

CV DATABASE

FOR A PREDOCTORAL RESEARCHER

(PREDOCTORAL RESEARCHER CONTRACT)
(Ref. 2610 - WATSON)

The Hospital del Mar Research Institute (HMRIB) is the research centre of the Barcelona Maritime Health Park Consortium and is part of the Barcelona Biomedical Research Park (PRBB), providing an exceptional environment for translational research and fostering a close relationship with Hospital del Mar.

POSITION

HMRIB is seeking to recruit a Predoctoral researcher to join a new research team investigating human circuit function, supervised by Dr Jake Watson, and supported by a 4-year funded FPI grant (PID2025-169560OA-I00; AEI) (<https://humancircuits.net/>)

The successful candidate will use clinical human brain tissue samples to determine the structural and functional properties of human synapses, asking:

1. how do human circuits function, and how do they differ from rodent circuits?
2. what pathological changes occur in epilepsy patients?

RESEARCH DESCRIPTION

Our research team investigates how cells, synapses, and circuits give rise to the computations performed by the human brain. We are working with the Hospital del Mar Epilepsy and Neurosurgery Units to apply patch-clamp electrophysiology and advanced imaging (expansion microscopy) to surgically resected patient tissue. With this approach, we can ask how human circuits function, how they change with disease, and whether human circuits have distinctive features compared with other species. This position will support the AEI-funded 'INHIBITOPO' project. We will use both rodent and human brain tissue to study how inhibitory circuits control memory storage function and how their disruption contributes to seizure generation in patients with epilepsy.

MAIN RESPONSIBILITIES

- Develop a research project focussed on understanding inhibitory synapse function
- Perform advanced imaging and/or patch-clamp electrophysiology on rodent and human brain tissue, dependent on candidate experience.
- Work closely with clinical collaborators at Hospital del Mar to facilitate surgical tissue study
- Contribute to the development of a rigorous, collaborative, and welcoming research team

WHAT WE OFFER

- The opportunity to join a dynamic, multidisciplinary research environment committed to scientific excellence.
- Close collaboration with researchers, clinicians, and other professionals involved in the project.
- Full-time predoctoral researcher employment contract governed by Article 21 of Law 14/2021, of June 1, on Science, Technology, and Innovation, and Royal Decree 103/2019, of March 1, on the Statute of Research Personnel in Training, with salary paid in 12 instalments.
- Incorporation within 9 months from the definitive resolution.

WHAT WE NEED

- Master's degree in Neuroscience/Life-Sciences or equivalent
- Strong interest in cellular neuroscience research, and training in molecular/cell biology
- Excellent English language skills; Spanish and Catalan valuable
- Ability to work effectively in multidisciplinary teams.
- Prior experience with image analysis or electrophysiology is highly valued
- At the time of hiring, the candidate must provide proof of admission to a doctoral program, and submit a copy of the formalized enrollment to the contracting institution.

SELECTION CRITERIA

- 1) Academic and/or scientific-technical trajectory of the candidate. (Up to 50 points).
 - 1.a) Scientific-technical contributions: The academic record and other curricular merits of the candidate will be evaluated, as well as their suitability for the tasks to be carried out based on their training and professional experience. (Up to 45 points).
 - 1.b) Mobility and internationalization: The relevance and impact of the candidate's stays in national and international research centers and/or the industrial sector will be assessed, considering the prestige of the hosting entity and the activities carried out there. (Up to 5 points).
- 2) Suitability of the candidate for the research activities to be carried out. The candidate's suitability for the project or research activities will be evaluated based on their previous training and experience. This will include the added value that the completion of the project will bring to their research career, as well as the contribution to the institution and research group. (Up to 50 points).

APPLICATION OF CANDIDATES

If you meet the requirements and are interested in the position, please send **your CV and short statement of interests letter** to jwatson@researchmar.net, indicating "Job Offer 2610 - WATSON" in the subject line.

Application deadline: 01/11/2026