



## João Pedro Ferreira Morais

**Date of birth:** 28/01/1994 | **Nationality:** Portuguese | **Gender:** Male |

**Phone number:** (+351) 937316419 (Mobile) | **Email address:**

[joaopfmorais@gmail.com](mailto:joaopfmorais@gmail.com) |

**Address:** Rua General Humberto Delgado nº4, 5430-474, Valpaços, Portugal  
(Home)

### WORK EXPERIENCE

17/08/2015 – 28/08/2015 Vila Real, Portugal

#### CLINICAL LABORATORY TECHNICIAN LABORATÓRIO PIOLEDO

Internship at a local clinical analysis lab:

1. Worked in the sectors of Biochemistry, Immunology, Hematology, and Microbiology.
2. Loaded equipment, performed internal and external controls, and processed samples.
3. Worked with human samples, preprocessing blood and urine vials to perform different tests.
4. Automated tests in Biochemistry and Immunology (handling equipment)
5. Manual tests (Blood type assay, microbiology culture assays, and microscope observation).

01/03/2017 – 01/12/2017 Porto, Portugal

#### RESEARCH ASSISTANT INSTITUTE FOR RESEARCH AND INNOVATION IN HEALTH; FACULTY OF MEDICINE OF PORTO UNIVERSITY

Bachelor's Internship

Developed a project to study of the effect of a drug (bupivacaine) in the regeneration of the lesioned external urethral sphincter of the rat:

1. Performance of surgeries for local drug delivery (injection) and standardized lesion of the urethra in female rats
2. Sample (Urethras) collection, processing in paraffin, various histological staining including immunohistochemistry.
3. Image acquisition in fluorescence microscopy
4. Cell counting and data analysis
5. Participation in Lab meetings, and experimental design

With the work developed in this project, a poster was published at international students meeting 12th YES meeting (2017) and published in Porto Biomedical Journal.

01/07/2018 – 01/08/2021 Lisbon, Portugal

#### RESEARCH ASSISTANT / RESEARCH TECHNICIAN CHAMPALIMAUD FOUNDATION

Study of the role of serotonin in decision-making:

1. Cranial stereotaxic surgeries in mice: brain nano injection, implanting optic fibers, headbars and acute-electrophysiology apparatus.
2. Mice handling and training using closed-loop automated protocols (python, arduino and matlab)
3. Transcardiac perfusion, sample collection (brains), cryostat slicing, immunohistochemistry, and image acquisition (fluorescence microscopy)
4. Participation in Lab meetings

This work culminated in a co-authorship of two scientific papers.

01/03/2022 – 01/09/2022 Barcelona, Spain

#### RESEARCH TECHNICIAN INSTITUT CATALÀ DE NANOCIÈNCIA I NANOTECNOLOGIA (ICN2)

1. Performed histology of frozen mice brains and immunohistochemistry.
2. Developed custom immunohistochemistry protocols.
3. Edited, reviewed, and debugged previously developed python scripts for neural data analysis.
4. Spike sorting in kilosort

## ● EDUCATION AND TRAINING

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08/09/2014 – 08/09/2017 Vila Real, Portugal

**BACHELOR DEGREE IN GENETICS AND BIOTECHNOLOGY** Universidade de Trás-os-Montes e Alto Douro

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**Address** Quinta de Prados, 5000-801, Vila Real, Portugal | **Website** <https://www.utad.pt/en/>

08/09/2017 – 08/11/2019 Porto, Portugal

**MASTER DEGREE IN NEUROBIOLOGY** Faculdade de Medicina da Universidade do Porto

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**Address** Alameda Prof. Hernâni Monteiro, 4200-319, Porto, Portugal |

**Website** [https://sigarra.up.pt/fmup/en/web\\_page.inicial](https://sigarra.up.pt/fmup/en/web_page.inicial)

## ● DIGITAL SKILLS

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### Coding / programming (general)

Basic Python 3.9 | Arduino's Java | wordpress (a little bit of html and css)

### MS

Microsoft Excel | Microsoft Powerpoint | Microsoft Word

### Online

Google Drive | Google Docs | Zoom | Instagram (Social media)

### Art

Krita (Image editing and drawing) | Inkscape ( open source alternative to Adobe Illustrator) | Paint.NET (alternative to Adobe Photoshop)

## ● ADDITIONAL INFORMATION

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### PUBLICATIONS

[Bupivacaine treatment enhances the regeneration of the lesioned external urethral sphincter of the rat: PS173](#)

– 2017

Morais, J. P; Torrado, M; Avelino, A.

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Porto Biomed J . 2017 Sep-Oct;2(5):203-204. doi: 10.1016/j.pbj.2017.07.068. Epub 2017 Sep 1.

[Phasic Activation of Dorsal Raphe Serotonergic Neurons Increases Pupil Size](#) – 2021

Fanny Cazettes , Davide Reato, João P Morais, Alfonso Renart, Zachary F Mainen

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Curr Biol . 2021 Jan 11;31(1):192-197.e4. doi: 10.1016/j.cub.2020.09.090. Epub 2020 Nov 12.

[A reservoir of foraging decision variables in the mouse brain](#) – 2023

Fanny Cazettes, Luca Mazzucato, Masayoshi Murakami, Joao P Morais, Elisabete Augusto, Alfonso Renart, Zachary F Mainen

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Nat Neurosci . 2023 May;26(5):840-849. doi: 10.1038/s41593-023-01305-8. Epub 2023 Apr 13.

### VOLUNTEERING

01/05/2023 – 30/06/2023 Stratoni, Halkidiki, Greece

**European Youth Corps H20 Cultural Heritage** Project under the European Solidarity Corps.

Organized non-formal education workshops to offer an in-depth look at the subject of migrations and cultural heritage to children in a rural region in the north of Greece. Our group of 15 volunteers worked to encourage the acceptance of interculturality between Turkish and Greek communities and fight generational prejudice.

## CREATIVE WORKS

15/01/2021 – CURRENT

**Experimental Digital Drawing and Editing** I regularly produce visual experimental digital art pieces which I share on Instagram and Deviant Art.

Each piece is usually accompanied by a short philosophical essay.

I create those under the name of "Estrondio":

[Instagram](#)

[DeviantArt](#)

01/01/2010 – CURRENT

**Music composition and playing** I play the guitar, some piano, a bit of the drums and sing.

I have composed various songs in Portuguese.

I used to have a covers band in my teens!

Here's a sneak peek:

[Pearl Jam cover live](#)

[Jazzy original song](#)

[Ballad original song](#)

07/05/2008 – CURRENT

**Blogging: Science Writing, Book Reviews and Native Essays** I like to write and to read:

1. I had a science blog which I started with a colleague in college. In each article, we approach a scientific question. Although we go deep into the science, we try to make it accessible for people from all backgrounds: [Adomania](#)
2. I also had another blog where I publish short essays in Portuguese: [Principiantes](#)
3. At last, I have a GoodReads account where I keep track of my readings and regularly review the books once I've finished reading them: [GoodReads](#)