



## FUNDACIÓN BIOFÍSICA BIZKAIA/ BIOFISIKA BIZKAIA FUNDAZIOA

OFFER – Technician Position in “Structural Biology of Genomic Macromolecular Complexes”.

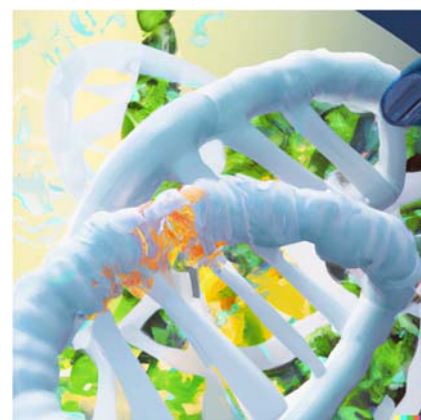
Publication date: July 18, 2024

**Biofisika Institute** (IBF) is a joint research centre of the University of the Basque Country (UPV/EHU) and the Spanish National Research Council (CSIC). In partnership with Fundación Biofísica Bizkaia (FBB), the centre focuses on advancing knowledge about the physical and chemical processes underlying biology and disease. With the FBB accredited as a Basque Excellence Research Centre (BERC) by the Basque Government, the IBF and FBB partnership enjoys a strong national and international reputation, and provides outstanding shared facilities for advanced biophysical and structural biology approaches in a new research building in the main Leioa campus of the UPV/EHU.

### Offer and description of the project

We offer a technician position at the Structural Biology of Genomic Macromolecular Complexes lab (<https://www.biofisika.org/en/research/structural-biology-genomic-macromolecular-complexes-laboratory>) at Instituto Biofísica (Leioa) under the supervision of Dr. Guillermo Abascal Palacios. The maximum duration of the contract will be until April 2026.

The "**Structural Biology of Genomic Macromolecular Complexes**" laboratory focuses on the study of protein complexes that interact with DNA/RNA, with the aim of determining the molecular mechanisms responsible for their function. To achieve this goal, we carry out a combined process that includes protein complexes cloning and expression techniques, purification using chromatographic tools and their subsequent analysis using biophysical and structural biology methods such as **cryo-electron microscopy (Cryo-EM)** or X-ray crystallography. The ultimate goal is to determine a high-resolution molecular structure that shows enzymatic activity at the atomic level and that can contribute to the development of drugs against diseases such as colorectal cancer or certain neurological disorders.



The selected candidate will participate in a research project aimed at understanding the relevance of **transposons or mobile genetic elements in the development of amyotrophic lateral sclerosis (ALS) and other human pathologies**. With this objective, the candidate will carry out research work focused on biochemical, biophysical and structural biology analyses of transposons and other protein-DNA/RNA complexes. Instituto Biofísica (IBF) has a wide variety of technical and scientific equipment, which will be at the disposal of the researcher during his/her doctoral thesis. In particular, the Institute hosts the first Titan Krios G4 cryo-electron microscope in Spain and one of the most advanced in the world, which allows the determination of atomic structures at an unprecedented level. In addition, the researcher is expected to participate in national and international conferences and courses, where they will have the opportunity to share their results and expand their knowledge. For more details on the techniques that will be used visit: Nature Communications, 2021, 12(6992); Nature Communications, 2020, 11(6409) or Nature, 2018, 553(7688).



## **Required background**

The ideal candidate must hold an official **Degree in Biology, Biochemistry, Biotechnology** or similar, and be in possession of a **Master** in related subjects. We seek highly qualified applicants with proved experience in cloning strategies (i.e. PCR), cell culture (i.e. Transformation, growth, protein expression) and *in vitro* characterization techniques (i.e. fluorescence detection). Knowledge of general bioinformatic tools (i.e. Pymol, Clustal) and previous research experience with aggregation-prone proteins will be highly valued. Finally, given the expected participation in dissemination activities, fluent written and oral communication in English will be essential.

This contract is supported by CNS2023-144408 funded by MICIU/AEI /10.13039/501100011033 and by the “European Union NextGenerationEU/PRTR”.

We are an equal opportunity employer committed to diversity. Applications should be addressed through the Biofisika website contact page (<http://biofisika.org/contact/>), adding the following subject: [Job Application: ***122\_Gabascal***]. It is recommended that applications are made as soon as possible as they will be considered upon arrival. Applications in a single pdf file must include:

- An updated Curriculum Vitae.
- Academic Record
- A motivation letter (max. 1 page).
- Two reference letters or contact email of referees.

**Deadline: August 2, 2024**