MARIE SKŁODOWSKA-CURIE POSTDOCTORAL FELLOWSHIPS 2025

EXPRESSION OF INTEREST FOR HOSTING MARIE CURIE FELLOWS

HOST INSTITUTION

NOVA Medical School, Universidade NOVA de Lisboa

RESEARCH GROUP AND URL

Cytoskeleton in Development and Disease, https://www.nms.unl.pt/en-us/research/research/research-groups/research-group/n/grupo-ana-marques

SUPERVISOR (NAME AND E-MAIL)

Ana Pimenta-Marques; ana.pmarques@nms.unl.pt

SHORT CV OF THE SUPERVISOR

Ana Pimenta-Marques; ORCID: 0000-0001-6318-3922; Ciência Vitae: CC17-1A14-FE62 (Link)

EDUCATION AND PROFESSIONAL EXPERIENCE

2007-2011 **PhD in Development Biology**
Universidade Nova de Lisboa (NOVA) and hosted by Instituto Gulbenkian de Ciência (IGC), Portugal. ***Supervisor:*** Rui Gonçalo Martinho

2003 **Degree on Biochemistry**, Universidade de Évora (UE, Portugal).

PROFESSIONAL EXPERIENCE

2022-onwards **Principal Investigator (PI)** and leader of the Cytoskeleton in Development and Disease laboratory at NOVA-NMS, NOVA University of Lisbon, iNOVA4Health
(6 years contract funded on a competitive basis by the Portuguese Research Council, (FCT, CEEC-IND),

2018 – 2021 **Senior Post-Doctoral Researcher / PI of FCT funded Project**
Cell Cycle Regulation laboratory / Instituto Gulbenkian de Ciência (IGC) / Portugal.
Supervisor: Mónica Bettencourt-Dias

2012 - 2018 **Post-Doctoral Fellow Researcher**,
Cell Cycle Regulation laboratory / Instituto Gulbenkian de Ciência (IGC) / Portugal.
Supervisor: Mónica Bettencourt-Dias

FELLOWSHIPS / GRANTS /PRIZES

Salary always funded on a competitive basis by the Portuguese Research Council (FCT) **Assistant Researcher** contract, FCT, Portugal

2021-2027 **Assistant Researcher** contract (CEEC-IND), FCT, Portugal

2021 Prize for the **3rd best oral communication** at the Portuguese Drosophila meeting.

2022 Principal Investigator in a **Funded Research Project** (1,5 Years) – FCT – **50k.**

2019 Financial Aid Award **from Marine Biological Laboratory** for participating as Faculty in the Physiology Course. University of Chicago, USA.

2018 – 2021 **Senior Post Doctoral** contract, FCT, Portugal

2017 Principal Investigator in a **Funded Research Project** (3 Years) – FCT – **200k.**

2016 **Medals of Honor L'Oréal for Women in Science**, L'Oréal, UNESCO and FCT, Portugal (4 Medals awarded out of 80 applications).

2012 – 2018 **Post-Doctoral fellowship**, FCT, Portugal

2007 -2011 **PhD individual fellowship** (SFRH/BD/28767/2006), FCT, Portugal

2009 **Travel grant, Federation of European Biochemical Societies** (FEBS) to attend the *FEBS Practical Course on Protein interaction modules.* Split, Croatia

ORAL COMMUNICATION AS SELECTED SPEAKER (full list at CIENCIA VITAE)

2024 *Tailoring the Structure and Activity of Diverse Microtubule Organizing Centers,* Drosophila Portuguese meeting: DrosTuga, Batalha, Portugal.
2022 *Ana1/CEP295 is an essential player in the centrosome maintenance program regulated by Polo kinase*, EMBO|EMBL symposium: Microtubules: from atoms to complex systems. Heidelberg.
2021 *Molecular regulation of Centrosome stability*, Drosophila Portuguese meeting: DrosTuga, Lisbon, Portugal. (Prize for the 3rd best oral communication).

SUPERVISION OF ACADEMIC WORK

2024 – 2027 Supervisor of a 2nd year PhD student (Jéssica Cabrita; ORCID:0009-0004-9204-2394) in my lab. She was awarded with a PhD Fellowship FCT (Portugal)
2024 – 2025 Supervising a master student
2022 – 2024 Supervised two master students Ana Maria Silva, Jéssica Cabrita and Eugénia Grossu.
2018 – 2021 As a senior post-doc I supervised a Post-doc fellow at the Cell Cycle Regulation laboratory (IGC). Our work was published in the Journal *EMBO Reports* (2024).
2016 – 2017 As postdoctoral fellow, I officially supervised 1 master student at the Cell Cycle Regulation laboratory (IGC). This student is currently pursuing a PhD at IST Austria PhD program.

TEACHING ACTIVITIES

2022 – Teach a module on the subject *Regulation of The Cell Cycle* to the Master program NOVA Biomedical Research (NBR), NMS, NOVA University of Lisbon, Portugal.
2019 Teaching assistant- Physiology course/Marine Biological Laboratory (MBL)/ University of Chicago/ USA.
2019 Class on the subject *Forward and Reverse Genetics in an introductory course to Drosophila Genetics* organized by the Portuguese Consortium for Genetically Tractable Organisms. (https://congento.org/) / Portugal.

REVIEWING ACTIVITIES

Since 2025 Reviewer for the French National Research Agency (ANR)
Since 2025 Reviewer for the *Journal of Cell Science*
Since 2024 Reviewer for the international journal *Communications Biology* (Nature group).
Since 2020 Reviewer for the international journal *Current Biology* (Cell Press group).
Since 2007 Reviewer for the international journal *Molecular Biology of the Cell* (ASCB group).

INSTITUTIONAL RESPONIBILITIES

2024 – onward. Substitute member of the NOVA Medical School (NMS) Council in representation of the *Full-Time Faculty and Researcher Representatives*
2022 – 2024 Organizer of the weakly Chalk Talks given by al the Principal Researchers from NMS, Universidade Nova de Lisboa (UNL).
Since 2022 Teach the module on *Regulation of the Cell Cycle,* in the scope of the program of the No Biomedical Research (NBR) Masters, NMS, NOVA.

ORGANIZATION OF SCIENTIFIC MEETINGS: Member of the organizing committee of the Portuguese Drosophila meeting (~80-90 attendants/year), Batalha, Portugal/ (http://drosophilameeting.pt/2019). For this meeting I secured **2.000£** from the Company of Biologists.

5 SELECTED PUBLICATIONS

(full list at CIENCIA VITAE)

1. Lince-Faria M., Ferreira-Silva A., **PIMENTA-MARQUES A.,** (2025). *The centriole stability assay: a method to investigate mechanisms involved in the maintenance of the centrosome structure in Drosophila cultured cells* ***Bio-protocols (in press).*** **Last and corresponding author.**
2. **PIMENTA-MARQUES A.,** Perestrelo T.,(....), Bettencourt-Dias M., (2024). *Ana1/Cep295 is an essential player in the centrosome maintenance program regulated by Polo kinase and the PCM*. ***EMBO Reports***. 25: 102-127. **First** and **corresponding author**. DOI: https://doi.org/10.1038/s44319-023-00020-6
3. **PIMENTA-MARQUES A.,** Bento I.,(....), Bettencourt-Dias M., (2016). *A mechanism for the elimination of the female gamete centrosome in Drosophila melanogaster.* ***Science.*** pii: aaf4866. **First** and **corresponding author**. DOI: https://doi.org/10.1126/science.aaf4866

4. Werner A., PIMENTA-MARQUES A., Bettencourt-Dias M., (2017). *Maintaining Centrosomes and Cilia*. ***Journal of Cell Science.*** (130):3789-3800. DOI: 10.1242/jcs.203505
5. Cunha-Ferreira I., Bento I., **PIMENTA-MARQUES A.,** (....), Bettencourt-Dias M., (2013). Regulation of autophosphorylation controls PLK4 Self-destruction and centriole number. ***Current Biology***. 23(22):2245-54. DOI: https://doi.org/10.1016/j.cub.2013.09.037

PROJECT TITLE AND SHORT DESCRIPTION

Mechanisms Contributing to Human Oocyte Spindle Assembly and Female Infertility

Advancements in medical knowledge and technology have improved human life quality and longevity, however, female fertility remains largely unchanged. A major factor is *aneuploidy*, where eggs have an incorrect number of chromosomes. Aneuploidy can result in failed egg maturation, embryos that do not implant, or miscarriage, making it the leading cause of female infertility.

Human eggs have significantly higher rates of aneuploidy compared to other mammals, especially as women age, contributing to age-related infertility. Among various factors, this risk is linked to the microtubule spindle, a vital "machine" that ensures proper chromosome separation during meiotic maturation. However, the processes behind spindle assembly and why human eggs are particularly prone to aneuploidy remain poorly understood.

This project aims to identify critical factors that regulate spindle assembly and function in human oocytes. By studying oocytes from both younger and older women, we aim to uncover the cellular and molecular basis of age-related and non-age-related aneuploidy. Insights from this research could open new avenues for therapeutic strategies aimed at reducing aneuploidy rates and enhancing fertility treatments for women.

We are looking for motivated postdoctoral researchers interested in applying for a **Marie Skłodowska-Curie Postdoctoral Fellowship** to join this exciting project. Candidates with a background in cell biology, reproductive biology, developmental biology, or related fields are especially encouraged to get in touch.

SCIENTIFIC AREA WHERE THE PROJECT FITS BEST*

Life Sciences (LIF)