



Francesca Esposito

Curriculum Vitae

Profile

PhD student in genetics and molecular biology at the IGM-CNR institute of Pavia, in the lab Fagagna-Francia. Graduated *cum Laude* from University of Milano-Bicocca. Previous experiences as an intern in a Genetics and Immunology laboratory. Cooperative, fast learner and endowed with great communication abilities. Working approach based on dialogue and confrontation.

Education

- October 2020–present **PhD student**, *University of Pavia*, Pavia, Italy.
Enrolled in the Genetics, Molecular and Cellular biology program. Working on DNA damage response and liquid-liquid phase separation in neurodegenerative diseases.
- October 2018–July 2020 **Master's Degree**, *University of Milano-Bicocca*, Milano, Italy.
Graduated *cum Laude* in the Industrial Biotechnology Master's Degree Programme.
- October 2015–July 2018 **Bachelor's Degree**, *University of Milano-Bicocca*, Milano, Italy.
Graduated *cum Laude* in the Biotechnology Bachelor's Degree Programme.
- September 2010–July 2015 **Highschool Diploma**, *Leonardo da Vinci Highschool*, Gallarate, Italy.
Graduated in the Scientific Programme. *State exam score– 92/100*

Master Thesis

- Title *Role of the histone-fold protein Dpb4 in double strand break repair and checkpoint response modulation*
- Supervisor Professor Maria Pia Longhese, Department of Biotechnology and Biosciences, University of Milano-Bicocca, Milano, Italy
- Description The thesis assessed the role of the histone-fold protein Dpb4, part of the ISW2 chromatin remodeler complex, in promoting histone removal during the DSB ends resection process. Implication in DNA damage checkpoint response was also investigated.

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Bachelor Thesis

- Title *Phase transition in the formation of nuage, membrane-less nuclear organelles*
- Supervisor Professor Stefania Brocca, Department of Biotechnology and Biosciences, University of Milano-Bicocca, Milano, Italy
- Description The thesis presented an already published worked on the disordered protein Ddx4, assessing the sequence elements and the environmental condition that favoured its liquid-liquid phase separation within HeLa cells.

Previous Lab Experience

Intern student, Master's Degree

- September 2019–July 2020 **Master thesis student**, LONGHESE'S MOLECULAR GENETICS LAB , University of Milan-Bicocca, Milano, Italy.
Experimental thesis project aimed to assess the role of a histone-fold protein during the resection process, through genetic and biomolecular techniques. Worked in collaboration with the PI and a tutor on the experimental designs; carried out the experiments independently. Acquired large competences in yeast genetics and molecular biology techniques, such as gene deletion, yeast strains genetic manipulation (use of micromanipulator), DNA extraction, protein extraction, ChIP, RNA radioactive probe preparation, Southern and Western Blots, PCR and q-PCR, DNA band extraction. Data collected during the work will soon submitted for publication.
- November 2019 **Poster session**, BIOTECHNOLOGY AND BIOSCIENCES DEPARTMENT DAY, University of Milan-Bicocca, Milano, Italy.
Poster presentation on master thesis project

Intern student, Bachelor's Degree

- April 2018–June 2018 **Intern student**, GRANUCCI'S IMMUNOLOGY LAB, University of Milano-Bicocca, Milano, Italy.
Curricular internship. Followed a project on molecular mechanism underlying *Candida* skin infection. Carried out experiments in cooperation with a tutor, and acquired confidence with different *in vitro* and *in vivo* techniques: cell lines cultures, mice genotyping, ELISA assay, organs extraction from mice, subcutaneous and intraperitoneal injections in mice, RNA extraction from tissue, retrostracription reaction, q-PCR, FACS anlysis.

Extra-curricular Activities

- January 2019–July 2019 **Invited student in the peer commission**, UNIVERSITY OF MILANO-BICOCCA, Milano, Italy.
Commission composed of both students and professors. Activity of monitoring, evaluation and advising on the Biotchnology Bachelor's and Master's Degree formative offer. Acquired analytical and problem solving competences.

June **Volunteering work with children** , MUSICOLANDIA MUSIC SCHOOL, Gallarate,
2015–July Italy.
2020 Volunteer music teacher to children in the age range of 6-13 years old. Worked within
a project aimed at approaching children to music in a positive way. Acquired sense of
responsibility, organisation and interpersonal communication.

Awards

2016–2018 University of Milano-Bicocca merit scholarship.

Languages

Italian **Native speaker**
English **C2 level**, TOEFL certificate (advanced level)
French **B1 level**

Personal skills

Excellent communication skills in Italian and English acquired during my studies
Good skills in interpersonal communication and interaction with colleagues, acquired
during group working in research laboratories.
Fast learning skills
Good time management and work organisation
Very determined and dedicated to work
Always curious and stimulated by new questions
Ability to work in a group

Interests

Travelling and experiencing new cultures
Theatre, opera and cinema
Playing piano and singing
Reading
Running

Computer skills

Microsoft Office
LaTeX
Prism Graphpad
Imaging programs (ImageJ Fiji, Cell profiler)
Graphic skills (BioRender)
Basic knowledge of Maestro chemical simulation software
Graphic skills (BioRender)

References

- Referee **Sofia Francia from IGM-CNR, Pavia** Pavia, Italy
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- Referee **Maria Pia Longhese from Department of Biotechnology and Biosciences,**
University of Milano-Biocca, Milano, Italy
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- Referee **Francesca Granucci from Department of Biotechnology and Biosciences,** Uni-
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- Referee **Stefania Brocca from Department of Biotechnology and Biosciences,** Univer-
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