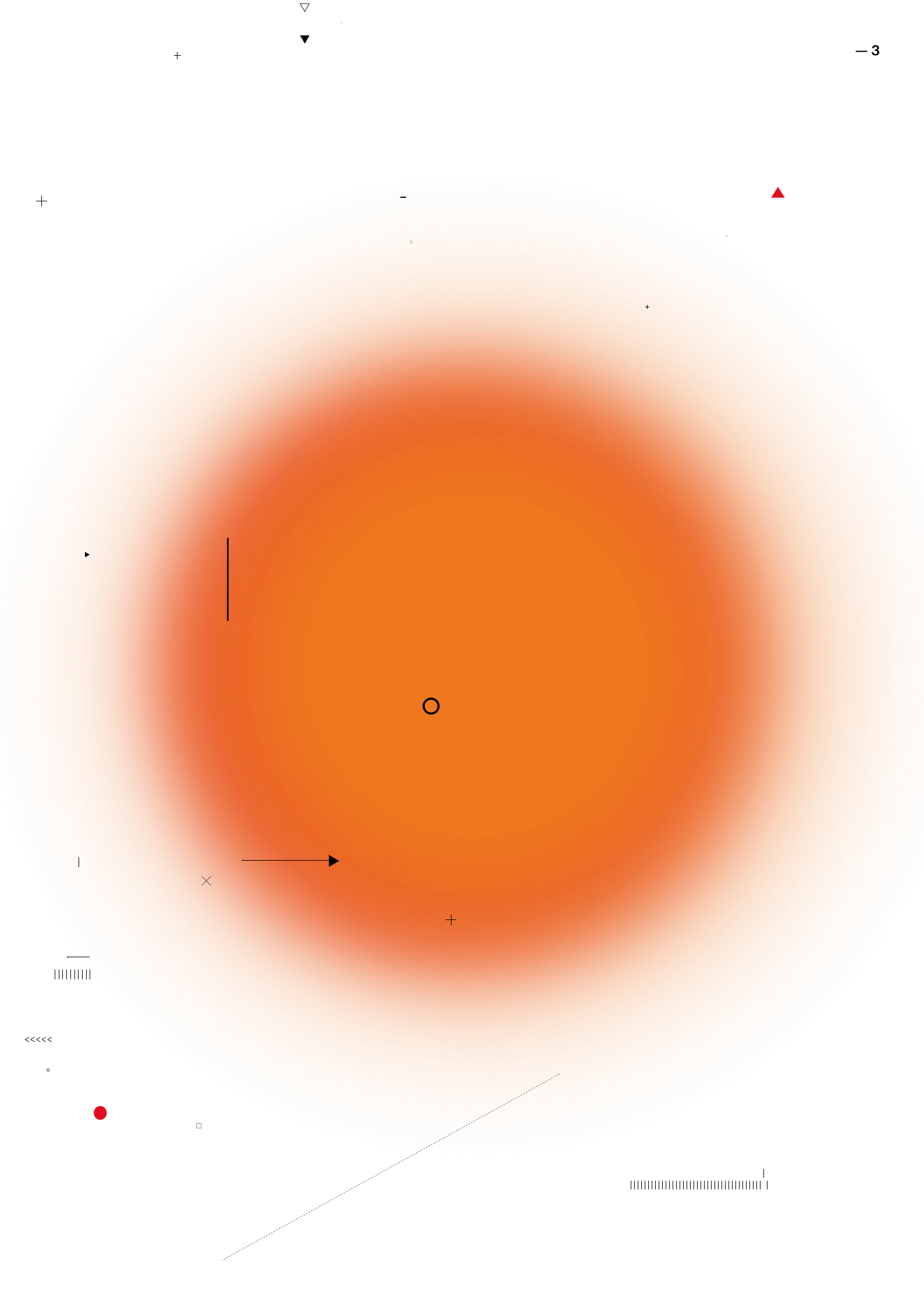


# Reveal Illuminate Clarify Visualize Discover

annual report  
—2019







# Illuminate my knowledge

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**In 2007 The Basque Government created Ikerbasque with the aim to reinforce the Basque scientific system through the attraction, recovery and retention of researchers from all around the world.**

## 13 Years Researching 2020

\_\_\_\_\_ What 13 years ago was but a dream, today has become a reality. Nowadays, the Basque Foundation for Science is a consolidated organization with **268 researchers from 28 different countries**, from all fields of knowledge and with a firm commitment to the hiring of female researchers, as well as to promoting the return of Basque researchers who are currently working outside of the Basque Country.

- + For all of this, **Ikerbasque** provides a comprehensive offer that has long term stability, covering the different stages of the researcher's career. Our researchers develop their work in the different universities and research centers of the Basque Country. It is all about our allies, those who make it possible for us to achieve our goals and who allow us to see ourselves as an organization unrestricted by our physical boundaries.

Since Ikerbasque's creation, we have sought to be a stable yet motivating platform from which scientists and scientific institutions in the Basque Country can continue asking themselves new questions and contributing to the challenge of generating new knowledge.



▼

# 268 Researchers

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# Research Professors

**Ikerbasque Research Professors** are senior independent researchers in all areas of knowledge with extensive research experience and leadership skills. They are assigned permanently to Basque universities and research centers.

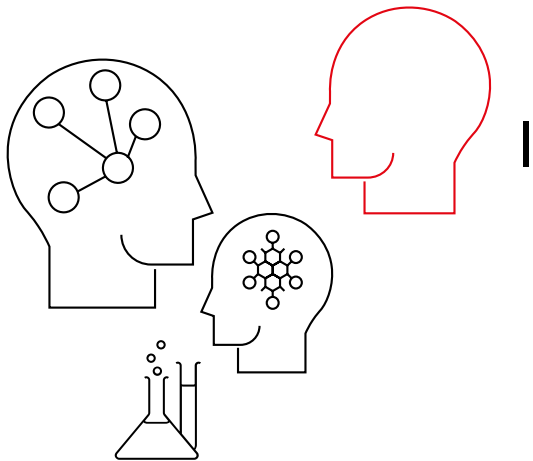
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Research Professors

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163

Research professors

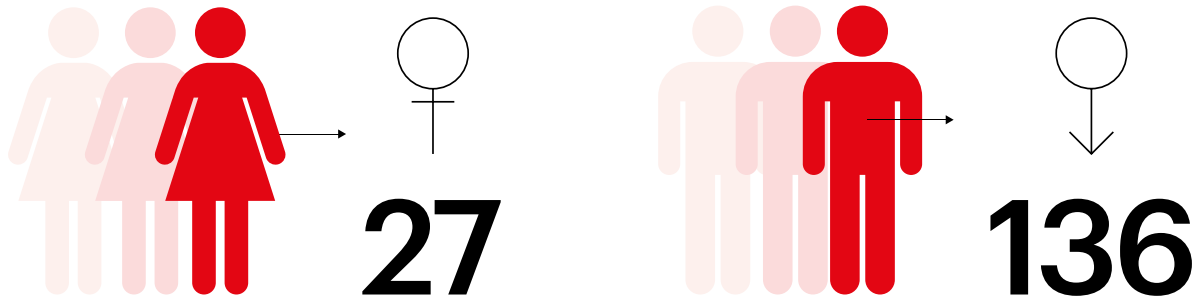
Nationality of Research Professors



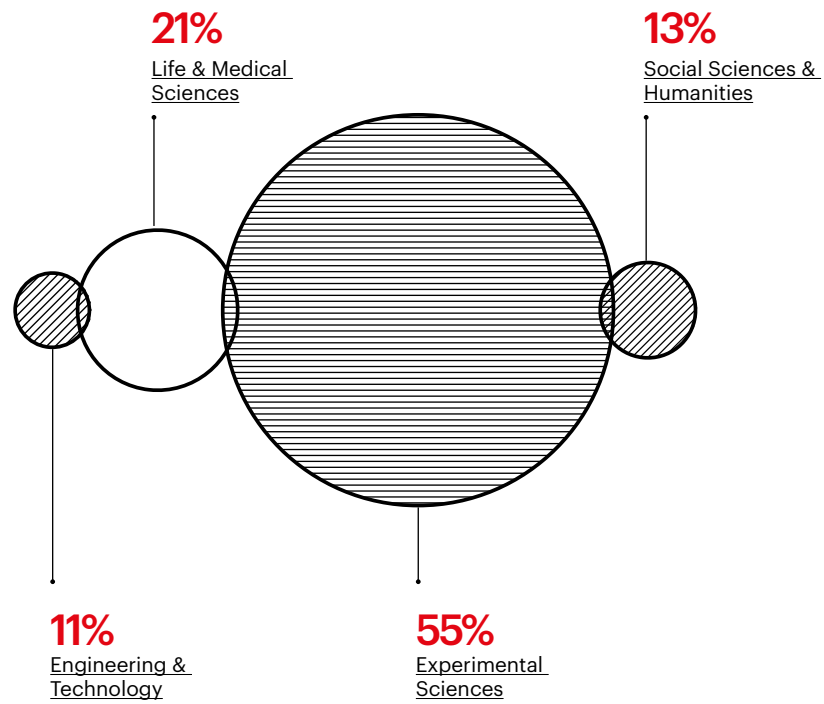
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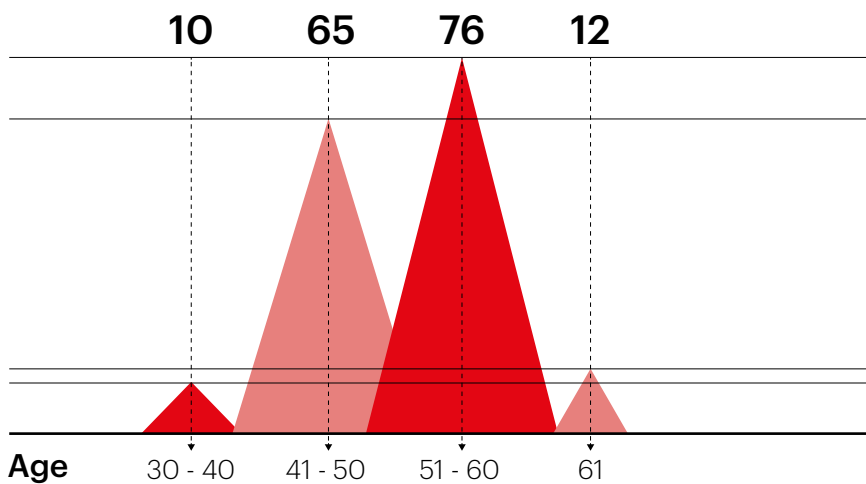
## Distribution by sex



## Distribution by knowledge field



## Distribution by age

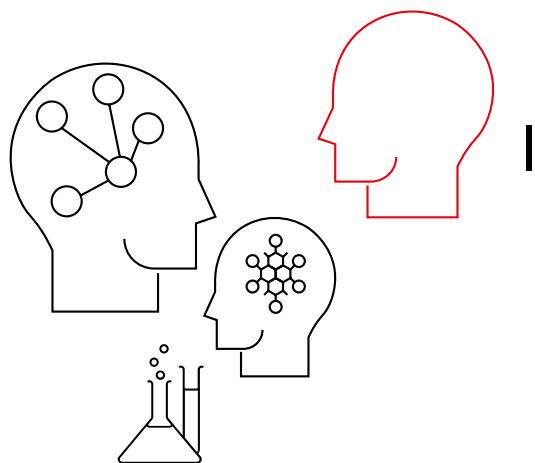


163

# Research Associates

**Research Associates are a young researchers** with an established scientific career in all areas of knowledge. They have demonstrated maturity, intellectual independence and leadership ability. **Ikerbasque** offers them permanent research positions.

## Research Associates



29

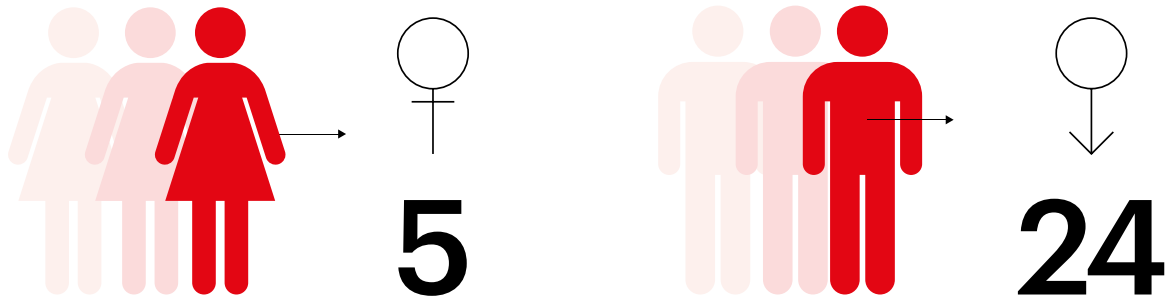
**Research** associates + + + +

## Nationality of Research Associates

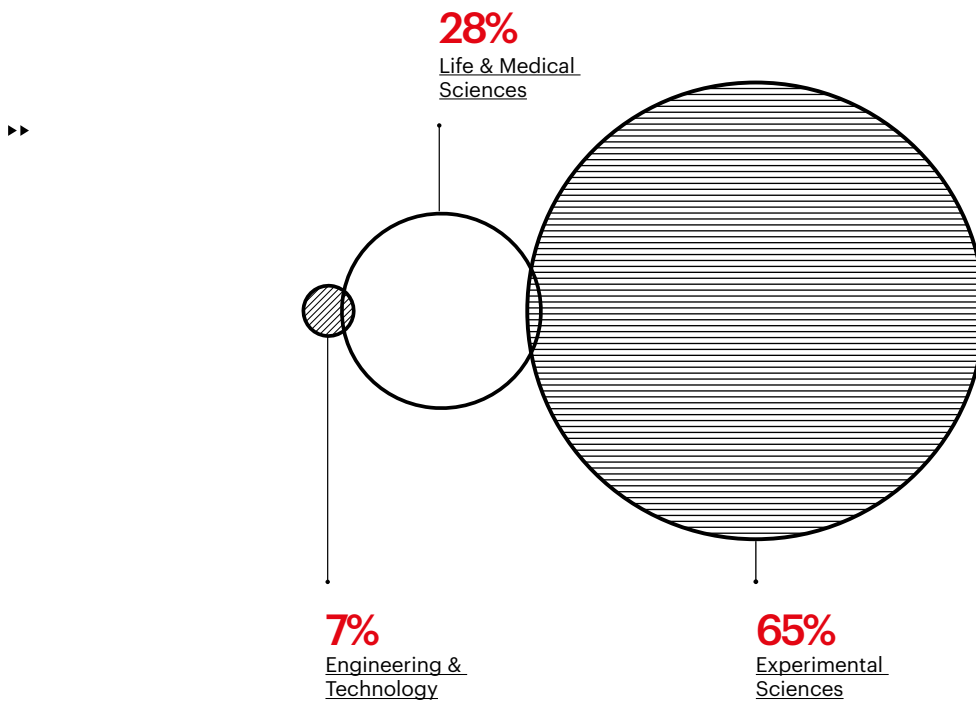




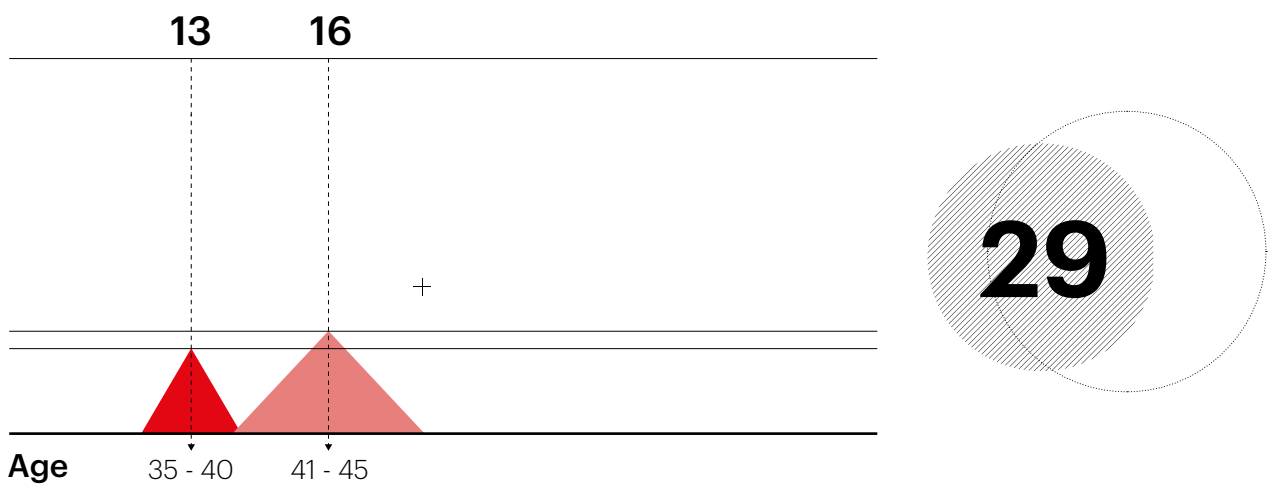
## Distribution by sex



## Distribution by knowledge field



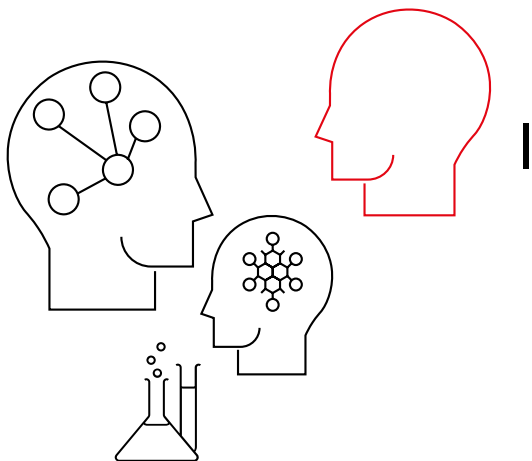
## Distribution by age



# Research Fellows

**Research Fellows** are young researchers with a promising scientific career and international experience. **Ikerbasque** offers them 5— year research positions with the aim of offering a track towards an independent research career.

## Research Fellows



76

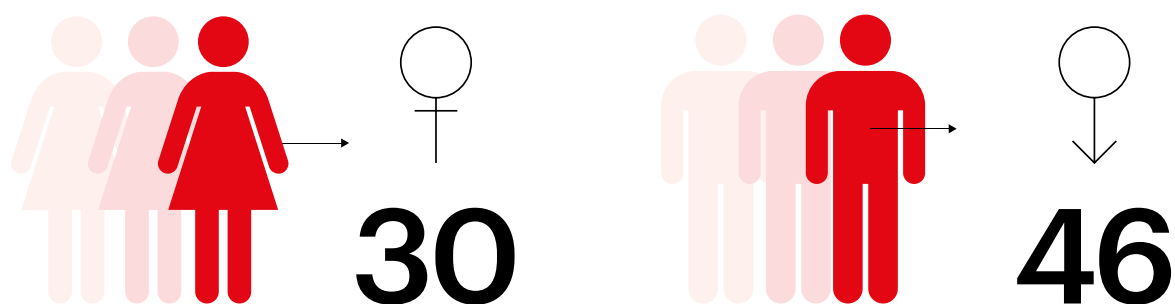
Research fellows

## Nationality of Research Fellows

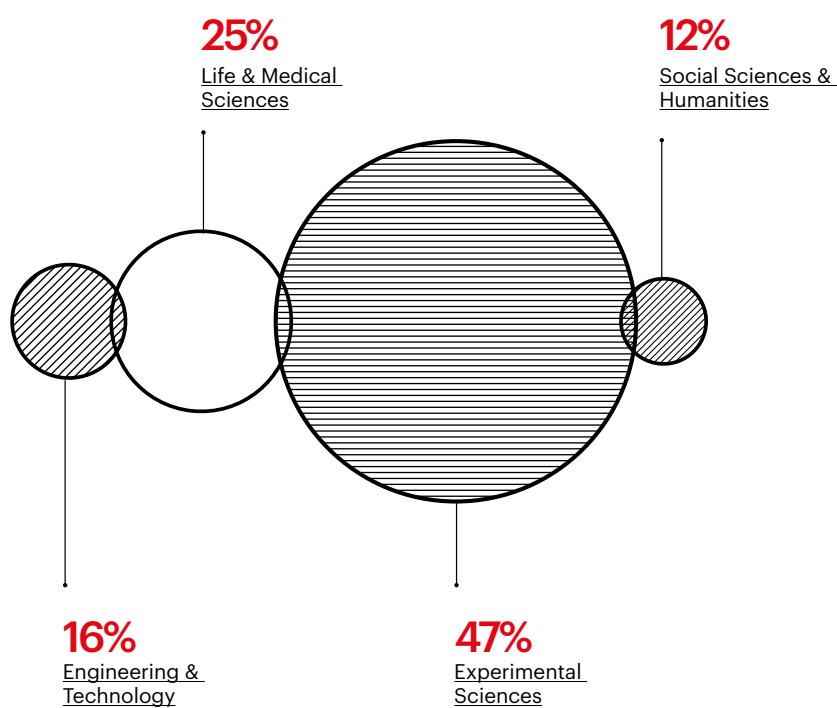




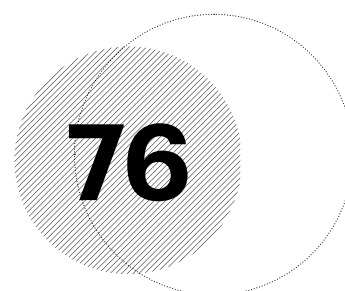
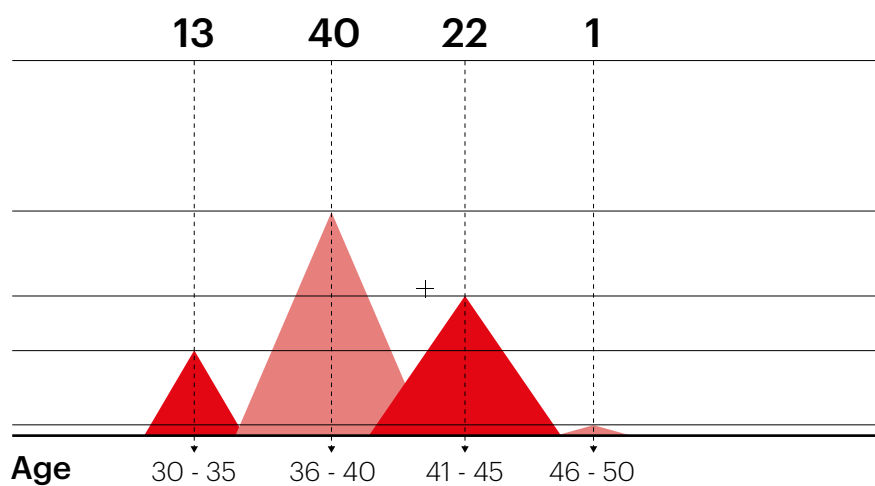
## Distribution by sex



## Distribution by knowledge field



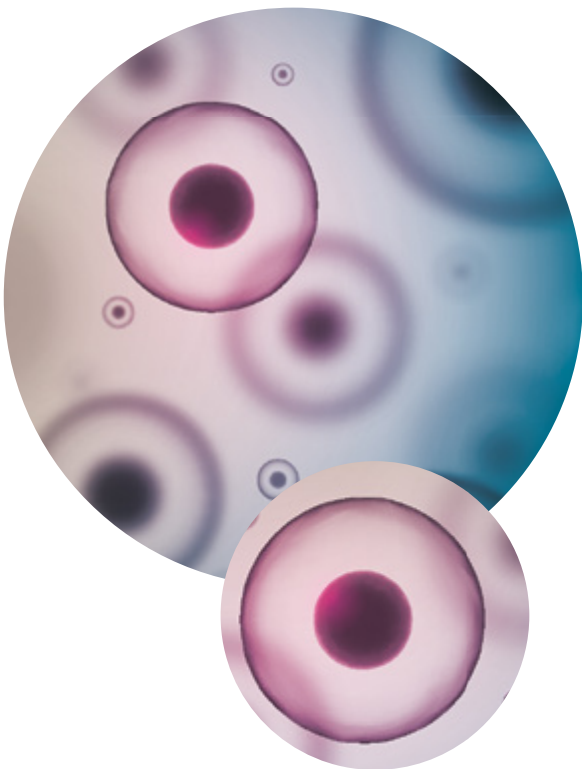
## Distribution by age



## Relevant Publications

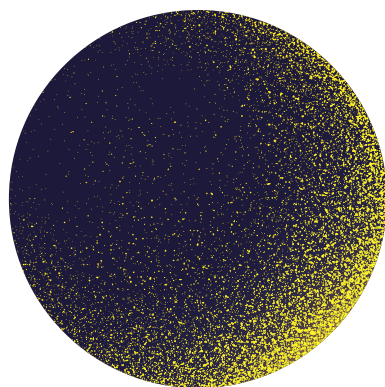
### New milestone achieved in the development of protein-based functional nanomaterials.

A team from CIC biomaGUNE, led by the Ikerbasque Research Professor Aitziber López Cortajarena, has developed novel protein-based functional nanomaterials. The work has been published in the prestigious journal *Angewandte Chemie*. The systems developed in this research open the door to numerous applications, such as advanced tools for imaging and labeling living cells; sensors to verify changes in temperature and pH or detection of pollutants, among others..



### The way nature benefits us and the way climate change will affect us.

Unai Pascual (BC3) has participated in a study published in *Science* that shows that in 2050 more than 5,000 million people will live in areas exposed to the maximum risk of water pollution, coastal storms and crop loss. Currently, the most vulnerable areas are, the most exposed to these risks. Based on the evidence gathered around the world, the study offers a new visualization tool to understand the contributions of nature to people's well-being and to provide scenarios to mitigate the impacts of change.



### New model to predict the flow of electricity.

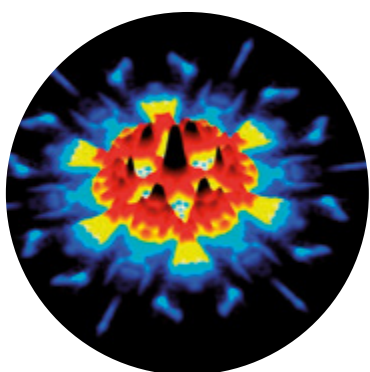
Jose Vilar, Ikerbasque researcher at Biofisika Institute has developed a software that software allows the reception of new data of electricity consumption continuously and autonomously predict the flow of energy through the network during the next hour. The proposal has obtained the Horizon Big Data Award from the European Commission.





## Thousands of new globular clusters have formed over the last billion years.

A study of Thomas Broadhurst (UPV/EHU) published by the prestigious journal *Nature Astronomy* has found unexpected answers to the origin of some globular clusters. They discovered that thousands of new globular clusters have been forming over the last billion years out of a cool gas in the giant galaxy located in the centre of the Perseus galaxy cluster.



## Catalogue of topological materials.

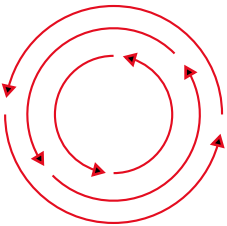
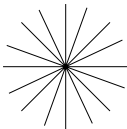
Maia Garcia-Vergniory (UPV/EHU, DIPIC) has created a new database to identify the topological classification of any material. This database allows users to select elements from the periodic table to form a compound that can then be explored for its topological properties. The study has been published in *Nature*.

## Structures that determine the aggressiveness of a breast cancer type have been identified.

María Muñoz Cafarell (Biodonostia) has taken part in a study published in the journal *Proceedings of the National Academy of Sciences (PNAS) USA*. A new mechanism to control the activity of HER2 and CB2R that will help to determine the prognosis of the patients, that is, how aggressive their tumors are, has been identified in order to decide the intensity of the treatment they have to receive.



Relevant Data



€ 32 Million  
Return of investment

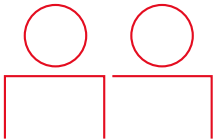
Total funds that Ikerbasque researchers obtained from competitive calls in 2019



1,272  
Articles

published by Ikerbasque researchers in indexed publications

1,031  
People

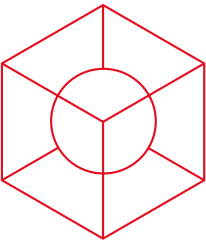


working in research groups led by Ikerbasque researchers

12  
ERC

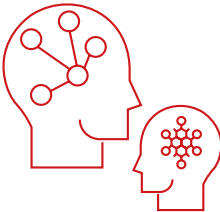


Ikerbasque researchers are leading 12 ERC grants. The ERC (European Research Council) is the main European organization that promotes research projects based on scientific excellence

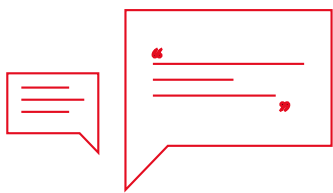


713  
Projects

with external funding in which Ikerbasque researchers participate



268  
Researchers

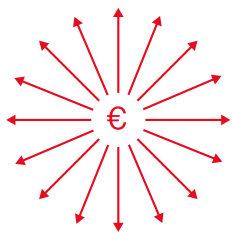


**+150,000**  
Citations

Ikerbasque has obtained more than  
150,000 citations since its creation

**37**

Nationalities of the researchers



**€ 17 Million**  
Annual Budget of Ikerbasque







# Host Centers

Ikerbasque researchers have joined the following centers in the Basque Country.



**Achucarro**  
Basque Center for Neurosciences

**Azti Tecnalia**

**BC3**  
Basque Centre for Climate change

**BCAM**  
Basque Center for applied Mathematics

**BCBL**  
Basque center on cognition brain and language

**BCMaterials**  
Basque center for materials, applications & nanostructures

**Biocruces bizkaia**  
Instituto de investigación Sanitaria

**Biodonostia**  
Instituto de investigación Sanitaria

**Biofisika Institutua**  
Basque centre for biophysics

**ceit**  
ik4 Research alliance

**CiCenergigUNE**  
Energy cooperative research center

**CiC bioGUNE**  
Center for cooperative Research in Biosciences

**CiC biomaGUNE**  
Center for cooperative Research in Biomaterials

**CiC nanogune**  
Nanoscience cooperative research center

**CFM-MPC**  
Materials Physics Center

**Deusto**  
University of Deusto

**DIPC**  
Donostia Internationa Physics Center

**Globernance**  
Institute for democratic governance

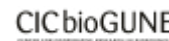
**Neiker Tecnalia**

**Polymat**  
Basque Center for Macromolecular Design and Engineering

**Tecnalia**  
Technology Corporation

**Tecnum**  
University of Navarra

**UPV/EHU**  
Universidad del Pais Vasco







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**“Darkness  
does not exist.  
It is in reality  
the absence  
of light”**

Albert Einstein





