

Francesca Brevi

Nationality: Italian **Date of birth:** 25/08/1998 **Gender:** Female

✉ **Email address:** francybrevi98@gmail.com

📍 **Home:** via Siviano 103, 25050 MONTE ISOLA (Italy)

EDUCATION AND TRAINING

PhD Program in Genetics, Molecular and Cellular Biology

University of Pavia (Italy) [10/2023 – Current]

City: Pavia

Country: Italy

Master Degree in Molecular Biology and Genetics

University of Pavia (Italy) [01/10/2021 – 27/10/2023]

City: Pavia

Country: Italy

Field(s) of study: Molecular genetics, structural biology and pharmacology, microbial genetics, bioinformatics, advance molecular biology, developmental biology

Final grade: 110/110 e Lode

Thesis: Functional characterization of pathogenic variants in aminoacyl-tRNA synthetase genes associated with trichothiodystrophy

Bachelor Degree in Biology

University of Pavia (Italy) [01/10/2018 – 24/09/2021]

City: Pavia

Country: Italy

Field(s) of study: Genetics, Molecular Biology, Microbiology, Pathology, Physiology, Biochemistry

Final grade: 110/110 e Lode

Thesis: Fidelity of chromosomal segregation in the presence or absence of the centromeric protein CENP-B

WORK EXPERIENCE

Internship in the section of human genetics and genomics

Professor Donata Orioli [01/11/2021 – 27/10/2023]

City: Pavia

Country: Italy

Name of unit or department: Institute of Molecular Genetics – National Council of Research “Luigi Luca Cavalli-Sforza”

Functional characterization of molecular defects responsible for the hereditary disorder Trichothiodystrophy

1. Preparation of cellular culture (Human primary fibroblasts)
2. PCR sequence protocols
3. Agarose gel electrophoresis
4. RNA/DNA and protein extraction from cells
5. Western Blot
6. Dot Blot
7. Preparation of bacterial cultures
8. Transformation
9. Plasmid preparation and site-directed mutagenesis
10. Plasmid transfection
11. Dual Luciferase assay

Tutor for the laboratory of cell methodologies

Professor Elena Raimondi [01/10/2021 – 07/10/2022]

City: Pavia

Country: Italy

Name of unit or department: University of Pavia - Business or sector: Education

Introduction to laboratory activities for the students of the 3rd year of the Bachelor in Biological Sciences:

1. Cell cultures (CHO-Chinese hamster ovary cells) and metaphase spread preparation
2. SCE (Sister Chromatid Exchange) analysis
3. FISH-Fluorescence in situ hybridization
4. Immunofluorescence
5. Chromosome banding

Internship in the group of molecular cytogenetics

Professor Elena Raimondi [11/01/2021 – 24/09/2021]

City: Pavia

Country: Italy

Name of unit or department: University of Pavia - Business or sector: Education

Chromosomal segregation fidelity study of horse chromosomes

1. Cell cultures (primary fibroblasts from the horse HSF-D)
2. Metaphase spread preparation
3. Immunofluorescence
4. BAC DNA purification
5. FISH
6. Microscope analysis with fluorescence microscope equipped with a cooled chargecoupled device camera

DIGITAL SKILLS

ECDL BASE: Computer essentials, Online Essential, Word Processing and Spreadsheets / PyMol - Molecular Visualization / Ensembl, UCSC genome browser, UniProt, OMIM databaes / Proficient with the main scientific databases (NCBI - PubMed) / GO enrichment analysis (DAVID, PANTHER) / Imaging Analysis Software for Fluorescence Microscopy / Pathway databases (WikiPathways, Reactome) / Online Tool for Bioinformatics (BLAST, GeneCards, Gene Ontology, KEGG, etc.)

LANGUAGE SKILLS

Mother tongue(s): **Italian**

Other language(s):

English

LISTENING B2 READING B2 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

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

PhD in Genetics, Molecular and Cellular Biology

Cycle XXXIX

NAME: Francesca Brevi

SUPERVISOR: Dr. Elena Botta

PROJECT TITLE: Characterization of nucleotide excision repair and related disorders

REVIEWER: Dr. Giorgia Zadra