

Cecilia Zuglian

Motivation:

PhD student wanting to explore a new research environment. Seeking to pursue an academic career studying neurobiology, with a particular interest in neurodevelopmental and neuropsychiatric disorders.

Research Experience:

PhD internship, LMU Muenchen (April 2024-September 2024)

Title of the project: *Role of RB5 in a neurodevelopmental model of human derived iPSCs.*

- Undertaken on the first year of my PhD program.
- Understanding the activity of a newly generated peptide (RB5) on neurodevelopment

PhD internship, Cardiff University (September 2023- April 2024)

- Undertaken on the first year of my PhD program
- Working on mouse models, both adult and embryos, of 16p11.2 deletion and duplication associated with neurodevelopmental disorder
- Followed master students throughout their dissertation internship

BAP summer school internship, Cardiff University (June 2023- August 2023)

Title of the project: *Rescue of cellular phenotypes in human iPSC-derived striatal neurons from 16p11.2 deletion carriers by targeting ERK signaling*

- Undertaken as a graduate master student
- Working on IPSC – derived striatal neurons from 16p11.2 deletion patients
- Trying to rescue the correct activity of ERK signaling, found aberrant in 16p11.2 deletion iPSCs

Erasmus student, Cardiff University (November 2022- June 2023)

Dissertation: *ERK signaling activation in the brain of a 16p11.2 deletion mouse model*

- Undertaken as part of MSc
- Working on mouse models, both adult and embryos, of 16p11.2 deletion and duplication associated with neurodevelopmental disorder.
- Used immunohistochemistry techniques both in bright field and in fluorescent
- Acquired and quantified results and analyzed through statistical analysis
- followed and supervised new students in the lab
- Presented a progress report and produced goals and hypotheses during weekly laboratory meetings

Undergraduate Project, University of Trento, Italy (November 2019 – January 2020)

Dissertation: *Neuronal Activation in Drosophila Melanogaster*

- Undertaken as part of BSc, at CIMEC Mind and Brain Interdepartmental Centre, Rovereto, Italy.
- The aim of the project was the activation of the Drosophila nervous system through optogenetic stimulation and two-photon calcium imaging.
- Presented a progress report and produced goals and hypotheses during weekly laboratory meetings

Education:

PhD, Biomedical Bioscience, Università di Pavia, Italy (October 2023 – present)

MSc, Neurobiology, Università di Pavia, Italy (2020-2023)

Final score: 109/110

BSc, Biological Science, Università di Ferrara, Italy (2017-2020)

Final score: 94/110

High school diploma in Human Science, G. Renier High School, Belluno, Italy (2011-2016)

Final score 77/100

Membership and Founding

- Training member of the British Association for Psychopharmacology, 2023
- Summer scholarship founded by the British Association for Psychopharmacology, 2024
- BraYn membership, 2025

Publications

- Leone R, Zuglian C, Brambilla R, Morella I. *Understanding copy number variations through their genes: a molecular view on 16p11.2 deletion and duplication syndromes*. *Front Pharmacol*. 2024;15:1407865. Published 2024 Jun 14. doi:10.3389/fphar.2024.1407865

Posters and Talks

- 50th BAP Summer meeting, Birmingham 2024, poster presentation “*Characterizing ERK signalling activation in mouse and human cellular models of 16p11.2 CNV deletion*”
- MNESYS stem cells Workshop, Pavia 2024, public talk “*Testing a novel ERK signalling modulator to counteract 16p11.2 duplication-associated cellular deficits*”
- Neurofront: Frontiers of Research in Neuroscience and Nervous System Disorders, Bari, September 4th -5th 2025, public talk “*Investigating the role of a novel ERK signalling modulator on neural differentiation: insight from human iPSC-derived neural progenitors and implication for 16p11.2 CNV syndromes*”
- MNESYS Spoke 1 Meeting, Parma, September 2025, poster presentation “*Investigating the role of a novel ERK signalling modulator on neuronal differentiation: insights from human iPSC-derived neural progenitors and implications for 16p11.2 CNV syndromes*”
- BraYn, brainstorming research assembly for young neuroscientists, Torino, October 2025, poster presentation “*Investigating the role of a novel ERK signalling modulator on neuronal differentiation: insights from human iPSC-derived neural progenitors and implications for 16p11.2 CNV syndromes*”

Other work experiences:

Summer internship, Unifarco, Santa Giustina, Belluno, Italy (1st July 2021 – 9th September 2021)

- Undertaken during BSc
- Nutraceutical Research and Development Laboratory
- Working on the development of food supplier

References available on request.

