2023 Annual Report

The power of networks





Research

Leveraging the power of extensive research networks, in 2023 IRB Barcelona has stood at the forefront of biomedical research, making pivotal advancements in understanding and combating cancer and metastasis, as well as tackling the complex challenges of ageing and metabolism-related disorders.







95.9% Q1 Publications SJR 2022



79.7% D1 Publications SJR 2022



Mechanism deciphered: MAF protein promotes breast cancer metastasis

The study suggests targeting the KDM1A molecule as a potential therapeutic approach to halt the metastatic process.

Published in Nature Cell Biology



Cell-to-cell communication drives the early development of pancreatic cancer

The research has pinpointed the significance of increased cellular plasticity and the improved ability of pre-cancerous cells to communicate as central to cancer progression. Published in *Science*

Research



The lock and key behind intracellular connection

The mitochondrial protein Mitofusin 2 acts as both a connector and regulator between mitochondria and the endoplasmic reticulum, and it is therefore crucial for cellular function. Published in *Science*



The key in skin ageing

The research highlights the involvement of IL-17 in various ageing-related functions, offering potential benefits for therapeutic intervention and recovery enhancement after surgery.

Published in Nature Aging



A key player in cellular reprogramming and tissue regeneration

Vitamin B12 supplementation could greatly enhance the body's natural repair mechanisms, opening new pathways for treatments in regenerative medicine and for conditions such as ulcerative colitis.

Published in Nature Metabolism



Protein droplets: a new approach to treat prostate cancer

Exploiting the androgen receptor's propensity to form biomolecular condensates offers a new way to inhibit its activity, potentially revolutionising treatment approaches. Published in *Nature Structural & Molecular*

Biology

Scientific Projects

In 2023, IRB Barcelona has been highly successful in securing funding for a range of groundbreaking projects through both competitive and non-competitive grants.







TRIP programme

Three new laboratories bring together fundamental and clinical research to accelerate the delivery of results to patients, with the support of "la Caixa" Foundation and the Dept. of Health of the Government of Catalonia.

AECC Excellence Programme: Metastasis

The partnership seeks to develop therapeutic tools for the diagnosis and treatment of metastasis in a targeted manner.

Screentech

The Complementary Plan for Biotechnology promotes high-throughput screening projects to accelerate drug discovery.



MDDB project

IRB Barcelona leads an ambitious European project to create the first database of molecular dynamics.



ERC Consolidator & Starting grants

IRB Barcelona's research frontiers expand with two prestigious European Research Council grants: Dr. Fran Supek has been awarded an ERC Consolidator grant, and Dr. Stefanie Wculek an ERC Starting grant.

Innovation

This year has seen an unprecedented breakthrough with one of our spin-offs launching its first biomedical diagnosis tool into the market. Another spin-off has secured substantial seed funding.



6 Active spin-offs



Research Agreements with public and private entities



6 Priority patent applications and extensions



12 New technologies scouted









Inbiomotion's MAF test hits the market. The test is available to oncologists and pathologists and will benefit an estimated 24,000 patients each year in Spain.

Nuage Therapeutics: €12M in Seed funding. Sofinnova Partners and Asabys head the investment, aiming to develop treatments for castration-resistant prostate cancer and other untreatable conditions.

Gate2Brain wins the Senén Vilaró Prize. Gate2Brain's groundbreaking technology holds promise for oncology, rare diseases, and pediatrics, with patents exclusively licensed to the company.

Two ERC Proof of Concept grants. Dr. Toni Gabaldón and Dr. Salvador Aznar Benitah have been awarded ERC Proof of Concept grants aimed at halting cancer metastasis and optimising sequencing techniques, respectively.

People & Talent











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Core Facilities

Research Programmes







A new laboratory to advance in immunology

Dr. Stefanie Wculek leads a new research group focused on the immune system and its function in tissues, in health and disease. The laboratory is supported by "la Caixa" Foundation.

IRB-TARGET: Securing Biomedical Talent

Co-funded by the EU's Horizon Europe, this programme is a strategic effort to bridge fundamental science with applied and clinical research.

39th and 40th Barcelona BioMed Conferences

Together with the BBVA Foundation, the Institute organised two conferences, that brought together international experts in the field. One focused on cancer and the other on proximity-inducing pharmacology.

Funding



Communication & Fundraising



4,641 People reached through outreach activities €3M Raised since the beginning of "The Metastasis Challenge" 3,524 Media impacts

Thank you!



We would also like to thank all the people and organisations that have joined The Metastasis Challenge.

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



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