



POSITION

PhD Student

WORK EXPERIENCE

11/2018 –

PhD student in Molecular and Industrial Biotechnology
Department of Biochemistry and Molecular Biology, University of Perugia (Italy)

Molecular and cellular fundamental research. Characterization study on Extracellular Vesicles from human cell models of autophagy-lysosome pathway of clearance impairment and from neurodegenerative diseases patient cells.

Supervisor: Carla Emiliani

Co-supervisor: Lorena Urbanelli

22/07/2019 – 31/07/2019

Summer School "Start-up in Biotechnology: supporting biotechnology students oriented towards an entrepreneurial path"

Faculty of Biotechnology / Department of Biotechnology, Romanian-American University, Bucharest (Romania)

Theoretical modules:

Entrepreneurship

Entrepreneurial abilities

Biotech Start-up process and specificity

Business plan

Cost-benefit analysis

2/07/2018 – 14/07/2018

Summer School "From Genes to Cells: A basic course of Molecular, Cellular and Ultrastructural Biology"

University of Pisa, Pisa (Italy)

Production and purification of Digoxigenin (DIG)-labeled RNA probes by in vitro transcription and analysis of mRNA expression by whole mount in situ hybridization;

RNA interference by feeding and observation of phenotype under stereo microscope;

Processing of samples for transmission electron microscopy (TEM), sectioning with ultramicrotome and observation by TEM;

Set up and scoring of Comet Assay slides for DNA damage evaluation;

Cytome assay.

(15 ECTS)

06/2018 - 07/2018

Visiting Student

Biotechnology and Molecular Biology Research Unit, Department of Chemistry, Biology and Biotechnology, University of Perugia, Perugia (Italy)

Design and development of an immunohistochemical assay for the detection of a biomolecular target in tumour cell lines.

Supervisor: Lorena Urbanelli.

06/2017–02/2018

Internship

Molecular Microbiology Research Unit, FABiT department, University of Bologna, Bologna (Italy)

Functional characterization of a gene of *Helicobacter pylori*, coding for a putative nickel membrane transporter, generating a knock-out mutant of the gene, and verifying the intracellular nickel content through qRT-PCR of NikR regulated genes, acid acclimation assays and ICP-OES.

Acquisition of cloning techniques, DNA manipulation, RT-qPCR, protein purification, bacterial cultures.

05/2015–10/2015

Internship

Biotechnology and Molecular Biology Research Unit, Department of Chemistry, Biology and Biotechnology, University of Perugia, Perugia (Italy)

Learning and application of the main biochemistry and molecular biology techniques, acquisition of manual skills in the application of western blotting, and eukaryotic cells culturing.

EDUCATION AND TRAINING

10/2015–20/03/2018

Master Degree in Molecular and Industrial Biotechnology

Alma Mater Studiorum, University of Bologna, Bologna (Italy)

<https://www.unibo.it/en/teaching/degree-programmes/programme/2015/8022>

Thesis Title: "Functional characterization of the *hopV* gene, coding for a putative nickel membrane transporter in *Helicobacter pylori*"

Supervisor: Alberto Danielli.

Final mark: 107/110

Date: 20.03.2018

TRAINING LABORATORIES

- **FUNCTIONAL GENETICS:** Application of immunofluorescence protocols for the detection of molecular markers suitable for the analysis of the phenotypic effect due to mutant alleles of a gene important for the development of the nervous system of *Drosophila melanogaster*.
- **PROTEIN STRUCTURE:** Exercises on allocating sequence-specific sequencing of nuclear magnetic resonance signals, processing and analyzing NMR spectrum data in triple resonance. Training on the determination of protein structure using NMR data; Crystallization of a protein, selection of the most appropriate sample and collection of X-ray diffraction data.
- **BIOINFORMATICS:** Use of structural information to design direct site mutation experiments; creation of structures through homology modelling.
- **MOLECULAR BIOLOGY:** Analysis of post-transcriptional regulation mediated by the small sRNA RyhB in *Escherichia coli*.
- **CHEMICAL-MOLECULAR METHODS FOR THE STUDY OF PROTEINS:** Use of Isothermal titration calorimetry analysis software.

09/2012–13/10/2015

Bachelor degree in Biotechnology

University of Perugia, Perugia (Italy)

<http://biotechnologie.unipg.it/index.php/biotechnologie>

Thesis title: "The origin of the autophagic membranes"

Supervisors: Carla Emiliani, Lorena Urbanelli

Final degree mark: 107/110

Date: 13.10.2015

PERSONAL SKILLS

Mother tongue(s)

Italian

Foreign language

| UNDERSTANDING | | SPEAKING | | WRITING |
|---------------|---------|--------------------|-------------------|---------|
| Listening | Reading | Spoken interaction | Spoken production | |
| C1 | C1 | B2 | B2 | B2 |

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Organisational / managerial skills

Good organisational and teamwork skills; Team leader and tutoring skills, gained during the PhD course, University of Perugia. Spirit of inventiveness, creativity.

Job-related skills

Molecular Cloning; Western blot; PCR; DNA and RNA manipulation; SDS-PAGE; Protein Expression; Microbiology; Eukaryotic cell culturing; ELISA

Digital skills

| SELF-ASSESSMENT | | | | |
|------------------------|-----------------|------------------|------------------|-----------------|
| Information processing | Communication | Content creation | Safety | Problem solving |
| Independent user | Proficient user | Proficient user | Independent user | Proficient user |

Digital skills - Self-assessment grid

ECDL

Office suite (Word; Excel; PowerPoint; GraphPad)

Photo editing softwares (Gimp; Photoshop)

Vector graphics softwares (Inkscape; Illustrator)

Molecular biology softwares (DeepView; Chimera; SnapGene; UGENE)

PUBBLICATINS

Tancini B, Buratta S, Delo F, Sagini K, Chiaradia E, Pellegrino RM, et al. Lysosomal Exocytosis: The Extracellular Role of an Intracellular Organelle. *Membranes*. dicembre 2020;10(12):406.

Buratta S, Tancini B, Sagini K, Delo F, Chiaradia E, Urbanelli L, et al. Lysosomal Exocytosis, Exosome Release and Secretory Autophagy: The Autophagic- and Endo-Lysosomal Systems Go Extracellular. *Int J Mol Sci*. 8 aprile 2020;21(7).

Tancini B, Buratta S, Sagini K, Costanzi E, Delo F, Urbanelli L, et al. Insight into the Role of Extracellular Vesicles in Lysosomal Storage Disorders. *Genes*. 06 2019;10(7).

Urbanelli L, Buratta S, Tancini B, Sagini K, Delo F, Porcellati S, et al. The Role of Extracellular Vesicles in Viral Infection and Transmission. *Vaccines*. 28 agosto 2019;7(3).

Annexes

Date 10/01/2021

Consento al trattamento dei dati personali secondo il d.lgs. 196/2003