

# ORIO PAVÓN AROCAS

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## Education

- 2016 – present **Wellcome Trust 4 Year PhD in Neuroscience**  
University College London, UK
- 2013 – 2015 **Master of Science (MSc), Neurosciences**  
Elite Network of Bavaria, Graduate School of Systemic Neurosciences  
Ludwig-Maximilians-Universität München, Germany  
GPA: 1.31 (German system)
- 2009 – 2013 **Bachelor of Science (BSc), Biomedical Sciences**  
Universitat Autònoma de Barcelona (UAB), Bellaterra (Barcelona), Spain  
GPA: 8.39/10, top 15%

## Work experience

3. 2015 – 9. 2015 **MSc Thesis | ‘Sleep regulation in *Drosophila*’**  
*Centre for Neural Circuits and Behaviour, DPAG, University of Oxford, UK*  
Used a photoactivatable GFP-based tracing method combined with two-photon laser scanning microscopy to map the neuronal circuitry involved in the homeostatic regulation of sleep in *Drosophila*.  
*Thesis directors: Prof Dr Gero Miesenböck and Prof Dr Alexander Borst*
1. 2015 – 2. 2015 **MSc Research Project 3**  
*Division of Neurobiology, Faculty of Biology, LMU München, Germany*  
Establishment of a whole-brain preparation for in-vitro electrophysiology to study the neuronal mechanisms of vocal patterning in the catfish *Ariopsis seemani*.  
*Supervisor: Dr Boris Chagnaud*
10. 2014 – 12. 2014 **MSc Research Project 2**  
*Dept. Axonal Signalling, Netherlands Institute for Neuroscience, Amsterdam, Netherlands*  
Combined whole-cell recordings in pyramidal neurons of acute brain slices of mice and rats with OGB-1-based calcium imaging to study calcium dynamics underlying action potential generation in the axon initial segment.  
*Supervisors: Prof Dr Maarten H.P. Kole and Dr Marko Popovic*
2. 2014 – 4. 2014 **MSc Research Project 1**  
*Neuronal Plasticity Group, Max Planck Institute of Psychiatry, München, Germany*  
Performed bilateral injections of AAV constructs carrying Archaelhodopsin targeting the lateral septum to optogenetically dissect its role on anxiety-related behaviour in the open field and elevated plus maze tests.  
*Supervisor: PD Dr Carsten Wotjak*
10. 2012 – 6. 2013 **BSc Thesis**  
*Institute of Neurosciences, Universitat Autònoma de Barcelona, Spain*  
Stereotaxic surgery to implant electrodes and perform electrolytic lesions in rats to study how a training protocol of Intracranial Self-Stimulation improves learning in two-way shuttlebox avoidance conditioning.  
*Thesis director: Dr Pilar Segura Torres*

## Additional experience

- 4. 2014 – 10. 2014 Research assistant at the group of **Prof Dr Benedikt Berninger**  
*Institute of Physiology, Dept. Physiological Genomics, LMU München, Germany*
- 8. 2012 Research exchange student (IFMSA) at the group of **Prof Dr M. Zafer Gören**  
*Dept. of Medical Pharmacology, Faculty of Medicine, Marmara University, Istanbul, Turkey*
- 7. 2012 Volunteer staff at **8th FENS Forum of Neuroscience**, CCIB, Barcelona, Spain
- 10. 2011 – 12. 2011 Research assistant under the supervision of **Dr Elisa Martró**  
*Dept. of Microbiology, Hospital Universitari Germans Trias i Pujol, Badalona, Spain*
- 8. 2011 – 9. 2011 Summer internship at the group of **Dr Ruben López-Vales**  
*Institute of Neurosciences, Universitat Autònoma de Barcelona, Spain*
- 7. 2011 Summer internship under the supervision of **Dr Rosa Mirapeix**  
*Faculty of Medicine, Universitat Autònoma de Barcelona, Spain*

## Awards and achievements

- 2016 - 2020 **Wellcome Trust 4 Year PhD in Neuroscience** at University College London
- 2016 - 2020 **Wellcome Trust 4 Year Doctoral Programme in Neuroscience** (MSc+Dphil) at University of Oxford (Declined)  
**DPhil in Ion Channels and Membrane Transport in Health and Disease** (OXION) funded by the University of Oxford (Declined)  
**MRes/PhD in Developmental Neurobiology** at King's College London (Declined)
- 3. 2015 – 9. 2015 Erasmus+ Traineeship Scholarship for the MSc Thesis Project in Oxford  
*European Commission*
- 8. 10. 2014 **Poster Award** – Rookie of the Year 2014 (best poster for a MSc student)  
*GSN Symposium, Graduate School of Systemic Neurosciences, LMU Munich*
- 10. 2014 – 12. 2014 Erasmus+ Traineeship Scholarship for the MSc Research Project 2 in Amsterdam  
*European Commission*

## Skills and competences

- Technical skills Two-photon laser scanning microscopy, photoactivatable GFP tracing  
Simultaneous patch-clamp recordings and calcium imaging in acute brain slices  
Optogenetics, behavioural assays, sharp electrode intracellular recordings  
Confocal microscopy, cryostat slicing, immunostainings, stereotaxic surgery  
Molecular biology (western blot, PCR, electrophoresis, DNA extraction)  
Animal models: rat, mouse, zebrafish, catfish, *Drosophila*, leech, *Xenopus laevis*
- Programming skills MATLAB, IGOR Pro, and Python for data analysis, modelling and *in silico* screening for *Drosophila* transgenic lines; NEURON simulator
- Software Axograph, IGOR Pro, and pCLAMP for electrophysiology  
ScanImage, Neuroplex, and IDL for calcium imaging and two-photon microscopy  
Image J, Adobe Photoshop and Amira 3D for microscopy image analysis
- Languages Native in **Catalan** and **Spanish**  
Proficient in **English** (CAE Grade B)  
Basic **German** (A2)

## Additional courses

- 10. 2015 – 12. 2015 “Introduction to Programming with MATLAB” *Vanderbilt University via Coursera*
- 3. 2013 – 7. 2013 “Synapses, Neurons and Brains” *Hebrew University of Jerusalem via Coursera*
- Winter 2012 “Drugs and the Brain” *California Institute of Technology via Coursera*
- 7. 2011 “The Neurodegenerative Disease” and “Stem Cells: from theory to clinics”  
Two 20 hours Courses, *III University of Barcelona International Summer School, Spain*
- 6. 2008 Physis 2008, 1<sup>st</sup> Physics Summer Camp, *University of Barcelona, Spain*
- 1994 – 2007 Clarinet player and music student at *Music School of Sant Joan de Vilatorrada, Spain*

## Extracurricular activities

- Official blogger at the [2017 UCL Neuroscience Symposium](#)
- I started a [blog](#) to write about my experiences as a graduate student and to share the thrill of scientific discovery
- I have also collaborated with and written at [Phenotype](#), [Principia](#), [GSN Munich](#), [SharpMinds](#) and [En Clave Biomédica](#)
- Page editor at [Phenotype](#), Journal of the Oxford University Biochemical Society, *July 2015 – February 2017*
- Organised a weekly Journal Club on Learning and Memory for the MSc Neurosciences at the GSN-LMU in Munich, *Summer Semester of 2014*
- Member, Science Communicator and Web Designer of Asociación Juvenil de Biomédicos (UAB,) *since 9. 2014 – En Clave Biomédica*
- Judo black belt 2nd DAN, clarinet and guitar enthusiast