



# Dalila Neves-Silva

POSTDOC RESEARCHER

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## EDUCATION HISTORY

- **Doctor in Neurosciences, *summa cum laude***

Faculdade de Medicina, Universidade de Lisboa, Lisboa, Portugal | 2019-2024

- **Master in Evolution and Developmental Biology**

Faculdade de Ciências, Universidade de Lisboa, Lisboa, Portugal | 2014-2017

- **Bachelor in Genetics and Molecular Biology**

Faculdade de Ciências, Universidade de Lisboa, Lisboa, Portugal | 2010-2014

## ADDITIONAL COURSES

**Basic Stereotaxic Neurosurgery Training**, Humboldt University, Germany | 2025

**Laboratory Animal Science Course for Function B**, CONGENTO, Portugal | 2025

**Introduction to Data Analysis**, iMM, Portugal | 2021

**Advanced Course Stem Cell Technologies**, FFUL, Portugal | 2020

**Recent Trends in CNS Regenerative Medicine from injury and disease to advanced therapies**, ICVS, Portugal | 2020

**Rodent Necropsy: protocol and sample collection for histopathology - hands-on**, CONGENTO, Portugal | 2020

**Laboratory Animal Science Course for Function A**, Consortium for Genetically Tractable Organisms (CONGENTO), Portugal | 2019

**Developmental Biology Course: From Stem Cells to Organogenesis**, Sorbonne Université Campus Pierre et Marie Curie, France | 2015

## WORK EXPERIENCE

### POSTDOC RESEARCHER

IMARTINS LAB | CATÓLICA MEDICAL SCHOOL - CENTER FOR INTERDISCIPLINARY RESEARCH IN HEALTH | 10.2024 - PRESENT

### VISITING RESEARCHER

LSAUDE LAB | GULBENKIAN INSTITUTE FOR MOLECULAR MEDICINE (GIMM) | 09.2024 - PRESENT

### POSTDOC RESEARCHER

NEVES-VICTOR LAB | INSTITUTO DE MEDICINA MOLECULAR (IMM) | 04.2024 - 09.2024

### PHD THESIS - NEUROSCIENCE

LSAÚDE LAB | INSTITUTO DE MEDICINA MOLECULAR | 01.2019 - 07.2024

VISITING RESEARCHER - INSTITUTO DE INVESTIGACIÓN SANITARIA ARAGÓN, SPAIN | 09.2019 - 02.2020

### TECHNICIAN | LAB MANAGER

CFRANCO LAB | INSTITUTO DE MEDICINA MOLECULAR | 11.2017 - 12.2018

### RESEARCH TRAINEE

GODINHO FERREIRA LAB | INSTITUTO GULBENKIAN DE CIÊNCIA | 02.2017 - 04.2017

### MASTER THESIS

LSAÚDE LAB | INSTITUTO DE MEDICINA MOLECULAR | 09.2015 - 03.2017

## INTELLECTUAL PROPERTY

**"Provisional Patent Application PT 118583 (Pending): "Treatment of Spinal Injury".**

**Inventors:** Martins, I.; Saúde, L. and Neves-Silva, D.

**Applicants:** IMM JLA

## TECHNICAL SKILLS

- **MOUSE MODEL** - Animal handling. Spinal cord injury (SCI). Animal care, pre- and post-SCI. Execution and analysis of different locomotor behaviour tests (Basso Mouse Scale (BMS), Horizontal Ladder, MouseWalker) and sensitive behaviour tests (Incremental plate, Von Frey). Animal perfusion and necropsy. Sample collection for histology or molecular analysis. Drug administration. Intracerebroventricular injection.
- **ZEBRAFISH MODEL** - Zebrafish husbandry. One-cell stage injection. Drug administration. SCI. Execution and analysis of different locomotor behaviour tests (Open Field and Swim tunnel assays). Cell transplantation to create zebrafish embryonic chimeras.
- **MOLECULAR AND GENETIC TECHNIQUES** - Genotyping. Sample preparation for histology. Immunofluorescence staining in whole mount and sectioned tissues. Western blot assay. RNA extraction. cDNA synthesis. Primer design. qPCR. Tissue culture. Cloning using Tol2 and Gateway systems. Anti-sense mRNA probe synthesis for *in situ* hybridization. *in situ* hybridization.
- **MICROSCOPY** - Spinning Disc Confocal Microscope Zeiss Cell Observer SD. Point Scanning Confocal Microscope Zeiss LSM 880. Widefield Fluorescence Microscopes Zeiss Cell Observer. Pathology Slide Scanners – NanoZoomer. Multi-photon Microscope Leica SP8 MP. Fluorescence Stereo Microscopes Zeiss AxioZoom V16.
- **FLOW CITOMETRY** - BD LSRFortessa X-20.
- **COMPUTER SKILLS** - Microsoft Office. FIJI. Image Lab. ZEN. Adobe Illustrator. Applied Biosystems 7500 Real-Time PCR Software. Graphpad Prism 9. SnapGene. Mendeley. R studio. FlowJo.
- **OTHERS** - Lab manager.

## SOFT SKILLS

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|--------------------|-------------------------------|-------------------------|----------------|
| - Problem solving. | - Collaboration and Teamwork. | - Writing Skills.       | - Hardworking. |
| - Reporting.       | - Conflict Resolution.        | - Interpersonal skills. | - Patient.     |
| - Communication.   | - Delegation.                 | - Adaptability,         | - Persistent.  |
| - Troubleshooting. | - Organization and Planning.  | - Leadership.           |                |
| - Brainstorming.   | - Project Management.         | - Critical thinking.    |                |

## AREAS OF EXPERTISE

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|--------------------------|-------------------------|
| - Mentoring/Teaching     | - Microscopy            |
| - Immunohistochemistry   | - Zebrafish             |
| - Molecular Biology      | - Mice                  |
| - Microbiology           | - Genetics              |
| - Animal Experimentation | - Developmental Biology |
| - Animal Behavior        | - Neuroscience          |
| - Lab Management         | - Flow Citometry        |

## AWARDS AND DISTINCTIONS

**2025 - Voted next Chair** for the Gordon Research Seminar Central Nervous System Injury and Repair 2027

**2025 - Selected speaker** in the Central Nervous System Injury and Repair - Gordon Research Seminar, Lucca (Barga), Italy

**2025 - Travel Grant** for the XIX Meeting of the Portuguese Society for Neuroscience

**2024 - PhD in Neurosciences - Approved with Distinction and Honors (*summa cum laude*)** by Doctoral Programme of the Academic Medical Centre of Lisbon, Lisboa, Portugal

**2021 - RISING STAR AWARD** at 3rd NMS Symposium on Chronic Diseases and Translational Science, Lisboa, Portugal

**2021 - Pfizer Basic Investigation Award** - Leonor Saúde and Team, Lisboa, Portugal

**2020 - Prémios Santa Casa Neurociências** - Leonor Saúde and Team, Lisboa, Portugal

**2018 – FCT PhD fellowship** (SFRH/BD/138636/2018), Lisboa, Portugal

**2016 - Selected Photo** for the exhibition ArtDEVO "the hidden beauty of the embryo" (<http://www.museus.ulisboa.pt/pt-pt/art-devo>), Lisboa, Portugal

## PUBLICATIONS

**"Protocol for whole-mount preparation, clearing and visualization of the adult zebrafish spinal cord structures."**

STAR Protocols, 2024, Article reference: XPRO\_STAR-PROTOCOLS-D-24-00423, Co-author

**"Mouse Spinal Cord Vascular Transcriptome Analysis Identifies CD9 and MYLIP as Injury-Induced Players" - 1st author**

International Journal of Molecular Sciences, 2023, <https://doi.org/10.3390/ijms24076433>

**"Using the MouseWalker to Quantify Locomotor Dysfunction in a Mouse Model of Spinal Cord Injury"**

Journal of Visualized Experiments, 2023, <http://dx.doi.org/10.3791/65207>, Co-author

**"Targeting senescent cells improves functional recovery after spinal cord injury"**

Cell Reports, 2021, DOI: 10.1016/j.celrep.2021.109334, Co-author

## PROJECTS

**MYLIP\_PRINT: EXPLOITING THE ROLE OF MYLIP POSITIVE PERICYTES |**

Lisaura Martins Lab - CIIS - CMS |2024 - Present

Researcher. **Coordinator:** Isaura Martins. **Funding:** Wings for Life Research Grant

**IMMUNE REGULATION OF SKELETAL MUSCLE METABOLIC HEALTH AND EXERCISE RESPONSE IN AGING | HR23-00881**

Neves-Victor Lab - IMM | 2024 - 2024

Researcher. **Coordinator:** Pedro Sousa Victor. **Funding:** Caixa d'Estalvis i Pensions de Barcelona.

**ENDOTHELIAL CD9 AS A NEW ANTI-INFLAMMATORY TARGET TO PROMOTE SPINAL REPAIR | 2022.05669.PTDC**

Leonor Saúde Lab - IMM | 2023 - 2024

Researcher. **Coordinator:** Isaura Martins. **Funding:** Fundação para a Ciência e a Tecnologia.

**SENESCENT CELLS AND THEIR SECRETORY PHENOTYPE: NOVEL TARGETS FOR SPINAL CORD REPAIR | MC-36-2020**

Leonor Saúde Lab - IMM | 2020 - 2023

Researcher. **Coordinator:** Leonor Saúde. **Funding:** Santa Casa da Misericórdia de Lisboa.

**TARGETING INDUCED-SENESCENT CELLS: A NOVEL APPROACH TO PROMOTE SPINAL CORD REGENERATION IN MAMMALS | HR18-00187**

Leonor Saúde Lab - IMM | 2020 - 2023

Researcher. **Coordinator:** Leonor Saúde. **Funding:** Caixa d'Estalvis i Pensions de Barcelona.

**"AXIAL.EC - PRINCIPLES OF AXIAL POLARITY-DRIVEN VASCULAR PATTERNING" | ERC-2015-STG-GA 679368**

Claudio Franco Lab - IMM | 2017 - 2018

Researcher. **Coordinator:** Claudio Franco. **Funding:** European Research Council.

## POSTER AND ORAL PRESENTATIONS

**"IDOLizing pericytes regulatorsof cardiometabolic effects after spinal cord injury"**

- Central Nervous System Injury and Repair - Gordon Research Conference - Lucca (Barga), Italy. 07.2025 (Poster)
- XIX Meeting Portuguese Society for Neurosciences - Povoia do Varzim, Portugal. 05.2025 (Poster)

**"Is the zebrafish a glitch in the matrix?"**

- IMM Neuroscience Seminar. 11.2023 (Oral Presentation)

**"Using the regenerative potential of zebrafish extracellular matrix to promote spinal cord repair in mammals"**

- XV CAML · V NeurULisboa PhD Students Meeting, Lisboa, Portugal. 05.2022. (Oral Presentation)
- 3rd NMS Symposium on Chronic Diseases and Translational Science, Lisboa, Portugal. 10.2021. (Oral Presentation)
- XIV CAML · IV NeurULisboa PhD Students Virtual Meeting - Lisboa, Portugal. 05.2021. (Oral Presentation)
- IMM Pizza Seminar - Lisboa, Portugal. 09.2021. (Oral Presentation)
- XIII Annual CAML PhD Students Meeting - Lisboa, Portugal. 05.2019. (Oral Presentation)

**"The right time to "scar""**

- 4th International Meeting of the Portuguese research network on Spinal Cord Injury , Lisboa, Portugal. 09.2024 (Poster)
- 3rd International Meeting of the Portuguese research network on Spinal Cord Injury , Porto, Portugal. 06.2023. (Poster)
- XVI CAML · VI NeurULisboa PhD Students Meeting, Lisboa, Portugal. 05.2023. (Poster)

**"Mimicking the Zebrafish Extracellular Matrix Profile in Mammals to Promote Spinal Cord Repair."**

- 2nd International Meeting of the Portuguese research network on Spinal Cord Injury - Porto, Portugal. 06.2022. (Poster)
- Gordon Research Seminar and Conference on Central Nervous System Injury and Repair - Oxnard, California, USA. 03.2022. (Poster)
- XVII Meeting of the Portuguese Society for Neuroscience (SPN2021) - Coimbra, Portugal. 03.2021. (Poster)

**"The role of Cadherin 11 in the establishment of organ laterality in zebrafish."**

- 10th-year anniversary BED master symposium. Faculdade de Ciências da Universidade de Lisboa, Lisboa, Portugal - 12.2017. (Poster)

**"The Intermediate Mesoderm, a new player in the establishment of organ laterality?"**

- International Curie/UPMC Developmental Biology Course Seminars (UPMC) - Paris, France. 10.2015. (Poster)

### Organizing member

- Co-chair of the Gordon Research Seminar “Central Nervous System Injury and Repair” 2027
- Co-organizer of the EMBO Practical Course “Spinal Cord Injury Models Training Course” 2026
- Organizer of the DiA meeting “Inspiring Embryonic Minds” for Portuguese Society of Developmental Biology (SPBD) at FCUL - Event date: 10.11.2023
- Projecto “Fala-me Neuro” - 2022 to 2024
- Organizer of the “Science Careers” sessions (CAML PhD committees) - 2021 to 2024
- Organizer of the “Pizza Seminar” sessions (CAML PhD committees) - 2020 to 2021
- Organizer of the Development in Action (DiA) meeting (SPBD) - 2020 to 2024
- Coordinator of the SPBD stand in the Noite Europeia dos Investigadores - Event date: 09.2016, 09.2017, 09.2018, 09.2018, 09.2019 and 09.2022
- Co-Organizer of the 2nd Meeting of SPBD with Spanish Society of Developmental Biology (SEBD) and Portuguese Society of Stem Cells and Cell Therapies (SPCE-TC) - Event date: 10.2013

### Social Media Coordenator

- IMartins Lab Social Media platform (Instagram, LinkedIn, website) - from 2024 - present
- SPBD Social Media platforms (Facebook and Instagram) - 2020 to 2024
- LSaúde Lab Social Media platform (Instagram) - 2019 to 2024

### Teaching

- Animal Models in Regeneration - Introduction to Regenerative Medicine Course for Integrated Master’s degree in Medicine from NOVA Medical School, Universidade Nova de Lisboa - 27.02.2025
- Left-right asymmetry - Developmental Biology course for Biology Bachelor from Faculdade de Ciências, Universidade de Lisboa (FCUL) - 06.2018
- Zebrafish as a model organism - 3 practical classes each year - Developmental Biology course for Biology Bachelor from FCUL - 04.2020 (online), 05.2021, 05.2022 and 05.2023
- Biomedical Science with zebrafish (Masterclass) - 2 sessions each year - AIMS meeting - Faculdade de Medicina, Universidade de Lisboa - 03.2021, 11.2021, 11.2022, 11.2023

## MENTORING AND SUPERVISION

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**Olivia Domingos - Co-Supervisor** - “Cognitive decline in spinal cord injury: human and mice overview under CD9 and MYLIP scope” - Master Thesis (ISPA) - 09.2025 - PRESENT

**Maria Borges - Supervisor** - “From vessel to scar: IDOL as the missing link in pericyte-driven fibrosis after spinal cord injury” - Laboratory rotation & Master Thesis (FCUL) - 06.2025 & 09.2025 - PRESENT

**Daniel Soares - Co-Supervisor** - “The role of CD9 in neuropathic pain after spinal cord injury” - Laboratory rotation & Master Thesis (NOVA Medical School) - 04.2025 & 09.2025 - PRESENT

**Isa Fernandes Mota - Co-Supervisor** - “Exploring the role of pericytes as metabolic regulators after spinal cord injury.” - 01.2025 - PRESENT

**Madalena Pires - Co-Supervisor** - “Uncovering the role of MYLIP-expressing pericytes as new regulators of neuroinflammation and blood spinal cord barrier integrity after spinal cord injury” - Master Thesis (NOVA Medical School) - since 09.2024 - PRESENT

**Pedro Gomes - Supervisor** - “Unveiling the function of type I Collagen in spinal cord regeneration” - Master Thesis (FCUL) - 09.2024 - PRESENT

**Gonçalo Mendes - Co-Supervisor** - “Unveiling the function of type I Collagen in spinal cord regeneration” - Master Thesis (IMM/FMUL) - 09.2023 - 04.2025

**Teresa Chaves - Mentoring** - “How are the *col1a2*-expressing cells disappearing from the injury site?” - Bachelor Thesis (Faculdade Ciências e Tecnologia, Universidade Nova de Lisboa) - 02.2023 to 07.2023

**Margarida Diniz - Mentoring** - “The right time to scar” - Laboratory rotation (NOVA Medical School) - 04.2023 to 07.2023

**José Maria Leitão - Mentoring** - “The role of Cadherin11 in the establishment of laterality in the zebrafish” - Master Thesis (FCUL) - 09.2016 to 03.2018