

Luis Liz-Marzán to receive today the 2021 Lilly Foundation Award for Preclinical Biomedical Research

At a ceremony presided over by the Minister of Science and Innovation Pedro Duque, this Ikerbasque professor and scientific director of CIC biomaGUNE will be receiving the award for his research in the field of nanoscience and nanomedicine

These awards recognize outstanding scientific research careers that are contributing towards the development of biomedicine

Donostia-San Sebastian. 14 June, 2021. Luis Liz-Marzán, scientific director of the Center for Cooperative Research in Biomaterials [CIC biomaGUNE](#), [Ikerbasque](#) professor and lead researcher at the Biomedical Research Networking Center in Bioengineering, Biomaterials and Nanomedicine ([CIBER-BBN](#)), will today be receiving the 2021 [Lilly Foundation](#) award for Biomedical Research in the category of preclinical research. Alongside him, Professor Carlos Simón-Vallés, coordinator of the INCLIVA Reproductive Medicine Research Group, Professor of Obstetrics and Gynecology at the University of Valencia and founder of Igenomix, will receive the award in the category of clinical research. These awards, which recognize the scientific trajectory of outstanding research that is contributing towards the development of biomedicine, will be presented this afternoon at a ceremony presided over by the Minister of Science and Innovation Pedro Duque.

José Antonio Sacristán, director of the Lilly Foundation, explained that "the studies conducted by these scientists in fields such as nanomedicine and reproductive medicine have contributed huge value and prestige to the health sciences", and added that it is precisely "the high caliber of their distinguished careers plus the scientific prestige of the members of the panel of judges and their rigorous criteria that have turned these Awards into a point of reference within the scientific community".

The Lilly Foundation highlights Liz-Marzán's research in the field of nanoscience and nanomedicine: "Professor Liz-Marzán's pioneering research aims to provide solutions based on chemistry and nanoscience for complex biomedical problems that are of huge social benefit." His scientific career has focused on metallic nanoparticles (gold, silver) with plasmonic properties and their applications in disease detection, diagnosis and therapy. "His original, pioneering approaches towards biomedical research from the field of chemistry are making a significant contribution towards complex medical problems that have a great social impact, but also towards the advancement of science in general," said Sacristán.

Liz-Marzán, a scientist at the cutting-edge of knowledge

Liz-Marzán and his group ([BioNanoPlasmonics Lab](#)) have developed a system for detecting the formation of amyloid fibers responsible for many neurodegenerative diseases, such as Parkinson's, based on the phenomenon of plasmonic chirality –in which light interacts in a special way– and have incorporated photoluminescent nanothermometers into photothermal therapy designed to control laser heating. Right now, they are focusing on the study of cancer and their line of research aims to incorporate nanosensors into 3D tumor constructions in order to identify biomarkers which allow tumor behavior to be understood under different conditions.

"The goal of my research is to be able to provide solutions for complex biomedical problems which, if they can be solved, may be of great social benefit," said Liz-Marzán. He pointed out that "the best scientist is not the one who finds the best answer, but the one who asks the best question, and that is what we have always tried to do with all the people who pass through the research group, to ask the most interesting questions and reach the frontier of knowledge that informs cutting-edge research".

Liz-Marzán is delighted by the Lilly Foundation award, which rewards research into biomedicine, "because the quest for applications of nanomaterials in the biomedical field has been a very strong commitment that I embarked on back at the University of Vigo but which has been developed mainly at CIC biomaGUNE, where the environment and the atmosphere undoubtedly foster research at the highest level. So I feel that this is not only an award for my scientific work but also confirms CIC biomaGUNE as one of the research centers of excellence in biomedicine. The successes achieved have been possible solely thanks to teamwork in which many talented young people who have passed through my group have participated, as well as collaborations with experts from other institutions", he concluded.

About Luis Liz-Marzán

Luis Liz-Marzán, a PhD holder in chemistry, specialized in Colloid Science and has focused his research on nanoscience and nanomedicine, specifically on metallic nanoparticles with plasmonic properties and their applications in the biomedical field. Today, he is one of the most recognized scientists of his generation for his numerous, significant contributions to his field. He is the author of more than 500 publications in journals of international impact, co-inventor of nine patents and editor of four books. Due to the high impact of his publications, he was nominated ISI Highly Cited Researcher for seven years running (2014-2020). His papers have received more than 50,000 citations, with an H-index around 120 (WOS data) and more than 90 publications rated as *highly cited papers* by Essential Science Indicators.

Liz-Marzán embarked on his career at the University of Santiago de Compostela and after two years of postdoctoral research at the University of Utrecht, he joined the University of Vigo in 1995. Since 2012 he has been scientific director of CIC biomaGUNE, where he heads the Bionanoplasmonics Laboratory, and is an Ikerbasque professor. He also heads a node of the Center for Biomedical Research Network, Bioengineering, Biomaterials and Nanomedicine (CIBER-BBN).

He is one of a small number of European researchers to have gained access to the prestigious ERC Advanced Grants on two consecutive occasions (2012-2017; 2018-2023), both related to biomedical applications of nanomaterials. In addition, he is a member of numerous editorial boards (he is the only Spanish member on the Board of Reviewing Editors of *Science*) and has

been editor of several journals of the American Chemical Society. Professor Liz-Marzán is a Fellow of the Royal Society of Chemistry (UK) and of the Optical Society of America (USA), an elected member of the Royal Academy of Exact, Physical and Natural Sciences of Spain, a corresponding member of the academies of sciences of Galicia and Granada, as well as of the European Academy of Sciences. The numerous awards he has received include the Humboldt Research Award, the RSEQ Medal, the Blaise Pascal Medal in Materials Science, the King Jaime I Prize, the Rhodia Prize of the European Colloid and Interface Society, and the Enrique Moles National Prize in Chemical Science and Technology.

About CIC biomaGUNE

The Center for Cooperative Research in Biomaterials CIC biomaGUNE, member of the Basque Research and Technology Alliance ([BRTA](#)), conducts state-of-the-art research at the interface between Chemistry, Biology and Physics devoting particular attention to studying the properties of biological nanostructures on a molecular scale and their biomedical applications. It was recognized in 2018 as a “María de Maeztu” Unit of Excellence for meeting requirements of excellence, which are characterized by a high impact and level of competitiveness in its field of activity on the global scientific stage.

About the Lilly Foundation

The Lilly Foundation, which this year celebrates its 20th anniversary, aims to contribute towards the development of Spanish healthcare for the benefit of the health of citizens; to foster SCIENCE and research, as well as the promotion of scientific culture and dissemination across society; to encourage the development of MEDICINE through the generation of biomedical knowledge, its dissemination, the training of professionals and medical education; and to promote the fundamental values of HUMANISM in the field of healthcare.