

Mirko Tamma

EXPERIENCE

March 2019 - Present

University Internship in Biochemistry

Biochemistry Laboratory, University of Foggia, Italy

- Study of mitochondrial and circadian system alterations in Parkinson's disease caused by Parkin mutations using iPSC-derived Dopaminergic Neurons
- Metabolic characterization of stem cells and cancer cells

April 2024 - November 2024

PhD abroad internship at Louis-Eric Trudeau Lab (Canada)

Department of pharmacology and physiology, University of Montréal, Canada

Study of the mitochondrial function as pharmacological target in Parkinson's disease

November 2021 - July 2022

Chemistry Tutor

University of Foggia, Italy

Helping university students to prepare for chemistry exams

July 2021 - September 2021

Erasmus Traineeship at Evandro Fang Lab (Norway)

Akershus University Hospital (University of Oslo), Lørenskog, Norway

Study of mitophagy mechanisms and the role of mitophagy in Alzheimer's disease using *C. elegans*

17 June 2019 - 1 July 2019

Summer School: Molecular Biology and IVF

University of Kent, Canterbury, England, UK

Learning fluorescent *in situ* hybridization (FISH) and *in vitro* fertilization (IVF) techniques

EDUCATION

December 2022 - Present

PhD Student in Basic and Clinical Neuroscience

Department of Clinical and Experimental Medicine, University of Foggia, Italy

May 2023

Licensed to practice as a Biologist (section A)

University of Bari Aldo Moro, Italy

October 2020 - July 2022

Master's degree in Biotechnology, Food and Human Nutrition Sciences

*Class: LM-9 Medical, Veterinary and Pharmaceutical Biotechnology
University of Foggia, Italy*

Degree thesis: Alterations in circadian control of bioenergetics and mitochondrial dynamics in familial Parkinson's disease: study in cellular models

110/110 cum laude

October 2017 - July 2020

Bachelor's degree in Biomolecular sciences and Technologies

Class: L-2 Biotechnology

University of Foggia, Italy

Degree thesis: Energy metabolism and circadian rhythms: functional analysis in familial Parkinson's disease

110/110 cum laude

September 2012 - July 2017

High school leaving qualification in Chemistry

Istituto Tecnico Tecnologico Altamura-Da Vinci, Foggia, Italy

Main subjects: analytical, organic and industrial chemistry

100/100 cum laude

LANGUAGES

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| • Italian | Native language |
| • English | Good knowledge of written and spoken English |

RESEARCH SKILLS

- Cells culture: cancer cell lines, primary cells, iPSCs
- Differentiation of stem cells
- Handling nucleic acids: DNA and RNA extraction, PCR, RealTime PCR
- Cellular bioenergetics analysis with XFe Extracellular Flux Analyzers (Seahorse Biosciences)
- Polarographic measurements of OXPHOS capacity and efficiency
- Protein concentration determination: Bradford, BCA, spectrophotometric assays
- Electrophoretic techniques: SDS-PAGE, Western Blot
- Immunocytochemistry techniques, live cell imaging and confocal microscopy
- Activity of respiratory chain complexes
- Data analysis (GraphPad Prism, ImageJ, ImageLab, Excel)

PUBLICATIONS

1. Cella O, Scrima R, Rosiello M, Pacelli C, Piccoli C, **Tamma M**, Agriesti F, Mazzoccoli G, Capitanio N. Circadian clockwork controls the balance between mitochondrial turnover and dynamics: What is life...without time marking? *Biochim Biophys Acta Bioenerg.* 2025 Jan 27;1866(2):149542
2. Ferrante A*, **Tamma M***, Agriesti F, Tucci F, Lopriore P, Amodio ML, Colelli G, Capitanio N, Piccoli C, Pacelli C. Characterization of the effect of pomegranate crude extract, and its post-harvesting preservation procedures, on redox tone, cellular growth and metabolic profile of MDA-MB-231 cell line. *BMC Complement Med Ther.* 2023 Sep 8;23(1):311. *Co-first author
3. Agriesti F, Landini F, **Tamma M**, Pacelli C, Mazzoccoli C, Calice G, Ruggieri V, Capitanio G, Mori G, Piccoli C, Capitanio N. Bioenergetic profile and redox tone modulate in vitro osteogenesis of human dental pulp stem cells: new perspectives for bone regeneration and repair. *Stem Cell Res Ther.* 2023 Aug 22;14(1):215
4. Della Sala G, Pacelli C, Agriesti F, Laurenzana I, Tucci F, **Tamma M**, Capitanio N, Piccoli C. Unveiling Metabolic Vulnerability and Plasticity of Human Osteosarcoma Stem and Differentiated Cells to Improve Cancer Therapy. *Biomedicines.* 2021 Dec 23;10(1):28

AWARDS

1. MITACS GLOBALINK Research Award 2024: Mitochondrial function as pharmacological target in Parkinson's disease

PARTICIPATION IN SCIENTIFIC CONFERENCES

- Selected oral presentation at **SIB meeting (section Puglia, Calabria, Basilicata)**, Potenza 13-14 December 2024. Title: Parkin mutation deregulates circadian-dependent energy metabolism in Parkinson's patient derived dopaminergic neurons
- Attended **Neuroscience 2024 (SfN)**, Chicago (USA) 5-9 October 2024
- Selected oral presentation plus poster at **Réseau LAB 2024 (6th edition)**, Joliette (Canada) 27-28 September 2024. Title: Parkin mutation deregulates circadian-dependent energy metabolism in Parkinson's patient fibroblasts and derived dopaminergic neurons
- Selected oral presentation at **3th International Meeting of the Italian Group of Biomembranes and Bioenergetics (GIBB)**, Riva del Garda 8-10 June 2023. Title: iNPC-derived dopaminergic neurons attained from PARK2 mutated patient fibroblasts unveil an impaired interplay between mitochondrial functions and circadian clockwork

SOCIETIES MEMBERSHIP

2023 - Present	Member of the Italian Society of Biochemistry and Molecular Biology (SIB)
2023 - Present	Member of the Italian Group of Bioenergetics and Biomembranes (GIBB)
2024	Member of the Society for Neuroscience (SfN)