



Francesca Brocco

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Address: Via Umbria 8 , 41037, Mirandola, Italy (Home)

● ABOUT ME

PhD student in Innovative Technologies and Products for Health (HIP-TECH) and University Research Fellow, graduated in Biology applied to Biomedical Research. Main research interests: Gene and Cell Therapies design and pre-clinical study for Oncology.

● WORK EXPERIENCE

 **DEPARTMENT OF MEDICAL AND SURGICAL SCIENCE FOR CHILDREN AND ADULTS, UNIMORE – MODENA, ITALY**
RESEARCH FELLOW – 16/12/2024 – CURRENT

Research fellow in the Cell Therapy Laboratory, supervisor Prof. Massimo Dominici.

Research grant title: '*Use and characterization of mesenchymal stem/stromal cells for cell therapy approaches*'.

Scientific-disciplinary sector: MEDS-09/A (Medical Oncology).

 **PROF.SSA GIUSEPPINA CARETTI – MILANO , ITALY**

MASTER'S THESIS INTERNSHIP – PROFESSOR G. CARETTI LABORATORY- DEPARTMENT OF BIOSCIENCES UNIMI – 09/10/2023 – 30/09/2024

Research project aimed at deciphering the role of the methylase SMYD3 in the cGAS/STING pathway in triple-negative breast cancer.

Thesis title: '*Deciphering the role of the methylase SMYD3 in the cGAS/STING pathway in breast cancer*'.

PI: **Prof. Giuseppina Caretti**; Thesis supervisor: **Dr. Cinzia Bottino, PhD**.

Affiliation: Department of Biosciences, University of Milan.

 **DIPARTIMENTO DI BIOSCIENZE UNIMI – MILANO , ITALY**

SCIENTIFIC LABORATORY TECHNICIAN – 04/03/2024 – 07/06/2024

Competition announcement n° **01/2024FZ, 25/01/24**

Support to the chief laboratory technician of the Department of Biosciences, UNIMI (MI) and Professors involved in the conduct of the Biological Sciences training internships, in the preparation of materials and operation of the teaching laboratories, for the carrying out of teaching exercises.

 **DEPARTMENT OF BIOSCIENCES, UNIMI – MILANO, ITALY**

RESEARCH COLLABORATION — PROF. MATTEO CHIARA – UNIVERSITY OF MILAN – 09/04/2022 – 13/05/2022

Collaboration for the pipelines setup of a bioinformatic analysis of NGS data within the research project carried out during the thesis internship at the MIOGEN biomedical laboratory.

 — **MIOGEN LAB – DEPARTMENT OF BIOMEDICAL, METABOLIC AND NEURAL SCIENCES, UNIMORE – MODENA, ITALY**

BACHELOR'S THESIS INTERNSHIP – BIOMEDICAL RESEARCH LABORATORY – 31/08/2021 – 29/06/2022

Conducted research project with the aim of detecting average methylation levels of cytosines in specific target regions of the macrosatellite D4Z4 associated with Fascioscapulohumeral Dystrophy using the BSS technique.

Thesis title: **Targeted methylation sequencing of D4Z4 repetitive elements assesses epigenetic complexity in Facioscapulohumeral muscular dystrophy**

PI: **Professor Rossella Ginevra Tupler** – Thesis Supervisor: **Dr. Valentina Salsi Phd**, - Affiliation: **Department of Biomedical, Metabolic and Neural Sciences, University of Modena and Reggio Emilia, Modena.**

🏠 **SAFE SRL** – MIRANDOLA, ITALY

SCIENTIFIC LABORATORY TECHNICIAN – 07/04/2021 – 31/07/2021

Independently responsible for the execution of **Microbiological Tests on Medical Devices (Masks and Biomedical Devices)**

Hired with a paid employment contract

● **EDUCATION AND TRAINING**

01/11/2025 Modena, Italy

PHD STUDENT IN INNOVATIVE TECHNOLOGIES AND PRODUCTS FOR HEALTH University of Modena and Reggio Emilia, UNIMORE

26/09/2022 – 24/10/2024 Milano, Italy

MASTER'S DEGREE IN BIOLOGY APPLIED TO BIOMEDICAL RESEARCH (LM6) University of Milan (UNIMI)

Address Via Celoria, 26, Milano, Italy | **Final grade** 110/110 cum Laude | **Type of credits** CFU | **Number of credits** 120 |

Thesis Deciphering the role of the methylase SMYD3 in the cGAS/STING pathway in breast cancer

09/2019 – 17/07/2022 Modena, Italy

BACHELOR'S DEGREE IN BIOLOGICAL SCIENCES (L13) University of Modena and Reggio Emilia, UNIMORE

Address Via Campi 287, 41125 , Modena, Italy | **Final grade** 110/110 cum Laude | **Type of credits** CFU | **Number of credits** 180 |

Thesis Targeted methylation sequencing of D4Z4 repetitive elements assesses epigenetic complexity in Facioscapulohumeral muscular dystrophy

12/09/2014 – 27/07/2019 Mirandola, Italy

SCIENTIFIC HIGH SCHOOL DIPLOMA – (APPLIED SCIENCES) Liceo Scientifico Galileo Galilei

Address Via Jacopo Barozzi, 6, 41037, Mirandola, Italy | **Final grade** 100/100

● **CERTIFICATIONS**

University of Milan (UNIMI), Via Celoria, 26, 12/11/2024

PRACTICAL INTERNSHIP FOR PERSONNEL INVOLVED IN ANIMAL EXPERIMENTATION FOR SCIENTIFIC PURPOSES. QUALIFYING INTERNSHIP FOR FUNCTIONS A, C, D MOUSE SPECIES.

Training degree as qualified persone for functions A, C, D mus musculus

University of Milan (UNIMI)– Via Celoria 26 Animal facility., 10/05/2024

SPECIFIC TRAINING FOR PERSONNEL INVOLVED IN ANIMAL EXPERIMENTATION FOR SCIENTIFIC PURPOSES, PRACTICAL MODULES 3.2, 6.2, 8 UNIMI MOUSE SPECIES, ACCREDITED BY THE MINISTRY OF HEALTH, DECREE 05 MARCH 2021 (SO-CALLED TRAINING DECREE)

ISTITUTO ZOOPROFILATTICO SPERIMENTALE DELLA LOMBARDIA E DELL'EMILIA ROMAGNA, 12/03/2024

NATIONAL LEGISLATION AND ETHICS LEVEL 1, MODULES 1 AND 2, MINISTERIAL DECREE 5 AUGUST 2021 AND BIOLOGY AND MANAGEMENT OF LABORATORY ANIMALS, MODULES 3.1, 4, 5, 6.1, 7. MINISTERIAL DECREE 5 AUGUST 2021 RODENTS AND LAGOMORPHS

SLAM - Centro Linguistico dell'Università degli Studi di Milano, 28/07/2023

B2 level in accordance with the Common European Framework of Reference for Languages (CEFR).

● **LANGUAGE SKILLS**

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
INGLESE	B2	B2	B2	B2	B1

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

● CONFERENCES AND SEMINARS

18/06/2025 – 20/06/2025 Modena

Co-organised GenE-HumDi COST Action 21113 and UNIMORE GENE EDITING Summer School

Summer School GENE EDITING: FROM TOOLS TO THERAPEUTIC APPLICATIONS

22/05/2025 – 24/05/2025 Prague, Czech Republic.

9th Cancer World Congress CWC-2025

Abstract: "Modified MSC as gene therapy tools for refractory solid tumors".

Valentina Masciale, Giulia Grisendi, Maria Carlotta Spano, Moein Farshchian, Aurora Melandri, Fabio Lepore, **Francesca Brocco**, Olivia Candini, Andrea Spallanzani, Paolo Magistri, Barbara Catellani, Fabrizio Di Benedetto, Pier Luigi Filosso, Luca Reggiani Bonetti, Albino Eccher, Edwin M Horwitz, Giorgio Mari, Massimo Dominici.

● SKILLS

Padronanza del Pacchetto Office (Word Excel PowerPoint ecc) | Gestione autonoma della posta e-mail | Windows | Posta elettronica | Utilizzo del browser | Google | Social Network | office | Buona padronanza del pc dei software ad esso correlati e del pacchetto Office

● TECHNICAL EXPERTISE

Instrumentation and techniques

- Immortalized Tumor cell cultures
- Primary cell culture
- Primary cells isolation from fresh biopsy (in accordance with the ethics committee)
- Flow cytometry for cell surface and intracellular marker analysis
- Protein extraction and detection by Western Blot method
- RNA isolation
- RT-PCR analysis to detect gene expression levels
- Genomic DNA extraction from peripheral blood and DNA purification
- PCR
- Histological analyses such as immunocytochemistry, hematoxylin and eosin
- Immunofluorescence assays
- Transductions using viral and/or transfection using plasmid vectors by nucleofection or transfection reagent.
- RiboNucleoProtein constructs for gene editing
- Mice manipulation and mice in-Vivo Experiments

Autorizzo il trattamento dei miei dati personali presenti nel CV ai sensi dell'art. 13 d. lgs. 30 giugno 2003 n. 196 - "Codice in materia di protezione dei dati personali" e dell'art. 13 GDPR 679/16 - "Regolamento europeo sulla protezione dei dati personali".



Modena , 23/10/2025

Francesca Brocco