

10th anniversary of the Centre for Cooperative Research in Biomaterials - CIC biomaGUNE

The work done by the Centre has made it a knowledge generator in the field of biomaterials

261 researchers from 31 different countries have developed their work in the Centre over the last 10 years and have seen over 700 articles published, receiving around 10,000 citations

Stand-out scientific and technological equipment at the Centre includes the Platform for Molecular and Functional Imaging, unique in Spain and considered as reference facilities in Europe

All 132 people working in the Centre were present at the official event headed by Arantxa Tapia, Minister of Economic Development and Infrastructure of the Basque Government

(Donostia-San Sebastián, 13 March 2017). The Basque Centre for Cooperative Research in Biomaterials - CIC biomaGUNE – officially marked its 10th anniversary today with an event in recognition of its position as a benchmark research organisation in the field of biomaterials.

The commemorative event was attended by representatives of various scientific and technological institutions as well as all 132 people who work in the headquarters of the Centre in the Gipuzkoa Science and Technology Park. Keynote interventions at the event were delivered by Arantxa Tapia, Minister of Economic Development and Infrastructure of the Basque Government; Luis Liz Marzán, Scientific Director of CIC biomaGUNE; and José María Mato, General Director of CIC biomaGUNE.

CIC biomaGUNE 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.

In the 10 years since it was founded, CIC biomaGUNE has established itself as a nationally and internationally recognised leader in the field of science and a knowledge generator in the field of biomaterials. This activity has given rise to publications, patents and collaboration with international bodies and institutions, with the technological



equipment and scientific personnel of the research centre at the service of the scientific community and business fabric.

Over these 10 years, the post of Scientific Director has been held by two people: Manuel Martín Lomas and Luis Liz Marzán, the current incumbent. Manuel Martín Lomas was appointed as Scientific Director in 2005 by José María Mato, General Director of CIC biomaGUNE, to shape the identity of the Centre and define its scientific strategy. Faced with the challenge of convincing renowned researchers to commit to this forward-looking project, Dr. Martín Lomas managed to attract high performing research groups. The subsequent appointment of Luis Liz Marzán in January 2013 marked a seamless and successful process of continuity, since when CIC biomaGUNE has consolidated its position in the Science and Technology System as a benchmark organisation in the field of research into materials with biomedical applications at the preclinical stage.

With a top-tier research group and state-of-the-art facilities, the Centre also features a Molecular Imaging Unit, which enables in vivo nanomaterial testing to be conducted. The Unit, included in the Spanish State's Map of Singular Scientific and Technological Infrastructures (ICTS), includes an animal housing facility, a cyclotron for the creation of radioactive isotopes, reactors to transfer those isotopes to the molecules or nanoparticles under study and tomography equipment based on radiochemistry, X-rays and magnetic resonance. This combination of techniques enables in vivo studies to be conducted, whilst the techniques themselves form an integral part of the Centre where the materials to be studied are produced.

Ten years in figures

CIC biomaGUNE was officially opened in December 2006. Since then, over 261 researchers from 31 different countries have developed their work in the Centre. Twenty five of these researchers, all from the Basque Country, have been able to return home from abroad to continue working on their scientific projects in optimum conditions, whilst a further 105 have taken their first steps in their scientific career in CIC biomaGUNE.

In the course of these ten years, total funding for the Centre stands at 102 million euros, of which 63 million have come from the Basque Government, 19 million from the Spanish State Administration, 4 million from the Gipuzkoa Provincial Government, 10 million from international projects, 4 million from generated revenue and 1.5 million from donations from members and private entities. 2.9 million euros have been generated and invoiced through service contracts with technology centres and Basque companies, whilst turnover derived from activity with companies outside the Basque Country stands at 0.8 million euros.



On the scientific front, over 700 articles have been published in international journals, receiving around 10,000 citations, and 75% of these articles have been published in the most renowned scientific journals in their field. Over 600 scientific institutions and 1,900 researchers from all over the world have collaborated in the writing and compilation of these 700+ articles, and a total of 14 patent applications have been submitted, of which 6 have been granted and 2 have been licensed for exploitation.

These 10 years have also seen CIC biomaGUNE involved in setting up two companies: MD Renal and Asparia Glycomics. Set up as a spin off, the objective of MD Renal was to market a series of products designed to identify and promptly quantify the metabolites in complex mixtures such as blood and urine. Asparia Glycomics is a company specialised in the production and marketing of reagents, reference standards, kits and software for glycan analysis in clinical diagnosis and for quality control of biopharmaceuticals.

Furthermore, over this same 10 year period, 40 doctoral theses have been written and 11 students have conducted post-graduate studies in CIC biomaGUNE, of which 27% subsequently continued developing their PhD thesis in the Centre. 20 vocational training students have done their work practice internships here, 10% of whom were subsequently offered their first job in the Centre. Finally, the research centre has also taken in 9 students on Erasmus Programme traineeships.

21 million euro investment in scientific and technological equipment

Investment by CIC biomaGUNE in scientific and technological equipment totals 21 million euros. One stand-out feature of the Centre's state-of-the-art infrastructure and facilities, covering a total surface area of 3,600 m² in the Gipuzkoa Science and Technology Park in Donostia-San Sebastián, is the Platform for Molecular and Functional Imaging. Unique in Spain, this facility is included in the Spanish State's Map of Singular Scientific and Technological Infrastructures, which encompasses large-scale facilities, resources, equipment and services considered as unique and dedicated to top tier cutting-edge technological R&D and to promoting the transfer, exchange and preservation of knowledge, technology transfer and innovation.

The Platform for Molecular and Functional Imaging, primarily focused on developing new nanomaterial applications in biomedicine, is a benchmark facility in Europe in the field of preclinical molecular and functional imaging. The experimental techniques and technology available in the Unit - Radiochemistry, Positron Emission Tomography (PET), Single Photon Emission Computed Tomography (SPECT), Computed Tomography (CT), Magnetic Resonance Imaging (MRI) and Optic Tomography (OT) - together with a dedicated animal housing facility certified in 2015 under AAALAC international quality standards, make it the largest biomedical imaging technology platform not only in the Basque Country but throughout Spain.

Other technological platforms applying research techniques within CIC biomaGUNE include Optical Spectroscopy, Nuclear Magnetic Resonance (NMR), Electron Microscopy, Mass Spectrometry, Elemental Analysis, Surface Analysis and Fabrication and Colloidal Nanofabrication.

