PERSONAL INFORMATION

Tomás Ochôa-May Pereira da Cruz

Rua Doutor Gama Barros nº 69 R/c Drt 1700-144 Lisboa, Portugal

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Sex Male | Date of birth 25/10/1991 | Nationality Portuguese

EDUCATION AND TRAINING

September, 2016 – September 2023

MSc in Molecular Biology and Genetics

University of Lisbon

- Thesis under the title: "Discovery of Biomarkers for the efficacy of Adalimumab in Ankylosing Spondylitis (AS) patients using a metabolomic approach"

September, 2014 – February, 2015

MSc in Immunology and Immunotherapy

University of Birmingham

- Attended the first semester of the programme but had to request a leave of absence due to illness

September, 2009 – June, 2012

Bachelor of Science with Honours in Medical Microbiology and Immunology

Newcastle University

- Dissertation under the title: "Investigation of the response of vaginal cells to the fungal cell wall component zymosan"

RESEARCH EXPERIENCE

September, 2020 – September, 2023

Student Research Scientist (MSc Thesis)

Proteomics of Non-Model Organisms Lab, ITQB NOVA (Oeiras, Portugal)

- Characterised the endogenous serum metabolome of Ankylosing Spondylitis (AS) patients receiving anti-TNF-α monoclonal antibody therapy using High-Resolution Liquid Chromatography Tandem Mass Spectrometry.
- Evaluated the metabolomic changes in AS patients in response to therapy.
- Proposed mechanistic explanations for those changes by correlating my own results with the current literature.

September, 2019 – March, 2020

Lab Assistant

Marc Veldhoen Lab, Instituto de Medicina Molecular (Lisbon, Portugal)

- Gained skills in advanced techniques in cellular and molecular biology including: Single Cell Suspension; Extracellular and Intracellular Antibody Staining; Multicolour Flow Cytometry with data analysis; Bacterial cell transformation; Plasmid purification (Megapreps).

July, 2015 – September, 2015

Lab Assistant

Maria Mota Lab, Instituto de Medicina Molecular (Lisbon, Portugal)

- Refined skills in several fundamental techniques in cellular and molecular biology

January, 2014 – June, 2014

Lab Assistant

Infections and Immunity group (PI: Michael Parkhouse), Instituto Gulbenkian de Ciência (Oeiras, Portugal)

- Refined skills in several fundamental techniques in cellular and molecular biology including: Cell culture; Immunofluorescence; Luciferase Reporter Assays; Western Blot; Bacterial Cell Transformation; Plasmid purification (Mini and Midipreparations); PCR; Agarose gel electrophoresis; DNA gel extraction; Molecular Cloning (restriction enzyme digestion, ligation, and transformation)

January, 2012 – March, 2012

Undergraduate Research Scientist (Dissertation)

Institute for Cell and Molecular Biosciences, Newcastle University (Newcastle upon Tyne, United Kingdom).

- Detected the presence of the β-glucan receptor Dectin-1 in vaginal epithelial cells using RT-PCR, PCR and gel electrophoresis; analysed the data using several software packages.
- Cultured the vaginal epithelial cells and transfected them the using a commercial NFκB Reporter (GFP). Adapted and optimised the given transfection method to better suit our cell line.
- Challenged the cells with several antagonists and measured the immune response using a fluorometer

November 2010 – June, 2011

Student Lab Assistant

Centre for Bacterial Cell Biology (CBCB), Newcastle University (Newcastle upon Tyne, United Kingdom).

- Assisted researchers at the CBCB with their projects.

PERSONAL SKILLS

Languages Portuguese, English, and Spanish

Computer skills Good overall knowledge of Microsoft Office. Can independently use Compound Discoverer to identify metabolites from a sample and customise the workflow to the project's requisites. Experience user of MetaboAnalyst for statistical and bioinformatic analyses. Have had hands-on experience with FlowJo to analyse flow cytometry data. Learned to use the multiple sequence aligner software CodonCode Aligner and the statistics software GraphPad Prism during my dissertation.

COMMUNICATIONS

Posters

- **Tomás Ochôa Cruz**, Cíntia Macedo, João Nunes Silva, Nuno Burnay, Pedro Mariano, Jorge Marques da Silva. Using the Chlorophyll Fluorescence Signal and Machine Learning Techniques To Automatically Identify Quercus Species: Preliminary Results. Poster session presented at: 3rd General COST Meeting; 27 – 28 Mar 2017; Oeiras, Portugal.
- Cíntia Macedo, **Tomás Ochôa Cruz**, João Nunes Silva, Nuno Burnay, Pedro Mariano, Jorge Marques da Silva. Using the Chlorophyll Fluorescence Signal and Machine Learning Techniques to Automatically Determine the State of the Water Stress in *Arabidopsis thaliana*: Preliminary Results. Poster session presented at: Poster session presented at: 3rd General COST Meeting; 27 – 28 Mar 2017; Oeiras, Portugal.

ADDITIONAL INFORMATION

Seminars (attendee)

- 3rd edition of FLxFlow Course: Basic Module (2021)
- 3rd General COST Meeting at Instituto de Técnologia Química e Bilógica (ITQB), Oeiras, Portugal.
- The Thymus @ Lisbon conference at Instituto de Medicina Molecular (IMM)
- The 2014 British Society for Immunology (BSI) Congress in Brighton, UK
- Several optional seminars as part of the Ncl+ program on a wide range of topics within the field of medical research.