

ikerbasque

Basque Foundation for Science

12

Annual Report



12

**Annual
Report**

**"Investment in
knowledge pays the
best interest."**

Abraham Lincoln

9

Research Centres.

BERCs (Basque Excellence Research Centres) are Research Centres of excellence tied to the university environment. The current network of BERC has nine research centres.

192

Projects with external financing

Research projects with external financing in which Ikerbasque researchers participate.

WHAT IS IKERBASQUE?

8 ERC

The ERC (European Research Council) is the first European organisation that promotes research projects based on scientific excellence. Eight Ikerbasque researchers have been awarded ERC grants to undertake major projects (three ERC Advanced Grants and five ERC Starting Grants).

450

Articles in indexed publications

4.19 articles published in ISI Database journals per Researcher and 5.25 publications per Researcher (including papers in ISI Database, chapters in books, and books).

116

Researchers

Ikerbasque has attracted 116 researchers from 20 countries to the Basque Country, who are permanently assigned to universities and research centres.

Ikerbasque
It is the foundation
that fosters the
production, promotion
and dissemination of
scientific knowledge
in Euskadi.

17.440.000 €

Return

Total funds that Ikerbasque Research Professors have received.

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01

PRESENTATION



IKERBASQUE, THE BASQUE FOUNDATION FOR SCIENCE

The results in 2012 show that the Foundation has become a magnet for researchers.

In 2007, the Basque Government set up Ikerbasque, the Basque Foundation for Science. The aim was to help the Basque Country become an international benchmark in the field of research. Ikerbasque has focussed its efforts on attracting research talent and fostering new Excellence Research Centres.

The results in 2012 show that the Foundation has become a magnet for researchers. At the present time, Ikerbasque has hired 116 senior researchers, and this year it successfully launched the first Research Fellows initiative for young researchers with a promising scientific career and international experience, with the aim of creating a "reserve" of scientists who can lead the future of science in Euskadi.

Scientific production has been excellent. Ikerbasque's researchers have published 450 articles in indexed journals and have raised more than €17 million for research projects. This means they have practically doubled the investment outlay. These resources are used to foster research in Euskadi by hiring researchers of all levels and investing in equipment and infrastructures. Ikerbasque's researchers have also received 8 ERC Grants, the most sought-after grants in Europe that pioneer ambitious frontier research projects.

Another major achievement has been the creation of three new BERCs (Basque Excellence Research Centres), which research Neuroscience, New Materials and Macromolecular Design. These are research areas with huge potential for growth and in which the Basque Country has shown it is capable of competing against leading international centres. These three new centres take the total number of BERC centres in the Basque Science System to nine.

Ikerbasque has therefore proven that investment in research is profitable in both the long and the short term. In the long term, research will result in new products and services that give Basque country an extra competitive edge. In the short term, investment in research gives immediate return in the form of funding for the Basque Country.

MISSION

Ikerbasque is the Foundation fostered by the Basque Government in order to strengthen the Science System in Euskadi by the incorporation, retention and consolidation of researchers and the creation of basic research centres, in cooperation with the scientific community and with a commitment to excellence.

VALUES

- Innovation
- Efficiency
- Consideration
- Cooperation

VISION

In 2013 Ikerbasque aspires to be: the main science-generating entity in Euskadi, as related to its number of researchers, thanks to its proven capacity for attracting and retaining scientific talent and its contribution to the creation of new basic research centres with excellence that is recognised by society, the management and its board for its contribution towards the improvement of Science in Euskadi, its management model and its sustainability and where the people who comprise it can fully develop themselves.

TRANSPARENCY

Ikerbasque makes a strong pledge to transparency, in the belief that integrity, transparency and responsibility are the pillars of organisational excellence. Transparency refers to the access people have to information about the organisation. Our accounts are audited annually and can be viewed on our website: www.ikerbasque.net

Since Ikerbasque was set up in 2007, 226 people have been hired through different initiatives. The organisation's management team is comprised of 5 people, which represents 2% of the total workforce.

Ikerbasque continues to be a model of management excellence, being awarded the EFGM's Silver Q Award in 2011. It has also received the European Commission's "HR Excellence in Research" seal, which gives recognition to leading institutions in Europe in terms of selecting, hiring and consolidating research talent.

Ikerbasque's budget for 2012 is broken down as follows:

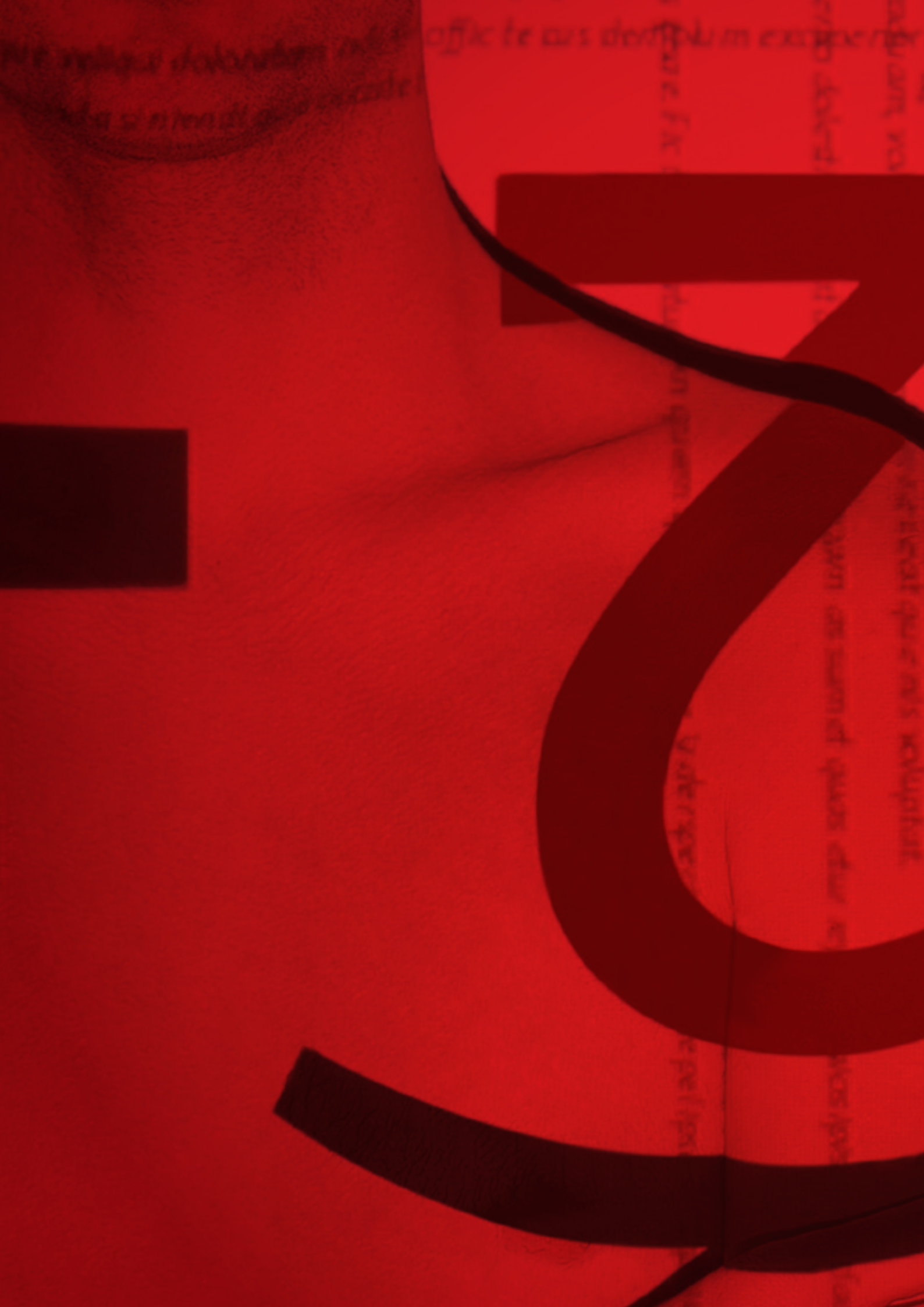
Total budget
14.807.183 €

Basque Government
13.107.713 €

European Union
1.423.393 €

Other
276.077 €





02

ATTRACTING TALENT

Evaluation Committee	12	2.1
Assignment Centres	13	2.2
Ikerbasque Researchers:	14	2.3
Research Professors	16	A
Research Fellows	58	B
Visiting Professors	62	C
DKR	64	D

EVALUATION COMMITTEE

The Ikerbasque Evaluation Committee is independent from the Basque Science System and is comprised of 120 researchers from 24 countries, coordinated by the following researchers:

Prof. Luis Oro

Professor of Inorganic Chemistry of Saragossa University, awarded the National Chemistry Research Prize 2007 and the King James I Research Prize 1999.

Prof. Ginés Morata

Researcher of the CSIC, awarded the Prince of Asturias Research Prize 2007 and the King James I Research Prize 1996.

Prof. Domingo Docampo

Professor of Telecommunications and ex-Vice-chancellor of Vigo University.

Prof. Salvador Barberà

Professor of Economics at the Autonomous University of Barcelona and awarded the King James I Research Prize 2008.

Prof. Felix Yndurain

Professor of Condensed Matter Physics at the Autonomous University of Madrid and ex-Secretary General of Scientific Policy of the Ministry of Science and Technology.

Prof. Joan Rodés

Professor of Medicine at the University of Barcelona, ex-Director of the Hospital Clinic of Barcelona and awarded National Prize for Medical Research in 2006.

Prof. Javier López Facal

Professor of research in Scientific Policy and Research Management at the CSIC. Ex-Vice-President of the CSIC.

EVALUATION CRITERIA

- 1 Scientific merit and research career.
- 2 Relevance of the research field and of the publications made.
- 3 Concordance with the capabilities of the Basque Science System.

ASSIGNMENT CENTRES

The Ikerbasque researchers have joined the following centres in the Basque Country.



IKERBASQUE RESEARCHERS:



A

Research Professors

Senior researchers with extensive research experience and leadership skills.

They are assigned permanently to Basque universities and research centres.

B

Visiting Professors

Senior researchers interested in research in the Basque Country for a maximum of 1 year.

It requires a joint application between the Host Research Group and the researcher.



C

Research Fellows

Young researchers, who received doctorates between the years 2002 and 2009, with outstanding CVs. International experience and promising scientific career. They are assigned to Basque universities and research centres for a five-year period.

D

DKR

Basque Government program to fund post-doctoral training for researchers in the Basque Country. It includes a training period of two years abroad and a third year in the Basque Country.

MAIN DATA

Research Professors A



17.441.778 €

Total funds that Ikerbasque Research Professors received in 2012.

450

Number of articles in indexed publications.

116

No. of researchers with a permanent contract.

ARTICLES AND PUBLICATIONS:

5.54

Articles, reports, books and chapters in books.

4.58

Articles in ISI Database magazines per researcher.

PAPERS AND COMMUNICATIONS:

2.77

No. of papers presented at international conferences per researcher.

FUNDS:

137,169 €

Funds obtained per Ikerbasque Researcher as director or member of the research group.

PROJECTS:

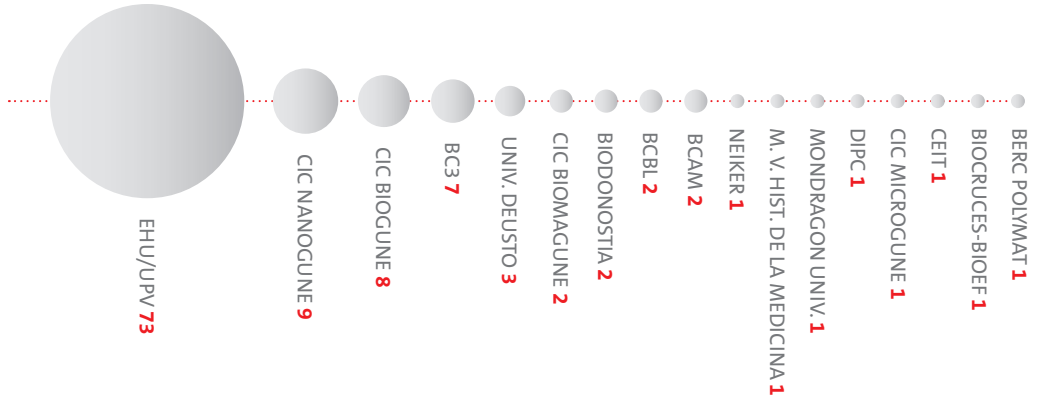
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Projects with external financing in which Ikerbasque researchers participate.

Due to some researchers having started to work in Ikerbasque over the course of 2012, they have not worked for a full year. Taking this variable into account the ratios are calculated for 107 researchers.

ASSIGNMENT CENTRES

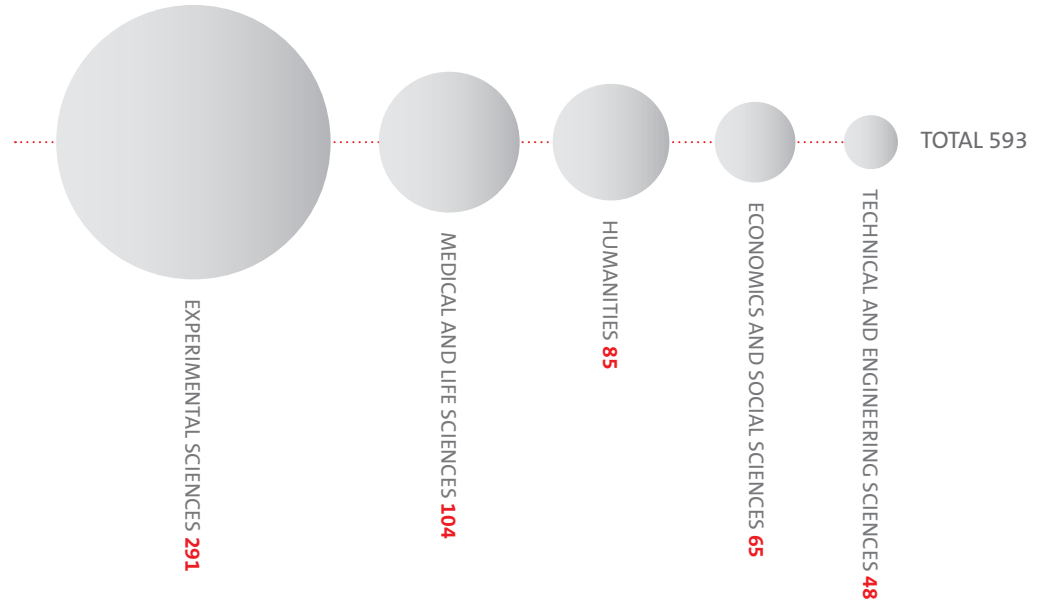
of the Ikerbasque
Research Professors:



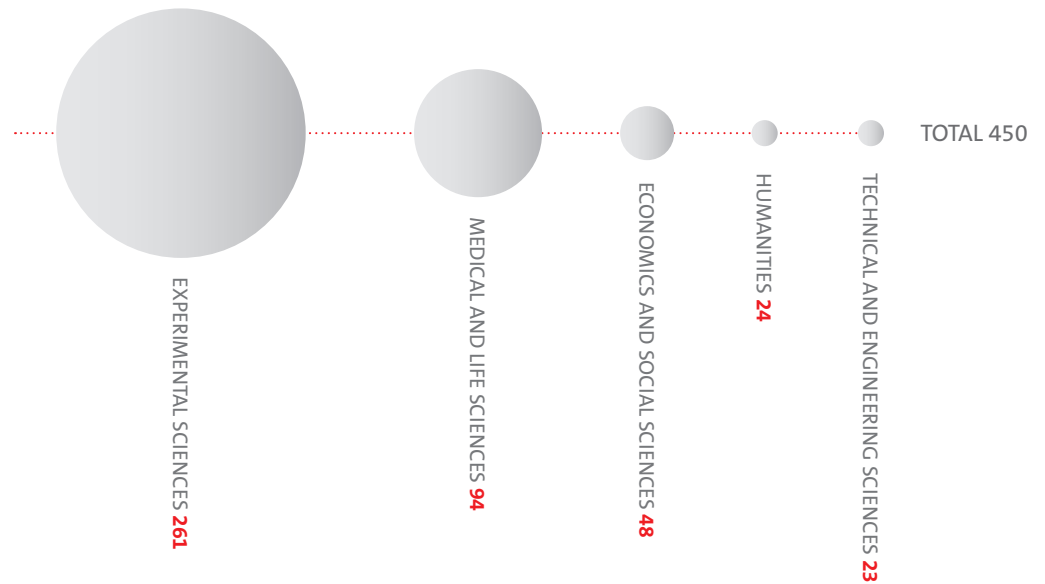
No. of PUBLICATIONS *

per research
area:

* Including published
documents, books
and chapters.



**No. of
PUBLICATIONS**
indexed in ISI Database:

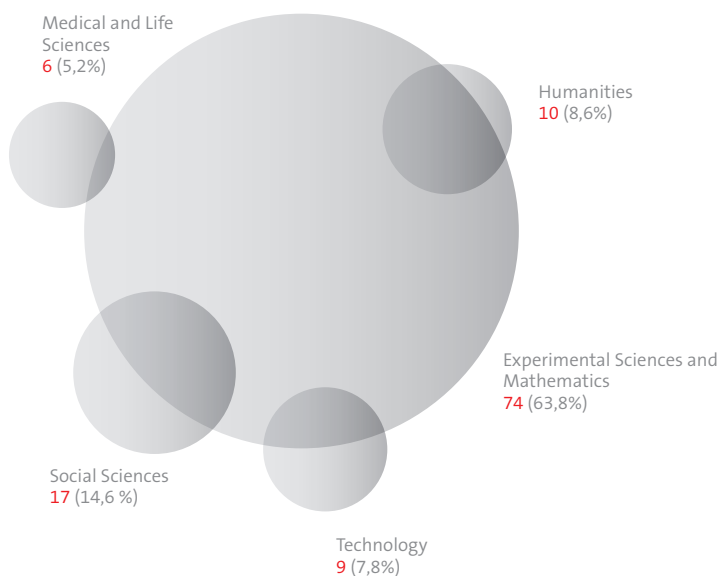


PROFILE

Research Professors A

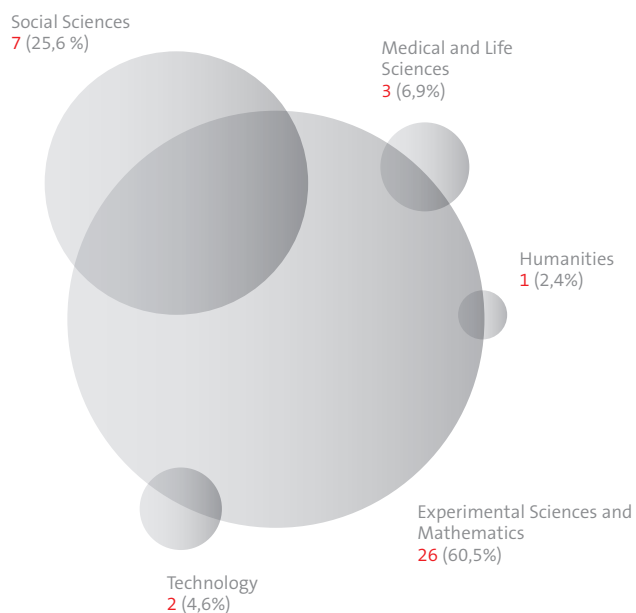
Researchers by knowledge field

(Total 116)



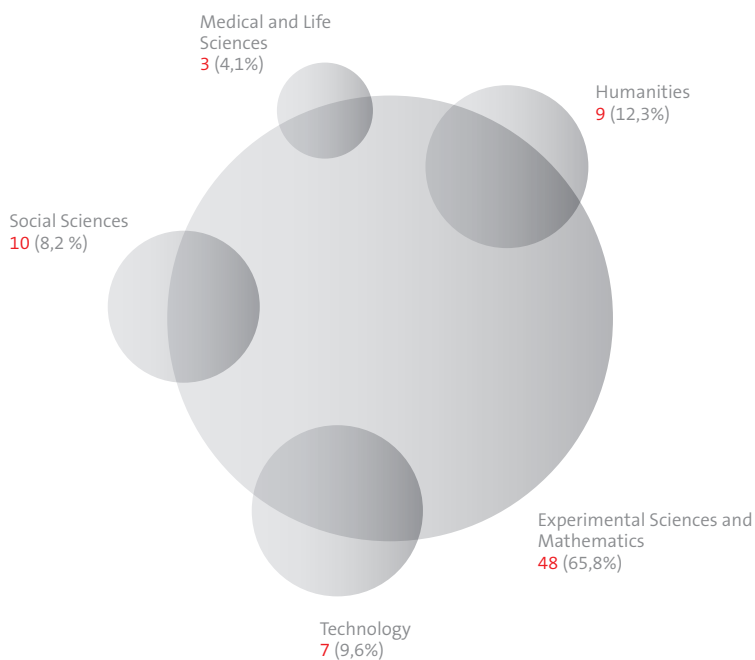
Researchers in research centres by field

(Total 39)



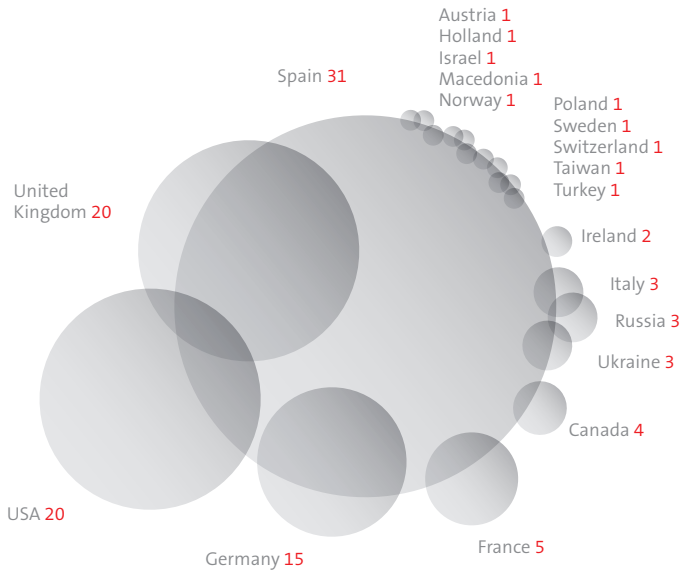
Researchers in universities by field

(Total 77)



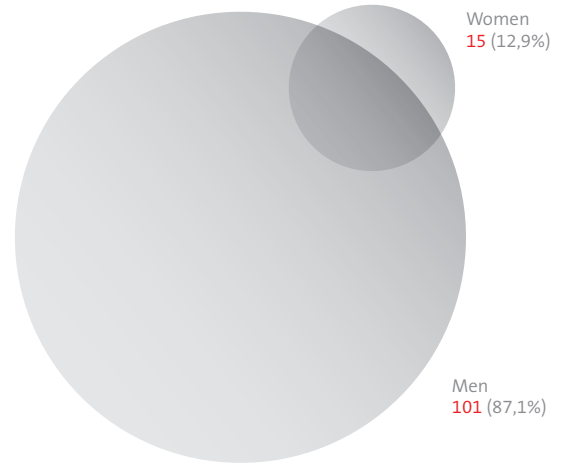
Country of origin of the researchers at the time they were hired

(Total 116)



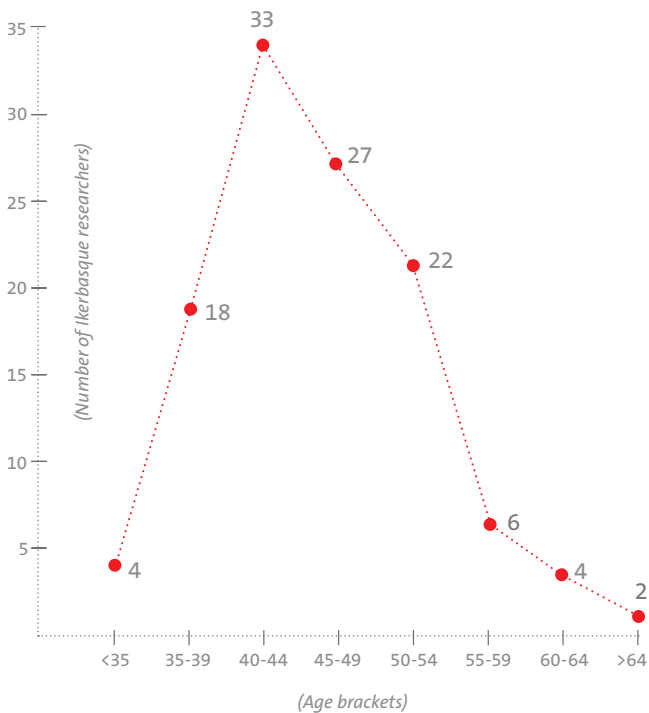
Researchers Gender

(Total 116)



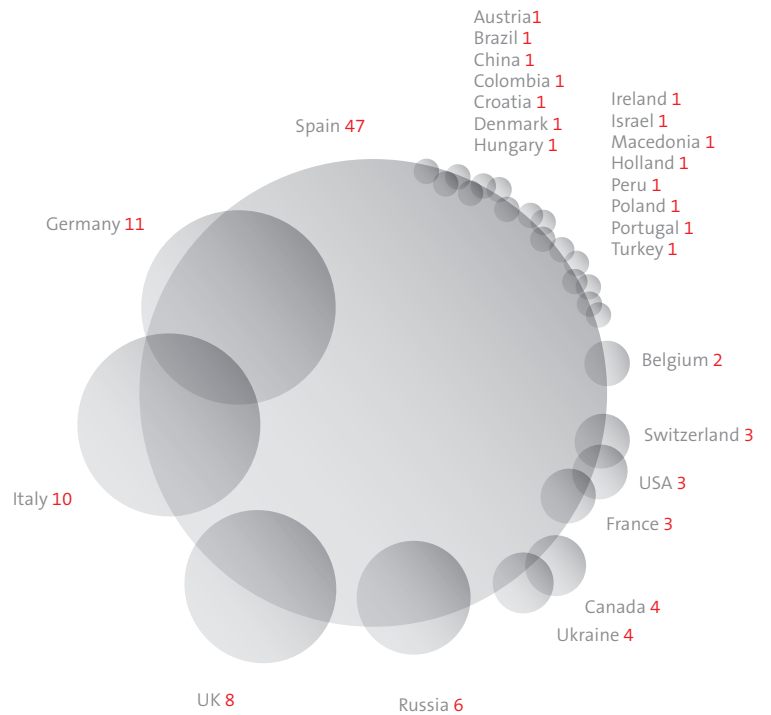
Distribution of researchers by age

(Total 116)



Nationality of the researchers

(Total 116)



Research Professors



Dr. Aitor Anduaga

Doctor in Physics in 2001 from the University of the Basque Country.

Guest Professor at the universities of Oxford, Sydney, Toronto and Montreal, the Max Planck History of Science Institute (Berlin) and the Smithsonian (Washington, DC).

Research field: History of Physics and Geophysics, Science in non-democratic regimes; the interaction between science, technology and industry.

He works at the Basque Museum of the History of Medicine and Science, of the UPV/EHU.



Dr. Nicola G. A. Abrescia

Doctor in Science in 2001 from the Polytechnic University of Catalonia (Barcelona)

He has previous research experience at the Division of Structural Biology, Wellcome Trust Centre for Human Genetics, Oxford University.

Research field: Structural studies of large molecular complexes and virus particles using X-ray crystallography and electron microscopy.

He works at the Structural Biology Unit of CIC bioGUNE.



Dr. Juan Carlos Arango

Doctor in Psychology in 2002 from the Autonomous University of Madrid.

He has previous research experience at Cooperative University of Colombia, San Buenaventura University, Antioquía University (both in Colombia), Complutense University of Madrid, University of Medicine and Dentistry of New Jersey (USA) and Virginia Commonwealth University (USA).

Research field: traumatic brain injury, spinal cord injury, physiotherapy and family affairs.

He works for the Neuropsychology of Medical Conditions Group at Deusto University.



Dr. Emilio Artacho

Doctor in Condensed Matter Physics in 1990 from the Autonomous University of Madrid.

He has previous research experience at University of California, Berkeley (USA), Max Planck Institute (Germany), Autonomous University of Madrid (Spain) and Cambridge University (UK).

Research field: Condensed matter physics; theory and simulation of solids, liquids and nanostructures.

He comes from the Cavendish Physics-Laboratory Department of the University of Cambridge.

He works at CIC nanoGUNE.



Dr. Urtzi Ayesta

Doctor in Computational Science in 2004 from the University of Nice Sophia-Antipolis.

He has previous research experience in CWI (Holland), INRIA, France Telecom and CNRS (France).

Research field: Programming theory, queuing theory, stochastic processes, gaming theory and their applications to the performance of the evaluation, design and scoping of the telecommunications and distributed systems networks.

He works at the Computer Science and Artificial Intelligence department of the UPV/EHU.



Dr. Gonzalo Bacigalupe

Doctor in Education (Psychological Counsellor) in 1995 from the University of Massachusetts Amherst; Masters degree in Public Health Care in 2007 from the University of Harvard.

He has previous research experience at Los Lagos University (Chile), Massachusetts Boston University (USA), Massachusetts Amherst University (USA) and the Department of Family Medicine and Community Health at UMASS Medical School Worcester (USA).

Research field: Family health, immigrant and transnational families, psychosocial impact of social technologies (ISTs), gender violence, family psychotherapy.

He works at the Faculty of Psychology and Educational Sciences of the University of Deusto.



Dr. Igor Bandos

Doctor in Physics and Mathematics in 1986 from the University of Donetsk.

He has previous research experience at Kharkov State University and Institute for Theoretical Physics, NSC Kharkov Institute of Physics and Technology (Ukraine), Vienna University of Technology (Austria) and Valencia University (Spain).

Research field: Theoretical physics of high energies, string theory/M theory, supergravity, supersymmetry.

He works at the Theoretical Physics and History of Science department of the Faculty of Science and Technology of UPV/EHU in Leioa.



Dr. Lourdes Basabe

Doctor in Science in 2006 from the University of Oxford.

She has previous research experience at Autonomous University of Madrid (Spain), Twente University (Holland) and Biomedical Diagnostics Institute, Dublin City University (Ireland).

Research field: Point-of-care diagnostic platforms: Integration of biosensors in microfluidic platforms for disposable point-of-care diagnostic tests.

She works at CIC microGUNE.



Dr. Alexander Bittner

Doctor rer. nat in Chemistry in 1996 from the University of Berlin, Germany.

He has previous research experience in Lure (France) and ETH (Lausanne, Switzerland), Sciences at nanoscale at MPI Solid State Research in Stuttgart.

Research field: electrochemistry, solids/liquids interfaces, plant viruses, electrospinning.

He works at the CIC nanoGUNE as Self-Assembly Group Leader.



Dr. Francisco Blanco

Doctor in Chemistry in 1992 from the Complutense University of Madrid.

He has previous research experience at the Institute for the Structure of Matter, CSIC (Spain), European Molecular Biology Laboratory, Heidelberg (Germany), National Institutes of Health, NIDDK (USA), National Centre for Oncology Research (CNIO).

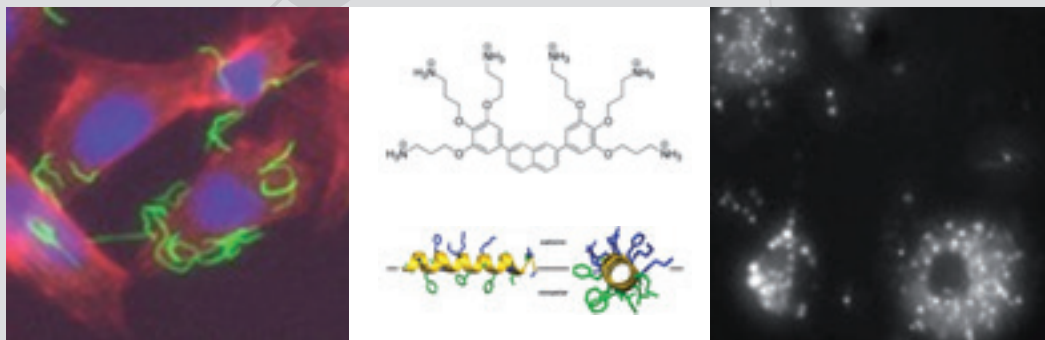
Research field: Biosciences, the structure of proteins.

He works at the CIC bioGUNE as RMN Group Leader.

Noteworthy Project

Synthetic solutions to combat infections.

Infections come from microbes (virus, bacteria) that enter our system, multiply and spread through it. These microbes, which produce diseases such as diphtheria, hepatitis, pneumonia, etc., are known as pathogens. The goal of medicine is to act against the consequences of these pathogens in people. Similarly, the goal of scientific research is to better understand their functioning to develop solutions to control these pathogens.



An international team of scientists, including Ikerbasque Biogune researcher Dr. Juan Anguita, in collaboration with Dr. Gregory Tew, from Massachusetts Amherst University (UMASS), published a paper in the *Journal of the American Chemical Society* – one of the most important chemistry journals – which proved the effectiveness of synthetic antimicrobial compounds which, in addition to eliminating killing infections, stimulate the immune system, which helps fight infections. The project sought to study the behaviour of certain synthetic compounds, based on natural peptides, which have been developed by a US company (Polymedix), that have a high antimicrobial activity against different micro-organisms.

The research team initiated the project on these compounds by looking at the operating mechanisms of certain natural antimicrobial peptides and which have the mentioned dual activity, combating external agents, on the one hand, and activating the immunological system, on the other. The idea, therefore, was to imitate the human body's immunological response using a synthetic compound - with positive results.

To trigger the activation of the immunological system, researchers focused on macrophages - cells that act with great rapidity at the start of an infection, in order to provide an early response to the same. Macrophages react immediately when, for example, we receive a cut, the aim being to initiate cicatrisation; and are also responsible for tattoos becoming permanent marks on our skin, as they are the cells that recognise the ink as a foreign body in the organism.

The research concluded that the activity of these synthetic compounds may have, as a final outcome, greater effectiveness in fighting infections. Moreover, given the low toxicity of these compounds, they are good candidates for the treatment of a wide range of infectious diseases, with the added advantage that the appearance of resistance, such as occurs in the case of antibiotics, is unlikely or nil, given the nature of these compounds.

These compounds are still at a pre-clinical study stage, but they have become good candidates for the treatment of a wide range of infectious diseases, such as conjunctivitis, meningitis and pneumonia, given their low toxicity and their effectiveness in fighting infections.

The goal of the research is to manage the response that favours the elimination of the pathogens, for example, increasing vascular permeability or generating proteins that attract cells responsible for eliminating the pathogens, such as macrophages and neutrophils. In short, according to Dr. Anguita "the idea is to generate a two-punch response, with direct elimination and through cell mechanisms, for example, phagocytosis, generating toxic compounds for bacteria like oxygen radicals, etc."



Dr. Juan Anguita

Doctor in Animal Health in 1993 from University of León.

He has previous research experience at Yale University, UNC Charlotte and Massachusetts Amherst University (USA).

Research field: proinflammatory signals in response to infectious agents. Macrophage function. Antimicrobials and Immunomodulators.

He works at CIC bioGUNE.



Dr. Christian Blum

Doctor in Applied Sciences in 2004 from the Free University of Brussels.

He has previous research experience at IRIDIA, Université Libre de Bruxelles (Belgium), Universitat Politècnica de Catalunya.

Research field: swarm intelligence techniques for optimization and management tasks in static and decentralised environments, hybridisation of metaheuristics with complete combinatorial optimisation techniques.

He works at the Computer Science and Artificial Intelligence department of the UPV/EHU.



Dr. Arkaitz Carracedo

Doctor in Biological Sciences in 2006 from the Complutense University (Madrid).

He has previous research experience at the Memorial Sloan-Kettering Cancer Center Hospital (USA) and Beth Israel Deaconess Medical Centre, Harvard Medical School (USA). He has spent research periods in France and Spain.

Research field: Study of the contribution of the reprogramming of the metabolism to the biology of cancer cells, and the implication of the signalling pathways in the regulation of the cancer's metabolism, with special emphasis on prostate cancer.

He works at the Proteomic Unit of CIC bioGUNE.



Dr. Jean-Bernard Bru

Doctor in Mathematical Physics in 1999 at the Theoretical Physics Center (C.P.T.), Marseilles, France.

He has previous research experience at the Centre for Theoretical Physics (CPT) in Marseilles (France), University of California (U.S.), School of Theoretical Physics - D.I.A.S. (Ireland), Dublin (Ireland), Johannes Gutenberg-University Mainz (Germany), University of Vienna (Austria).

Research field: mathematical studies (analysis, probability, algebra) of the quantum problem of multiple bodies relating to condensed matter physics.

He works at the Mathematics Department of the Faculty of Science and Technology of the UPV/EHU.



Dr. José Juan Blanco

Doctor in Physics in 2001 from the University of Tufts (USA).

He has previous research experience in the United Kingdom and USA (University of Tufts).

Research field: cosmology of the primitive universe.

He works at the Theoretical Physics department of the UPV/EHU.



Dr. Félix Casanova

Doctor in Physics in 2003 from the University of Barcelona.

He has previous research experience at the University of San Diego, California, USA.

Research field: spin currents in complex systems (metals, superconductors, organic semiconductors) by nanomanufacturing and features of “spintronic” devices.

He works at CIC nanoGUNE.



Dr. Joaquín Castilla

Doctor in Science in 1996 from the Autonomous University of Madrid.

He has previous research experience at the CSIC National Biotechnology Centre (Spain), CISA Animal Health Research Centre, INIA (Spain), University of Texas (USA) and The Scripps Research Institute (USA).

Research field: molecular mechanisms involved in the transmission of prions between different species.

He works at the CIC bioGUNE as Prion Lab Leader.



Dr. Hubert Chen

Doctor in Computer Science in 2004 from the University of Cornell (USA).

He has previous research experience in the United States (Cornell University, Ithaca) and Spain (Universitat Pompeu Fabra, Barcelona). Visiting Professor in Germany, England and France.

Research field: Theoretical computer science and related mathematics.

He works at the Department of Computer Language and Systems at UPV/EHU.



Dr. Volodymyr Chernenko

Doctor in Physics and Chemistry in 1980 from the State University of Moscow.

He has previous research experience at Moscow State University (Russia), Institute of Metal Physics, NASU (Ukraine), Forschungszentrum Karlsruhe, Karlsruhe (Germany), and CNR IENI (Italy). Visiting professor at institutions of the United States, Japan, Spain, Italy, Switzerland, France and Australia.

Research fields: ferromagnetic materials with shape memory.

He works at the Electricity and Electronics department of the Faculty of Science and Technology of the UPV/EHU.



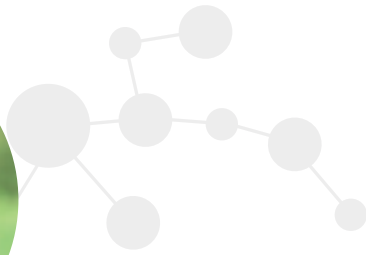
Dr. Andrey Chuvilin

Doctor in Physics and Mathematics in 1998 from the Organic Chemistry Institute SB RAS, Novosibirsk, Russia.

Institute of Catalysis, Novosibirsk (Russia), University of Jena (Germany), TU Ilmenau (Germany) and University of Ulm (Germany).

Research field: Low voltage high resolution TEM of nanocarbon materials, electron diffraction in convergent beams, image simulation and processing.

He works at the CIC nanoGUNE in the Electron Microscopy Laboratory.



Dr. Darrell Conklin

Doctor in Computer Science in 1995 from the University of Queen.

He has previous research experience at centres in Spain, the United Kingdom, the USA, Norway and Canada.

Research field: bio information technology, musical information technology

He works at the department of Information Technology and Artificial Intelligence of the UPV/EHU in Donostia-San Sebastián.



Dr. Martin Cooke

Doctor in Information Technology in 1991 from the University of Sheffield.

British Computer Society Prize (Cambridge University Press).

He has previous research experience in Great Britain at the National Physics Laboratory and at the University of Sheffield.

Research field: computer hearing, robust automatic speech recognition.

He works at the LASLAB laboratory (Language and Speech Lab) at the Faculty of Arts at the UPV/EHU in Vitoria-Gasteiz.



Dr. Daniel Conversi

Doctor in Sociology in 1994 from the London School of Economics.

He has research experience at the London School of Economics (UK), Cornell University (USA), Syracuse University (USA), Central European University (Hungary), John Cabot University (Italy) and University of Lincoln (UK).

Research field: Political and social history.

He works at the PROSOPARLAM of the UPV/EHU in Leioa.



Dr. Susana Cristobal

Doctor in Biochemistry in 1997 from the Faculty of Medicine of the Basque Country.

She has research experience at Stockholm University, Karolinska, Uppsala University and Linköping University (Sweden).

Research field: Proteomics: tools to calculate environmental and health matters.

She works at the Physiology department of the Faculty of Medicine of the UPV/EHU.



Dr. Roberto D'Agosta

Doctor in Physics in 2003 from the University of Rome "Tre".

He has research experience at University of Missouri – Columbia (USA), Istituto Nazionale per la Fisica della Materiala (Italy), University of California (USA) and Imperial College London (UK).

Research field: the transport of electrons in nanoscale systems, multiple bodies system theory and the open quantum system. Cold atoms physics

He works at the ETSF and the Materials Physics department of the Faculty of Chemistry of the UPV/EHU.



Dr. Eros Corazza

Doctor in the Arts in 1992 from the University of Geneva.

He has previous research experience at universities and centres in Switzerland, France, United States, United Kingdom, Spain and Canada.

Research field: Philosophy of language and the mind. Linguistics. Cognitive sciences

He works at the ILCLI (Institute for Logic, Cognition, Language and Information) of the UPV/EHU.



Dr. Jesus Cortés

Doctor in Physics in 2005 from the University of Granada.

He has research experience at Radboud University Nijmegen (Holland), The Salk Institute (USA), University of Edinburgh (UK) and University of Granada (Spain).

Application of statistical methods and Information Theory to neuroimaging data.

He works at the Biocruces Health Research Institute (Bioef).



Dr. Ezequiel DiPaolo

Doctor in Computer Science in 1999 from the University of Sussex, United Kingdom.

He has research experience at centres including the Centre for Computational Neuroscience and Robotics (CCNR), Centre for Research in Cognitive Science (COGS), Sussex University (UK), Institute for Autonomous Intelligent Systems and German National Research for Information Technology GMD (Germany).

Research field: Personal and social cognition, philosophy of the mind, evolutionist robotics, computational neuroscience.

He works at the Department of Logic and Philosophy of Science of the EPV/EHU.



Dr. Fadi Dornaika

Doctor in Computer Science in 1995 from the National Research Institute of Information Technology and Automation (INRIA) in France.

He has previous research experience at centres in France, Spain, Sweden, Germany, China and Canada.

Research field: computer vision, image processing, models recognition, learning by machines.

He works at the Computer Science and Artificial Intelligence department of the UPV/EHU.



Dr. Javier Echeverria

Doctor in Philosophy in 1975 from the Complutense University of Madrid and Doctor in Science and Humanities from the University of Paris (Sorbonne).

Euskadi Research Prize 1997.

He has research experience at centres in the USA, France, Germany, Belgium and Spain, where he was Director of the Institute of Philosophy Spanish National Research Council (CSIC).

Research field: The Information and Knowledge Society.

He works at the department of Sociology II of the Faculty of Social Sciences and Communications of the UPV/EHU.



Dr. Juan M. Encinas

Doctor in Neuroscience from the Complutense University of Madrid.

He has research experience at the Institute of Neurological Recovery - Baylor College of Medicine/Texas Children's Hospital (USA) and Ramón y Cajal Institute of Neurobiology, CSIC (Spain).

Research field: Study of the intrinsic properties of neural stem cells and neurogenesis in the adult hippocampus under normal conditions, of ageing and of neurological disorders such as epilepsy.

He works at the Neuroscience department of the UPV/EHU.

Noteworthy
Publication

Oldest known galaxy yet discovered?

Thomas Broadhurst, an Ikerbasque Research Professor, participated in a recently Nature-published research about a galaxy of the re-ionization era, the deepest, remotest epochs of cosmic history not previously investigated. It may be the oldest galaxy ever. This new discovery opens up a new window to the first galaxies born after the Big Bang.



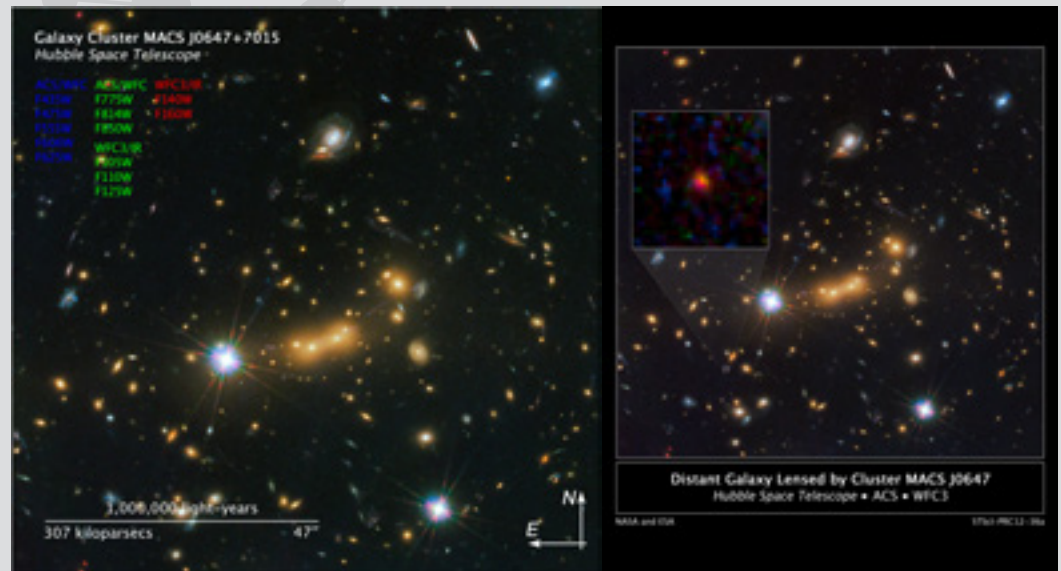
Dr. Thomas Broadhurst

Doctor in Physics from the University of Durham, United Kingdom.

He has previous research experience at centres in the UK, USA, Germany, Israel, Japan and Taiwan.

Research field: Observational cosmology, dark matter, the formation of galaxies. Experience with telescopes and satellites.

He works at the Theoretical Physics department of the UPV/EHU in Leioa.



MACS0647-JD, the name of the galaxy, is so small it may be in the first steps of forming a larger galaxy. It is less than 600 light-years wide, although astronomers estimate that a typical galaxy of a similar age should be about 2,000 light-years wide. For comparison, our Milky Way is 150,000 light-years across and the Large Magellanic Cloud, a dwarf galaxy companion to the Milky Way, 14,000 light years wide.

The furthest galaxy discovered so far is small, 13.3 billion light years from Earth, and the light that astronomers can now see was emitted only 420 thousand years after the Bag Bang (which created the Universe 13.7 billion years ago). By combining the power of NASA's Hubble and Spitzer (infrared) space telescopes and the help of nature itself by using a gravitational lense (that magnifies light), astronomers have set a new record for finding the most distant galaxy seen in the universe. The effect called gravitational lensing consists of magnifying the light from objects behind a

massive cluster of galaxies. As well as Hubble, Spitzer was also necessary in this research due to the so-called red shift, extreme in this case. The expanding universe stretches ultraviolet and visible light from galaxies into infra-red wavelengths. Scientists explain that if the object were emitted directly in infra-red, through Spitzer it would be bright, while it is hardly discernible even using this telescope, which indicates it is far away. According to the calculations of Postman and his colleagues, the red shift of MACS0647-JD is $z=11$, the greatest observed to date.



Dr. Juan Falcón-Pérez

Doctor in Biological Sciences in 1999 from the Autonomous University of Madrid.

He has previous research experience at the University of California (USA) and Autonomous University of Madrid (Spain).

Research field: Functional and molecular study of microvesicles and thorough metabolic analysis of body fluids.

He conducts his research at CIC bioGUNE.



Dr. Sergio Faria

Doctor in Mechanics from the Technological University of Darmstadt, Germany.

He has research experience at the Geociencias GZG, University of Göttingen (Germany), Max Planck Institute for Mathematics in the Sciences MPI-MIS (Germany), Darmstadt University of Technology TUD (Germany) and Federal University of Paraná UFPR (Brazil).

Research field: Environmental physics, glaciology, geomorphology, thermodynamics, soft matter, continuous diversity, biodiversity, emerging and multiscale modelling.

He works at the BC3 (Basque Centre for Climate Change).



Dr. Roger Fouquet

Doctor in Economics in 1997 from the University of Surrey.

He has research experience at the University of Surrey (UK), Imperial College of London (UK) and University of the South Pacific (Fiji).

Research field: long-term relationships between the development of the economy, technological change, energy consumption and climate change.

He works at the BC3 - Basque Centre for Climate Change.



Dr. Thomas Frederiksen

Doctor in Physics in 2007 from the Technical University of Denmark.

He has previous research experience in Denmark and Spain.

Research field: quantum transport theory and electronic structure methods. Theory and simulation of nanostructures and interfaces.

He works at the Donostia International Physics Center (DIPC).



Dr. Zoraida Freixa

Doctor in Chemistry in 2000 from the Autonomous University of Barcelona.

He has experience at the University of Coimbra (Portugal), Universiteit van Amsterdam (Holland), Institut Catala d'Investigació Química and University of Barcelona (UB).

Research field: homogeneous catalysis, supramolecular chemistry and photochromic materials.

He works at the Applied Chemistry Department of the UPV/EHU.



Dr. Vadim Frolov

Doctor in Biophysics in 1998 from the State University of Moscow.

With research experience and group leader at the A.N. Frumkin Electrochemistry Institute of Moscow (Russia); Guest researcher at the National Health Institute in Bethesda (USA).

Research field: biophysics of cellular membranes and model; membrane dynamics, fusion and fission, mechanics and thermodynamics of small membrane systems.

He conducts his research at the Biophysics Unit (CSIC-UPV/EHU), UPV/EHU, as Group Leader.



Dr. Durk Gorter

Doctor in Humanities in 1993 from the University of Amsterdam.

He has previous research experience at University of Amsterdam (Holland), National Science Foundation (Holland) and Fryske Akademy (Holland). He has spent research periods in the UK, Canada, India, US and China.

Research field: studies in minority languages; multilingual education.

Coordinator of research networks in Europe.

He works at the department of Education Theory and History of the UPV/EHU.



Dr. Frank Girot

Doctor in Materials Sciences and Processes in 1987 from the University of Bordeaux.

He has research experience at University of Bordeaux 1 (France), Center for Composite Materials (USA) and Arts et Métiers ParisTech (France).

Research field: optimisation and simulation of manufacturing processes; application of nanotechnologies to manufacturing processes.

He has joined the Mechanics department at the Higher Technical Engineering School of Bilbao, UPV/EHU.



Dr. Marcelo E. Guerin

Doctor in Biochemistry and Molecular Biology in 2002 from the Leloir Institute, School of Sciences of the University of Buenos Aires (Argentina).

Research experience in the Structural Biochemistry Unit in the Pasteur Institute of Paris and senior researcher at the Mycobacteria Research laboratories in the Microbiology department of the State University of Colorado, USA.

Research field: Structural glycobiology.

He works at the Biophysics Unit (CSIC-UPV/EHU).



Dr. Andreas Heidenreich

Doctor in Chemistry in 1990 from the University of Marburg (Germany).

Research experience at the University of Tel Aviv (Israel) and at the Humboldt University of Berlin (Germany).

Research field: computer simulations of Coulomb explosions in clusters induced by ultra-intense and ultra-short pulses.

He works at the Chemistry department of the Faculty of Chemistry of the UPV/EHU in Donostia-San Sebastián.



Dr. Konstantin Gusliyenko

Doctor in Solid Matter Physics in 1989 from the Metal Physics Institute in Kiev, National Science Academy of Ukraine.

He has previous research experience at centres in Austria, Germany, South Korea, Japan, Ukraine and the United States.

Research field: Theory of magnetism and magnetic materials: quantum magnetism, nano magnetism and micromagnetism, spin dynamics.

He works at the Materials Physics department of the Faculty of Chemistry of the UPV/EHU.



Dr. Slawomir J. Grabowski

Doctor in Chemistry in 1986 from the University of Warsaw, Poland.

He has previous research experience at the Eidgenössische Technische Hochschule (ETH) Zürich (Switzerland), University of Uppsala (Sweden), University of Grenoble (France), Jackson State University (USA), University of Fukuoka (Japan) and the University of Poland.

Research field: Theoretical chemistry, Physics-chemistry, intermolecular interactions.

He works at the Faculty of Chemistry of the UPV/EHU and the Donostia International Physics Center (DIPC).



New experimental facility to investigate the behaviour, handling and welfare of poultry.

This research line is a joint Neiker-Tecnalia-Ikerbasque effort. This facility will allow research work aimed at developing new production systems that integrate animal health and welfare while maintaining profitability.



Dr. Inma Estevez

Doctor in Zoology in 1994 from the University of Cordoba.

She has previous research experience at the University of Maryland (United States), Institute National de la Recherche Agronomique INRA (France), Swedish Institute, Agricultural University (Sweden) and the University of Cordoba (Spain).

Research field: improvement of poultry production.

She works at the Neiker-Tecnalia research centre.

The new facility consists of a 320 m2 aviary with capacity to hold a variable number of animals depending on the species, purpose and production system, and there is an automated system to control environmental and food conditions. This facility was designed to be versatile and multi-purpose, allowing a wide variety of studies to be conducted. There are also 120 m2 used for warehouse, office and laboratory purposes. The research work will investigate new care techniques that foster the sustainability of poultry systems, combining welfare, environmental protection and economic return. The work will mainly be focused on fostering animal welfare and improving the efficiency of production systems, both for laying hens and meat-producing chickens, ducks and turkeys.

One of the research lines in the animal production department will be based on the space in which the poultry must live and their phenotypic traits. The NEIKER-Tecnalia specialists, led by Inma

Estevez and with the collaboration of Annick Laruelle, (both Ikerbasque researchers), Raúl Marín (Ikerbasque Visiting Professor) and Elena Iñarra (UPV -EHU), are working on a State-funded project. One of the aims of this project is to find out how the ratio between space and number of animals influences their behaviour, health, welfare and productivity. This research work will give great insight into the social dynamics of poultry as a critical factor on the performance of the batches and on their welfare. This knowledge will result in new strategies for rearing and caring for animals that reduce undesired behaviour that might significantly reduce productivity. This control is of much interest to the poultry industry.

Spain is one of the leading poultry producers in the European Union. Solving the problems that the Spanish poultry industry is facing and bringing it into line with European regulations on animal welfare are therefore priority objectives.



Dr. Daniel Innerarity

Doctor in Philosophy.

He has previous research experience at centres in Germany (as Alexander von Humboldt-Fellow), Switzerland, Italy, France and Spain.

Research field: Political philosophy (governance in the global knowledge society).

He conducts his research at the Constitutional Law department of the Faculty of Law, UPV/EHU. He is responsible for the Democratic Governance Institute.



Dr. Vladimir Kaberdin

Doctor in Biochemistry in 1991 from the University of Moscow.

He has previous research experience at centres in Taiwan, Austria and Belarus.

Research field: post-transcriptional control, processing and decay of RNA, bacterial stress responses.

He conducts his research at the Department of Immunology, Microbiology and Parasitology, Faculty of Science and Technology, UPV/EHU.



Dr. Nagore Iriberry

Doctor in Economics in 2006 from the University of California (San Diego, USA).

She has research experience at the Universitat Pompeu Fabra (Spain) and the University of California (USA).

Research field: behavioural and experimental economics. initial responses to games, role of beliefs and expectations in individual decision-making and games.

She works at the Department of Fundamentals of Economic Analysis, UPV/EHU.



Dr. Aitor Hierro

Doctor in Molecular Biochemistry and Molecular Biology from the Biophysics Unit CSIC-UPV/EHU.

Post-doctoral research for the American Food and Drug Administration (FDA) and the US National Health Institute.

Research field: Structural biology, membranes traffic. Protein complexes.

He works at the CIC bioGUNE as group leader.



Dr. Sergey Korotov

Doctor in Scientific Computation in 1997 from the University of Jyväskylä in Finland.

He has previous research experience at Utrecht University (Holland), Academy of Finland and Helsinki University of Technology (Finland), Mittag-Leffler Institute (Sweden) and University of Erlangen (Germany).

Research field: numerical analysis, finite element method, mesh generation.

He works at the BCAM, Basque Centre for Applied Mathematics.



Dr. Mato Knez

Doctor in Physics-Chemistry in 2003 from the Max-Planck Institute for Solid State Research (Stuttgart, Germany).

He has research experience at the Max Planck Institute FKF and Max Planck Institute of Microstructure Physics (Germany) and Università Degli Studi di Brescia (Italy).

Research field: nanomaterials (synthesis and properties), material science, thin film coatings, atomic layer deposition (ALD) and organic-inorganic and bio-organic hybrid materials.

He works at the CIC nanoGUNE as Nanomaterials Group Leader.



Dr. Eugene Krasovskii

Doctor in Physics and Mathematics in 1987 from the Academy of Science in Ukraine.

More than 20 years of research experience at research centres in the Ukraine and Germany.

Research field: The science of the surface, the theory of the deflation/diffraction of electrons and photoemissions, computational methods of solid state theory.

He works at the Materials Physics department of the Faculty of Chemistry of the UPV/EHU.



Dr. Andrey Kazansky

Doctor in Science (Physics and Mathematics) from the State University of Saint Petersburg.

Experience as the head researcher at the V.A.Fock Physics Institute in Saint Petersburg. More than 50 stays as visiting professor in the USA, France, Germany, Denmark and Spain.

Research field: Computer simulation of the ultra-fast phenomenon in gases and metal interfaces.

He works at DIPC.



Dr. Stefan Kurth

Doctor in Physics in 1995 from the University of Wurzburg, Germany.

He has research experience at the University of Antwerp - RUCA (Belgium), Tulane University (USA), Lund University (Sweden) and Free University (Germany).

Research field: Particle quantum physics, especially functional density theory, the temporal description of the transport of electrons through molecules and nanostructures.

He conducts his research at the nanobio-spectroscopy group of the Material Physics department of the Faculty of Chemistry of the UPV/EHU and the Material Physics Center (mixed centre of the CSIC and UPV/EHU).



Dr. Annick Laruelle

Doctor in Economics Economics in 1998 from the Catholic University of Leuven, Belgium.

He has been visiting professor at several European universities. His latest position was professor at the University of Caen Basse Normandie, France.

Research field: Game theory and social choice.

He works at the Department of Fundamentals of Economic Analysis, UPV/EHU.



Dr. Charles Lawrie

Doctor in Biological Science in 2000 from the University of Oxford.

He has worked in business and academic departments in the UK. He has research experience at the Nuffield Department of Clinical Laboratory Sciences, University of Oxford (UK).

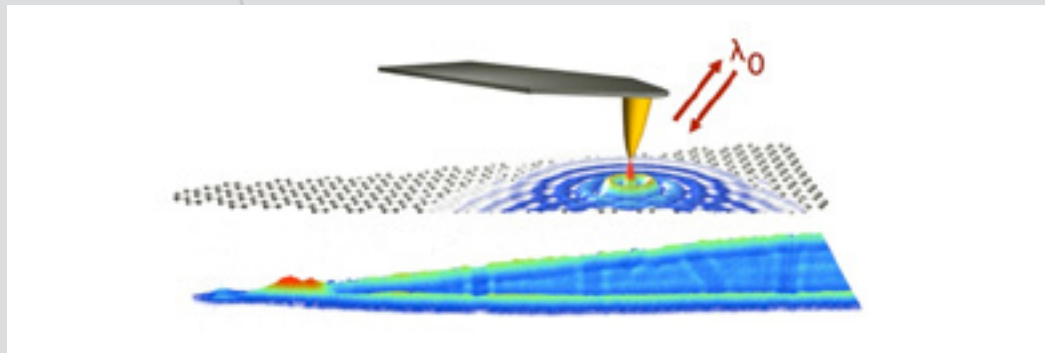
Research field: Use of primary genome techniques to identify the genes/micro-RNA involved in the pathology of cancer and their potential as a biomarker.

He works at the Biodonostia Institute as Director of Oncology Research.

Noteworthy
Publication

Taming light with graphene.

Joint research by several research groups, including the group led by Ikerbasque researcher, Rainer Hillenbrand, have achieved the first ever visualizations of light guided with nanometric precision on graphene (a one-atom-thick sheet of carbon atoms), as published in Nature journal.



This visualization demonstrates what theoretical physicists have long predicted; that it is possible to trap and manipulate light in a highly efficient way, using graphene as a novel platform for optical information processing and sensing. Synergies between theoretical proposals from IQFR-CSIC (Madrid), specializations in graphene nano-photonics and nano-optoelectronics at ICFO (Barcelona), and experimental expertise in optical nano-imaging at nanoGUNE (San Sebastian) give rise to these noteworthy results reported in Nature this week in a back-to-back publication alongside a similar study by the group of Dmitry Basov in UCSD in California.

Graphene is a material that, among many other fascinating properties, has an extraordinary optical behaviour. Particularly interesting optical properties had been predicted for the case that light couples to so-called plasmons, (wave-like excitations that were predicted to exist in the "sea" of conduction electrons of graphene). However, no direct experimental evidence of plasmons in graphene had been shown up to this work. This is because the wavelength (that is, the "size") of graphene plasmons is 10 to 100 times smaller than what can be seen with conventional light microscope.

Now, the researchers show the first experimental images of graphene plasmons. They used a so called near-field microscope that uses a sharp tip to convert the illumination light into a nanoscale light spot that provides the extra momentum ("push") needed for the plasmons to be created. At the same time the tip probes the presence of plasmons. Rainer Hillenbrand, Ikerbasque

researcher and leader of the nanoGUNE group comments: "Seeing is believing! Our near-field optical images definitely proof the existence of propagating and localized graphene plasmons and allow for a direct measurement of their dramatically reduced wavelength."

In addition, the capability of trapping light in very small volumes could give rise to a new generation of nano-sensors with applications in diverse areas such as medicine and bio-detection, solar cells and light detectors, as well as quantum information processing. This result literally opens a new field of research and provides a first viable path towards ultrafast tuning of light, which was not possible until now.

As demonstrated by the researchers, graphene plasmons can be used to electrically control light in a similar fashion as is traditionally achieved with electrons in a transistor. These capabilities, which until now were impossible with other existing plasmonic materials, enable new highly efficient nanoscale optical switches which can perform calculations using light instead of electricity.



Dr. Juan Mareque

Doctor in Inorganic Chemistry in 1998 from the University of Missouri, St.

He has research experience at the United States (Massachusetts Institute of Technology and University of Missouri-St. Louis) and the United Kingdom (University of Edinburgh).

Research field: Bioinorganic and supramolecular chemistry, molecular recognition, biomedical and nanomedical imaging.

He works at CIC biomaGUNE.



Dr. Anil Markandya

Doctor in the Economics of the Environment in 1975 from the London School of Economics, United Kingdom.

He has research experience at centres in the United Kingdom (London School of Economics, University College London, University of Bath), Italy (Fondazione Eni Enrico Mattei) the United States, (Princeton University, University of California, Harvard University, World Bank) and France.

Research fields: The economics of the environment and of the resources, climate change.

Member of the IPCC - International Panel of Experts on Climate Change - awarded the Nobel Peace Prize in 2007.

He conducts his research work at the BC3 (Basque Center for Climate Change), where he is Scientific Director.



Dr. Iciar Martínez

Doctor in Science in 1990 from University of Tromsø (Norway) and in 1991 from UPV/EHU.

She has research experience at the CSIC (Institute of Marine Research) and at the SINTEF, Norwegian Institute of Fisheries and Aquaculture – Fiskeriforskning (Norway).

Research field: identification and control of factors affecting the composition, quality and safety of edible aquatic organisms. Development of analytical methods to verify the authenticity of foodstuffs.

She works at the Plentzia Marine Station (PIE), UPV/EHU.



Dr. Michael Marder

Doctor in Philosophy of the New School for Social Research in New York.

He has research experience at York University (Canada), New School University (USA), Suffolk University (USA), Georgetown University (USA), St. Thomas More College-University of Saskatchewan (Canada) and Lisbon University (Portugal).

Research field: phenomenology, ethical and political philosophy, environmental philosophy.

He works at the Philosophy department of the UPV/EHU.



Dr. Ugo Mayor

Doctor in Biology in 2003 from the University of Cambridge.

Experience at the Lund University in Sweden and at the MRC Centre for Protein Engineering, WT CR UK Gurdon Institute and the Genetics department at Cambridge (United Kingdom).

Research field: biochemical and genetic characterisation of the locational pathways in functions and neuronal disorders.

He conducts his research at CIC bioGUNE.



Dr. Aurelio Mateo

Doctor in Chemistry in 2004 from the Queen Mary University of London (UK).

Young Investigator Award from Università di Trieste (2007), Eugen-Graetz Prize from Universität Freiburg (2009), RSEQ Young Investigator Prize (2011) and ECS Young Investigator Award from the Fullerene Division (2012).

He has research experience at Università di Trieste (Italy) and Freiburg Institute for Advanced Studies (Germany).

Research field: molecular and supramolecular materials.

He conducts his research at Polymat – Basque Center for Macromolecular Design & Engineering.



Dr. Michele Modugno

Doctor in Theoretical Physics in 1998 from the University of Florence, Italy.

He has research experience at University of Florence (Italy), in Switzerland and at École Normale Supérieure of Paris (France).

Research field: Bose-Einstein condensation. Quantum “ultracold” gases in optical networks and potential disorders.

He conducts his research at Theoretical Physics and the History of Science department of the UPV/EHU in Leioa.



Dr. Rafael Morales

Doctor in Physics from the University of Oviedo.

He has research experience at the University of Oviedo, in the CINN in Spain and at the University of California in San Diego (USA).

Research field: Interchange magnetism of paired multilayers and nanostructure magnetism.

He conducts his research at the Physics-Chemistry department of the Faculty of Science and Technology of the UPV/EHU.



Dr. Jaume Navarro

Doctor in the History of Science in 1988 from the Autonomous University of Barcelona.

He has previous research experience at the University of Cambridge, Imperial College (United Kingdom) and the Max Planck Institute of Berlin (Germany).

Research field: The History of Science, especially the history of physics science.

He works at the Faculty of Philosophy of the UPV/EHU.



Dr. Marc Neumann

Doctor in Technical Science (Environmental Engineering) in 2007 from ETH Zurich (Switzerland).

He has previous research experience in Switzerland (Eawag, ETH Zurich) and Canada (Laval University).

Research field: aquatic impact of climate change, adaptation of water infrastructures, planning and design in conditions of uncertainty.

He works at the BC3 - Basque Centre for Climate Change.



Dr. Ignacio Palacios

Doctor in Economics in 1995 from the University of Chicago.

He has previous research experience in the United States (Dartmouth College of the University of Stanford, the University of Chicago, Brown University) and the United Kingdom (London School of Economics).

Research field: Theoretical and applied microeconomy, game theory, behavioural and experimental economy.

He conducts his research at Bilbao LABEAN (UPV/EHU).



Dr. Ignacio Pascual

Doctor in Physics in 1998 from the Autonomous University of Madrid.

He has research experience at the Free University of Berlin and Fritz-Haber Institute Max-Planck-Gesellschaft (Germany) and Institute of Material Science, Barcelona (Spain).

Research field: single atom/molecule spectroscopy and manipulation with a scanning-tunnelling-microscope.

He works at the CIC nanoGUNE as Nano-Imaging Group Leader.



Dr. Florence Perrin

Doctor in Biological Sciences-Evolutionary neuroscience in the year 2000 from the University of Basel, Switzerland.

Experience in evolution of the central nervous system and pathologies at University of Geneva and University of Basel (Switzerland), McGill University (Canada) and University of Montpellier, INSERM (France).

Research field: underlying molecular mechanisms in neurodegeneration and neuroprotection processes and in the development and pathologies of the spinal cord, focused on amyotrophic lateral sclerosis, chronic motorneuronal disease and spinal cord damage.

She is the manager of the new Integrative Biology and Neurodegenerative laboratory at the Neuroscience department of the Faculty of Medicine in the UPV/EHU.



Dr. Unai Pascual

Doctor in Environmental Economics in 2002 from the University of York (United Kingdom).

He has previous research experience in Economy of the environment and development, applied to numerous countries around the world. He is a researcher at Cambridge and Manchester Universities (UK).

Research field: Economy of the environment and development, ecological economy, modelling of natural resources, the economy of biodiversity and ecosystems, global environmental change, links between poverty and the environment, preservation of the agrobiodiversity.

He works at the BC3 (Basque Centre for Climate Change).



Dr. David Pardo

Doctor in Computational and Applied Mathematics in 2004 from the University of Texas (United States).

He has research experience at the Institute for Computational Engineering and Sciences (ICES) and the Department of Petroleum Engineering at University of Texas. USA.

Research field: computational simulations, multiphysics, investment and petroleum.

He works at the Applied Mathematics, Statistics and Operational Research department of the UPV/EHU.



Dr. Mario Piris

Doctor in Physics in 1997 from the University of Havana, Cuba.

He has previous research experience in Cuba, Italy, Germany and Spain.

Research field: Chemistry physics, quantum chemistry, reduced density matrix mechanics, natural orbit functional theory.

He works at the Faculty of Chemistry of the UPV/EHU.



Dr. Jose Pomposo

Doctor in Chemistry in 1994 from the University of the Basque Country (UPV/EHU).

He has previous research experience in Materials Science. During 12 years he was responsible for the New Materials department at the Electromechanical Technologies Centre - Cidetec.

Research field: Launch of the “Macromolecular Click-Chemistry Laboratory” for the synthesis of nano-soft uniform objects and the research of nano-complex objects with self-assembly behaviour.

He works at the Materials Physics Center (UPV/EHU-CSIC).



Dr. Yury Racovich

Doctor in Physics in 1995 from the National Science Academy of Minsk, Belarus.

Research experience at the Technical University of Brest; the University of Minho (Braga), Senior researcher at the CRANN, Trinity College (Dublin, Ireland).

Research field: Nanophotonics, spectroscopy and photonics application of particles and structures at a nano scale, microcavities optics, nano-biophotonics.

He works at the Materials Physics Center.



Dr. José Julio Rodríguez Arellano

Doctor in Biological Sciences - Neurobiology in 1995 from the Complutense University.

He has previous research experience in Switzerland (Novartis Pharma), France (INSERM), USA (Cornell Medical College and Florida Atlantic University) and the United Kingdom (University of Manchester).

Research field: Neuroanatomy and functional connectivity of neural circuits in the context of plasticity relating to memory under normal and pathological conditions.

He works at the Functional Neuroanatomy Laboratory at the Neuroscience department of the Faculty of Medicine of the UPV/EHU.



Dr. Susana Rodríguez

Doctor in Chemistry in 1999 from the University of Vigo.

She has research experience at the Institute of Environmental Biotechnology at Graz University (Austria), Minho University (Portugal) and Rovira i Virgili University (Tarragona, Spain).

Research field: production of ligninolytic enzymes, development of different techniques for the immobilization of microorganisms and the immobilization of enzymes, bioreactor design, development of bioprocesses, biological treatment of waste water containing dyes and the purification of enzymes.

She conducts her research at CEIT - Technical Studies and Research Centre.



Dr. Dirk Rübhelke

Doctor in Economics ("Dr. rer. pol.") in 2001 from the Chemnitz Technological University; qualification ("Dr. rer. pol. habil.") in 2006.

He has research experience in Environmental and Public Economics at the Oslo Center for International Climate and Environmental Research CICERO (Norway) and Chemnitz University of Technology (Germany). He has spent research periods at centres in Australia, Germany, Israel, Cuba and United Kingdom.

Research field: Environmental and public economics; specifically the international aspects of climate change and the benefits of climate change policy.

He conducts his research at the BC3 - Basque Centre for Climate Change.



Dr. Ulf-Dietrich Reips

Doctor in Psychology in 1997 from the University of Tübingen (Germany).

He has previous research experience at centres in Switzerland, Germany, USA and the United Kingdom.

Research field: Methodology of Internet science (use of the Internet for research into social and behavioural sciences); Cognition of causality.

He works at the LabPsico of the Psychology department of the University of Deusto.



Dr. Gunar Schnell

Doctor in Physics from the New Mexico State University, USA.

He has research experience at Deutsches Elektronen-Synchrotron – DESY (Germany), Universiteit Gent (Belgium) and Tokyo Institute of Technology (Japan).

Research field: Experimental and phenomenological research of quantum chromodynamics and particularly the structure of the nucleon and hadronisation.

He works at the Faculty of Science and Technology of the UPV/EHU.



Dr. Arthur Samuel

Doctor in 1979 from the University of California, San Diego.

He has previous research experience, which include a post-doctoral stay at the Bell Laboratories and stays at the Universities of Yale and Stony Brook, USA.

Research field: psycholinguistics, particularly, the cognitive processes involved in the recognition of spoken language.

He conducts his research at BCBL (Basque Center on Cognition, Brain, and Language).



Dr. Eugeny Sherman

Doctor in Theoretical Physics in 1990 from the Landau Theoretical Physics Institute of Russia.

He has previous research experience at centres in the Canada, Austria, Russia and Germany.

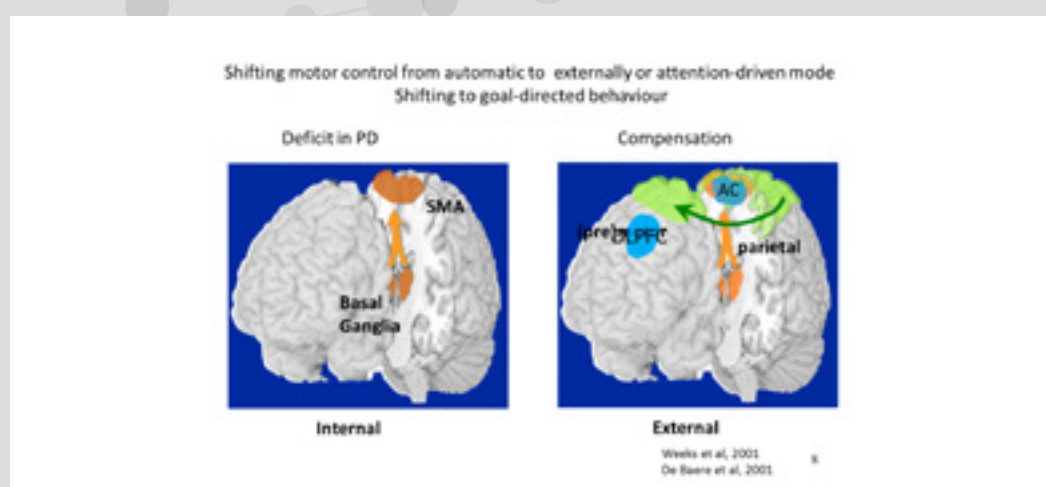
Research fields: nanostructures, spintronics and quantum magnetism.

He works at the Physics-Chemistry department of the Faculty of Science and Technology of the UPV/EHU.

Noteworthy
Project

M^a Cruz Rodríguez Oroz organised a symposium on cognitive and gait impairments in Parkinson's disease.

One hundred and sixty researchers and medical experts specialising in Parkinson's disease met at Palacio de Miramar, San Sebastián to analyse this new research field.



Dr. M^a Cruz Rodríguez Oroz

Doctor in Medicine and Surgery from the University of La Laguna (Spain).

She has research experience at different centres in Spain, the United Kingdom and USA.

Research field: Parkinson's disease, mainly based on surgical treatment and the associated behavioural and cognitive problems, as well as the pathophysiology of basal ganglia of this disease.

She works at the BioDonostia and Donostia Hospital.

Researching the link between cognitive and gait impairments in Parkinson's disease could help to find new therapeutic targets. Both impairments occur in 80% of patients in the advanced stage of the disease, that is, after many years. There is evidence that the mechanisms that lead to gait impairment in Parkinson's disease could be partly common to those involved in cognitive impairment. The two problems are not completely independent of each other. There is a high risk of cognitive impairment in patients with gait disorders, and vice versa.

The experts attending the meeting at Miramar, from hospitals, universities and research centres in Spain, Europe, Canada and Israel, discussed early strategies of identifying these problems and the possible treatments. There are several stages of Parkinson's disease. The main early clinical signs are different the symptoms that occur years later. Gait disorders in the advanced stages have specific characteristics due to the degeneration of certain neural structures which might also contribute to cognitive impairment. However, the disease does not evolve in this way in every case. It is not known why 20% of cases evolve in a more benign manner.

If it is known which neural systems are totally or partly responsible for the cognitive and gait alterations, new pharmacological treatments could be applied to restore the functioning of the brain structures involved, or cognitive stimulation or physiotherapy sessions used as soon as these disorders appear. New surgical treatments could also be proposed for other clinical symptoms of the disease, such as shaking or clumsiness. An early diagnosis could also result in therapies that may not cure the disease, but can delay the onset of clinical problems.

According to researcher M^a Cruz Rodríguez-Oroz, Parkinson's sufferers "Could do a lot about their own illness. It's not only about letting the neurologist take over and waiting for him to prescribe something for what is missing in the brain. We know that physical and mental exercise can help to delay the clinical manifestations of gait disorders and falls and cognitive impairment. In this task the patient is the one who plays the leading role in improving his/her quality of life".



Dr. Amanda Sierra

Doctor in Neuroscience in 2003 from the Complutense University of Madrid.

She has previous research experience at research centres in Spain (Cajal Institute) and the USA (Rockefeller University, Stony Brook University and the Baylor Medical College).

Research field: Microglial cells in the interaction between phagocytosis and inflammation in the diseased brain.

She works at the Neuroscience department of the Faculty of Medicine of the UPV/EHU.



Dr. Vyacheslav Silkin

Doctor in Physics and Materials Science in 1990 from the Russian Academy of Science.

He has previous research experience at centres in Russia, and Spain.

Research field: Ultra-fast particle dynamics.

He works at the Materials Physics department of the Faculty of Chemistry of the UPV/EHU.



Dr. Jens Siewert

Doctor in Physics from the University of Karlsruhe, Germany.

He has previous research experience at centres in USA, Italy and Germany.

Research field: quantum dynamics and transport in mesoscopic systems, quantum information theory.

He works at the Physics-Chemistry department of the Faculty of Science and Technology of the UPV/EHU.



Dr. Dmitri Sokolovski

Doctor in Theoretical Physics in 1985 from the “Bonch-Bruевич” Communication University of Leningrad.

He has previous research experience at centres in Russia, Germany and the United Kingdom.

Research field: Quantum theory.

He works at the Physics-Chemistry department of the UPV/EHU.



Dr. Vadim Soloshonok

Doctor in Organic Chemistry in 1987 from the Academy of Science in Ukraine.

He has previous research and teaching experience in Ukraine, Russia, Poland, Italy, Japan and the USA.

Research field: Organic chemistry, fluoridated chemistry, chiral nanotechnology, astrochemistry.

He works at the Organic Chemistry Department of the UPV/EHU.



Dr. Enrique Solano

Doctor in Physics in 2000 from the Federal University of Rio de Janeiro, Brazil.

He has research experience in Peru, France, Germany and Brazil.

Research field: Multidisciplinary research in quantum optics; quantum information; quantum mechanics; condensed matter.

He works at the Physics-Chemistry department of the Faculty of Science and Technology of the UPV/EHU.



Dr. Ivo Souza

Doctor in Physics in 2000 from the University of Illinois.

He has previously been Professor of Physics at University of California, Berkeley.

Research field: condensed matter theory. Computational electronic structure.

He works at the Materials Physics Center.



Dr. Radmila Tomovska

Doctor in Chemical Engineering from Saints Cyril and Methodius University, Skopje, Macedonia.

She has previous research experience at Saints Cyril and Methodius University, Department of Technology and Metallurgy, Skopje, Macedonia and at the Academy of Sciences of the Czech Republic.

Research field: photochemistry, photocatalysis, preparation and characterisation of materials, polymer surface modification.

She works at the POLYMAT Institute of the UPV/EHU.



Dr. Esther Torrego

Doctor in Linguistics (Romance Linguistics) in 1972 from the Complutense University of Madrid.

She has previous research experience at centres in the United States and Europe.

Research field: linguistic theory, syntax interface between syntax and phonology and syntax and semantics, comparative syntax and Spanish and Romance linguistics.

She works at the Euskara Institutua of the UPV/EHU.



Dr. Ilya Tokatly

Doctor in Physics in 1992 from the Electronic Technology Institute of Moscow.

He has previous research experience at centres in the United States, Russia and Germany.

Research field: Quantum physics and nanostructures.

He works at the Materials Physics department of the Faculty of Chemistry of the UPV/EHU.



Dr. Paolo Vavassori

Doctor in Physics in 1994 from the Politecnico di Milano, Italy.

He has previous research experience at centres in Italy, USA and France.

Research field: Changing magnetisation, related characterised dynamics and methods. Manufacturing and characterisation of magnetic nanostructures.

He works at CIC nanoGUNE.



Dr. Alexei Verkhratsky

Doctor in Science in 1993 from the Physiology Institute of Bogomoletz.

He has previous work experience at Manchester University (UK), Max-Delbrück Center for Molecular Medicine, Berlin (Germany), Kiev Institute of Physiology and Academy of Sciences (Ukraine).

Research field: Neuroscience, cellular signalling, neurodegeneration.

He works at the Neuroscience department of the Faculty of Medicine of the UPV/EHU.



Dr. Mustafa Tutar

Doctor in Computation Fluid Dynamics in 1998, department of Mechanical and Aerospace Engineering of the University of Hertfordshire, United Kingdom.

Research experience in Turkey and the United Kingdom.

Research field: Interactions of the structure of fluids for aerodynamic and/or hydrodynamic applications, turbulences modelling for different movement scenarios, renewable energy.

He works at Mondragon Unibertsitatea.



Dr. Koen Vandebroek

Doctor in Molecular Biology in 1998 from the Catholic University of Leuven, Belgium.

He has previous research experience at centres in Belgium, Italy and the United Kingdom.

Research field: Pharmacogenomics and the genetics of autoimmune diseases.

Head of the Neurogenomics laboratory of the Neuroscience department of the UPV/EHU.



Dr. José Vilar

Doctor in Physics in 1998 from the University of Barcelona.

He has research experience at Princeton University (USA), Rockefeller University (USA), Cornell University (USA) and Memorial Sloan-Kettering Cancer Center, New York (USA), where he was Laboratory Director.

Research field:
Computational biology.

He works at the department of Biochemistry and Molecular Biology of the Faculty of Science and Technology of the UPV/EHU.



Dr. Lucia Vitali

Doctor (Dr. Rer. Nat.) in Physics in the Karl-Franzens Univeristaet in Graz, Austria.

She has previous research experience at the Max-Planck Institute for Solid State Research in Stuttgart, Germany.

Research field: surface science, spectroscopic and local scale structural research based on tunnel effect techniques.

She works at the Materials Physics Center (CSIC-UPV/EHU).



Dr. Ferdinando Villa

Doctor in Ecology in 1993 from the University of Parma, Italy.

He has previous research experience at Maryland and Vermont University (USA).

Research field:
Theoretical ecology.

He works at the BC3 - Basque Centre for Climate Change.



Dr. Agustín Vicente

Doctor in Philosophy from the UPV/EHU.

He has previous research experience as a post-doctoral researcher at the University of Barcelona and guest researcher at the University of North Carolina, at Brown University, at the University College of London and at the University of Valladolid.

Research field: philosophy of the mind; specifically in mental causation and emergentism, relationships between language and thought.

He works at the Department of Logic and Philosophy of Science of the EPV/EHU.

Noteworthy
Project

The Becerro Galicano cartulary.

UPV/EHU and the San Millán de la Cogolla Foundation have signed an agreement to investigate and promote the heritage of San Millán. Both institutes are looking into the common past of both territories and the history of the Castilian and Basque languages.



Dr. Francesca Tinti

Doctor in the History of the Medieval Church. Thesis awarded a prize by the University of Padua (Italy) in 2000.

She has previously worked at the University of Cambridge (United Kingdom) and the University of Bologna (Italy).

Research field: church organisation of the High Middle Ages, papal correspondence, preservation and transmission of documents of the High Middle Ages.

She works at the Medieval, Modern and American History department at the UPV/EHU.



The Department of Medieval, Modern and American History at UPV/EHU provides academic support for research into the Becerro Galicano. The members of the Department responsible for the studies are Juan José Larrea Conde, Full Professor of Medieval History, and Francesca Tinti, Ikerbasque Researcher. They are also responsible for the Basque Government's Consolidated Research Group.

Francesca Tinti boasts extensive experience in cartularies, collections of medieval documents copied by monks. She has worked with the UPV/EHU to launch the digital edition of the Becerro Galicano cartulary of San Millán de la Cogolla, a fascinating cartulary dating from the late 12th century which has resulted in an international work team.

The "Becerro Galicano" has never been published. The San Millán de la Cogolla Foundation and the University of the Basque Country have decided to create a digital edition, on the basis that the use of new technologies will make it easier to access and process the information. This document will become the first Spanish cartulary to be published in a non-traditional format. Researchers from Cilengua, UPV/EHU, Royal Academy of the Basque Language and King's College took part in the project.

The Becerro Galicano contains decisive testimonials on the history of La Rioja, the Basque Country, Araba and Castile, including both events and the social landscape and cultural life and the future of language.



Dr. John Walton

Doctor in Social History in 1974 from the University of Lancaster.

He has previous research experience at Lancashire Central University and Leeds Metropolitan University in the United Kingdom, where he held research manager posts.

Research field: Social history and the culture of tourism and that of coastal resorts, especially in the United Kingdom and Spain.

Editor of the History of Tourism (Routledge) newspaper since 2009.

He works at the Contemporary History Department of the UPV/EHU.



Dr. Ronen Zangi

Doctor in Chemistry in 1999 from the University of Chicago.

He has research experience at Columbia University and Chicago University (United States) and Groningen University (Holland), and the Hebrew University of Jerusalem (Israel).

Research field: Chemical physics.

He works at the Organic Chemistry department of the Faculty of Chemistry of the UPV/EHU.



Dr. Cornelius Zeth

Doctor in Structural Biology from the Technical University of Munich (Germany).

He has research experience at University of Konstanz, MPI in Martinsried and ZMBP, University of Tübingen (Germany) and EMBL Outstation de Grenoble (France).

Research field: Biology mechanisms: biogenesis of proteins in bacteria and mitochondria, human antimicrobial peptides, iron storage in bacteria.

He works at the Biophysics Unit (CSIC-UPV/EHU).



Dr. Lian-Ao Wu

Doctor in Physics in 1989 from the University of Jilin (China).

He has research experience at centres in China, Japan, Europe, United States and Canada.

Research field: Quantum information theory.

He works at the Physics-Chemistry department of the Faculty of Science and Technology of the UPV/EHU.



Dr. Arkady Zhukov

Doctor in Science in 1988 from the Physics Institute of the Russian Academy of Science.

Qualification (Doctor in Science) from the State University of Moscow in 2010.

Manuel Laborde Werlinden award 2004.

He has previous research experience at the Institute of Applied Magnetism and the Institute of Materials Science, CSIC (Spain) and the Moscow State University.

Research field: Magnetic materials, magnetic cables, amorphous nano-crystalline and granular magnetic materials, magnetoelectric effects, transport properties, magnetic properties.

He works at the Materials Physics department of the UPV/EHU.



Dr. Jose Luis Zugaza

Doctor in Pharmacy in 1993 from the University of Santiago de Compostela.

He has research experience at Santiago de Compostela University, the Salamanca Cancer Research Centre and the Andalusian Initiative for Advanced Therapies (Spain), Imperial Cancer Research Fund, London (UK) and the Centre for Pharmaceutical Studies, Faculty of Pharmacy, University of Paris XI (France).

Research field: Cell signalling in cancer and neurodegeneration.

He works at the Faculty of Science and Technology of the UPV/EHU.



Dr. Peicheng Zhu

Doctor in Applied Mathematics in 1997 from Fudan University in Shanghai, China.

Doctor in fluid dynamics from Kyushu University in Fukuoka, Japan (2001).

He has previous research experience at the University of Technology (Germany), Kyushu University and Japan Society Promotion for Sciences (Japan), Beijing Institute of Applied Physics and Computational Mathematics (China).

Research field: Phase transition models. Differential partial equations analysis.

He works at the Mathematics Department of the UPV/EHU.



ERC. European Research Council

The ERC (European Research Council) was created by the European Union in 2007. It is the first European organisation that promotes research projects based on scientific excellence.

ERC Advanced Grants

The ERC Advanced Grants programme is aimed at researchers with an exceptional background and leadership skills, who have undertaken pioneering and highly ambitious projects in life sciences, physical sciences and engineering or social sciences and humanities.

ERC Starting Grants

The aim of the ERC Starting Grants is to provide support to young researchers so that they develop their research career in Europe; these are intended for researchers who have demonstrated their capacity to become independent leaders.

These projects are granted for the research fields of life sciences, physical sciences and engineering research or social sciences and humanities.



Dr. Manuel Carreiras

Doctor in Psychology in 1984 from the University of La Laguna.

He has research experience at University of La Laguna (Spain), Umeå Universitet (Sweden), University of Exeter and Oxford University (United Kingdom), University of Massachusetts at Amherst and University of Oregon (United States), University of New South Wales (Australia) and University College of London (United Kingdom).

Research field: psycholinguistics, neurocognition of language.

He works at the BCBL (Basque Centre on Cognition, Brain and Language) as Scientific Director.

Manuel Carreiras is leading an ERC Advanced Grants project called Bi-literacy: Learning to read in L1 and in L2.

The aim of this research project is to identify the neural substrates of the reading process and the cognitive components these are comprised of, with special attention to individual differences and reading disabilities, as well as researching the relationship between the specific cognitive functions and the changes that take place in the neural activity during the reading learning process in L1 and in L2.

The results of this project will provide a greater understanding of how the general factors and the specific neurocognitive factors of language underlie the individual differences - and reading disabilities - in the acquisition of reading of L1 and L2.

The project started in 2012 and it will end in 2017.



Dr. Enrique Zuazua

Doctor in Mathematics in 1988 from Pierre and Marie Curie University, France and from the University of the Basque Country-Euskal Herriko Unibertsitatea in 1987.

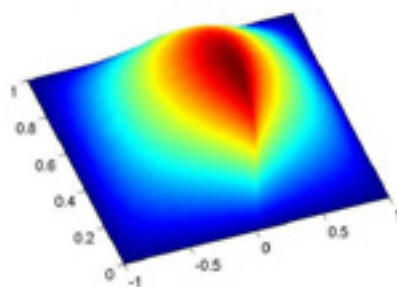
Euskadi award 2006 for Science and Technology from the Basque Government and the National "Julio Rey Pastor" award from the MICINN.

He has previous research experience at the Autonomous University of Madrid and Madrid Complutense University (Spain) and Ecole Polytechnique (Paris, France). He has spent research periods in France, Brazil and United States.

Research field: Partial differential equations, numerical methods, control and optimal design theory.

He works at the BCAM (Basque Centre for Applied Mathematics).

Solution to $-\Delta u - u|x|^2 = 1; u=0, B. C.$



Enrique Zuazua has obtained the ERC Advanced Grants project NUMERIWAVES. The research that he is carrying out with this project has the aim of obtaining new analytical tools and numerical schemes.

Moreover, this will contribute towards significant progress in some applied fields, where the matters that are the object of the study play a decisive role.



Dr. Luis Liz-Marzán

Doctor in Chemistry in 1992 from the University of Santiago de Compostela.

He has previous research experience at the University of Santiago de Compostela and University of Vigo (Spain) and University of Utrecht (Holland). He has spent research periods in Japan, United States, Australia and Germany.

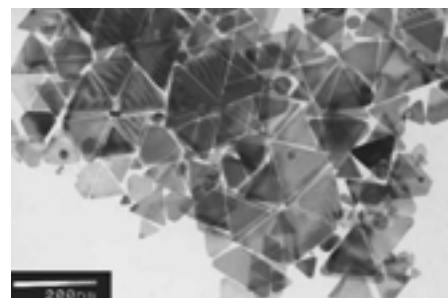
Research field: synthesis and assembly of nanoparticles, development of sensors and diagnosis tools based on nanoparticles.

He works at CIC biomaGUNE, where he is Scientific Leader.

Luis Liz-Marzán manages the project entitled ERC Advanced Grant PLASMAQUO; Development of plasmonic quorum sensors for understanding bacterial-eukaryotic cell relations. The aim is to create new nanostructured materials based on crystalline assemblies of anisotropic plasmonic nanoparticles (gold/silver).

The project will use nanoparticle-based diagnosis techniques and will design a biosensor to study how bacteria communicate with each other and with other cell colonies. This is very important information to combat diseases.

The project started in 2011 and it will end in 2016.





Dr. David Mecerreyes

Doctor in Science in 1998 from the University of Liege, Belgium.

He has previous research experience at Stanford University (United States), IBM Almaden Research Center (United States), and the CIDETEC Foundation (Spain).

Research field: Polymer chemistry, Organic catalysis, Polymers that are non-harmful for the environment, sustained polymerisation reactions.

He works at the POLYMAT at the UPV/EHU.

The Innovative Polymers for Energy Storage project aims to fully develop the field of polymers for energy storage by using an innovative macromolecular engineering approach to get an insight into their unique electronic properties.

The main goal is to develop polymers at the next level to store and use energy, technologies that are currently dominated by inorganic electrode materials.

Mecerreyes works on the chemistry of polymers using innovative methods such as organic catalysis, new ionic polymers and macromolecular architectures.

The project started in 2012 and it will end in 2017.



Dr. Rainer Hillenbrand

Doctor in Physics in 2001 from the Technical University of Munich.

He has research experience at the Max Planck Institute of Biochemistry (Martinsried, Germany), where he was Nano Fotónica group leader. He has been visiting professor at different USA and Spanish organisations.

Research field: Nano-optics and materials characterisation.

He works at the CIC nanoGUNE as Nano-optics Group Leader.

The grant's project is called "Close Field Spectroscopic Nanotomography in Infrared and Terahertz Frequencies", and its main aim is the development of a new microscopic technique to obtain 3D images of extremely small structures, measured in nanometres (millionths of a metre).



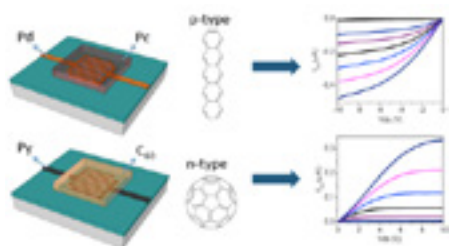
Dr. Luis Hueso

Doctor in Physics in 2002 from the University of Santiago de Compostela.

He has previous research experience at Leeds University (United States), Institute for Nanostructured Materials Studies (Italy) and Cambridge University (United Kingdom).

Research field: Electronic devices with organic semiconductors and nanofibres. Memory devices.

He works at the CIC nanoGUNE as Nano-devices Group Leader.



“Spin Transport in Organic Semiconductors” is the title of the project which has obtained the European grant, the aim of which is the research of new materials to manufacture electronic devices at a nanometric scale, replacing the silicon with organic molecules. It is therefore a search for a possible alternative to current electronics, in which physics, materials science and electronic engineering converge.

The project started in 2011 and it will continue until 2016.



Dr. Thomas Schäfer

Doctor in Chemical Engineering.

He has previous research experience in engineering of biological procedures, membranes separation and monitoring techniques at research centres in Germany, the Netherlands, Australia, Portugal, Italy and Spain.

Research field: sustainable separation processes through the use of benign materials, interfaces of stimuli sequences for separation systems and artificial smell systems, membranes separation in microreactor technology.

He works at the Basque Centre for Macromolecular Design & Engineering - POLYMAT.

“MATRIX” (“Mixed-Matrix Interfaces for Enhanced Fine Chemicals Downstream Processing and Monitoring”) is the name of the project obtained by Thomas Schäfer.

It involves a multidisciplinary project. Joining the recent progress made in biology/biochemistry, chemistry and materials science and combining these fields with the principles of chemical engineering, the project's aim is to create a more selective and versatile synthetic membrane for use in subsequent transformation processes of the chemicals industry.



Dr. Geza Tóth

Doctor in Electric Engineering in 2000 from the University of Notre Dame, Indiana, USA.

He has previous research experience at Institute of Photonic Sciences (Spain), Wigner Research Centre for Physics (Hungary), Max Planck Institute of Quantum Optics (Germany) and Oxford University (United Kingdom).

Research field: Quantum information.

He works at the Theoretical Physics and History of Science department of the Faculty of Science and Technology of UPV/EHU.

The work has been presented under the caption of “Generation and detection of multi-particle entanglement in quantum optical systems”.

It is largely theoretical research, although applicable to experimentation, on the so-called quantum entanglement, a phenomenon discovered in 1935 by three physicists, including Albert Einstein. This phenomenon has application in metrology, as it allows for a great degree of precision to be achieved when measuring certain quantities on an atomic scale.

Research Fellows

In 2012 we launched the Research Fellow program to hire post-doctoral researchers. The candidate requirements were a doctorate completed before January 2010, and having ties with or having contacted universities or research centres in the Basque Country to undertake a project. Special consideration was also given to research periods abroad and at top-level R&D centres.

The successful candidates were given a five-year contract. At the end of the fourth year, these contract holders will be evaluated in accordance with standard Ikerbasque procedures. Those showing an outstanding performance can opt for an indefinite contract to continue their research work in the Basque Country on completing their fifth year.



Jesús Bañales

Doctor in Biochemistry in 2006 from the University of Navarre.

He has research experience in Spain, France and the United States.

Research field: study of the pathophysiology of the liver, functions of bile acid, microRNA and metabolites in normal liver function, and study of liver diseases.

He has joined Biodonostia.



Iraide Alloza

Doctor in Molecular Biology in 2003 from Queen's University de Belfast (United Kingdom).

He has previous research experience at centres in the United Kingdom and Spain.

Research field: identification and analysis of prognostic biomarkers associated with cerebrovascular diseases.

He has joined the Neurogenomiks, the department of Neuroscience at the UPV/EHU.



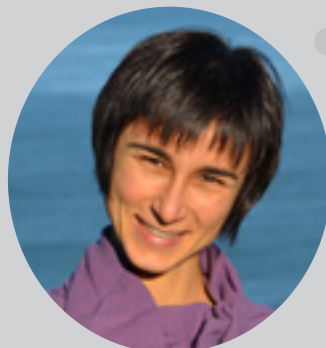
Pepa Cabrera

Doctor in Physics in 2005 from the Surface Science Research Centre-Department of Chemistry, Liverpool University (United Kingdom).

She has worked in the field of computational studies of molecule-surface interactions and dynamics since 2005.

Research field: interaction of small molecules with surfaces. Specifically, water ice modelling on ion substrates and graphite surfaces, and the behaviour of water on transition metal surfaces.

She has joined the Donostia International Physics Center (DIPC).



Martina Corso

Doctor in Physics in 2006 from the University of Zürich (Switzerland).

Research experience in Switzerland, Spain and Germany.

Research field: electronic structure and scanning tunnelling and atomic force microscopy characterization of the morphology of low-dimensional systems, and angle-resolved photoemission.

She has joined the Materials Physics Center (CFM) CSIC-UPV/EHU.



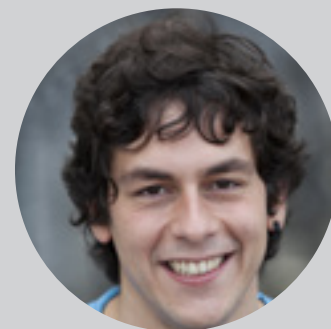
Xabier Contreras

Doctor in Molecular Biochemistry and Molecular Biology from the Biophysics Unit CSIC-UPV/EHU.

He has research experience in United States, Spain and Germany.

Research field: mechanisms and dynamics of lipid-protein interaction, and the role of those interactions in protein activity and cell signalling, with special emphasis on membrane proteins. Development of functionalised small molecules to investigate membranes.

He has joined the Biophysics Unit CSIC-UPV/EHU.



Abel de Cozar

Doctor in Organic Chemistry in 2008 from the University of Castilla la Mancha.

Research experience in Holland, Spain and the United Kingdom.

Research field: reaction mechanisms, metallophilic interactions, computer-aided design of chemical compounds.

He has joined the Organic Chemistry department of the UPV/EHU.



Arantzazu García

Doctor in Physical Sciences in 2003 from UPV/EHU.

She has previous research experience at centres in the United Kingdom, United States and Spain.

Research field: modelling electron transport in nanoscale; theoretical investigation of electron processes on nanostructured surfaces.

She has joined the Donostia International Physics Center (DIPC).



Vitaly Golovach

Doctor in Theoretical Physics in 2005 from the University of Basel (Switzerland).

He has research experience in France, Germany and Switzerland.

Research field: Majorana fermion in hybrid semiconductor and superconductor systems; quantum computation, spintronics and nanoelectronics.

He has joined the Materials Physics Center (CFM) CSIC-UPV/EHU.



Javier García

Doctor in Archaeology in 2007 from the University of Barcelona.

He has research experience in Spain, Greece and the United States.

Research field: archaeometry of archaeological artefacts during the Early Middle Ages and the Early Modern World. Technological change and archaeological and cultural processes in societies during colonial contact. Historical archaeology.

He has joined the Geography, Prehistory and Archaeology Department of the UPV/EHU.



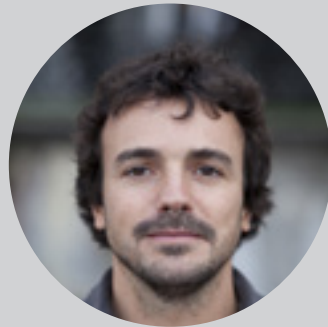
Daniel Erro

Doctor in Signal Theory and Communications in 2008 from the Universitat Politècnica de Catalunya (UPC).

Research experience in Catalonia and Euskadi.

Research field: voice conversations, speech synthesis, speech signal analysis, modelling, transformation, vocoding.

He has joined the AHOLAB signal processing laboratory, UPV/EHU.



Daniel Marino

Doctor with European Doctorate Mention in Biological Sciences in 2006 from the Public University of Navarre.

Research experience in Spain and France.

Research field: plant nutrition and metabolism, plant molecular biology, plant-microbe interactions.

He has joined the Plant Biology and Ecology department of the UPV/EHU.



Marek Grzelczak

Doctor in Physical Chemistry in 2008 from the University of Vigo.

He has previous research experience in the United States, Italy, Germany and Spain.

Research field: synthesis of nanoparticles; biometric self-organisation of molecular and colloidal systems, artificial photosynthesis and biosensors.

He has joined the CIC biomaGUNE.



Ander Matheu

Doctor in Molecular Biology in 2005 from the Autonomous University of Madrid.

Research experience in Spain and the United Kingdom.

Research field: characterisation of brain cancers and population study of cancer mother cells.

He has joined Biodonostia Institute.



Clara Martin

Doctor in Cognitive Science (mention in Neurosciences) in 2005 from the University of Lyon, France.

She has previous research experience at centres in the United Kingdom, France and Spain.

Research field: bilingual language comprehension and production and interaction between the face and voice processing in social interactions.

She has joined the BCBL.



Visiting Professors

Ikerbasque Visiting Professors 6th Initiative. Intended for senior researchers interested in research in the Basque Country for a maximum of 12 months.

Since 2007, the year in which the first initiative was launched, Ikerbasque has managed to attract a total of 108 guest researchers. The aim of this initiative is to promote the transfer of knowledge and strengthen the international research networks.

The Visiting Professorship initiative requires a joint application between the Host Research Group and the researcher.

The applications received are assessed by an Evaluation Committee that is independent of the Basque Science system, based on the following criteria:

- Interest and potential of the research project.
- Candidate's profile and experience.
- Level of excellence of the Host Group.

Binek, Christian

Current centre

University of Nebraska

Host centre CIC nanoGUNE

Project title

Voltage-controlled Faraday rotation in magnetoelectric nanostructures

Field

Physics

Caño, Lidia

Current centre

University of California Davis

Host centre

UPV/EHU

Project title

Physiological responses to herbicide, salinity and waterlogging of the invasive shrub *Baccharis halimifolia*: insights for strategic estuarine management in the Bay of Biscay

Field

Plant Physiology

Chialvo, Dante

Current centre

CONICET/ UNR

Host centre

UPV/EHU

Project title

Brain states: fMRI markers of impaired consciousness and coma outcome.

Field

Medicine

Collado, Carlos

Current centre

Phillips University

Host centre

UPV/EHU

Project title

National anthem lyrics as collective symbols in the context of the construction of national identities: genesis, persistence and conflictuality

Field

History

Gao, Shiwu

Current centre

University of Gothenburg

Host centre

Materials Physics Center

Project title

Time-dependent density functional study of plasmonic excitations of nanoparticles and nanogaps NANOPLASMON

Field

Physics

García de Leaniz, Carlos

Current centre

Swansea University

Host centre

AZTI Foundation

Project title

FISHEVIDENCE

Field

Marine biology

Habtemariam, Abraha

Current centre

University of Warwick

Host centre

CIC biomaGUNE

Project title

Coupling of Ruthenium Photoactive Complexes and Upconversion Nanoparticles for Theranostics

Field

Chemistry

Knowler, Duncan

Current centre

Simon Fraser University

Host centre

UPV/EHU

Project title

Integrating climate change influences into bioeconomic modelling with applications in Europe and North America

Field

Environmental economics

López, Carmen**Current centre**

Autonomous University of Barcelona

Host centre

UPV/EHU

Project title

Enzymic production of biodiesel with magnetic lipase in lab-bench bioreactors/BIODIESEL

Field

Biochemistry

McClelland, Gary**Current centre**

University of Colorado

Host centre

University of Deusto

Project title

Interactive Web-Based Graphics in Support of Scientific Publications

Field

TIC

Mijangos, Carmen**Current centre:**

CSIC

Host centre:

UPV/EHU

Project title:

In-situ coolymerization reaction of vinyl monomers in aao nanocavities

Field:

Chemistry

Montero, María**Current centre:**

University of Nottingham

Host centre:

UPV/EHU

Project title:

Game Theory and Social Choice

Field:

Economics

Nimni, Ephraim**Current centre**

Queen's University Belfast

Host centre

UPV/EHU

Project title

New Paradigms on National Self Determination and the Basque Case

Field

Social and Political Sciences

Postoutenko, Kirill**Current centre**

Queen's Mary, University of London

Host centre

UPV/EHU

Project title

Approaches to the critical history of concepts: Searching for the new ways of an old discipline

Field

Political Sciences

Saenz, Juan José**Current centre**

Autonomous University of Madrid

Host centre

Donostia International

Physics Center

Project title

Mechanical effects of light on "optically magnetic" dielectric structures (MELOMDIP)

Field

Physics

Stramaglia, Sebastiano**Current centre**

University of Bari

Host centre

BioCruces Health

Research Institute

Project title

Causal implications in seizure generators (evidence from electrocorticography arrays during interictal, preictal and postictal states)

Field

Medicine

Tagliatalata, Maurizio**Current centre**

University of Molise

Host centre

Biophysics Unit

Project title

Exploring the role of the Kv7.2 C-terminus in the pathogenesis of Kv7-2-linked epileptic channelopathies

Field

Neurophysiology

Torrent, Miquel**Current centre**

University of Girona

Host centre

UPV/EHU

Project title

Theoretical Study of the switching between Hückel and Möbius topologies for Expanded Porphyrins (TSHMEP)

Field

Chemistry

Vallée, Richard**Current centre**

Université de Moncton

Host centre

UPV/EHU

Project title

Epistemic Modalities and Cognitive Significance in Multipropositionalism

Field

Logic

Vieira, P.**Current centre**

Georgetown University

Host centre

Globernance

Project title

The Idea of Perpetual Peace: Its History and Contemporary Applications to European and Global Governance

Field

Sociology

Weiss, Matthias**Current centre**

Deakin University

Host centre

Goi Eskola Politeknikoa – Mondragon Unibertsitatea

Project title

Development of new forming strategies for the flexible roll forming of ultra high strength steels/ FLEXROLL

Field

Engineering

Zouridakis, George**Current centre**

University of Houston

Host centre

BCBL, Basque Center on

Cognition, Brain and Language

Project title:

Brain Connectivity Networks as noninvasive neurophysiological biomarkers

Field

Neuroscience

DKR

Post-doctoral researchers

Ikerbasque manages the DKR Program (Financial Aid Programme for Training and Perfecting Research Personnel) of the department of Education, Linguistic Policy and Culture of the Basque Government.

The DKR is a program to finance the training of post-doctoral researchers which includes a training period of two years abroad and a third year in the Basque Country.

● Acha Sagredo, Amelia

Destination abroad

University of Liverpool, United Kingdom.

Destination in Euskadi

Faculty of Medicine and Odontology

Project title

Epigenetic profiling and biomarker development for the clinical management of head and neck tumours

Field: Medicine

● Arrizabalaga, Onetsine

Destination abroad

GSI Helmholtzzentrum für Schwerionenforschung GmbH, Germany.

Destination in Euskadi

ESS Bilbao

Project title

Radiobiological studies on Embryonic Stem Cells related to Ion Beam Therapy.

Field: Biomedicine

● Barbero González, Iker

Destination abroad

Centre for Citizenship, identities and governance, United Kingdom

Destination in Euskadi

UPV/EHU. Administrative

Law department

Project title

Migrations and new citizenship models

Field: Humanities

● Calzada Mujika, Igor

Destination abroad

University of Oxford, United Kingdom.

Destination in Euskadi

Mondragon Unibertsitatea

Project title

Basque City & Future of Cities and Regions

Field: Social Sciences

● Del Castillo, Urko

Destination abroad

Feinberg School of Medicine, Northwestern University, (Chicago, EE.UU.)

Destination in Euskadi

Biophysics Unit (CSIC-UPV/EHU)

Project title

Regulation of motor-mediated microtubule sliding

Field: Cellular biology



● **Errea, Ion**

Destination abroad
IMPMC in Paris, France
Destination in Euskadi
Donostia International
Physics Center
Project title
Anharmonic effects in
superconductors
Field: Physics

● **García Echarri, Aitzol Imanol**

Destination abroad
University of Stanford, USA.
Destination in Euskadi
Donostia International
Physics Center
Project title
The theoretical and
experimental tools
that will enable a three
dimensional negative index
metamaterial fluid
Field: Physics

● **Granados Mateo, Eduardo**

Destination abroad
MIT, USA.
Destination in Euskadi
Donostia International
Physics Center
Project title
Single-cycle optical pulses
and isolated attosecond
pulse generation
Field: Physics

● **Jelenkovic, Aline**

Destination abroad
University of Helsinki, Finland
Destination in Euskadi
UPV / EHU. Department of
Genetics, Physical Anthropology
and Animal Physiology
Project title
Cardiovascular Disease:
Determining risk factors
and mode in which they
are influenced by physical
development in childhood
and adolescence.
Field: Biology

Laresgoiti Garay, Usue

Destination abroad

University of Cambridge,
United Kingdom

Destination in Euskadi

UPV/EHU. Department of
Genetics, Physical Anthropology
and Animal Physiology

Project title

Study of the cellular and molecular
mechanisms involved in foetal
maturation and development
of the murine lung tumour

Field: Biology

Marín, Eugenia

Destination abroad

MIT, USA.

Destination in Euskadi

BCBL- Basque Centre on
Cognition, Brain and Language

Project title

Behavioral and Neural Study of
Priming Effect

Field: Psychology

Prieto Sobrino, Ailette

Destination abroad

Helmholtz Centrum for
Environmental Research-
UFZ, Germany

Destination in Euskadi

UPV/EHU. Department of
Analytical Chemistry

Project title

Development of automated
or semi-automated analytical
approaches using new
extraction materials and
monitoring strategies of
emerging contaminants
by means of passive
sampling procedures

Field: Chemistry

López de la Calle, Oier

Destination abroad

University of Edinburgh

Destination in Euskadi

UPV-EHU. IXA Group

Project title

Automatic Knowledge
Extraction by Reading Wikipedia

Field: Information technology

Moreno Cano, Antonia

Destination abroad

"FCV" Cardiovascular
Foundation (Colombia)

Destination in Euskadi

UPV/EHU. Journalism
department

Project title

Survey of Social Perception
of Climate Science and
Change in Colombia

Field: Journalism

López Romo, Raúl

Destination abroad

Queen's University of
Belfast, United Kingdom

Destination in Euskadi

UPV/EHU. Contemporary
History department

Project title

The seventies: the lead
decade. Discourses and social
practices on the victims of
terrorism in the Basque
Country and Northern Ireland

Field: Humanities

Olabarria, Markel

Destination abroad

Columbia University, USA.

Destination in Euskadi

UPV-EHU. Neuroscience
department

Project title

Targeting astroglial alterations
as a potential therapeutic
approach in Alzheimer's
disease and other major
neurodegenerative diseases

Field: Neuroscience

Puente García, Angel Ramón

Destination abroad

Ludwig Maximilians
Universität, Germany.

Destination in Euskadi

Department of Organic
Chemistry I (UPV/EHU)

Project title

Dynamic kinetics and
mechanisms of catalytical
and enantioselective
transformations.

Field: Chemistry

● **Salado Rivera, Javier**

Destination abroad
University of Birmingham,
United Kingdom
Destination in Euskadi
UPV/EHU. Department of
Inorganic Chemistry
Project title
High resolution structural
characterisation and precise
synthetic control of gold
shell nanostructures for
protein immobilization
Field: Chemistry

● **Uria Garin, Larraitz**

Destination abroad
Laboratoire IKER. Campus
de la Nive (UPPA), France
Destination in Euskadi
UPV/EHU. IXA Group
Project title
Analysis and processing
of the dialects of the
French Basque Country
Field: Humanities

● **Vidal Postigo, Maider**

Destination abroad
University of Copenhagen,
Denmark
Destination in Euskadi
UPV/EHU. Faculty of
Chemical Science
Project title
Comprehensive assessment
of the problems in the
chemical image analysis and
development of chemiometric
tools for their exploration.
Field: Chemistry

● **Salsamendi Pagola, Egoitz**

Destination abroad
University of Ulm, Germany
Destination in Euskadi
UPV/EHU. Department of
Zoology and Animal Biology.
Project title
The relationship between
habitat degradation and the
incidence of viral pathogens
in chiropterans that are
detrimental to human health.
Field: Biology

● **Valverde, Laura**

Destination abroad
Institute of Legal Medicine.
University of Münster
(WWM), Germany
Destination in Euskadi
UPV/EHU. BIOMICS
Research Group
Project title
Epigenetic approach for
discriminating monozygotic
twins in criminalistics
Field: Genetics

● **Zarraonaindia
Martínez, Iratxe**

Destination abroad
National Laboratory,
Chicago, USA.
Destination in Euskadi
Department of Genetics,
Physical Anthropology
and Animal Physiology
Project title
Marine biodiversity and impact
in the ecosystem: Metagenomics
Field: Genetics

● **Suárez Bilbao, Saioa**

Destination abroad
School of Earth and Sciences.
Cardiff University (Cardiff,
Wales, United Kingdom).
Destination in Euskadi
UPV/EHU. Department of
Mineralogy and Petrology
Project title
Evolution of the platinum
group minerals and platinum
group elements in oxidising
surface environments (gossans
and laterites). From deserts to
tropical areas
Field: Geology

● **Vara Ferrero, Natalia**

Destination abroad
University of Chicago, USA.
Destination in Euskadi
UPV/EHU. Department
of Hispanic and Romanic
Philology and Literary Theory
Project title
Horizons of irony, satire
and parody in post-
modern fiction in Spain
Field: Humanities



03

RESEARCH CENTRES

RESEARCH CENTRES

BERC

The BERC are Research Centres of excellence tied to the university environment.

In 2012, three new neuroscience, new materials and macromolecular research centres were set up, fostered together by Ikerbasque and UPV/EHU. The current network of BERC has nine research centres.



Achucarro – Basque Center for Neuroscience.

Zamudio

Under the leadership of Carlos Matute, it researches the physiology and pathophysiology of brain function, with special emphasis on:

- Understanding the organisation and processing of information in neuronal circuits.
- Identifying genetic and molecular basis of neural circuitry during development and ageing.
- Characterisation of genetic, molecular and cell mechanisms in neurodegenerative diseases.
- Translational research aimed at developing new strategies to treat brain diseases.



Basque Center for Materials, Applications and Nanostructures

Zamudio

Under the leadership of José Manuel Barandiarán, it covers every aspect of research in functional materials with advanced electrical, magnetic and optical properties, from basic aspects to applications.

- Intelligent or multifunctional materials
- Nanomagnetism
- Functional materials with applications in the fields of energy, sensors and accelerators.



Polymat – Basque Center for Macromolecular Design & Engineering

Donostia – San Sebastián

Under the leadership of José María Asua, the centre focuses on fundamental research in the field of polymer synthesis, assembly and processing. It covers the following fields:

- Polymer synthesis
- Assembly and processing
- Theory and simulation
- Energy
- Water-dispersed polymers
- Adjustable and stimuli-responsive membranes
- Polymers for biomedical applications



DIPC - Donostia International Physics Center.

Donostia-San Sebastián

Under the chairmanship of Pedro Miguel Echenique, it researches the areas of:

- Electronic properties at a nanoscale.
- Surfaces and interfaces.
- Polymers and soft matter
- Photonics and plasmonics.
- Computational chemistry and physical chemistry.



Materials Physics Center

Donostia-San Sebastián

Under the leadership of Ricardo Díez Muiño, it researches the areas of:

- Chemical-physical properties of complex materials.
- Electronic properties at a nanoscale.
- Photonics.
- Polymers and soft condensed matter



Bizkaia Biophysics Foundation

Leioa

Under the leadership of Felix Goñi, it researches the areas of:

- Biological membranes.
- Biophotonics and microscopy.
- Computational and integrative biology.
- Cellular biology.



BC3 - Basque Centre of Climate Change.

Bilbao

Under the leadership of Anil Markandya, it researches the areas of:

- Adaptation to climate change and consequences of the change.
- Measures for mitigating the consequences of climate change.
- International dimensions of climate policies.



BCAM - Basque Center for Applied Mathematics.

Bilbao

Under the leadership of Tomás Chacón, it researches the areas of:

- Equations in partial derivatives and control theory.
- Design, analysis and optimisation of networks.
- Computational mathematics.
- Computational mechanics of fluids.
- Mathematical biology and molecular simulation.



BCBL - Basque Center on Cognition, Brain and Language.

Donostia-San Sebastián

Under the leadership of Manuel Carreiras, it researches the areas of:

- Language acquisition, representation and processing.
- Multilingualism.
- Neurodegeneration, language and disorders in learning.
- Advanced methods in cognitive neuroscience.



04

DISSEMINATION OF SCIENCE

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Scientific
breakfasts 76 **4.4**

ZIENTZIA FOROA 2012



Date: March 5th
Venue: Guggenheim Museum, Bilbao

Marcus Du Sautoy

Marcus du Sautoy (London, 1965) is Professor of Mathematics at Oxford University. In 2011 he received the Berwick Prize from the London Mathematical Society. He is known for making mathematics popular and being a specialist in number theory.

He was a Fellow of All Souls College, Wadham College and the Royal Society University Research, and is currently a Fellow of New College and EPSRC Senior Media Fellow.

"Mathematics, Art and Science"

Date: May 22
Venue: Kutxa Andia Room

Richard Prum

William Robertson Coe Professor of Ornithology, and Head Curator of Vertebrate Zoology at the Peabody Museum of Natural History, Yale University. He has received the Fulbright, Guggenheim, and MacArthur grants and is currently Ikerbasque Collaborator at the DIPIC.

He describes himself as "an evolutionary ornithologist with broad interests in diverse topics, including phylogenetics, behavior, feathers, structural color, evolution and development, sexual selection, and historical biogeography."

He holds that birds are the living descendants of theropod dinosaurs, a highly disputed finding in the research community.

"Animal Colouration and the Evolution of Beauty in Nature"



This is a scientific dissemination initiative which periodically brings internationally renowned researchers and scientists to the Basque capital cities. To date, "Zientzia Foroa" has been comprised of approximately thirty conferences during which first class scientists have aimed to bring the public at large closer to topical issues related to medicine, physics, biology, chemistry, mathematics, sociology the economy and linguistics or have discussed issues such as climate change, the origin and evolution of man or cerebral processes.

Date: October 2
Venue: Guggenheim Museum, Bilbao

Alain Touraine

French sociologist and economist, he was born in 1925. In 2010 he was joint winner with Zygmunt Bauman of the Prince of Asturias Award for Communication and Humanities.

He is one of the most influential contemporary sociologists and intellectuals, he has written several dozen books translated into various languages, and he created the "postindustrial society" idea with his book of the same title in 1969. Always linked to the prestigious École des Hautes Études en Sciences Sociales, one his main career interests has been social movements, including Latin America, Poland and the uprisings of May 68.

"is there anyone capable of resisting the consequences of the crisis in Europe?"



Date: November 29
Venue: Euskalduna Conference Centre

Rolf-Dieter Heuer

Rolf-Dieter Heuer has been CEO of the CERN since January 2009. He received a doctorate from Heidelberg University in 1977. Most of his scientific work focused on studying electron-positron reactions, the development of experimental techniques, and the construction and functioning of large detection systems.

From 1984 to 1998, Professor Heuer worked at the CERN, taking part in the OPAL experiment on the LEP electron and positron storage ring. During the 15 years that he spent at the CERN, Professor Heuer held senior manager posts in the OPAL experiment and was OPAL spokesman from 1994 to 1998. From 2004 to 2008, Professor Heuer was research director for particle and astroparticle physics at the DESY laboratory.

"Large Hadron Collider: Discovering the Universe"





4.2

Reputed experts and scientific reporters met for three days to discuss topics such as making science accessible to the lay public, social responsibility in research and the role of citizen participation in technological or scientific decisions.

The course was based around the idea that citizen participation is fundamental in a democracy, in complex political, social or economic decision making, but also in scientific and technological decision making. Scientific and research activity must therefore be disseminated properly. This initiative aims to open discussion on the validity of information that society at large receives through the media regarding scientific developments.

As well as directors Fernando Cossío, Chairman of Ikerbasque, and Juan Ignacio Pérez, Head of the Chair of Scientific Culture, experts and scientific reporters took part in the course, including philosopher Javier Echevarria, Professor of Biochemistry at UPV/EHU Mertxe De Renovales, Doctor in Chemistry and CSIC Coordinator Pilar Tígeras, neurophysiologist and scientific reporter Xurxo Mariño and former Director of the Spanish Foundation for Science and Technology Lourdes Arana. Journalists Antonio Martínez Ron, from Lainformacion.com, and José Antonio Pérez, Director of the ETB 'Escépticos' TV program, also attended.

SUMMER COURSE

Science and democracy: dilemmas of scientific dissemination.

Last year we participated in the UPV/EHU courses for the third year running. Alongside the Chair of Scientific Culture we organised the course entitled 'Science and democracy: dilemmas of scientific dissemination'.



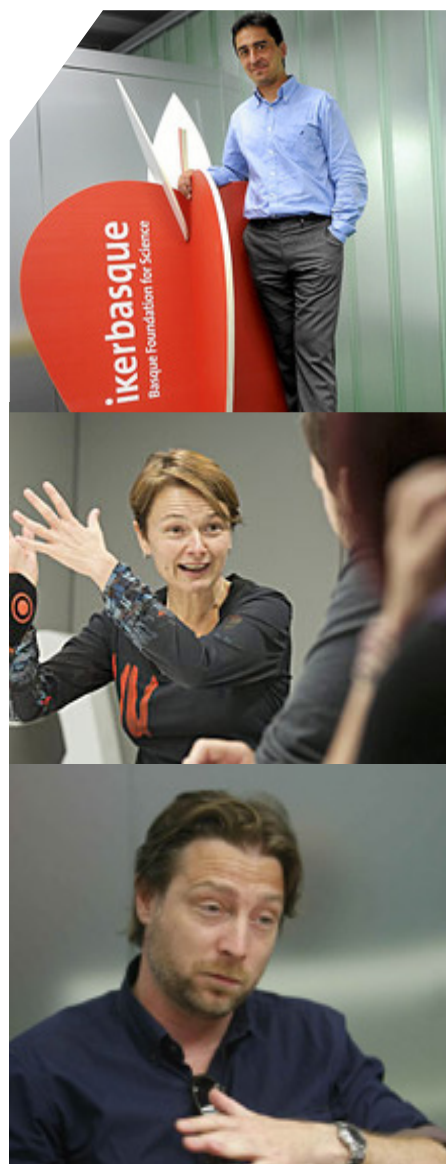
TRAINING CARAVAN

The Department of Education, Universities and Research at the Basque Government, Ikerbasque and the Research Centre for Climate Change BC3 (Basque Center for Climate Change) joined forces to launch the Training Caravan, a pioneering initiative with the objective of raising vocational awareness amongst higher secondary school pupils in the region. Throughout the course, leading researchers of renowned international prestige went to schools

at their request to explain first-hand to pupils what research work consists of.

This academic year almost one thousand students from some twenty centres participated in the initiative. In surveys carried out after the visit by the researchers to the schools, 45 % of the pupils participating admitted starting to focus their academic and professional training on the area of science.

This initiative is headed by researchers who are members of Ikerbasque and the BC3 and, given that many of them are from different countries, the meetings with pupils are conducted in English.



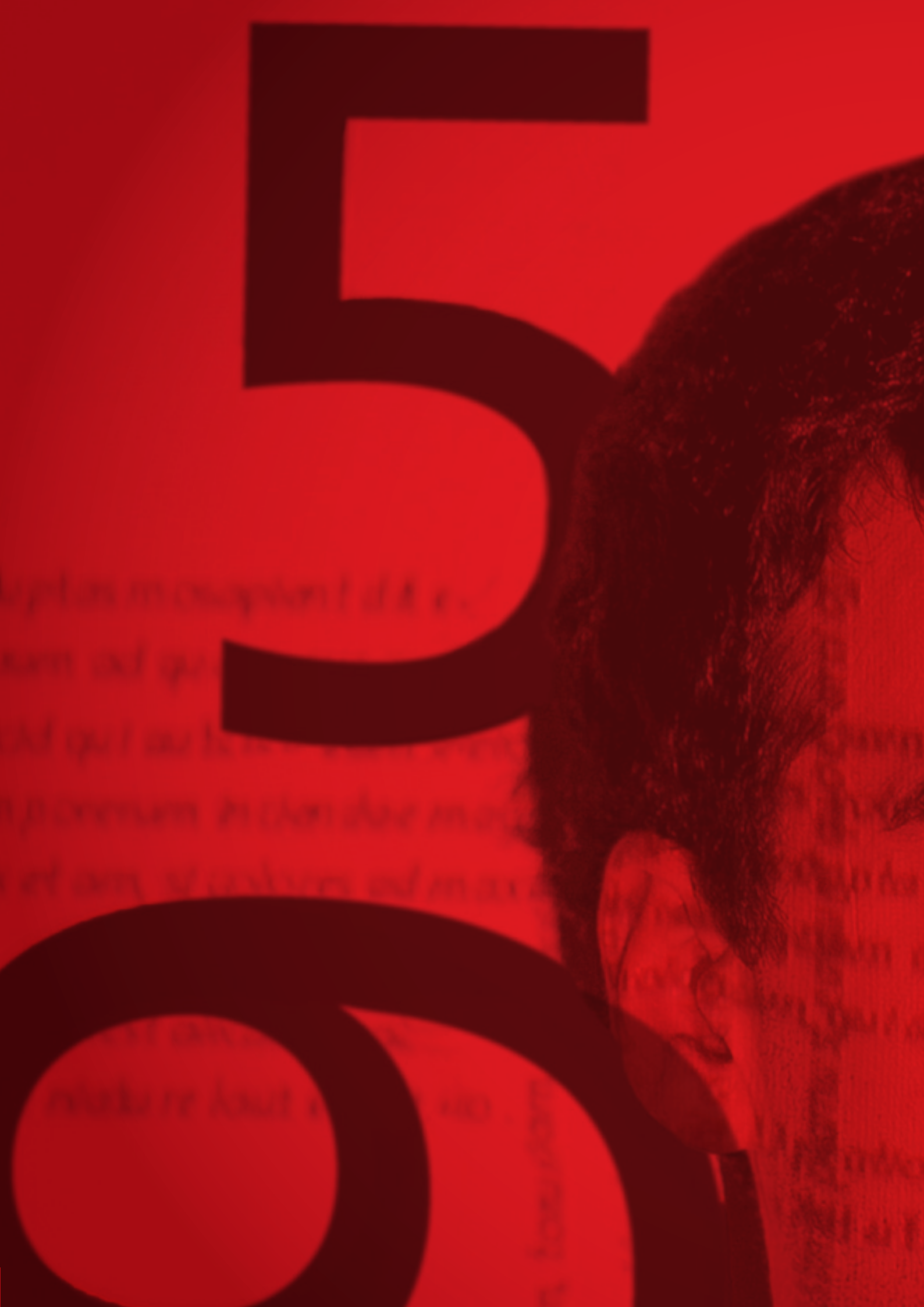
SCIENTIFIC BREAKFASTS

Aware of the importance of disseminating everything related to scientific and research activity in the Basque Country, in 2012 we launched the "Scientific breakfasts" initiative. Held once a month, the purpose of these meetings is to allow journalists specialising in scientific and technological information to meet our researchers in person.

This initiative aims to inform the media about some of the most advanced lines of research currently being undertaken in the Basque Country, presented by the leading researchers. It also aims to introduce the media and specialist journalists to some of the top international talent recruited in recent years to work at Basque universities and R&D centres.

In 2012 we held scientific breakfasts with the following researchers:

- *Inma Estevez*
- *Charles Lawrie*
- *David Mecerreyes*
- *J. L. Zugaza*
- *Marcelo Guerin*



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05

EMPLOYMENT PORTAL

SCIENCE CAREERS.EU

The website promoted by Ikerbasque brings together job offers from more than 30 scientific organisations in Euskadi



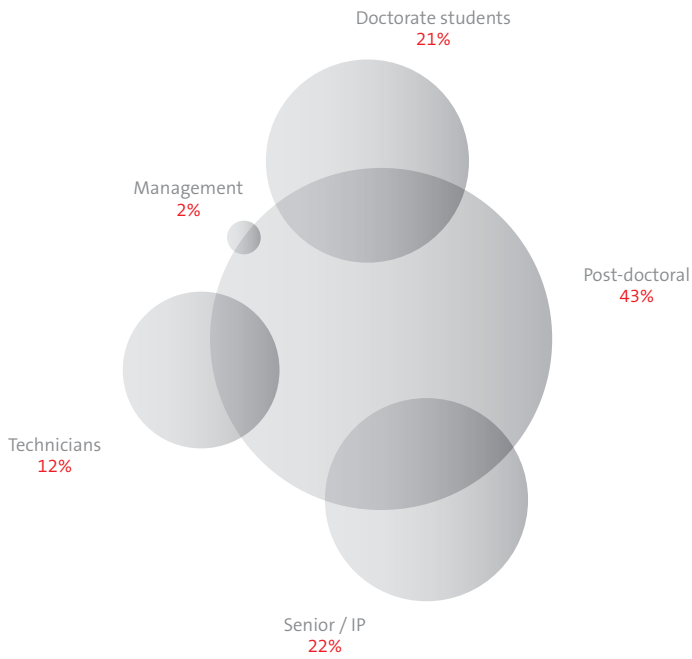
In 2010, Ikerbasque launched the sciencecareers.eu portal which has already become a reference for research staff all over the world who choose the Basque Country to develop their professional career.

ScienceCareers is a useful tool both for researchers and for research institutions. For the former it provides a unique venue from where they can access all professional opportunities offered by the Basque System of Science and Technology, including a notification service which occasionally gives information on any vacancies which arise. For universities, technology and research centres in the Basque Country they are given a space where their employment vacancies are given greater publicity. This aspect is fundamental in such an internationalised and competitive era such as the one characterising scientific research.

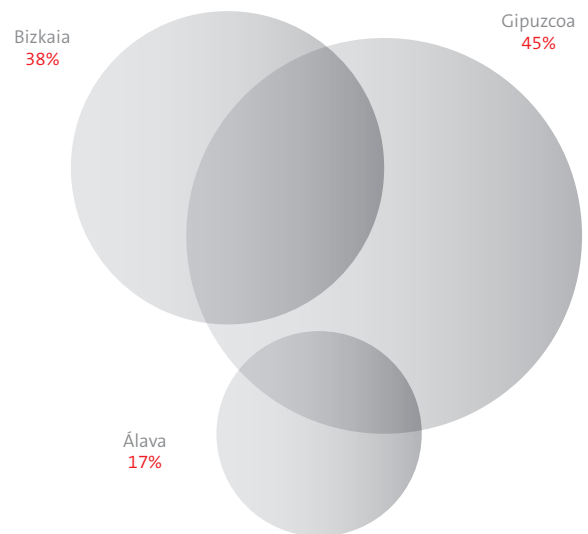
There are other web services which offer the same features as ScienceCareers.eu, however the advantage of this portal is that it is based on the centralisation of data thus enabling those who publish employment vacancies to have these more widely disseminated by virtue of automatically exporting information to other international portals such as Euraxess (the European portal managed by the European Commission) and NatureJobs (from the prestigious Nature journal), in such a way that the Basque centres that publish their vacancies in ScienceCareers do not have to double their efforts by publishing the same information in various portals.

The website currently holds more than 165 job offers from 42 institutions or research groups belonging to the Basque Science, Technology and Innovation Network.

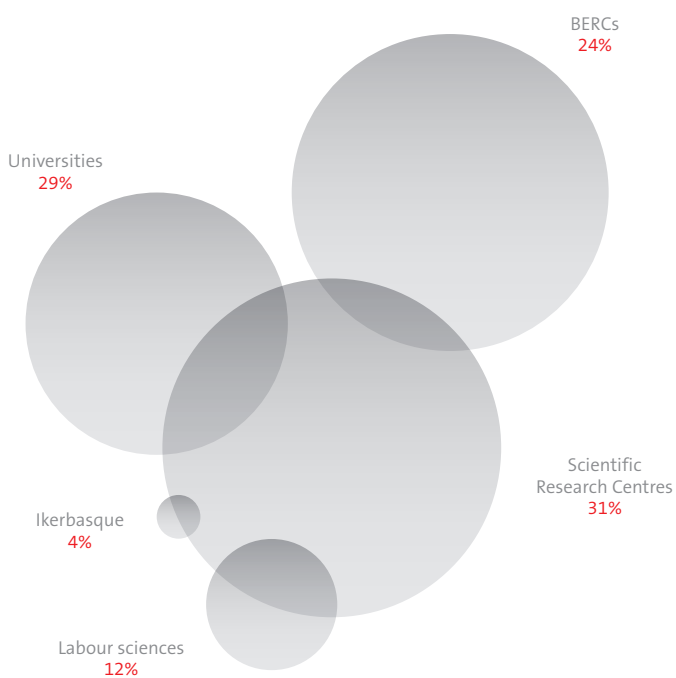
Classification of positions by their category or functional area:



Classification of positions by their Historical Territory:



Classification of positions by Institution:





06

BASQUE SCIENCE OBSERVATORY

Basque Observatory of Science and Technology IKERBOOST

Ikerbasque manages the Basque Observatory of Science and Technology, a tool for monitoring the advance of science and technology in Euskadi.



Ikerbasque developed and launched the Observatory in 2010, with a base of more than 50 synthetic indicators regarding the main aspects related to research activity such as the research population, research results, research incentives, technological transfer, projects and training of researchers.

The latest available data show the main results in the field of scientific and research output in our area, between the years 2003-2010, and therefore reflect the impact of the latest science, technology and innovation plans launched in Euskadi.

Some details worth highlighting are as follows:

- 1** Scientific output in Euskadi doubled between the years 2003 and 2010, with growth rates above Spain's output and above overall world output.
- 2** Euskadi is the sixth autonomous regional community in terms of the absolute volume of research output in 2010. Euskadi has improved in terms of output per thousand inhabitants, moving into ninth position, it was tenth in the 2003-2008 period.
- 3** The number of people specialising in R&D activities grew 60% in Euskadi between 2003 and 2010. At the present time, the ratio of R&D researchers in relation to the working population in Euskadi is higher than Spain's and the world's.
- 4** Seventy-two percent of indexed scientific output in Euskadi are research articles published in leading international journals. UPV/EHU is the clear scientific leader in Euskadi in terms of visible research output.
- 5** Euskadi has a science system based on classic science (mainly medicine, physics, chemistry and materials science). In recent years it has branched out to other areas: Business, Psychology, Engineering, Chemical Engineering and Social Sciences.
- 6** The map of scientific agents in the Basque science network has changed significantly. It has diversified with the creation of BERCs and CICs. They accounted for 13.2% of scientific output in 2010.

Figure 1 /

Specialisation in Euskadi:

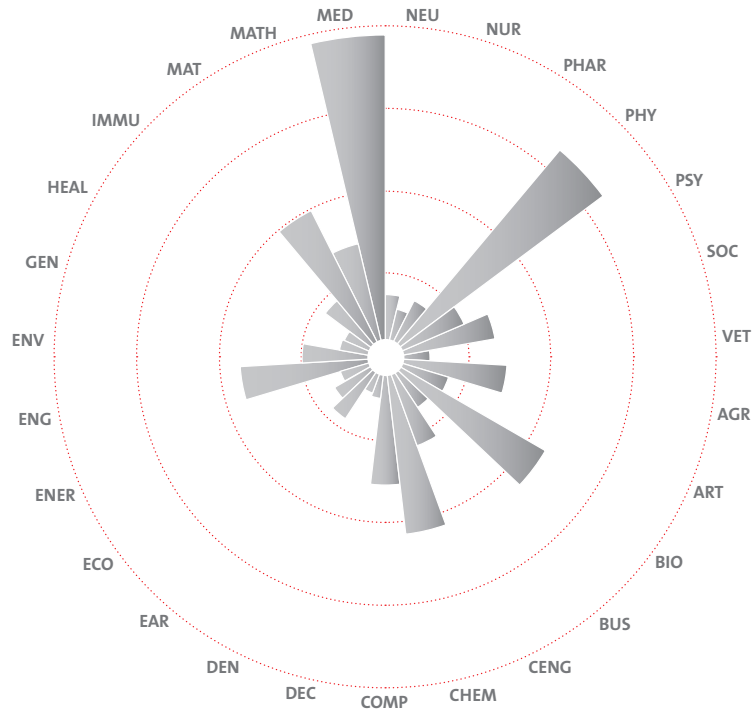


Figure 2 /

Researchers per thousand of people occupied in various states, zones of the European Union (EU) and Euskadi:

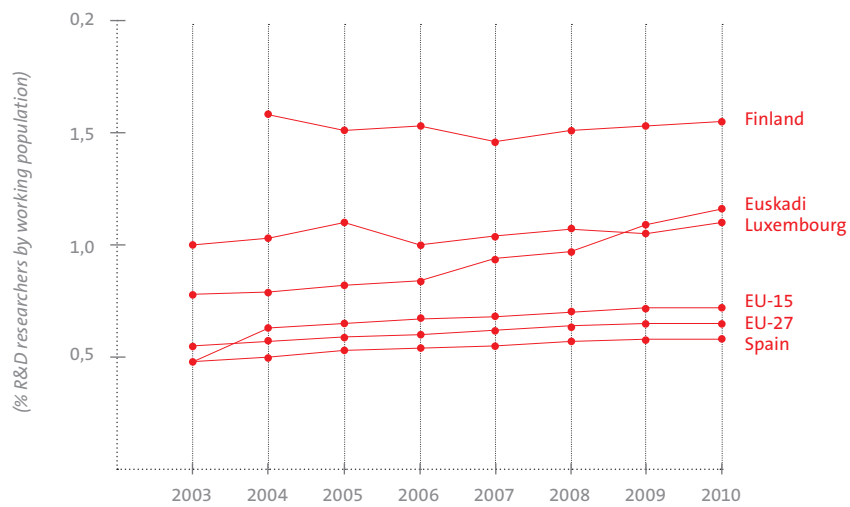
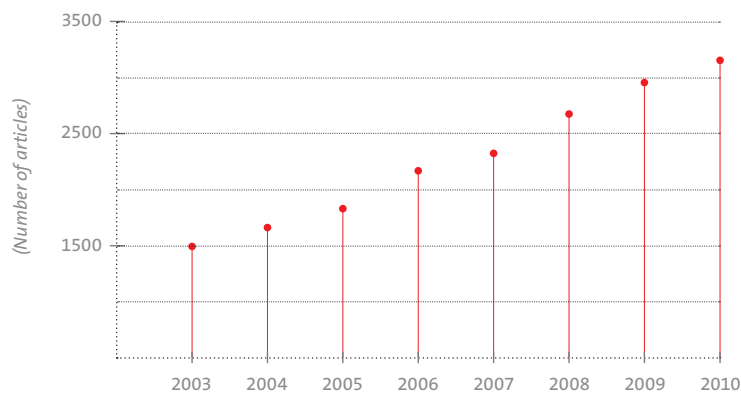
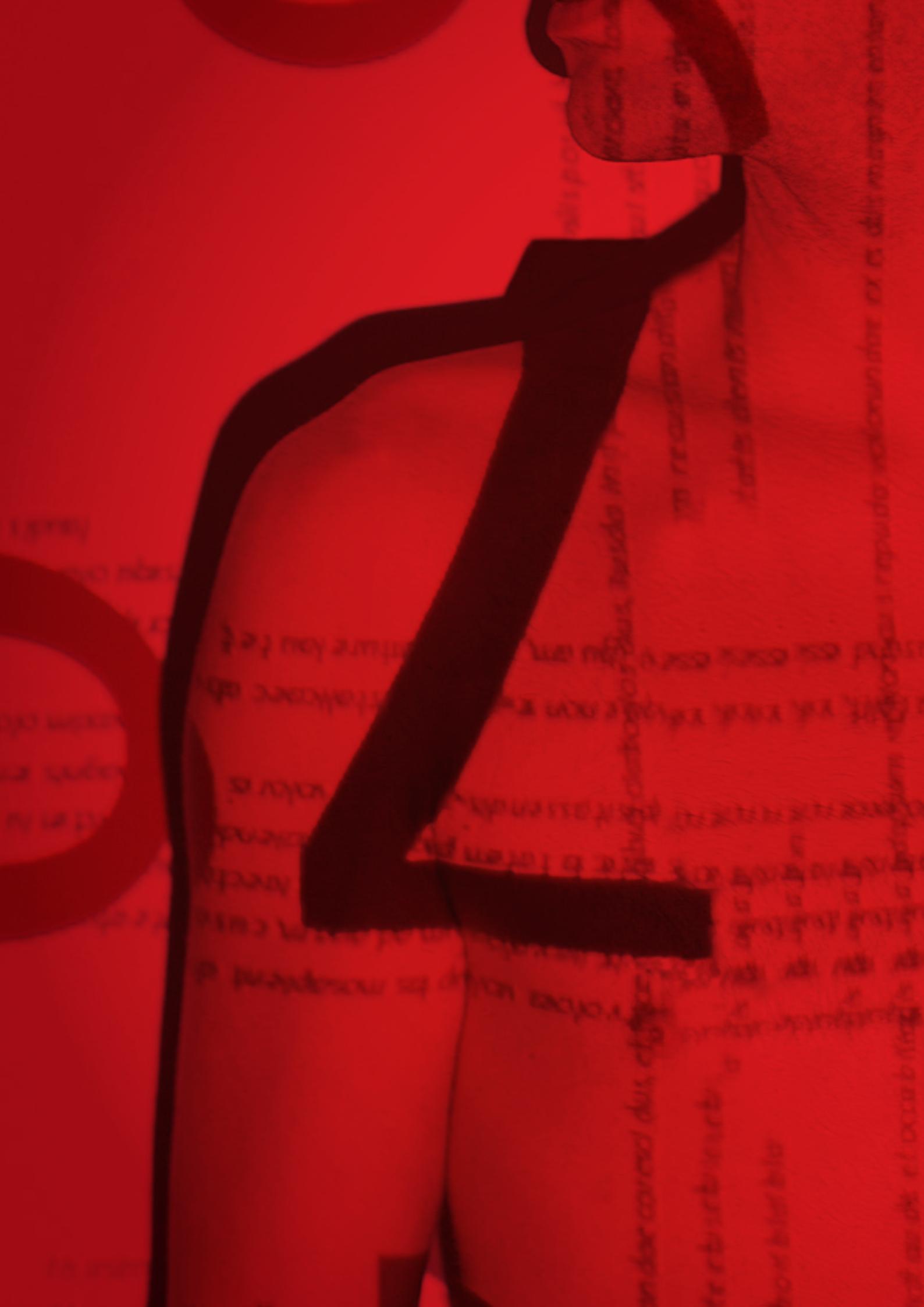


Figure 3 /

Evolution of the scientific output in Euskadi:





07

WORKSHOP

WORKSHOP

Twice a year the “Ikerbasque Workshop” works sessions are held with a twofold purpose. On the one hand, the objective is to create a space where the researchers can share personal and professional experiences, and, on the other, create a network amongst the researchers which enables boosting knowledge transfer.



Basque Culinary Center
Donostia-San Sebastián

On 6th June we held the Ninth Workshop at the Basque Culinary Center, which belongs to Mondragon Unibertsitatea and includes a Faculty of Gastronomic Science and a Food and Cuisine Research and Innovation Centre.

At the event, general lines were presented on scientific policy in the Basque Country as well as the strategy in the area of research. José Luis García, national representative for the IDEAS program (FP7) spoke about the ERC initiatives, and Thomas Schäfer, Ikerbasque researcher, presented the Young Academy of Europe initiative.





Euskalduna Conference Centre Bilbao

The tenth Ikerbasque Workshop was held at the Euskalduna Conference Centre and consisted of a brainstorming session which aimed to collect 100 concrete proposals to improve Basque research in the coming years. The initiative, called #100Zientzia, invited all of the members of the Basque science network to make their contribution through the different channels.

The workshop ended with a speech by Xurxo Mariño, neuroscientist at the University of Vigo, who spoke about scientific dissemination.





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08

PUBLICATIONS LIST

PUBLICATIONS LIST

Year 2012.

ARTICLES

A list of all the articles published by Ikerbasque Research Professors in 2012 is given below.

ECONOMICS AND SOCIAL SCIENCES

Anil Markandya
Annick Laruelle
Arthur Samuel
Daniel Innerarity
Daniele Conversi
Dirk Rübbelke
Dirk Gorter
Ferdinando Villa
Gonzalo Bacigalupe
Ignacio Palacios Huerta
Javier Echeverría
Manuel Carreiras
Roger Fouquet
Ulf-Dietrich Reips
Unai Pascual

EXPERIMENTAL SCIENCES

Alexander Bittner
Andreas Heidenreich
Andrey Chuvilin
Arkady Zhukov
Arkaitz Carracedo
Aurelio Mateo Alonso
David Mecerreyes
Dmitri Sokolovski
Emilio Artacho Cortés
Enrike Zuazua
Enrique Solano
Eugene Krasovskii
Eugene Sherman
Felix Casanova
Geza Tóth
Gunar Schnell
Igor Bandos
Ilya Tokatly
Inma Estevez
Ivo Souza
Jean-Bernard Bru
Jens Siewert

José Ignacio Pascual Chico
José Juan Blanco Pillado
José Luis Zugaza
José Pomposo
Jose Vilar
Juan Anguita
Juan Encinas
Juan Mareque Rivas
Kostyantyn Gusliyenko
Lian-Ao Wu
Luis Hueso
Luis Liz Marzan
M^a Iciar Martínez Galarza
Marcelo Guerin
Mario Piris
Mato Knez
Michele Modugno
Paolo Vavassori
Peicheng Zhu
Rafael Morales
Rainer Hillenbrand
Roberto D'Agosta
Ronen Zangi
Sergey Korotov
Slawomir Grabowski
Stefan Kurth
Thomas Broadhurst
Thomas Frederiksen
Vadim Soloshonok
Volodymyr Chernenko
Vyacheslav Silkin
Yury Rakovich
Zoraida Freixa

HUMANITIES

Agustin Vicente
Eros Corazza
Esther Torrego
Ezequiel Di Paolo
Francesca Tinti
Jaume Navarro
John Walton
Michael Marder

MEDICAL AND LIFE SCIENCES

Alexei Verkhatsky
Charles Lawrie
Florence Perrin
Francisco Blanco
Jesús Cortés

Joaquín Castilla
Jose Rodriguez Arellano
Juan Falcon-Perez
Koen Vandebroek
Mari Cruz Oroz
Nicola Abrescia
Vladimir Kaberdin

TECHNICAL AND ENGINEERING SCIENCES

Andrey Kazansky
Christian Blum
Darrell Conklin
David Pardo
Fadi Dornaika
Franck Girot
Hubert Chen
Lourdes Basabe
Martin Cooke
Mustafa Tutar
Susana Rodríguez-Couto
Thomas Schäfer
Urtzi Ayesta

BOOKS AND CHAPTERS

A list of all the chapters and books published by Ikerbasque Research Professors in 2012 is given below.

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Inma Estevez
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Jose Juan Blanco Pillado
José Luis Zugaza
José Pomposo
José Vilar
M^a Iciar Martínez Galarza
Mario Piris
Radmila Tomovska
Rainer Hillenbrand
Sergey Korotov
Stefan Kurth

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Michael Marder

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Charles Lawrie
José Rodríguez Arellano

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Ugo Mayor
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Thomas Schäfer





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Basque Foundation for Science

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Annual
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