

Company Description

BCMaterials, Basque Center on Materials, Applications and Nanostructures, is an autonomous research center launched in June 2012 by Ikerbasque, the Basque Foundation for Science and the University of the Basque Country (UPV/EHU) as a research center for Materials, Applications and Nanostructures. The Center is included in the BERC's (Basque Excellence Research Centers) Network, and its mission is to generate knowledge on the new generation of materials, turning this knowledge into (multi)functional solutions and devices for the benefit of society.

Information

 Deadline: 2023-02-05
 Category: Business
 Province: Bizkaia

 Country: Basque Country
 City: Leioa

Company

BCMaterials



Main functions, requisites & benefits

Main functions

We are seeking a highly motivated and qualified individual to join the ReUSED project " Ultra-wide ScrEening of anti-viral Drugs" team as a research scientist funded by the IKUR program. The ReUSED project aims to apply recent technological advances in computational modeling and graphene-based devices to develop a novel method for automating drug screening. The successful candidate will work on combining large-scale computational screening with fast experimental testing using printed graphene field effect transistors (gFETs). The focus of the project will be on developing new antiviral drugs, with the ultimate goal of quickly identifying and distributing effective treatments in the event of a viral outbreak.

This is a full-time position based at our research facility in the Basque region. The duration of the contract is estimated in two years, until the end of the project. We offer a competitive salary and benefits package, as well as the opportunity to work on an exciting and meaningful project with the potential to have a significant impact on global health.

The work will be carried out at BCMaterials in the Computational Soft Matter and Biophysics group and in close collaboration and coordination with different institutions from the Basque Scientific and Technological network as well as in cooperation with international leading research institutions. In particular, the other partners of the ReUSED are the groups of Prof Maurizio Prato at CIC biomaGUNE, Prof Jose Luis Vilas at the UPV/EHU and of Prof Senentxu Lanceros-Méndez at BCMaterials.

For the successful candidate, the position represents an excellent opportunity to develop both collaborative and personal scientific research career, exploiting the capabilities of advanced functional materials and their application. **Work Program / Duties / Responsibilities** The tasks associated to this position are:

Task 1.1 Drug Docking

ReUSED will apply the Drug Docking approaches to score the binding the FDA approved drugs to the structure of the target viral proteins predicted within the Machine Learning methods (e.g., AlphaFold).

Task 1.2 Protein Structure and binding modelling

Protein structure prediction methods in the last few years made a giant leap forward and are now capable of reliably predicting the structure of complex proteins just from the knowledge of their genetic makeup.

The responsibilities of this position include: Design and execution of computational and experimental studies. Participating in experiments using gFETs to identify ligands that can block the binding of viral proteins to receptors. Collaborating with team members in the manufacturing of printed gFETs and the microfluidic system needed for automation. Analyzing and interpreting data, and