

Lucia Sileo



WORK AND PROFESSIONAL EXPERIENCE

Research Internship - Master's degree Sapienza University of Rome, Department of General Physiology (CU026) – Rome (RM), Italy

September 2024 – October 2025

During my research internship, I have been working on the 'Modulation of brain ageing through nutrition and healthy lifestyle (NutriBrain)' project, approved by the MUR - Italian Ministry of University and Research.

My study aims to recapitulate neurodegenerative processes by triggering inflammation and inducing insulin resistance in primary human astrocytes, which have shown to be conditions linked to neurological diseases and an unhealthy lifestyle.

In order to achieve this model, I have been applying proinflammatory stimuli and metabolic stress, thus leading to reactive astrogliosis and insulin resistance.

I have also been assessing the effects of Oleoylethanolamide (OEA), previously shown to be effective in obese murine models with neurodegenerative diseases, to evaluate its neuroprotective potential and its role in modulating inflammatory and metabolic responses.

My contributions to this project have included the design and optimization of the cellular model, the establishment and characterization of inflammatory and insulin-resistant phenotypes, and the analysis of OEA effects using biochemical assays and molecular biology techniques.

I have employed advanced methodologies such as primary cell cultures, oxidative stress and viability assays, immunofluorescence on cells and tissues, confocal microscopy, qPCR, Western blotting, transient transfections and lipid analysis (Red Oil).

Throughout this project, I have expanded my knowledge of cellular alterations in neurodegenerative diseases, refined skills in primary cell manipulation and pathway analysis, and I have gained insight into the impact of nutrition and metabolism on brain health.

- Bioinformatics: Gene expression and pathway analysis.
- Statistical analysis: Data processing with GraphPad Prism
- Image analysis: Processing and quantification with ImageJ/Fiji, ZEN (Zeiss), and Mars.
- Experimental design: Development of in vitro neurodegeneration models.
- Project management: Planning and execution of long-term protocols.
- Scientific communication: Data presentation and teamwork.

Italian Glia Network - abstract submitted on 10 October 2025: I participated in the selection process for the Second IGN Symposium with an abstract on my work on human astrocytes.

Research Internship - Bachelor's Degree Sapienza University of Rome, Department of General Physiology (CU026) – Rome (RM), Italy

March 2023 – July 2023

Study of novel dualsteric ligands in human glioblastoma U251 cells, aiming to modulate cell growth by targeting muscarinic receptors at orthosteric and allosteric sites.

PROFILE

I am a Master's student in Neurobiology at the Sapienza University of Rome and I have a Bachelor's Degree in Biological Sciences. Throughout my Academic studies, I have focused on topics such as neuroinflammation, astrogliosis and models of neurodegenerative diseases, thus acquiring solid laboratory skills. I am highly motivated to continue my career and to obtain a PhD in Neuroscience.

SKILLS

- Primary cell culture
- Molecular biology
- Microscopy and immunofluorescence
- Biochemical assays
- Bioinformatics
- Statistical analysis
- Image analysis
- Experimental design
- Project management
- Scientific communication

LANGUAGES

Italian: Native

English: B2

Upper Intermediate



EDUCATION AND TRAINING

A Master's Degree in NEUROBIOLOGIA (MSc, ongoing)

Sapienza University of Rome – Roma (RM), Italy

October 2023- October 2025: I graduated on 17 October 2025 with grade 110/110 and Lode

1)	10592825	DEVELOPMENTAL PSYCHOBIOLOGY	(M-PSI/02)
	12/01/2024	26/30	c: 6
2)	10592897	GENE THERAPY AND NEUROSCIENCE	(BIO/18)
	07/02/2024	30/30	c: 6
3)	1038168	CELLULAR NEUROPHYSIOLOGY	(BIO/09)
	08/02/2024	29/30	c: 6
4)	1022871	DEVELOPMENTAL NEUROBIOLOGY	(BIO/06)
	09/02/2024	30with honors/30	c: 6
5)	1034889	MECHANISMS OF SIGNAL TRANSDUCTION	(BIO/10)
	28/02/2024	30/30	c:
6)	10592805	PSYCHOBIOLOGY WITH ELEMENTS OF PSYCHOPHARMACOLOGY	(M-PSI/02)
	06/06/2024	27/30	c: 6
7)	1038203	STEM CELL IN THE NERVOUS SYSTEM	(BIO/12)
	08/07/2024	30/30	c: 6
8)	10592906	METHODS IN BEHAVIORAL NEUROSCIENCE	(M-PSI/02)
	12/07/2024	28/30	c: 6
9)	1021480	COMPARED NEUROANATOMY	(BIO/06)
	24/09/2024	28/30	c: 6
10)	1047695	NEUROPHYSIOLOGY OF SENSORY PERCEPTION	(BIO/09)
	31/10/2024	30 with honors/30	c: 6
11)	1041449	MOLECULAR NEUROBIOLOGY	(BIO/11)
	29/01/2025	27/30	c: 6
		MODULO II (BIO/11)	c: 3
		MODULO I (BIO/11)	c: 3
12)	1051866	PHARMACOLOGY IN DRUG DISCOVERY	(BIO/14)
	30/01/2025	30 with honors/30	c: 6
13)	1052237	BIOCHEMICAL METHODS APPLIED TO NEUROBIOLOGY	(BIO/10)
	17/02/2025	29/30	c: 6
		MOD.2 (BIO/10)	c: 3
		MOD.1 (BIO/10)	c: 3
14)	AAF1041	TRAINING (-)	12/05/2025
		qualified	c: 3

BORSA DI COLLABORAZIONE

Sapienza University of Rome – Roma (RM), Italy

2024-2025: BANDO PER 18 BORSE DI COLLABORAZIONE PER ATTIVITÀ DI SUPPORTO PRESSO I LABORATORI DIDATTICI, I MUSEI E LA SEGRETERIA DIDATTICA DEL DIPARTIMENTO DI BIOLOGIA E BIOTECNOLOGIE "CHARLES DARWIN"

A Bachelor's Degree in SCIENZE BIOLOGICHE (BSc)

Sapienza University of Rome – Roma (RM), Italy

October 2020- July 2023: I graduated on 20 July 2023 with grade 103/110

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Secondary School Diploma (Classical Studies)
LICEO CLASSICO STATALE 'Quinto Orazio Flacco' – Potenza (PZ)
September 2015- Jun 2020: with grade 96/100



HOBBIES AND INTERESTS

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I have been practicing classical and modern jazz dance since I was eight years old. This activity has significantly contributed to the development of my personal discipline, organizational skills and the ability to work with others. I am aware of the impact of physical activity on neuroplasticity, I have always maintained a consistent interest in the interactions between the body and the brain, integrating this perspective into my academic and scientific paths.

Roma, 12 Gennaio 2026