

Aitziber López Cortajarena, PhD in Biochemistry, joins CIC biomaGUNE as an Ikerbasque researcher

Dr. López will lead the Biomolecular Nanotechnology group and will develop an EU-funded project to generate new biomaterials

Dr. López has a PhD from the University of the Basque Country and has worked at Yale University (USA) and in the IMDEA Nanoscience Institute in Madrid (Spain)

(San Sebastián-Donostia, 2 February 2016). Aitziber López Cortajarena, PhD in Biochemistry, has recently joined CIC biomaGUNE as a researcher on the Ikerbasque program, designed to attract and retain talent in the Basque Country. Dr. López will be responsible for coordinating the Biomolecular Nanotechnology group of the research centre, where she will develop a research project funded by the European Research Council (ERC Consolidator Grant) set up to support innovation. The ERC budget allocation for the project, entitled “Functional protein-based nanostructures”, is 1.7 million euros. The work of Dr. López will be focused on opening up pathways for practical applications for new nanotechnology-based biomaterials and devices for use in such diverse fields as the photovoltaic industry, catalysis and nanoelectronics, clinical diagnosis and biomedicine, amongst others.

Dr. Aitziber López is a specialist in protein engineering. Her main line of research in CIC biomaGUNE will be focused on developing a technology based on using proteins as simple building blocks to generate complex structures, a kind of molecular Lego. Dr. López explains: “Proteins have a wide variety of forms and functions in nature; in a way, they are the pillars on which life is built. If the structure and function of proteins can be controlled in the laboratory using our technology, we will be able to create new biomaterials and devices inspired by and shaped on how proteins are put together”.

Research within the Biomolecular Nanotechnology group is targeted on obtaining structured biomaterials and nanodevices of application in a wide range of fields, such as nanoelectronic circuits functioning as electric cables at the nano-scale. Another beneficiary of this project will be biomedicine, as the objective is to develop sensors to identify different analytes in diagnosis and, in the longer term, to create implantable biomaterials. Another application of interest is focused on the photovoltaic industry, where ordered materials for high performance in efficient optoelectronic devices are looking to be developed.

A prestigious single-person project with EU support



‘Functional protein-based nanostructures’ is the title of a single-person research project supported and funded by the European Research Council (ERC). The ERC provides long-term funding for highly prestigious scientific projects among the international scientific community, with a view to fomenting cutting-edge and potentially profitable research.

Aitziber López Cortajarena obtained her PhD in Biochemistry from the University of the Basque Country in 2002. She later worked for seven years in Yale University (USA), in the design, structure and function of proteins. From 2010 to 2015, Dr. López led a research group in the *Instituto Madrileño de Estudios Avanzados - IMDEA* Nanoscience Institute in Madrid, Spain. Her scientific work is centred on protein engineering and on generating functional nanostructures and bioinspired materials (inspired by nature to create something new) applicable in nanobiotechnology and nanomedicine, amongst other materials.

About CIC biomaGUNE

The Centre for Cooperative Research in Biomaterials (CIC biomaGUNE), located in the Donostia-San Sebastián Technology Park, conducts cutting-edge research at the interface between Chemistry, Biology and Physics, and particularly on the properties of molecular level biological nanostructures and their biomedical applications.

