



MARIE SKŁODOWSKA-CURIE POSTDOCTORAL FELLOWSHIPS 2026

EXPRESSION OF INTEREST FOR HOSTING MARIE CURIE FELLOWS

HOST INSTITUTION

NOVA Medical School, iNOVA4Health-research unit

RESEARCH GROUP AND URL

[Metabolic reprogramming in mitochondrial disease](#)

SUPERVISOR (NAME AND E-MAIL)

Paulo Gameiro, paulo.gameiro@nms.unl.pt

SHORT CV OF THE SUPERVISOR

Positions

-Nov 2022 - present

Group Leader of the 'Metabolic Reprogramming in Mitochondrial Disease' Laboratory, NOVA Medical School. Research focus: metabolism-RNA interactions and mitochondrial dysfunction in disease.

-Sep 2016 - Dec 2021

Postdoctoral Researcher, Marie Skłodowska-Curie Research Fellow, 'RNA Networks' Laboratory, The Francis Crick Institute | Department of Molecular Neuroscience, University College London (UCL), UK

-Jan 2014 - Aug 2016

Postdoctoral Researcher, Department of Biological Chemistry and Molecular Pharmacology (BCMP), Harvard Medical School, Boston, MA, US

Selected publications

-Gameiro PA^{*} et al., *Nature Communications* (2026)

-Santos CS et al., *Nature Communications* (2025)

-Gameiro PA[#] et al., *J Biol Chem* (2021)

-Gameiro PA and Struhl, *Cell Reports* (2018)

-Gameiro PA et al., *Cell Metabolism* (2013)

-Selected work highlighted in *Trends in Biochemical Sciences* and *Nature Reviews* journals.

Full publication list: [Google Scholar](#)

Bibliometrics: >4,000 citations | h-index 11 | 2 top 1% and 6 top 10% most-cited papers

Funding and fellowships

2025 - 2031 Scientific Employment Stimulus, CEEC Inst-LA, ref. CEE- INSTLA/00024/2, FCT, Portugal

2022 - 2025 "Junior Leader – Incoming", ref: 116925, 'La Caixa' Foundation

2016 - 2018 Marie Skłodowska-Curie Individual Fellowship, ID: 701730, European Commission

2008 - 2012 PhD Fellowship, ID: SFRH/BD/43406/2008, FCT, Portugal

Patents

(2018) Metabolic Gene, Enzyme, and Flux Targets for Cancer Therapy (US Patent No. US10064885B2).

Inventors: Stephanopoulos G, Metallo CM, Kelleher JK, Iliopoulos O, **Gameiro PA**



Awards

2014 – InnoCentive award
2008 – top 3% merit award, University of Coimbra
2007 – top 3% merit award, University of Coimbra
2006 – BSc student merit prize, BPI bank, Portugal

Supervision

2026 André Minderico's MSc thesis, NMS
2024 Joana Borba's MSc thesis, NMS
2022 - 2024 Supervisor of five BSc theses, NMS
2018 Tutor, UCL Medical SSC Program, the Francis Crick Institute, UK

Teaching

2023 - 2026 Lecturer, NBR MSc programme, curricular unit: "Cell Regulation", NMS
2023 - 2025 Lecturer, PhD programme, unit: "Cell and Molecular Mechanisms of Aging", NMS
2021 Lecturer, BEB PhD programme, University of Coimbra
2018 Tutor, UCL Medical SSC Programme, the Francis Crick Institute, UK

Selected oral presentations

2026 XXII International Symposium, Portuguese Society for Metabolic Disorders (by invitation)
2025 EMBO | FEBS Lecture Course, Belgrade, Serbia
2024 XXII National Congress in Biochemistry, Aveiro, Portugal
2019 EMBO workshop, Ljubljana, Slovenia
2018 EMBO workshop, Capri, Italy
2018 RNA UK meeting, Lake District, UK
2015 EMBO Conference, EMBL Heidelberg, Germany
2013 Abcam Cancer & Metabolism Meeting, Amsterdam, Netherlands

5 SELECTED PUBLICATIONS

1. **Gameiro PA***, Foskolou IP*, Martens A, Kuret K, de los Mozos IR, Hozjan Ž, Kot V, Faraway R, Vermeulen M, Wolkers M, Johnson RS, Ule J. Meta-unstable mRNAs in activated CD8+ T cells are defined by interlinked AU-rich elements and m6A mRNA methylation. | * equal contribution. (2026) **Nature Communications** 17(1): 160.
2. Santos CS, Schweizer N, Cairrão F, Ramirez J, Osinalde N, Gaspar CJ, Rasheva V, Hensel Z, Adrain C, **Gameiro PA**, Mayor U, Domingos PM. Fbxo42 promotes the degradation of ataxin-2 granules to trigger terminal Xbp1 signalling. (2025) **Nature Communications** 16(1):7523.
3. **Gameiro PA**[#], Encheva V, Dos Santos MS, MacRae JI, and Ule J. Metabolic turnover and dynamics of modified ribonucleosides by ¹³C labelling. (2021) **Journal of Biological Chemistry** 297(5):101294 | [#] corresponding author.
4. **Gameiro PA** and Struhl K. Nutrient deprivation elicits a transcriptional and translational inflammatory response coupled to decreased protein synthesis. (2018) **Cell Reports** 24(6):1415-1424
5. **Gameiro PA**, Yang J, Metelo AM, Pérez-Carro R, Baker R, Wang Z, Arreola A, Rathmell WK, Olumi A, López-Larrubia P, Stephanopoulos G, and Iliopoulos O. In Vivo HIF-Mediated Reductive Carboxylation Is Regulated by Citrate Levels and Sensitizes VHL-Deficient Cells to Glutamine Deprivation. (2013) **Cell Metabolism** 17(3):372-85

PROJECT TITLE AND SHORT DESCRIPTION

Nucleotide–Redox Homeostasis in Mitochondrial Disease: Linking TCA Rewiring to mtRNA Quality Control

Mitochondrial diseases associated with pseudo-hypoxic metabolism, such as succinyl-CoA ligase (SCL) deficiency, are characterised by a profound yet poorly understood rewiring of the tricarboxylic acid (TCA) cycle. These alterations extend beyond bioenergetic defects, impacting anabolic pathways and redox balance in ways that remain poorly understood. Notably, mitochondrial DNA depletion syndromes (MDDS) are linked to imbalances in nucleotide (NTP) pools, yet the metabolic determinants of NTP insufficiency and their integration with mitochondrial biogenesis - particularly mitochondrial RNA (mtRNA) homeostasis – remain largely unexplored.

This project will investigate how TCA cycle rewiring under hyper-succinylation conditions reshapes anabolic fluxes (pyrimidine and coenzyme Q biosynthesis) and bioenergetic capacity (NAD(P)H and CoQ redox states), and how these changes contribute to nucleotide imbalance and mitochondrial stress. Using stable-isotope tracing, high-resolution respirometry and targeted metabolomics, the fellow will define metabolic states that contribute to, or adapt, impaired nucleotide availability in SCL-deficient cell models.

Our central aim is to determine how these metabolic perturbations reshape mtRNA turnover and surveillance pathways, particularly the mitochondrial RNA degradosome. The postdoctoral researcher will test whether altered nucleotide availability and redox balance impair mtRNA decay and promote the accumulation of aberrant, immunogenic RNA species. Integration of metabolic profiling with RNA stability assays and RNA-protein interaction mapping will define the mechanistic links between TCA cycle rewiring, mitochondrial genome maintenance and RNA quality control.

By connecting metabolic flux, nucleotide homeostasis and RNA decay, the project will uncover fundamental principles of mitochondrial regulation and identify target metabolic pathways for therapeutic intervention in SCL deficiency and MDDS-related mitochondrial disorders.

SCIENTIFIC AREA WHERE THE PROJECT FITS BEST*

Life Sciences (LIF)