Hospital del Mar Research Institute Barcelona

POSITION OF POSTDOCTORAL RESEARCHER

(Ref. 2513 - BIEL)

OFFERS

We are seeking a highly motivated **Postdoctoral Researcher** to join a multidisciplinary European project focused on the **development of innovative ablative devices** for the treatment of **pancreatic and prostate diseases**.

The project encompasses **preclinical (animal) and translational (human)** phases, aiming to design, test, and optimize next-generation ablation technologies that enhance precision and safety in minimally invasive and robotic surgery.

The selected candidate will work in close collaboration with engineers, surgeons, and imaging specialists within an international research consortium.

We offer the participation in the **design, development, and preclinical validation** of new ablative devices; Conduct **animal experiments** in compliance with ethical and regulatory standards. Prepare, process, and analyze **tissue samples** from histholgical analysis to transciptomics or other omics in collaboration with CNIO (Centro Nacional de Investigaciones Oncológicas). He Will also contribute to **data collection, management, and statistical analysis**. Support the **translation of results** to early-phase human applications. Participate in **scientific dissemination**, including manuscript preparation and conference presentations.

Requirements of the candidatures

- ✓ PhD degree in Biomedical Sciences, Biotechnology, Medicine, or related fields.
- ✓ Experience in experimental research, preferably involving animal models.
- ✓ Proficiency in sample preparation for microscopic and histopathological studies (tissue fixation, sectioning, staining, and imaging).
- ✓ Basic knowledge of biostatistics and ability to perform data analysis using common softwares
- ✓ Familiarity with database management and data entry for research studies.
- ✓ Ability to work independently as well as collaboratively within a multidisciplinary research team.

Hospital del Mar Research Institute Barcelona
Parc de Recerca Biomèdica de Barcelona
Doctor Aiguader, 88 | 08003 Barcelona
Tel. 93 316 06 08 | Fax 93 316 06 38
http://www.researchmar.net

- ✓ Good communication and organizational skills.
- ✓ Fluent written and spoken English.

Project
Development of Innovative Surgical Technologies for Ablation

Project Summary

This project focuses on the development and optimization of new radiofrequency (RF) ablation devices designed for use in pancreatic and prostate surgery.

The core objective is to adapt an existing monopolar radiofrequency clamp, already in use in conventional surgery, to be fully compatible with robotic surgical platforms. This innovation aims to improve precision, safety, and control during complex robotic procedures.

In parallel, the project includes the design and testing of a novel radiofrequency probe specifically intended for the selective ablation of pancreatic and prostatic ducts, expanding the potential applications of RF energy in minimally invasive and organ-preserving surgery.

The research program is structured in two main phases:

1. Preclinical (animal) phase, focused on prototype development, optimization of ablation parameters, and histopathological validation.
2. Translational (human) phase, aimed at assessing feasibility, safety, and early clinical outcomes.

Through this multidisciplinary approach, combining engineering, surgery, and translational research, the project seeks to establish the foundation for next-generation robotic RF ablation systems applicable to both pancreatic and prostate surgery.

For more information and to submit your curriculum vitae, contact: bielpo@hmar.cat; fburdio@hmar.cat

Deadline for submission of CV: 30/11/2025