

Post- or pre-doctoral in Medical Imaging

The Biomedical Sciences and Engineering Laboratory of the Universidad Carlos III de Madrid is hiring a post-doctoral fellow within the frame of the PET/CT/MR technology development and image analysis projects.

Required university level: PhD or pre-doctorate in Medical Imaging, Physics, Engineering, Industrial science, and technology.

Domain of the activities: Medical imaging research, preclinical and clinical, in PET/CT/MR imaging and technology

Position: Post-doctoral or pre-doctoral EU, immediately available.

Context: The search of translational image-based biomarkers is a pressing need in clinical diagnostics and in the development of new drugs. The strategy of the Biomedical Sciences and Engineering Laboratory (BSEL) is based on matching the technological developments of the instruments with the progress in the analysis of the images produced by them using conventional and AI-based strategies.

Projects currently underway include the ERA4TB consortium (<https://era4tb.org/>), an European JU-IMI initiative to accelerate the development of new TB regimens, where imaging-based biomarkers are critical for more efficient and rapid diagnosis as well as a preferred tool for the drug development activities needed to create the new regimens.

In the Horizon2020 EIUC-Pathfinder RETIMAGER (<https://retimager.eu/>) is an action focused building molecular imaging systems (mainly PET in this case) with a ten-fold spatial and temporal improvement of the reconstructed image with respect to current PET devices.

Activities:

- Develop hardware and software strategies to improve image quality.
- Exploit multimodal images obtained with the improved equipment.
- Design experimental protocols required for molecular imaging.
- Preparation of manuals, scientific dissemination documents, scientific publications, and patents.

Candidate Capacities:

- Imaging device engineering: design and development of imagers.
- This requires skills in electronics, programming, and instrument automation.
- Image and data processing: Knowledge of image processing and data analysis.
- Communication skills: writing papers, technical reports, and dissemination notes.
- Team player.

Contact person: For additional questions please contact by mail:

- Laura Alises <laura.alises@uc3m.es> | <bsel-cmbies@uc3m.es>