

Sara Lucia Maria Lo Russo

Biologist · Behavioral Neuroscientist · Nutritional Consultant · Rome, Italy ·
saralorusso93@gmail.com

Profile

Biologist with an MSc in Evolutionary Biology and a decade of experience at the intersection of preclinical neuroscience, nutritional therapy, and science communication. Co-author of five peer-reviewed publications in international neuroscience journals, with hands-on research at Italy's National Institute of Health (ISS) and RCSI Dublin. Specialist in the neurobiology of behavior, stress resilience, epigenetics, and the gut-brain axis. Independent researcher in longevity science, nutritional neuroscience, and aging biology. Certified to teach Mathematics and Sciences in Italian secondary schools (Classe A028, EQF Level 7). Currently developing a science-based editorial platform on nutrition, longevity, and brain health, with a critical and evidence-first approach.

Core skills: Behavioral Neuroscience · Preclinical Research · Epigenetics · Gut-Brain Axis · Nutritional Therapy · Scientific Writing · Teaching · Evidence-Based Critical Analysis

Peer-reviewed publications

1. **Brancato A., Lo Russo S., et al.** (2021). *Social Interactions of Dat-Het Epi-Genotypes Differing for Maternal Origins: The Development of a New Preclinical Model of Socio-Sexual Apathy*. **Biomedicines**, 9(7), 778.
 2. **Carbone C., Brancato A., Adinolfi A., Lo Russo S., et al.** (2020). *Motor Transitions' Peculiarity of Heterozygous DAT Rats When Offspring of an Unconventional KO×WT Mating*. **Neuroscience**, 433, 108120.
 3. **Mariano S., Pardo M., Buccheri C., Illiano P., Adinolfi A., Lo Russo S., et al.** (2020). *Own or dam's genotype? Classical colony breeding may bias spontaneous and stress-challenged activity in DAT-mutant rats*. **Developmental Psychobiology**, 62(4), 505–518.
 4. **Carbone C., Lo Russo S., et al.** (2019). *Prior Activation of 5-HT7 Receptors Modulates the Conditioned Place Preference With Methylphenidate*. **Frontiers in Behavioral Neuroscience**, 13, 208.
 5. **Cerniglia L., Bartolomeo L., Capobianco M., Lo Russo S., et al.** (2019). *Intersections and Divergences Between Empathizing and Mentalizing: Development, Recent Advancements by Neuroimaging and the Future of Animal Modeling*. **Frontiers in Behavioral Neuroscience**, 13, 212.
-

Experience

Independent Researcher — Longevity, Nutritional Neuroscience & Aging Biology

Self-Employed — Rome, Italy · 2022 - Present

- Systematic independent study of aging biology: cellular senescence, mTOR/AMPK/sirtuins pathways, caloric restriction models, and their translational implications for human nutrition.
- Deep dive into the gut-brain axis: microbiome composition, neuroinflammation, and dietary interventions targeting cognitive decline and mood disorders.

- Development of a science-based editorial platform on nutrition, longevity, and brain health, applying an evidence-critical approach to debunk pseudoscientific claims common in the wellness industry.

Substitute Research Assistant — FutureNeuro Centre, RCSI

Royal College of Surgeons in Ireland — Dublin, Ireland · Jul 2022 – Sep 2022

- Genotyping of three mouse colonies carrying distinct genetic models of epilepsy, contributing to FutureNeuro's translational epilepsy research programme.

High School Science Teacher

ITTL Francesco De Pinedo — Rome, Italy · Jan 2021 – Jun 2021

- Designed and delivered lessons in biology and science to classes of 20–25 students, integrating analytical thinking and evidence-based reasoning.
- Prepared assessments, tracked individual student progress, and adapted teaching methods (keynotes, video, Socratic discussion) to diverse learning profiles.

Nutritional Consultant

Self-Employed — Rome, Italy · 2017 – 2022

- Clinical nutritional consulting for adult clients, integrating neurobiological and behavioral perspectives on the emotional relationship with food and eating disorders.
- Diet therapy for chronic conditions: intestinal and liver diseases, hypertension, chronic cardiovascular insufficiency, insulin resistance, and hormonal imbalance.
- Protocol design for intermittent fasting, ketogenic, and low-carb diets for clinical applications including epilepsy management.
- Non-prescriptive nutritional support for clients with eating disorders, maintaining a psychologically informed, non-pathologizing approach.

Research Intern — National Institute of Health (ISS)

Rome, Italy · Feb 2018 – Feb 2019

- Preclinical behavioural and pharmacological research on transgenic rodent models (DAT-KO, DAT-HET) to identify novel psychopharmacological treatments for neuropsychiatric disorders.
- Responsible for colony breeding, genotyping, and behavioural testing (Conditioned Place Preference, Social Preference, Forced Swim Test) in the Adriani lab.
- Bibliographic research on gambling disorders and depression using PubMed with structured Boolean search methodology; results contributed to published peer-reviewed work.
- Collaborated with Dr. Anna Brancato (University of Palermo) on ex vivo immunofluorescence experiments; findings published in *Biomedicines* (2021).
- Investigated epigenetic modifications and maternal care as determinants of personality disorder susceptibility in rat models; results published in *Developmental Psychobiology* (2020).

Research Intern, Molecular Biology — Tor Vergata University

Rome, Italy · Dec 2015 – Apr 2016

- Characterised the molecular interaction between PIM-1 and RPS19 proteins via co-immunoprecipitation; trained in Western Blot, DNA extraction, and PCR techniques.
 - Contributed to laboratory equipment installation, calibration, sourcing, and stock management.
-

Education

Teaching Qualification — Classe A028 (Mathematics & Sciences)

Università degli Studi Link, Rome · 2025 · EQF Level 7 · 60 CFU · DPCM 4 August 2023

MSc in Evolutionary Biology, Anthropology, and Ecology

Tor Vergata University, Rome · 2019 · 110/110 Thesis: *The role of genetic makeup in maternal behavior, resilience to stress, and social interaction* (Behavioral Neuroscience)

BSc in Biological Sciences

Tor Vergata University, Rome · 2016 Thesis: *Study of the interaction between RPS19 and PIM-1 proteins through co-immunoprecipitation experiments*

Certifications & Skills

LAST Certification — Core Modules 1–14 (Rodent Species). EU Directive 2010/63 compliance, animal experimentation (Articles 23–24), obtained in Ireland.

Technical: Western Blot · Co-IP · PCR · DNA Extraction · Behavioural Testing (CPP, Social Preference, Porsolt FST) · Observer · Statview · R · Microsoft Office Suite

Languages: Italian (native) · English (full professional proficiency) · French (basic)