

Susana Carregal, Ikerbasque Research Fellow of CIC biomaGUNE

The CIC biomaGUNE researcher Susana Carregal has recently been appointed [Ikerbasque Research Fellow](#) to carry out research on multifunctional, bioinspired materials for biomedicine and biotechnology. This call aims to promote young researchers with a promising scientific career and international experience.

The Ikerbasque Fellowship will enable Carregal to consolidate her independent line of research: "This 5-year fellowship will put me in a position to compete in public calls of excellence, which will ultimately allow me to develop cutting-edge discoveries in the field of materials science."

Dr Carregal is a research associate in the [Molecular and Functional Biomarkers](#) group led by Professor Jesús Ruíz-Cabello (Ikerbasque Professor), and is co-supervising the theses of four PhD students (one of whom belongs to a partnership with the Gaiker R&D center). Carregal is also attached to [CIBERES](#) (Biomedical Research Networking Center in Respiratory Diseases).

Right now, Dr Carregal is running several projects, the common factor of which is the application of nanotechnology in biomedicine. "We study cellular and non-cellular barriers in the lung so that we can develop better drugs for lung diseases that can be inhaled in order to increase their therapeutic efficiency. In this context, we are working to improve drugs to combat pulmonary fibrosis and we are analyzing, in preclinical trials, the efficiency of the various nanocomposites that we create in the laboratory. I am also working on the design and development of metallic nanoparticles as multifunctional agents capable of acting in catalytic therapies but also capable of being efficient contrast agents in medical imaging. Lastly, we are designing new contrast agents for medical imaging that specifically mark damaged areas of the body, such as atherosclerosis plaques, the main cause of cardiovascular disease.

Carregal received her PhD in Chemistry from the University of Vigo (2009). She has worked as a postdoctoral researcher at the Philipps University of Marburg, the University of Melbourne, the University of Liverpool and the University of Buenos Aires. During her short career, she has been a Ramón y Cajal researcher (2021), has received a postdoctoral grant from the Fundación Progreso y Salud (2009), a predoctoral grant FPI (2006), and a predoctoral grant from the Regional Government of Galicia (2005).

The new Ikerbasque researcher says that she is "very grateful to the two Ikerbasque researchers who supported my nomination, Pedro Ramos-Cabrer and Jesús Ruiz-Cabello, because without their support and their confidence in me, this would not have been possible". She also added that she is "immensely grateful to Ikerbasque for the recognition, and for its kindness and approachability". Carregal is aware that

"we have a lot of work ahead of us to drive forward the research projects I am involved in, but I am very excited about the opportunity I have been given".

In the researcher's opinion, "the Basque Country is the perfect environment for consolidating my scientific career, since the Basque Government is deeply committed to the promoting of Research and Development. In particular, Ikerbasque is the right platform to create fundamental knowledge and transfer it to the industrial sector. My ideals coincide with this point of view and I will do my best to participate in this great project of Basque society".