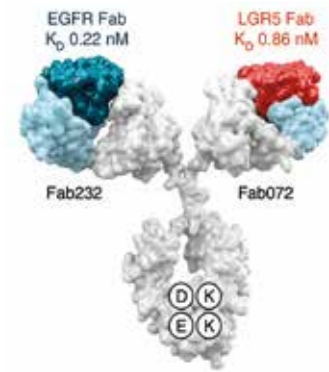


Research

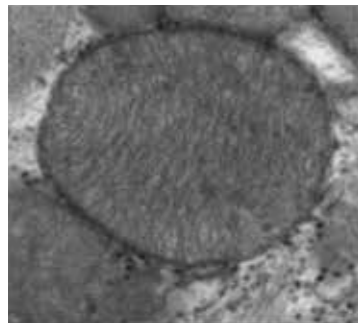


MCLA-158, the first clinical candidate screened in organoids, targets cancer stem cells of solid tumours

The bi-specific antibody targets two proteins, EGFR and LGR5, on the surface of cancer stem cells, slowing the growth of primary tumours in preclinical models of cancer and preventing metastasis.

Nature Cancer

DOI: 10.1038/s43018-022-00359-0

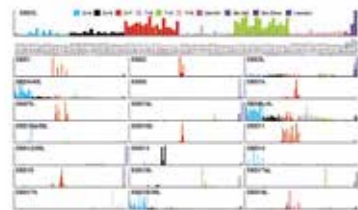


Correct mitochondrial function prevents muscle loss during ageing

Researchers have discovered that the BNIP3 protein protects against age-related muscle atrophy, also known as sarcopenia.

Aging Cell

DOI: 10.1111/ocel.13583

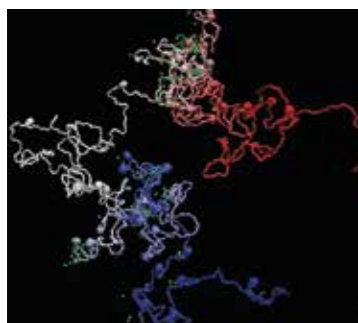


Not individual genes but the "mutational signatures" of many genes hold the key to better cancer therapies

The so-called "mutational signatures" can accurately predict the activity of various drugs applied to cancer cells from many types of tumours.

Nature Communications

DOI: 10.1038/s41467-022-30582-3



Researchers capture how genes fold and work at unprecedented resolution

The new approach allows scientists to create three-dimensional models of genes and to study their shape and function in unprecedented detail.

Nature Structural & Molecular Biology

DOI: 10.1038/s41594-022-00839-y

Thank you!

We would like to thank all the people and institutions who have made 2022 an exceptional year. Thanks to your contributions, our science is bringing about biomedical breakthroughs that have an increasing impact on people's lives. We would also like to thank all the people and organisations who have joined The Metastasis Challenge.



www.metastasischallenge.com

Every donation, every event, every legacy...brings us one step closer to our goal of stopping metastasis.

CENTRE



A MEMBER OF



TRUSTEES



WITH THE COLLABORATION OF:



RECOGNISED AS:



IRB Barcelona
Annual Report 2022



2022 Annual Report

From Frontier Technology to
Groundbreaking Discoveries

Research

This year, our research into cancer, metastasis, and ageing- and metabolism-related disorders has made remarkable progress. We have also advanced our fundamental understanding of the mechanisms underlying health and disease.



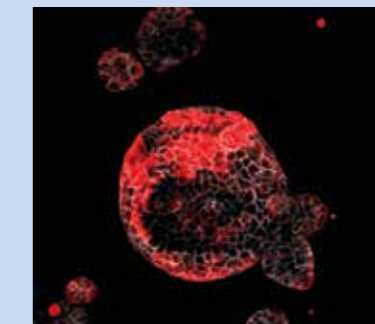
182
Total number
of publications



89.8%
Q1 Publications
SJR



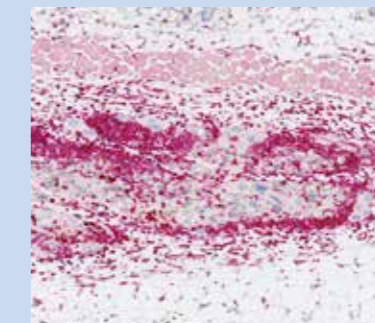
71.7%
D1 Publications
SJR



Identification of the cells responsible for colon cancer relapse

A population of cells called High Relapse Cells (HRCs) can detach from the primary tumour and remain hidden for some time in a distant organ before they develop a metastasis.

Nature DOI: 10.1038/s41586-022-05402-9

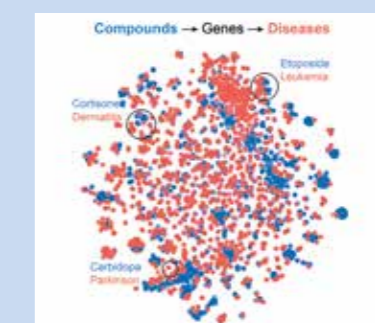


Senescent cells as vaccines against cancer

Vaccination with senescent cells significantly reduces the development of tumours in mice with melanoma and pancreatic cancer.

Cancer Discovery

DOI: 10.1158/2159-8290.CD-22-0523



The Bioteque: a computational tool to harmonise biological knowledge

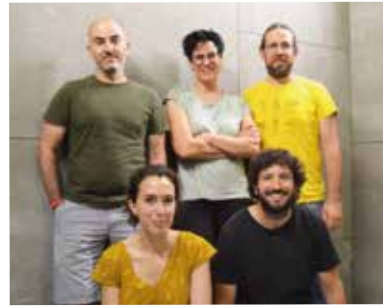
Researchers have launched a computational tool that seeks to integrate and harmonise the vast amount of biological data available.

Nature Communications

DOI: 10.1038/s41467-022-33026-0

Scientific Projects

Notable scientific projects have been awarded funding in 2022 through competitive calls run by public and private entities.



CGI-Clinics

Funded by the European Commission, this 5-year project seeks to implement and systemise tumour genome interpretation for clinical decision-making.



PROMINENT - Cancer Grand Challenges

The team aims to build a 'roadmap' of early cancer development in the hope of finding new, informed ways to prevent cancer.



LUCIA Project

The project seeks to improve the outcome of lung cancer by providing in-depth knowledge of the risk factors and facilitating prevention and early diagnosis.



2 ERC Starting Grants

One grant is devoted to developing "monovalent degraders"—a novel type of drug—and the other one to studying the diversity of stem cells.

Innovation

Our market-potential discoveries have given rise to a new spin-off, agreements and licenses, as well as new patents filed. We currently have 6 active spin-offs.



Catalan National Innovation Award for the foundation of Ona Therapeutics

This IRB Barcelona - ICREA spin-off focuses on the discovery and development of biological drugs that target lipid metabolism to treat metastatic cancer.



Inbiomotion validates its test, which will help reduce mortality in breast cancer

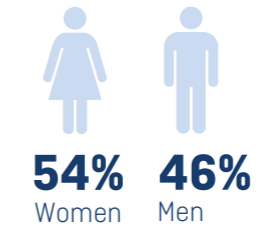
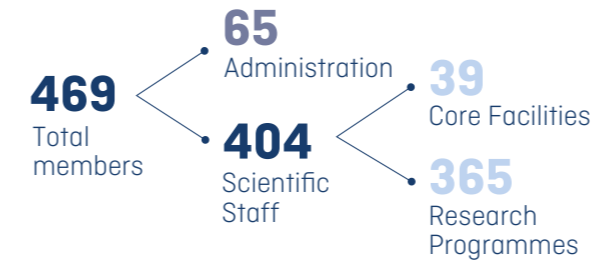
The IRB Barcelona spin-off Inbiomotion has developed a unique single gene-based biomarker for the personalised adjuvant treatment of early-stage breast cancer patients.



Gate2Brain €2.5M funding - EIC Accelerator

Gate2Brain's research focuses on brain tumours, and the funding received will contribute to advancing the preclinical regulatory studies of its proprietary compound G2B-00.

Talent



The remarkable contributions of our researchers have garnered recognition and awards from various distinguished organisations, thereby showcasing their outstanding international standing.



Dr. Aznar Benitah

2022 LILLY FOUNDATION BIOMEDICAL RESEARCH AWARD

The award acknowledges his contributions to research into the link between ageing, stem cells, cancer, diet, and circadian rhythm.



Drs. López-Bigas, Muiños and González-Pérez

CITY OF BARCELONA AWARD

The award recognises the potential of BoostDM, a computational method they developed that identifies the driver-mutations for each type of cancer.

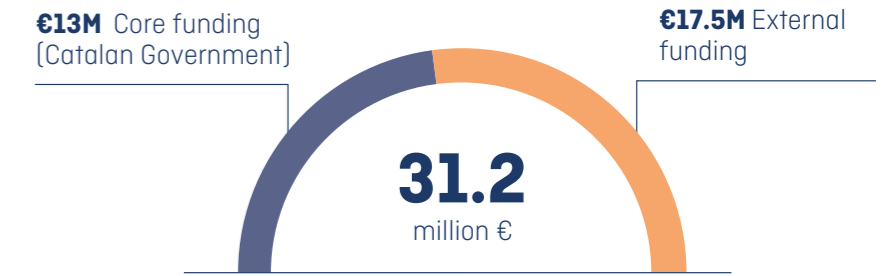


Dr. Rodríguez-Fraticelli

ICREA RESEARCH PROFESSOR

As a scientist, he has challenged the traditional model of hematopoiesis by revealing heterogeneity among individual hematopoietic stem cells (HSCs) and the differentiation trajectories they take.

Funding



31.2 million €

215

EXTERNAL FUNDING.

National and international research projects and networks



Communication & Fundraising



8,408

People reached through public engagement activities

€2.6M

Raised since the beginning of "The Metastasis Challenge"

3,172

Media impacts