnel management, planning and organization, problem-solving, organization of teaching activities, tutoring, order management.
Professional skills	Educational design, training process management, relational skills, laboratory instrumentation, transfusion medicine, genetics, clinical chemistry, immunohematology, molecular biology, continuing education, teaching, project design.
Languages	Italian: native speaker English: A2 level French: A2 level
Computer skills	Operating systems: Windows, Macintosh Office suite: Excel, Word, PowerPoint, Pages, Numbers, Keynote Professional software: Emonet, Emomaster, Concerto.

The undersigned, MARIA LIBERA TROTTA, aware that false statements entail the application of criminal penalties pursuant to Article 76 of Presidential Decree 445/2000, declares that the information provided in the following curriculum vitae is true.