

Postdoctoral researcher

The **Cipitria Lab – Bioengineering in Regeneration and Cancer** at **Biodonostia Health Research Institute**, San Sebastián, Spain (<https://cipitrialab.com>) is seeking candidates for a fully-funded postdoctoral position on multiscale characterization of the microstructure and composition of biological tissues. Research in our lab aims to understand how biophysical and biochemical properties of native extracellular matrix and synthetic biomaterials guide cell response in tissue regeneration, cancer dormancy and bone metastasis.

This position is funded by the **EU Horizon 2020 HEALIKICK project** (grant 874889) (<https://glasgow.thecemi.org/our-research/healikick>), aiming to deliver next generation bone graft materials for the repair of major critical defects. It combines two novel technologies: coatings for efficient presentation of growth factors and stem cells stimulated to undergo osteogenesis. The consortium includes partners from the Universities of Glasgow, Strathclyde, Navarra, Max Planck Institute of Colloids and Interfaces and Biodonostia Health Research Institute, along with industrial partners at HistoCell, Bilbao.

What we offer:

- Successful applicants will perform advanced analysis of the quality of regenerated mineralized tissue obtained from small and large animal models, aiming at preparing for first-in-human clinical trials at the end of the project. Both organic and inorganic components will be examined at macro and nano-scales with techniques including high resolution microcomputed tomography, histology, polarized light microscopy, second-harmonic generation imaging, backscattered electron microscopy, nanoindentation and small angle X-ray scattering.
- Our lab maintains an active part in Germany. The project will involve travels to the Max Planck Institute of Colloids and Interfaces and Charité University Hospital Berlin, as well as interaction with consortium partners in the UK and Spain. He/she will participate in regular consortium meetings, larger consortium events and Translation Day with clinical partners.
- Collaboration with ongoing projects in the lab. We perform a large variety of in vitro, ex vivo and in vivo experiments, including work with biomaterial scaffolds and hydrogels and multiscale correlative characterization of tissue samples.

Suggested reading: Moreno-Jiménez et al. *Sci Adv* 6 (2020); Paris et al. *Acta Biomater* 60, 64 (2017).; Cipitria et al. *Acta Biomater* 23, 282 (2015), Moreno-Jiménez et al. *MethodsX* 8 (2021).

Desired qualifications, knowledge and skills (*recommended but not mandatory*):

- PhD in Materials Science, Bioengineering, Biophysics or similar.
- Experience in optical and confocal imaging, electron microscopy. Data and image analysis in 2D and 3D.
- Experience working with biological tissue samples, histology, immunohistochemistry is preferred but not required.*
- Strong interpersonal and collaboration skills to be able to work in a multidisciplinary research environment.
- Project management skills.
- Strong oral and written communication skills.
- Have a genuine excitement for science, innovation and creative thinking!

Starting date and duration: preferred between March-April 2022, 1 year renewable up to 3 years. The salary will be adapted to the experience of the candidate.

Application: Please send a motivation letter describing your experience and research interests, CV with a complete list of publications, transcript of university record and three references, to: amaia.cipitria@biodonostia.org and rrhh@biodonostia.org, indicating "Postdoc- HEALIKICK" in the subject line. **The position will remain open until filled.**

