

## Gaia Fattorini - Curriculum Vitae

Gaia Fattorini holds a Bachelor's Degree in Agro-Industrial Biotechnology from Sapienza University of Rome (2018), where she conducted her thesis on the functional analysis of the Tip60 chromatin-remodeling complex during meiosis in *Drosophila melanogaster* under the supervision of Prof. Patrizio Dimitri. She continued her academic path at the same university, earning a Master's Degree in Genetics and Molecular Biology (summa cum laude) in 2021. Her master's thesis focused on the cellular division alterations caused by the knockdown of Tip60 complex subunits in *Drosophila*.

Professionally, Gaia collaborated with a private laboratory specializing in SARS-CoV-2 diagnostics throughout 2021. Concurrently, she worked with Prof. Dimitri's lab on chromatin remodeling research.

Currently, Gaia is pursuing a PhD in Cellular and Developmental Biology at Sapienza University. Her research, under Dr. Cinzia Rinaldo's supervision, aims to develop prognostic and predictive biomarkers for Hereditary Spastic Paraplegias using high-content imaging techniques. The project is in partnership with Nikon Instruments.

In 2023, Gaia expanded her expertise internationally, conducting research at the University of Sheffield in the laboratory of Prof. Barbara Ciani. There, she focused on post-translational modifications of proteins involved in Hereditary Spastic Paraplegia.

### Scientific Publications:

- Sardina F, Carsetti C, Giorgini L, **Fattorini G**, Cestra G, Rinaldo C. *Cul-4 inhibition rescues spastin levels and reduces defects in hereditary spastic paraplegia models*. Brain. 2024 Mar 29;awae095. doi: 10.1093/brain/awae095. Epub ahead of print. PMID: 38551087.
- Sardina F, Valente D, **Fattorini G**, Cioffi E, Zanna GD, Tessa A, Trisciuglio D, Soddu S, Santorelli FM, Casali C, Rinaldo C. *New cellular imaging-based method to distinguish the SPG4 subtype of hereditary spastic paraplegia*. Eur J Neurol. 2023 Jun;30(6):1734-1744. doi: 10.1111/ene.15756. Epub 2023 Mar 26. PMID: 36815539.
- Prozzillo Y, **Fattorini G**, Ferreri D, Leo M, Dimitri P, Messina G. *Knockdown of DOM/Tip60 Complex Subunits Impairs Male Meiosis of Drosophila melanogaster*. Cells. 2023 May 9;12(10):1348. doi: 10.3390/cells12101348. PMID: 37408183; PMCID: PMC10216235.
- Prozzillo Y, Cuticone S, Ferreri D, **Fattorini G**, Messina G, Dimitri P. *In Vivo Silencing of Genes Coding for dTip60 Chromatin Remodeling Complex Subunits Affects Polytene Chromosome Organization and Proper Development in Drosophila melanogaster*. Int J Mol Sci. 2021 Apr 26;22(9):4525. doi: 10.3390/ijms22094525. PMID: 33926075; PMCID: PMC8123692.
- Prozzillo Y, **Fattorini G**, Santopietro MV, Suglia L, Ruggiero A, Ferreri D, Messina G. *Targeted Protein Degradation Tools: Overview and Future Perspectives*. Biology (Basel). 2020 Nov 26;9(12):421. doi: 10.3390/biology9120421. PMID: 33256092; PMCID: PMC7761331.