

Maïna Garnero

Position: PhD Candidate in Neuroscience

Address: Collège de France, 11 place Marcelin Berthelot, 75005 Paris, France

Email: maina.garnero@college-de-france.fr

ORCID: <https://orcid.org/0009-0008-0414-0373>

Academic Education

2023-Present: PhD in Neuroscience (expected 2026), Center for Interdisciplinary Research in Biology (CIRB), CNRS UMR 7241, INSERM U1050, Collège de France, Paris, France / Doctoral School 158 Brain, Cognition, Behavior, Sorbonne University, Paris, France

Thesis title: Role of neuroglial interactions in mice social behavior

Supervisor: Dr. Nathalie Rouach

2019-2023: Ecole Normale Supérieure Paris-Saclay Diploma (Master's degree equivalent), Biology Department, Gif-sur-Yvette, France

French « Grande Ecole », admitted through a highly competitive national examination in 2019 (14 admitted out of 742 candidates)

2022-2023: MSc in Computational Neuroscience and Neuroengineering, *Highest Honors*, Université Paris-Saclay / CentraleSupélec, Gif-sur-Yvette, France

2021-2022: MSc in Higher Education Teaching in Life Sciences – Biochemistry & Biological Engineering, *Highest Honors* (ranked 1/12), Ecole Normale Supérieure Paris-Saclay / Université Paris-Saclay, Gif-sur-Yvette, France

2019-2020: BSc in Biology and Health (enhanced track), *Honors* (ranked 10/122), Université Paris-Saclay, Gif-sur-Yvette, France

2014-2017: French Baccalauréat (science track), *Highest Honors*, Lycée Marcelin Berthelot, Saint-Maur-des-Fossés, France

Research Experience

2023: Master internship (6 months), *Neuroglial Interactions in Brain Physiology and Pathologies* team, CIRB, CNRS UMR 7241, INSERM U1050, Collège de France, Paris, France

Project: Functional analysis of neuron-astrocyte interactions involved in mouse social behavior

Supervisors: Dr. Julien Moulard, Dr. Isabelle Arnoux, Dr. Nathalie Rouach

2022: Master internship (3 months), *Memory, Emotion and Time* team, Institut des neurosciences Paris-Saclay, CNRS UMR 9197, Université Paris-Saclay, Gif-sur-Yvette, France

Project: Quantification of temporal strategies using posture estimation with neural networks

Supervisors: Dr. Tadeusz Kononowicz, Dr. Léa Lebarillier, Dr. Valérie Doyère

2021: Summer research internship (6 weeks), *Serotonin, Microglia, Plasticity and Pathology* team, INSERM U1270, Institut du Fer à Moulin, Paris, France

Project: Regulation of microglia by serotonin

Supervisor: Pr. Anne Roumier

2020: Summer research internship (5 weeks), *Brain Rhythms and Neural Coding of Memory* team, CIRB, CNRS UMR 7241, INSERM U1050, Collège de France, Paris, France

Project: Cross-structural reactivation between the hippocampus and the limbic system

Supervisor: Dr. Raphaël Brito, Dr. Michaël Zugaro

Publications / Preprints

1. Astrocytes control oxytocin-based maternal behavior via connexin 30, I. Arnoux*, **M. Garnero***, J. Moulard*, A. Rollenhagen, C. Meinung, N. De Mota, P. Barbe, P. Ezan, A. Laugeray, V. de Concini, A. Bemelmans, I. Neumann, A. Menuet, C. Llorens-Cortes, J. H. R. Lübke, G. Ghézali#, N. Rouach#, *bioRxiv* 2026.01.09.698569; doi: <https://doi.org/10.64898/2026.01.09.698569> (* Equal contributing authors, # Equal contributing authors)
2. Astroglial networks control visual responses of superior collicular neurons and sensory-motor behavior, J. Visser, G. Milior, R. Breton, J. Moulard, **M. Garnero**, P. Ezan, J. Ribot, N. Rouach, *Cell Rep.* 2024 Jul 23;43(7):114504. doi: <https://doi.org/10.1016/j.celrep.2024.114504>

Fellowships

2023-2026: PhD Fellowship (3 years) funded by the French Ministry of Research

Teaching Experience

2023-Present: Teaching Assistant in Biology (undergraduate / graduate courses), Ecole Normale Supérieure Paris-Saclay, Gif-sur-Yvette, France

2022: Agrégation (highly selective French national teaching qualification) in Life Sciences - Biochemistry and Biological Engineering

Student Supervision

2026: Thomas Benoît, graduate student (University of Lille, France), 6 months

2025: Antoine Reliquet-Dupont, undergraduate student (Université Paris-Cité, France), 3 months

2024: Nina Emery, Salomé Julliard, Lucas Marechal, undergraduate students (ENS Paris-Saclay, France), 1 week

2024: Alys Pisani-Houze, undergraduate student (McGill University, France), 3 months

2023: José Correia, Paul Rolland-Du-Roscoat, undergraduate students (ENS Paris-Saclay, France), 1 week

Conferences

2025: European Meeting on Glial Cells in Health and Disease, Poster « *A neuroglial circuit for maternal behavior* » (Marseille, France)

2025: European Brain and Behaviour Society Meeting, Poster « *A neuroglial circuit for maternal behavior* » (Bordeaux, France)

2025: Paris Circuit Dynamics Conference, Poster « *Astroglial calcium dynamics in hippocampal rhythms during sleep-dependent memory consolidation* » (Paris, France)

2025: CIRB Internal Seminar, Talk « *Role of neuroglial interactions in mice social behavior* » (Paris, France)

2024: FENS Forum, Poster « *A neuroglial circuit for maternal behavior* » (Vienna, Austria)

2024: FENS Satellite Event *FeMale Glia*, Talk « *A neuroglial circuit for maternal behavior* » (Vienna, Austria)

2024: Doctoral School Scientific Days, Poster & Talk « *Role of neuroglial interactions in mice social behavior* » (Paris, France)

2024: Qlife Winter School, Poster « *Role of neuroglial interactions in mice social behavior* » (Paris, France)

Science Outreach

2025: Brain Awareness Week, Lecture for middle-school students « *Discovering the brain and glial cells* » and public talk « *Role of neuroglial interactions in mice social behavior* » (Collège de France, Paris, France)

2024: French National Science Festival, Public workshop « *Discovering glial cells* » (Collège de France, Paris, France)

2024: Brain Awareness Week, Public roundtable « *The hidden face of neurons* » (Collège de France, Paris, France)

Administrative and Collective Responsibilities

2024-Present: Member of the organizing committee for CIRB internal seminars (Paris, France)

Technical Training

2025: Inserm Workshop 284 *Advances in in vivo imaging of neuronal activity in small animals* (Montpellier, France)

2025: Online course *Bulk RNA-seq analysis with R* (University of Cambridge, UK)

2024: Qlife Winter School: *Learning and Plasticity in Neuronal Networks* (IBENS, Paris, France)

2023: Animal surgery training (Animaform, Paris, France)

2023: Animal experimentation training (EPHE-PSL, Dijon, France)

Technical Skills

Languages: French (native), English (C1 – Cambridge English Advanced Certificate, 2021), Italian

Imaging: Confocal, STED, two-photon, miniscope 1P and 2P; image processing (Fiji, Huygens, Imaris)

Molecular Biology: Immunohistochemistry, flow cytometry, digital droplet PCR

Programming: Python, R, basic MATLAB

Other: Stereotaxic viral injections, behavioral assays, *in vivo* electrophysiology, optogenetics