



JOÃO MORAIS

Bsc in Genetics and Msc in Neurobiology

PROFILE

I am a scientific researcher with strong expertise in animal experiments and theoretical background in molecular biology and neuroscience. I am very passionate about science and easily motivated with new challenges and the possibility to learn.

This is an interactive CV. Clicking in "curriculum", PDF or PUBMED will redirect you to an online pdf.

CONTACT INFORMATION

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(+351) 937 316 419
www.linkedin.com/in/joaopfmorais
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PERSONAL SKILLS

Portuguese	<div style="width: 100%;"></div>
English	<div style="width: 95%;"></div>
Spanish	<div style="width: 80%;"></div>
Communication	<div style="width: 90%;"></div>
Complex Problem Solving	<div style="width: 95%;"></div>
Critical Thinking	<div style="width: 95%;"></div>
Creativity	<div style="width: 90%;"></div>
Organization	<div style="width: 95%;"></div>
Management	<div style="width: 95%;"></div>
Teamwork	<div style="width: 95%;"></div>
Flexibility	<div style="width: 95%;"></div>

PROFESSIONAL REFERENCES

Fanny Cazettes
Postdoctoral Researcher
fanny.cazettes@neuro.fchampalimaud.org

António Avelino
Professor / Postdoctoral Researcher
aavelino@med.up.pt

PROFESSIONAL EXPERIENCE

MASTER STUDENT / RESEARCH ASSISTANT (3 YEARS)

Systems Neuroscience group (Mainen Lab) | Champalimaud Centre for the Unknown
November 2019 - August 2021

Project title: "Effects of 5-HT DRN stimulation in decision making"
Supervisor: Fanny Cazettes

BACHELOR INTERNSHIP (1 YEAR)

Translational NeuroUrology group (Cruz Lab) | Research and Innovation in Health (i3S)
March, 2017 - December, 2017

Report title: "Bupivacaine on external urethral sphincter regeneration"
Supervisor: António Avelino

EDUCATION AND TRAINING

MASTER DEGREE IN NEUROBIOLOGY

Faculty of Medicine, University of Porto | September 2017 - November 2019
Curriculum

Thesis: "Behavioral effects of DRN stimulation on a Head-fixed Foraging Task"
Supervisor: Fanny Cazettes
Grade: 18/20



BACHELOR DEGREE IN GENETICS AND BIOTECHNOLOGY

University of Trás-os-Montes e Alto Douro | September, 2014 - September, 2017
Curriculum

Report title: Bupivacaine on external Urethral sphincter regeneration
Supervisor: António Avelino
Grade: 19/20



SCIENTIFIC PUBLICATIONS

Phasic Activation of Dorsal Raphe Serotonergic Neurons Increases Pupil Size (Cazettes, 2020)

DOI: 10.1016/j.cub.2020.09.090 | Current Biology

Bupivacaine treatment enhances the regeneration of the lesioned external urethral sphincter of the rat (Morais, 2017)

DOI: 10.1016/j.pbj.2017.07.068 | Porto biomedical journal

COLLABORATION

Reservoir of decision strategies in the mouse brain (Cazettes, 2021)

DOI: 10.1101/2021.04.01.438090 | Biorxiv

TECHNICAL SKILLS

Rodent general

- Mouse colony management
- Mouse handling and maintenance
- Standard Injections, Anaesthesia, Euthanasia
- Elaboration of customized SOPs

Rodent surgery

- Stereotaxic head bar implantation
- Stereotaxic intracranial microinjection
- Stereotaxic optic fiber implantation
- Transcardial perfusion
- In situ drug delivery (Rat)

Software / coding

- Microsoft office programs: (Excel, PowerPoint, Word)
- Adobe programs: (Photoshop, Illustrator)
- Pyrat and Agendo

Histochemistry

- Tissue fixation
- Sample processing in paraffin and OCT
- Microtome and cryostat cutting
- Stainings (H&E, Trichrome, Methylene blue)
- Immunohistochemistry
- Custom protocol elaboration

Microscopy

- Axio Imager M2
- ZEISS Axio Scan.Z1 Slide Scanner

- Fiji ImageJ
- QuPath
- Matlab *
- Arduino *
- Python *

Molecular Biology *

- DNA and RNA extraction
- DNA electrophoresis
- PCR, qPCR and RT-PCR
- Cell culture

Neuroscience

- Behavioral task setup with thorlab and arduino hardware
- Optogenetics
- Electrophysiology*

Other

- Digital drawing and graphic design
- Scientific Writing

I have complete independence in all listed skills except for those marked with an *

CONFERENCES, COURSES AND WORKSHOPS

2021

- Neuromatch Academy: Computational Neuroscience (Online, international)

2019

- XVI Meeting of the Portuguese Society for Neuroscience - Presenting student (Lisbon)

2018

- **Laboratory animal science course for Function A (+D) (Former FELASA B) (Champalimaud, Lisbon)**

2017

- 12th Young European Scientists Meeting - Presenting student (FMUP, Porto)
- XIX Journeys of genetics and biotechnology (UTAD, Vila Real)

2016

- VIII Journeys of genetics and biotechnology (UTAD, Vila Real)

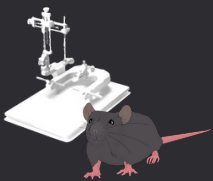
2015

- VII Journeys of genetics and biotechnology (UTAD, Vila Real)
- Bioethics meeting (ICBAS, Porto)

PROJECTS OVERVIEW

PROJECT:

EFFECTS OF 5-HT DRN STIMULATION IN DECISION MAKING

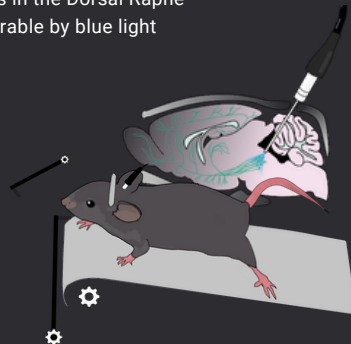


1 - INJECTION OF DIO CHR2 IN SERT-CRE TRANSGENIC MICE

Serotonin neurons in the Dorsal Raphe become triggerable by blue light

2 - MICE PERFORM A TASK WHICH REQUIRES THEM TO MAKE DECISIONS UNDER UNCERTAINTY.

Blue light is shed in the Dorsal raphe in a subset of trials stimulating serotonin neurons



3- DATA IS COLLECTED, PROCESSED AND ANALYZED



Histology Data



Behaviour Data



Video Data

PUBLICATION:

PHASIC ACTIVATION OF DORSAL RAPHE SEROTONERGIC NEURONS INCREASES PUPIL SIZE (CAZETTES, 2020)

DOI: 10.1016/J.CUB.2020.09.090 | CURRENT BIOLOGY

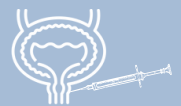


PROJECT:

URETHRAL MUSCLE REGENERATION THROUGH BUPIVACAINE



1 - Surgical lesion of urethral muscle



2 - Injection of Bupivacaine



3 - Immunohistochemistry Histology Acquiring and Data Analysis

PUBLICATION:

BUPIVACAINE TREATMENT ENHANCES THE REGENERATION OF THE LESIONED EXTERNAL URETHRAL SPHINCTER OF THE RAT (MORAIS, 2017)

DOI: 10.1016/J.PBJ.2017.07.068 | PORTO BIOMEDICAL JOURNAL

