

Personal Description

I am a young PhD student at Humanitas University and I currently work in the Laboratory of Cell Biology of the Synapse. After a trainee period during my thesis internship, I got passionate to neuroscience and I started to investigate mechanisms of cellular trafficking in synaptogenesis. Nowadays, my project is focused on the Angelman Syndrome, a rare genetic neurodevelopmental disorder, and I am studying the interactions between the post-translational modifications of ubiquitination and sumoylation.

I am curious, precise and extremely determined, able to adapt in different and challenging situations. I am looking forward to learn new techniques and apply my knowledge in a progressive autonomous way.

Work Experience

November 2022 – Now	PhD Student in Molecular and Experimental Medicine at Humanitas University (Pieve Emanuele, MI, Italy). Laboratory of Cell Biology of Synapses of Dr. Matteo Fossati (IN-CNR). Evaluation of the pathogenic mechanisms in the Angelman Syndrome and alterations of the interplay between the post-translational modifications of ubiquitination and sumoylation in this neurodevelopmental disorder.
March 2021 – September 2022	Research fellow for Institute of Neuroscience (National Research Council) at Humanitas Clinical and Research Institute (Rozzano, Italy). Laboratory of Pharmacology and Brain Pathology under the scientific supervision of Dr Matteo Fossati. Study of the early secretory pathway and COPII-dependent transport in neurons to investigate the role of the molecular diversity of COPII component in synapse development and formation.
December 2020 – February 2021	Health worker at Fondazione Eris Onlus (Via Ventura 4, Milano). Project “Tampone Solidale” to offer free Covid swab to needy people during emergency time.
October 2019 – September 2020	University internship at Institute of Neuroscience (National Research Council) under the scientific supervision of Dr Sara Francesca Colombo. New fluorescent ligands for the study of neuronal nicotinic receptors and application in intracellular trafficking.
April 2019 – October 2019	Professional university training in pharmacy at “Farmacia Pharmanovate” (Via Polveriera 29, Novate milanese, MI).

Education

October 2015 – 20 th October 2020	Pharmaceutical Chemistry and Technology master degree (Single-cycle degree). Department of Pharmaceutical Science Università degli Studi di Milano Graduation grade: 110/110 cum laude Thesis title: “Fluorescent ligands for the study of intracellular trafficking of neuronal nicotinic receptors”.
September 2010 – July 2015	Classical High School Diploma at Liceo classico Fondazione Sacro Cuore (Via Rombon 78, Milano, MI) with graduation grade 100/100.

Summer School

July 10-14 th , 2023	“Neural Circuit Development and Plasticity” Utrecht Summer School, Utrecht (Netherlands).
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Fellowship and award

I was awarded with the following fellowship and award:

October, 2023	Best oral presentation award, 6 th Brainstorming Research Assembly for Young Neuroscientists Conference, Napoli (NA), Italy.
July, 2023	FENS and IBRO-PERC stipend to attend the course “Neural Circuit Development and Plasticity” Utrecht Summer School, Utrecht

Congress and Poster

I have participated to the following congresses presenting a poster entitled:

1. *“Mechanisms of synaptic dysfunction in the Angelman Syndrome.”*

Federica Baronchelli^{1,2*}, Martina Biagioni^{3*}, Martina di Nunzio³, Davide Pozzi^{2,3}, Alessandra Folci^{2,3}, Matteo Fossati^{1,3}

(1) Institute of Neuroscience – CNR, Milano Italy; (2) Humanitas University, Pieve Emanuele (MI), Italy; (3) IRCCS – Humanitas Research Hospital, Rozzano (MI), Italy. *Co-first author

September 14th, 2023

PhD Student National Meeting in Neuroscience 2023, Torino (TO), Italy.

March 13-15th, 2023

XXI Scientific Convention Telethon, Riva del Garda (TN), Italy.

2. *“Investigating the role of the molecular diversity of COPII-dependent transport in cortical neurons.”*

Federica Baronchelli^{1,2}, Martina Biagioni³, Giuseppe Martano^{1,3}, Sara Francesca Colombo¹, Matteo Fossati^{1,3}

(1) Institute of Neuroscience – CNR, Milano Italy; (2) Humanitas University, Pieve Emanuele (MI), Italy; (3) IRCCS – Humanitas Research Hospital, Rozzano (MI), Italy.

September 14-17th, 2023

SINS 20th National Congress of the Italian Society for Neuroscience, Torino (TO), Italy.

July 9-13th, 2022

FENS Forum 2022, International Neuroscience Conference, Paris (France).

May 21st, 2022

Symposium “Mechanisms, Therapies and Biomarkers in Neurodevelopmental Disorders”, Scuola Normale Superiore Pisa (Italy).

October 20-22nd, 2021

BraYn Conference, 4th edition, Pisa (Italy).

Oral Presentation

I have been selected for the following oral presentations:

September 27-29th, 2023

“Mechanisms of synaptic dysfunction in the Angelman Syndrome”, BraYn Conference, 6th edition, Napoli (NA), Italy.

November 4th, 2022

“Investigating the role of the molecular diversity of COPII-dependent transport in cortical neurons”, NeuroMI, Università degli Studi di Milano Bicocca, Milano (Italy).

Certificates and professional qualification

January 17th, 2023

Practical course at Charles River Laboratories (Calco, LC, Italy).
Module 3.2 Base Biology; Module 6.2 Euthanasia; Module 8 Minimally invasive procedures without anaesthesia.

January, 2023

Theoretical Courses mandatory for working with laboratory animals.
Module 1 National Legislation; Module 2 Ethics, animal welfare and principles of 3R;
Module 3 Biology and management of laboratory animals, modules 3.1, 4, 5, 6.1, 7.
Ministerial Decree August 5th, 2021 rodents and lagomorphs.

November 26th, 2020

Training course “The role of CRA in CRO” (Formazione Nel Farmaceutico).

November 16th, 2020

State Exam for the qualification to pharmacist profession.

PhD Courses

I have attended the following courses:

- Biostatistics, basic course (2,5 ECTS)
- Scientific Methods (1,5 ECTS)
- “Optical Microscopy: from epifluorescence to multiphoton microscopy”, Theoretical and practical course (1,5 ECTS)
- Basic and Advanced Flow Cytometry Course, Theoretical course (1,5 ECTS)

Personal Skills

Mother Tongue

Italian

Other languages

English: B2, good level in reading, writing and oral expression.
Spanish: A1, basic level in reading and writing.

Digital competence	<p>Good digital competences in Office programmes (Word, Excel, PowerPoint) and operative systems (Windows e IOS).</p> <p>Good skills in graphic editor and image elaboration and analysis (Photoshop, Illustrator, Fiji).</p> <p>Competence in Prism GraphPad for statistical analysis and basic course on Stata.</p>
Technical Skills	<p>Cell cultures, primary neuronal cultures, brain dissection, cellular transfection with reagents, immunofluorescence, lentivirus production and usage, confocal microscopy.</p> <p>Microbiology and molecular biology (cloning, use of restriction enzymes, bacteria handling, DNA and RNA extraction, gel electrophoresis, retrotranscription, PCR), real-time PCR, genotyping, biochemistry (Western Blot, IP, coIP).</p> <p>Experience in animal house, mouse colony management, subcutaneous injections, mouse tissue collection, in utero electroporation, quick learning of new techniques.</p>
Communication skills	<p>Good relationship and cooperative skills with different aged and social extraction people, thanks to the experiences of internship and volunteering.</p>
Organisational Skills	<p>Ability to face high pressure and stressful situations, good organisational skills aimed to optimize time and quality of work to respect deadline. Strong inclination to team-working to pursue a common aim, thanks to sport experience in team.</p>

Other skills and interests

Volunteering and Occasional	<p>Volunteer as entertainer during summer camp and study aid for foreign children at Parrocchia Annunciazione (Milano) and La Lanterna Onlus (Milano) (June 2011 – September 2022).</p> <p>Tutoring activity in Math, Chemistry, Biology and English (September 2016 – Now).</p>
Hobby and Passions Jobs	<p>I play piano in my free time and I love to draw to express my creative side. I play basketball in a female team at competitive level from 2015 and I have recently started the experience of baskin from 2021 (inclusive basketball).</p> <p>I am generally passionate to sport and I prefer spending time outside.</p>

