

Miguel Ramírez Moreno, PhD

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Employment History

- 2022- **The University of Southampton**, School of Biosciences (Department of Biomedical Science). Postdoctoral researcher with Prof. Amrit Mudher.
- Investigating the transmission of Tau protein across neuronal circuits.
 - Developing tools to analyse intracellular trafficking of Tau protein.
 - Optimizing and testing an array of transgenic tools to study Tau-mediated neurodegeneration in the brain.
- 2021- **The University of Sheffield**, School of Biosciences (Department of Biomedical Science).
2022 Postdoctoral researcher with Dr Natalia Bulgakova and Prof David Strutt.
- Studied the interaction between microtubule network and the Ft-Ds planar polarity in the developing wing.
- 2017- **The University of Sheffield**, School of Biosciences (Department of Biomedical Science).
2021 Postdoctoral researcher with Dr Natalia Bulgakova.
- Discovered a new mechanism regulating E-cadherin protein dynamics.
 - Generated transgenic fly strains using CRISPR.
 - Contributed to a model of microtubule network organisation in epithelial tissues.
 - Prepared and delivered lectures, worked as practical demonstrator and first and second marker of practical and literary reports.
 - Contributed to the training and supervision of junior members of the laboratory.
 - Acted as Postdoctoral representative (chair) at the departmental society, staff meetings and Health & Safety Committee.

Education

- 2013- **The University of Southampton**, Faculty of Natural and Environmental Sciences.
2017 PhD in Biology supervised by Dr Herman Wijnen.
- 2011- **Universidad Autónoma de Madrid (UAM)** and **CBMSO** (Prof Ginés Morata laboratory).
2013 Msc in Molecular and Cellular Biology.
- 2006- **Universidad Autónoma de Madrid (UAM)**.
2011 BSc in Biology

List of peer-reviewed publications

- Stubbs, K.; Batchelor, B.; Sivanantharajah, L.; Sealey, M.; **Ramírez Moreno, M**; Ruiz, E.; Richardson, B.; Perry, V.H.; Newman, T.A. and Mudher, A. **Tau-mediated axonal degeneration is prevented by activation of the WldS pathway** (Brain Communications, 2023).
- **Ramírez Moreno, M**; Hunton, R.; Strutt, D. and Bulgakova N.A. **Deciphering the roles of Fat and Dachshous planar polarity and cell shape in arranging the apical microtubule network** (Molecular Biology of the Cell, 2023).
- **Ramírez Moreno, M**; Boswell, K.; Casbolt H.L and Bulgakova, N.A. **Multifaceted control of E-cadherin dynamics by the Adaptor Protein Complex 1 during epithelial morphogenesis** (Molecular Biology of the Cell, 2022).
- Dobosz, P.; Stempor, P.A.; **Ramírez Moreno, M** and Bulgakova, N.A. **Transcriptional and post-transcriptional regulation of checkpoint genes on the tumour side of the immunological synapse** (Heredity, 2022).
- **Ramírez Moreno, M**; Bulgakova N.A. **The cross-talk between EGFR and E-cadherin** (Front Cell Dev Biol, 2022).
- **Ramírez Moreno, M**; Stempor, P.A. and Bulgakova N.A. **Interactions and feedbacks in E-cadherin transcriptional regulation** (Front Cell Dev Biol, 2021).
- Płochocka, A.Z.; **Ramírez Moreno, M**; Davie, A.M.; Bulgakova N.A. and Chumakova, L. **Robustness of the microtubule network self-organization in epithelia** (eLife, 2021).

Skills and interests:

Scientific proficiencies:

- Career track developed with the use of multiple system models in *Drosophila*, focused on cell and developmental biology (adhesion, tumour development and planar polarity), genetics, neuroscience, and circadian biology.
- High proficiency in multiple systems and tissue of *Drosophila melanogaster*. Basic experience with mouse handling and histology, and cell culture (S2 cells).
- Molecular biology and genetics: high-quality DNA and RNA extraction (library preparation), qPCR, cloning, editing (CRISPR transgenesis), Western Blot/IP.
- Immunolabelling and microscopy: expertise using different confocal and airyscan systems (Leica, Olympus, Zeiss) and extensive use of imaging analysis pipelines with FIJI/ImageJ and Matlab.
- Use of bioinformatic tools (genetic databases, sequences, basic transcriptome analysis).
- Presentation of research in several international conferences, awarded by travel grants (The Genetics Society and Guarantors of Brain, 2016) and prizes (2nd postdoc poster at Dynamic Cell IV, 2021).

IT skills:

- Proficiency in basic research software (Office, SPSS, Graphpad), and illustration software to generate visual content for research, presentation and outreach (rasterized and vectorial).
- Proficiency with digital learning and management systems (Blackboard, purchase systems) and website environment design (Wordpress).
- Coding skills with Matlab/Octave. Use and creation of tools for image analysis and data processing (see github). Basic skills with ImageJ and Python coding. Self-learning interest in data science and machine learning.

Management and organisation:

- Managed projects including summer studentship as PI and a BBSRC research grant as a research associate. Roles included: grant budgeting, communication with stakeholders, fulfilling multiple overlapping deadlines in different projects, short- and long-term planning.

- Secured funding for a summer student project (SURE scheme) by designing a research project for an undergrad student.
- Awarded with The Researcher as Manager program (ILM-endorsed).
- Chaired the departmental Postdoc Society at the University of Sheffield and participated in several department and faculty committees in diverse roles.

Teaching, teambuilding and leadership:

- Taught in multiple formats of delivery (lectures, project supervision, demonstrating etc).
- Accredited as mentor (Associated Supervisionaries scheme, modelled after HEA programs).
- Organisation of events (annual symposium, external speaker talks).
- Represented and advocated for the postdoc researchers in several committees.

Communication and collaboration:

- Presented ongoing research at several conferences in both poster and oral formats.
- Generated scientific communication content for several articles and reviews (see list above).
- Created visual content and organised/planned for several outreach events.
- Coordinated several social media accounts to raise profile of societies and schools, including the role of Media and Comms officer at the departmental postgraduate society.