

Annual Report  
20**22**



Annual Report

2022

25  
YEARS

A large, bold, orange number '25' dominates the right side of the page. Two small, stylized human figures are climbing the number. One figure is on the top curve of the '2', and the other is on the top curve of the '5'. Their shadows are cast onto the surface of the number.

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Parc Científic de Barcelona  
UNIVERSITAT DE BARCELONA

# Highlights

## The Park

m<sup>2</sup>**22.070** m<sup>2</sup>

OF LABORATORIES

**10.904** m<sup>2</sup>

OF OFFICES

**4.996** m<sup>2</sup>

OF SCIENTIFIC SERVICES

## Occupation

m<sup>2</sup>**21.564** m<sup>2</sup>OF LABORATORIES  
OCCUPIED**9.455** m<sup>2</sup>OF OFFICE SPACES  
OCCUPIED

Growth compared to 2021

**7%****4%**

## The Park's Community

**3.447**

PROFESSIONALS

**126**

ORGANISATIONS

**100**

COMPANIES

**12**

NON-PROFIT ORGANISATIONS

**7**

RESEARCH CENTRES

**7**

GROUPS, UNITS AND SERVICES OF THE UNIVERSITY OF BARCELONA

## Economic data

M€

Growth compared  
to 2021**22,3** M€

REVENUE

**10%****7,2** M€

EBITDA

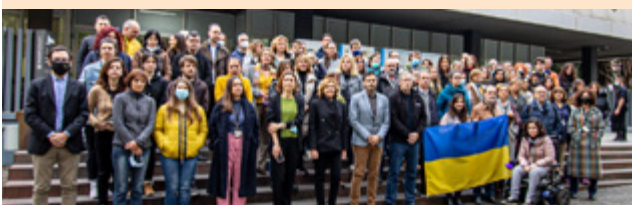
**11%****2,3** M€

NET RESULT

**-8%**

## Support Campaigns for Ukraine

Throughout 2022, various support campaigns were carried out for the Ukrainian population following the Russian invasion: in March, a few days after the beginning of the hostilities, the Park published a joint statement with Biocat and several organisations located in the Park in support of Ukraine. In April, Qiagen leads a food collection campaign, Universitas, the company that manages the Park's restaurant and cafeteria, launches a solidarity menu in support of the population affected by the conflict and in June, Inbrain and the Park organise a course to help Ukrainian refugees adapt their CV to local standards and find the best channels to find work.



## 2022-2025 Sustainability Plan



The Park approved its 2022-2025 Sustainability Plan with the aim of integrating institutional strategy criteria for economic, social and environmental growth compatible with sustainable development.

Strategic SDGs (SDG 3: Good Health and Well-being; SDG 4: Quality Education; SDG 9: Industry, Innovation and Infrastructure; SDG 12: Responsible Production and Consumption)



Complementary SDGs (SDG 8: Decent Work and Economic Growth; SDG 13: Climate Action and SDG 17: Partnerships for the Goals)





## Maria Terrades

CEO, Barcelona Science Park

In 2022, the Barcelona Science Park celebrates its 25th anniversary and, taking a look back at the journey we have made since its constitution, we see that we have reason to celebrate.

We are currently a community of almost 3,500 professionals working for 126 organisations in the Park. These cover the whole range of research and innovation in life sciences: research centres, spin-off, start-up, small, medium and large companies, non-profit organisations and groups, units and services of the University of Barcelona. In this report you will find not only all the activity generated by the Park, but also two compilations made in 2022 with the most important milestones obtained by the public research centres and by the companies located in the Park during the previous year. This summary highlights the level of excellence of organisations based at the PCB.

As regards the spaces, at the end of 2022, the Park has reached full occupation, with a total of 31,019 m<sup>2</sup> of office and laboratory space occupied, 98% occupation of the prepared spaces and 94% of the total available space. This level of occupancy represents a growth of 6% compared to last year.

Since its beginnings, the Park has been an example in its collaboration to revitalise the innovation sector. In these 25 years the Park has hosted two bioincubators: CIDEM-PCB between 2002 and 2005, PCB-Santander between 2007 and 2009 and, in 2021, the accelerator BCN Health Booster, launched with the Barcelona City Council, Barcelona Activa and Biocat to strengthen the life sciences sector through the acceleration of eleven recently created innovative business projects. As you can read in this report, the closing indicators of the first year of activity of this accelerator show that the proposed objectives are being achieved.

**The Park extends its commitment with the approval of the 2022-2025 Sustainability Plan with the aim of integrating institutional strategy criteria for economic, social and environmental growth compatible with sustainable development.**

I also want to talk about the consolidation of our Research in Society Programme, which was created in 2001 to promote a knowledge-based society by promoting scientific vocations and the critical spirit of 10 to 18-year-old students in Catalonia. This year 100 activities have been carried out with the participation of more than 6,500 students.

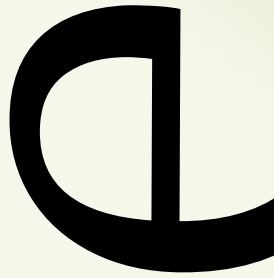
The Park extends its commitment with the approval of the 2022-2025 Sustainability Plan with the aim of integrating institutional strategy criteria for economic, social and environmental growth compatible with sustainable development.

In the economic field, we have closed the year with solvent figures: revenue of 22.3 million euros, a net result of 2.3 million euros and a reduction in debt of up to 75 million euros.

It is imperative to highlight that none of this would have been possible without the effort and commitment of the Park's employees, who work in a very demanding growing environment. I would like to sincerely thank all the workers of the institution for the work they have done.

Now, we are working on establishing the basis for the next 25 years. The expected location of the new Hospital Clínic, very close to the Park, offers us a very strong future as part of the Health Hub which is being set up in the Diagonal district. We can tell you that in March 2023 the University of Barcelona, the Government of Catalonia (Generalitat) and Barcelona City Council have signed a protocol which includes the commitment to construct a new building for the Park, which will be operational in 2028, and which has to allow us to continue building community, research and innovation in life sciences.

ditorial





# 25 YEARS OF THE PCB



On 26 September, the Barcelona Science Park Foundation is incorporated by the University of Barcelona (UB). The first scientific park in Spain is launched.

1997

1999

Torre D. Preparation of the Park's first building which had been part of the Geography and History Faculty of the UB. Various units of the UB set themselves up there, such as the Bosch i Gimpera Foundation and the Patent Centre.

The UB installs the first 800 MHz nuclear magnetic resonance equipment in the Park, this being the largest in Europe at that time.

2000



2001

Clúster I. The first laboratory building in the Park with 36 modules of laboratory spaces and the first two scientific platforms: the Animal Experimentation Service and Radioactive Facility. Initiation of the activity of the Common Scientific Services.

Beginning of the Research in Society Programme with the aim of arousing scientific vocations in 10 to 18-year-old students.

2002-2006 CIDEM-PCB Bioincubator. Initiative promoted by the Government of Catalonia, the UB, the Park and the Bosch i Gimpera Foundation. Enantia, Oryzon.

2002

ee enantia



First edition of the Live Research Fair organised together with the Catalan Society of Biology.

2003

Establishment of the Institute of Molecular Biology of Barcelona (IBMB-CSIC).

Creation of the Biomedical Research Institute of Barcelona (IRB Barcelona).

2005

First edition of the “Batx2lab, from baccalaureate to the laboratory” programme.



2007

Creation of the Institute for Bioengineering of Catalonia (IBEC).

Hèlix. The second laboratory building is constructed.

2007-2009 PCB-Santander Bioincubator. Initiative promoted by the UB, the Park, the Bosch i Gimpera Foundation and the Marcelino Botín Foundation (Banco Santander).

Science and public sector projects

Company

Buildings

Artistic interventions

Sustainability

Boosting the PCB

Research in Society



The towers, Torre I and Torre R begin activity by offering more office space.

**2009**



**2010**

First artistic intervention in the Park with a mural by Bombardearte that blends art and science in the car park.

Creation of the National Center for Genomic Analysis (CNAG-CRG).

Clúster II. Third laboratory building. Esteve is the first company to establish themselves there.

**2011**

ISO 14001 certification for the environmental management of buildings and ISO 9001 for the quality management of Common Scientific Services.



**2012**

Opening of Fifteen, new restaurant of the Clúster II building.



Second artistic work by Kograffx of over 400 linear metres along the ramps which, for the first time, leading to the entrances on the Gregorio Marañón and Baldri Reixac streets. The abstract motifs of the work mimic cells and small organisms.

Number of Companies:

<b>56</b>	<b>57</b>	<b>59</b>	<b>63</b>	<b>83</b>	<b>82</b>	<b>86</b>	<b>92</b>	<b>96</b>	<b>100</b>
2013	2014	2015	2016	2017	2018	2019	2020	2021	2022

2012-2022 Promotion and preparation of the Clúster II building to establish spin-off and start-up companies in the Park.



Beginning of the programme to encourage interaction and networking within the PCB Community with the celebration of the first Coffee Connection (at that time, called the Cocktail Connection).

Fourth artistic work created by Anna Taratiel, one of the most prominent representatives of the global street-art movement, to decorate the passageway that joins the Clúster I and Clúster II buildings together.



**2014**

Third artistic work in the PCB's Garden by the artist Núria Mora, who works with the geometry of space.

**2015**

Workshops and seminars organized by the Park:

<b>6</b>	<b>8</b>	<b>13</b>	<b>8</b>	<b>12</b>	<b>15</b>
2017	2018	2019	2020	2021	2022

**2017**

Fifth artistic work. Through a contest won by the artist Kelly Arrontes, the underground corridor of the Clúster buildings is decorated with an acrylic mural work and silk paper, which is more than 125 metres long and represents water in four states.

Start of Yoga sessions for the PCB Community.

Inauguration of the Patio of the Hèlix building.

Creation of the Sustainable Development section, with the publication of the weekly article in the "*T'interessa*" newsletter.



Sixth artistic work. Through a new contest, the artist Kelly Arrontes decorates the corridor of floor 0 of the Clúster I building with the work the “The Origin of Life”, with her unique vision of neurones and eye cells.

Start of the Influencers programme for the PCB Community.

The Park commemorates 20 years of the Park with a great celebration.

**2018**



**2019**

An agreement is signed with a private investor to prepare 600 m<sup>2</sup> of new laboratories in the Clúster II building.

Inauguration of the PCBeach outdoor space with the support of Qiagen.

Artistic intervention by Christophe Deluz with the “Cachalot” sperm whale work at PCBeach.

The Scientific Summer Schools for the PCB Community begin.

First edition of Reimagine Science, with Novartis and Big Van Ciencia.

**2020**







## 2022

Installation of the first 1.0 GHz nuclear magnetic resonance device in Spain and one of a few worldwide, led by the Scientific and Technological Centres of the UB (CCitUB).

Achievement of full occupation of the Park.

The Park's first Sustainability Plan (2022-2025).

Start of the physiotherapy service for the PCB Community.

The solidarity breakfasts promoted by the PCBakers begin.

2022-2024 Third accelerator in the Park, BCN Health Booster. An initiative of Barcelona City Council, Barcelona Activa, Biocat and the Park itself.



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## Budget



# The Foundation

The Barcelona Science Park Foundation forms part of the UB group and is an initiative promoted by the University of Barcelona which started to take shape in 1997. The Foundation participates in the activities related to research, in the promotion of its quality and, mainly, in the task of streamlining the connection of the University of Barcelona with the new demands and realities of society, in order to achieve the global university objectives.

The University of Barcelona strengthens its role as a public service through the Foundation facilitating the giving back of its scientific-technical capabilities to society.

## The Foundation's objectives:

- Managing and developing a scientific park with the personnel and material spaces and infrastructures necessary to make it possible for its users to develop the basic and applied research tasks, innovation and the transfer of technology and knowledge.
- Promote actions that enable improvement in the efficiency of the university's innovative and research work and its interaction with other research groups, companies and institutions.
- Create a privileged environment to promote innovation and technology transfer activities.



## Mission

To enhance public and private sector research, the transfer of knowledge and innovation, through an intelligent management of spaces, technological offer and the relationships and communication of the Park Community.

## Vision

Becoming an internationally renowned public-private research community for the benefit of the scientific leadership of Catalonia, its economic growth and the attraction of talent.

## Values

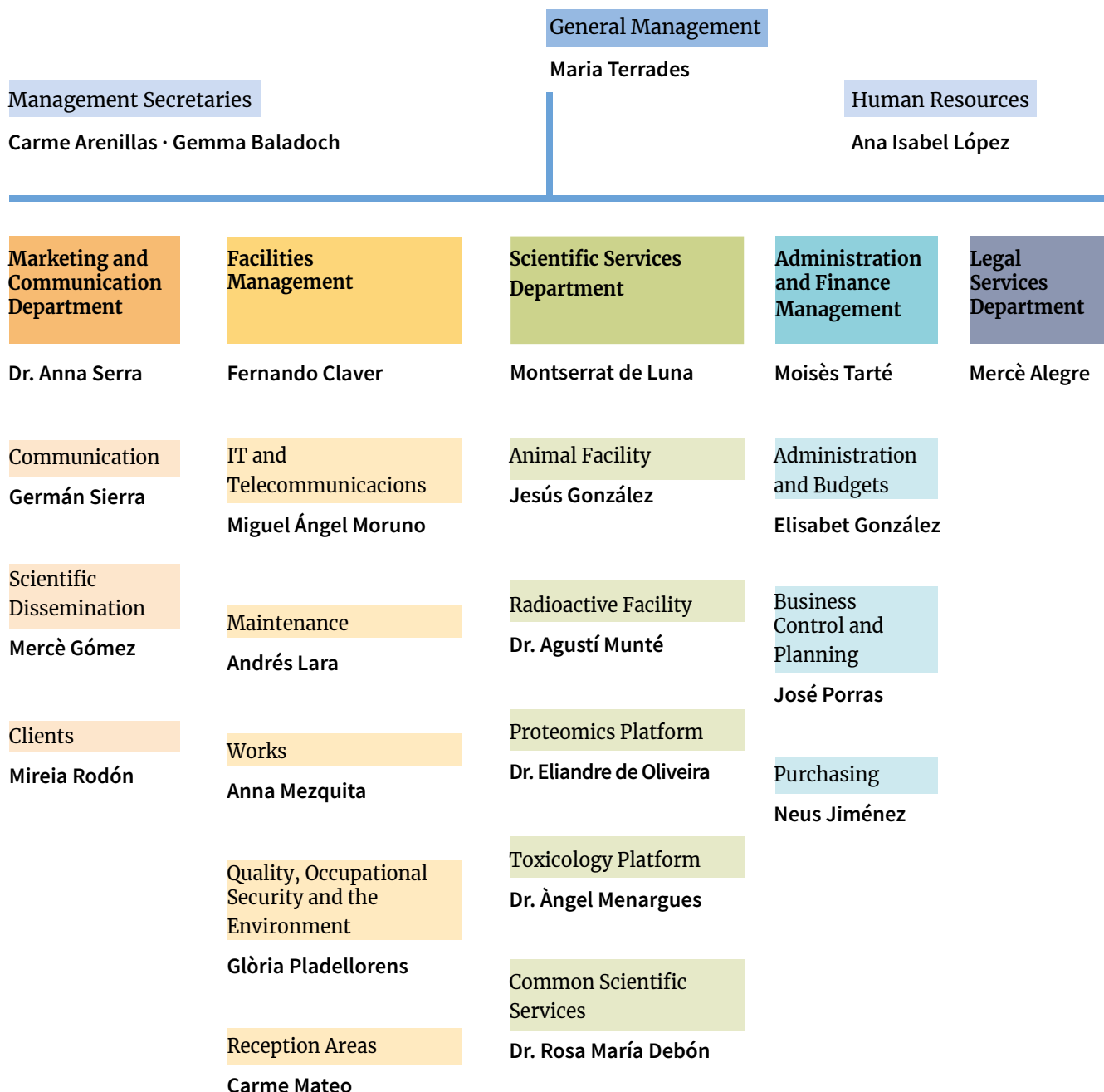
- Communication
- Commitment
- Responsibility
- Passion
- Teamwork

## Anti-fraud Policy

The anti-fraud policy is approved in June and the implementation of the corresponding measures begins with the elaboration and approval of the relevant risk map for the Park. In the application of this policy, the main procedures with potential risks are detected, and the initiatives needed to minimise them are planned. Another of the noteworthy measures is the implementation of the signature and mandatory compliance of the conflict of interest statement by all the people involved in tendering procedures.



# Organisational Chart





# Board of Trustees



**CHAIR**

**Joan Guàrdia Olmos**  
Rector of the University of Barcelona

The Barcelona Science Park Foundation was created in 1997 at the initiative of the University of Barcelona. The composition of its board of trustees in 2022 is as follows:



**FIRST DEPUTY CHAIR**

**Joan Corominas Guerin**  
Chair of the Social Council of the University of Barcelona



**SECOND DEPUTY CHAIR**

**Olga Lanau Rami**  
General Director of the UB Group (until 14 June 2022)



**SECRETARY**

**Marina Solé Català**  
General Secretary of the University of Barcelona



**NON-TRUSTEE DEPUTY SECRETARY**

**Miquel Amorós March**  
Secretary of the Social Council of the University of Barcelona



#### MEMBERS APPOINTED BY THE UNIVERSITY OF BARCELONA

##### **Glòria Matalí Costa**

Manager of the University of Barcelona



##### **Jordi Garcia Fernández**

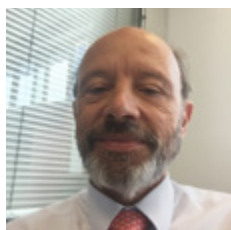
Vice-Rector for Research of the University of Barcelona



#### MEMBER APPOINTED BY BARCELONA CITY COUNCIL

##### **Jordi Martí Grau**

Deputy Mayor of Culture, Education, Science and Community



#### MEMBER APPOINTED BY THE SOCIAL COUNCIL OF THE UNIVERSITY OF BARCELONA

##### **Francesc Boada Pallerés**



#### MEMBER APPOINTED BY THE BOSCH I GIMPERA FOUNDATION

##### **M. Carme Verdaguer Montanyà**

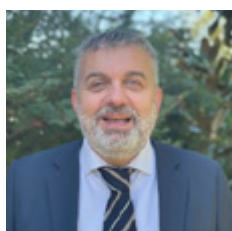
Director General of the Bosch i Gimpera Foundation



#### MEMBERS APPOINTED BY THE GOVERNMENT OF CATALONIA

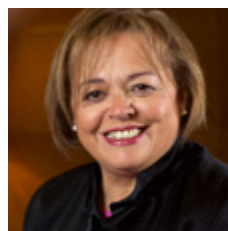
##### **Joan Gómez Pallarès**

Director General of Research



##### **Xavier Aldeguer Manté**

Director General of Knowledge Transfer



#### MEMBER APPOINTED BY THE SPANISH NATIONAL RESEARCH COUNCIL (CSIC)

##### **Rosa María Menéndez López**

Chair of the CSIC (until 21 June 2022)



##### **María Eloísa del Pino Matute**

Chair of the CSIC (from 4 July 2022)



# Team

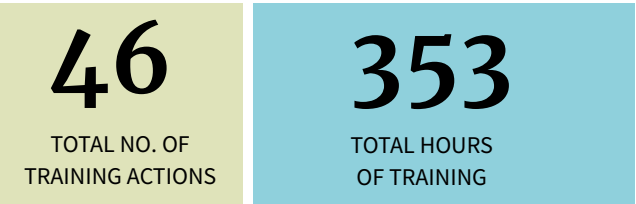
During 2022, the average size of the workforce was 86 people, two points below the previous year's average. The Park has a stable workforce, with low staff rotation although it was higher than in 2021, and a gender ratio with a predominant presence of women in the workforce, although the proportion of men has increased compared with 2021.

**Total 84**



## Training and development

In the field of the most transversal training aimed at the whole staff team, the one aimed at adopting the Microsoft 365 tool stands out with special emphasis on the Teams tools, OneDrive and Share Point as well as the continuous training oriented towards the service. All the departments and services have received training to deepen knowledge on the ISO 9001 and 14001 quality system.



## Creation of the Purchasing Department

The Purchasing Department which is incorporated into the Administration and Finance Management Department is created in order to facilitate and improve the management of the Park's purchases.

## Collective Bargaining

The PCB's 2nd Collective Bargaining Agreement lasting three years (2021-2023) is published, with a total of seven meetings being held between the Enterprise Committee and Management to monitor on the most significant issues.

## Career Plan for PCB Staff Project

Initiated in 2021, the final proposal of the PCB Staff Development Plan is presented.

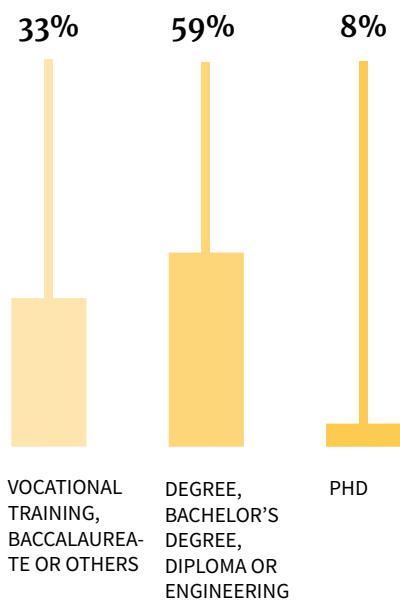
## The PCB Barbecue is Reactivated

After a long break caused by the pandemic, in July the best get together of the summer at the PCB is reactivated: the barbecue in the Garden, which brings together the entire PCB team for a relaxing day together.



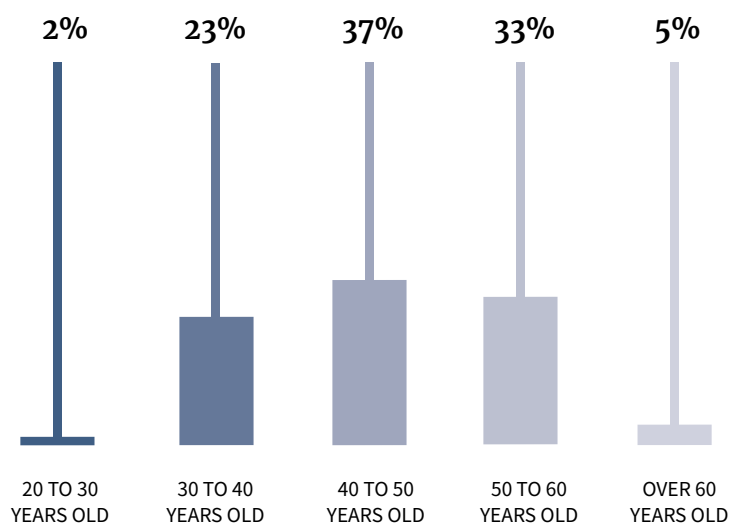


## Training



## Age

AVERAGE AGE 47 YEARS OLD



# Sustainability



## The Park's First Sustainability Plan

The Park prepares and approves its 2022-2025 Sustainability Plan with the aim of integrating institutional strategy criteria for economic, social and environmental growth compatible with sustainable development.

Four Strategic SDGs are identified (SDG 3: Good Health and Well-being; SDG 4: Quality Education; SDG 9: Industry, Innovation and Infrastructure; SDG 12: Responsible Production and Consumption)

Complementary SDGs (SDG 8: Decent Work and Economic Growth; SDG 13: Climate Action and SDG 17: Partnerships for the Goals)

These strategic and complementary SDGs are developed in 20 projects and 47 actions which will be implemented during the three years of the Plan. As one of the actions, the communication of the content of the Plan, during 2023 the content will be included on the PCB website.



## Main actions carried out during 2022

### SDG 3. Good Health and Well-being

Promotion of yoga and physiotherapy activities to improve physical and mental well-being aimed at the entire community and staff of the Park.

- Yoga: 2 weekly sessions with an average attendance of 50 people.
- Physiotherapy: 1 day per week with a capacity for 8 sessions and with an average of 30 sessions each month.

Contracting services to organisations and cooperatives working to employ people with disabilities or at risk of social exclusion: Gardening service with the Fundació Tallers, confidential destruction of paper and recovery of plastic with the Eina Association and the reuse of furniture in good condition with the Pont Solidari organisation.

### SDG 9. Industry, Innovation and Infrastructure

Creation and approval of the PCB Sustainability Plan to integrate the SDGs and sustainability into the business culture of both the Park and its Community.

## SDG 12. Responsible Production and Consumption

### WATER SAVING MEASURES

Installation of timed ECO taps and with an internal system which is able to save 77% of the water. In addition to the water saving technology, the taps are made with quality, resistant materials to ensure they have a long duration. Resistant, easy-to-repair elements, minimising the mixture of materials have also been sought to help with repairs and to manage waste easily.

Incorporation of new equipment to wash laboratory cages and glass with efficiency functions for water and energy consumption.

### ENERGY SAVING MEASURES

Changing traditional lighting systems to LED technology with an intelligent management system to optimise light intensity based on the occupation of common spaces and new laboratories. During 2022 the lighting systems in all the corridors in the Clúster I building were changed.

Application of Royal Decree 14/2022 on economic sustainability, savings and energy efficiency measures. In accordance with the above, the PCB has applied the following measures:





- The air temperature in heated enclosures is kept below 19 °C.

- The air temperature in cooled enclosures is kept above 27 °C.

Additionally, and although these measures do not affect laboratory spaces, the temperature set for centralised equipment in these spaces have also increased slightly, with the aim of making the research activity and energy saving compatible.

#### **PROMOTION OF THE CIRCULAR ECONOMY AND THE REDUCTION OF NON-HAZARDOUS WASTE**

- The donation of furniture in good condition but no longer needed to associations and non-profit organisations (office furniture such as chairs, furniture units, shelves and sofas).

- Recycling of high-density polyethylene pipette caps and boxes with an average of 20 sacks per month with a total weight of 4 tonnes of HPDE.

- Recirculation of cold blocks, preventing their destruction with an average of 40 m<sup>3</sup> per month.

- Elimination of the dissemination of minutes documents in paper form.

- Catering management minimising the environmental footprint by the application of non-food waste criteria and the elimination of plastic waste at events and meetings held in the Park's spaces.

#### **SDG 8. Decent Work and Economic Growth**

PCB Staff Career Plan design currently pending approval.

#### **SDG 13. Climate Action**

- Encourage the use of car sharing through the implementation of the Hoop Carpooling app to facilitate access to the Park through carpooling or motorbike sharing among users.

- Installation of a parking area within the Park which holds 4 folding bicycles and an electric scooter parking area with 20 places. Outside, 17 bars where 34 bicycles can park have been installed.

#### **SDG 17. Partnerships to achieve the Goals**

- The Park's participation as a guest member in the UB Sustainability Commission.

- Member of the Sustainable Research Barcelona (SuRe-BCN) working group, formed by 11 institutes in the Barcelona area.

# The Park in the Media

In 2022, it was possible to recover lost website traffic resulting from redesigning the website and the Intranet, which was carried out at the end of 2020. Over the year, the number of annual visits to the Park’s website has practically doubled and registrations from the years 2018, 2019 and 2020 have been improved. With regard to the number of news articles posted on the website, the previous two years have been exceeded, with 143 news articles posted and the number of mentions in the press has slightly improved as a result of the news articles published by the Science Park. These amount to 933.

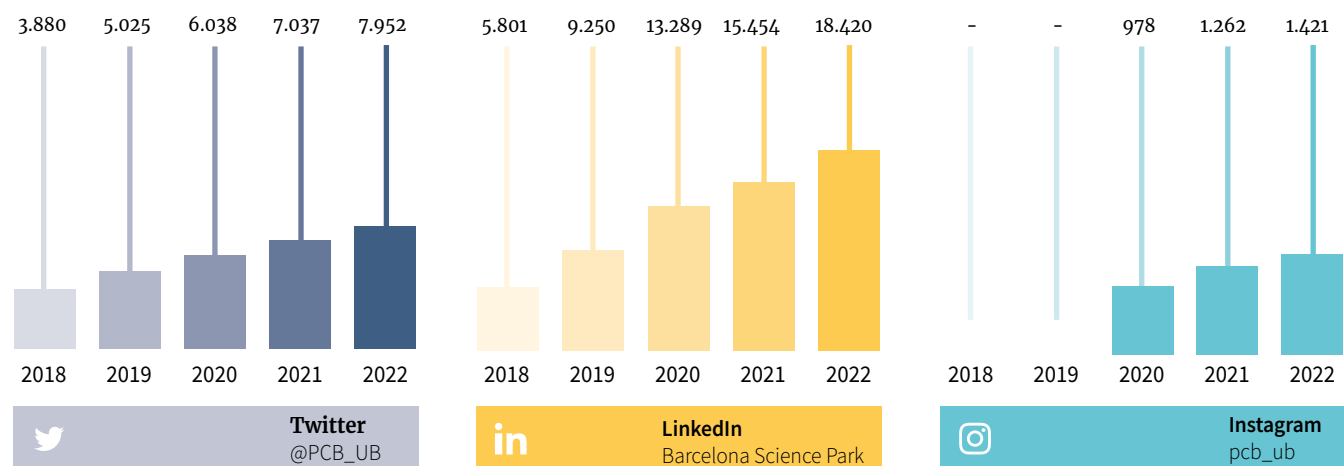
	2018	2019	2020	2021	2022
ANNUAL VISITS TO A WWW.PCB.UB.EDU	111.869	107.986	103.111	64.120	112.008
NEWS ARTICLES POSTED ON THE WEBSITE	145	148	134	141	143
MENTIONS IN THE GENERAL PRESS, SPECIALISED AND SECTOR WEBSITES	1.141	1.073	1.152	930	933

## Social Media

Twitter continues its progressive growth with virtually a thousand new followers in 2022 while LinkedIn consolidates its meteoric rise, with a very pronounced growth curve

in a trend that started during the pandemic. In just one year 3,000 followers have been achieved and the Park is approaching 20,000. The growth of Instagram, in turn, continues slowly but surely and the account already has almost 1,500 followers.

### Social Media Followers







# Laboratories Open to the Community



## Self-service laboratories, equipment and scientific infrastructure

The Park provides its users with laboratories, equipment and scientific infrastructure on a self-service basis. These laboratories are managed by Park staff who support users and ensure the services operate properly and suit the research requirements of companies and research centres alike.

Users and researchers from the organisations based in the Park use these scientific facilities for independent work, having access to all the equipment owned by the PCB.

## Online booking available

Facilities can be booked online by users, making the most of time for them and for the technical team supporting the spaces.

## Special Reaction Services

- 43 m<sup>2</sup> of equipped laboratories
- Infrastructure and equipment
- Hydrogenation laboratory
- Toxic products and hazardous reactions laboratory
- Specialised technical support

## Common Scientific Services

- 24/7
- 365 days a year
- 1,630 m<sup>2</sup> f self-service equipped laboratories
- 1,185 users
- Laboratories in Clúster I, Clúster II and the Hèlix buildings

## Investment in the Renovation of Equipment

# €381 m

INVESTMENT IN  
EQUIPMENT RENEWAL

- Biological safety cabinets
- Inverted microscopes and a vertical microscope
- Desktop centrifuges
- -80 °C freezers
- Ice making machine
- Small diverse pieces of equipment for the cold chamber
- CO<sub>2</sub> incubators for cell cultures
- Storage containers for nitrogen samples
- Bacterial shakers-incubators
- Rotor blades for high speed centrifuges and ultracentrifuges
- Microvolume spectrophotometer and cuvettes
- Refrigerated incubators
- High capacity centrifuge and rotor blade
- Photodocumentation equipment

## Infrastructure and Equipment

- 7 clean rooms
- 2 bacteria culture rooms
- 2 yeast culture rooms
- 1 chemical analysis laboratory
- 9 centrifuge rooms
- 11 rooms with standard equipment
- 6 rooms with shaker-incubators
- 1 climatic chamber at 37°C with shaking platforms
- 10 cold chambers, 6 ultra-low freezer rooms and 2 rooms with cryotanks
- 7 rooms with standard spectroscopic equipment
- 1 microscopy room
- 1 histology room
- 2 dark rooms
- 1 protein purification laboratory
- Laboratory material washing service

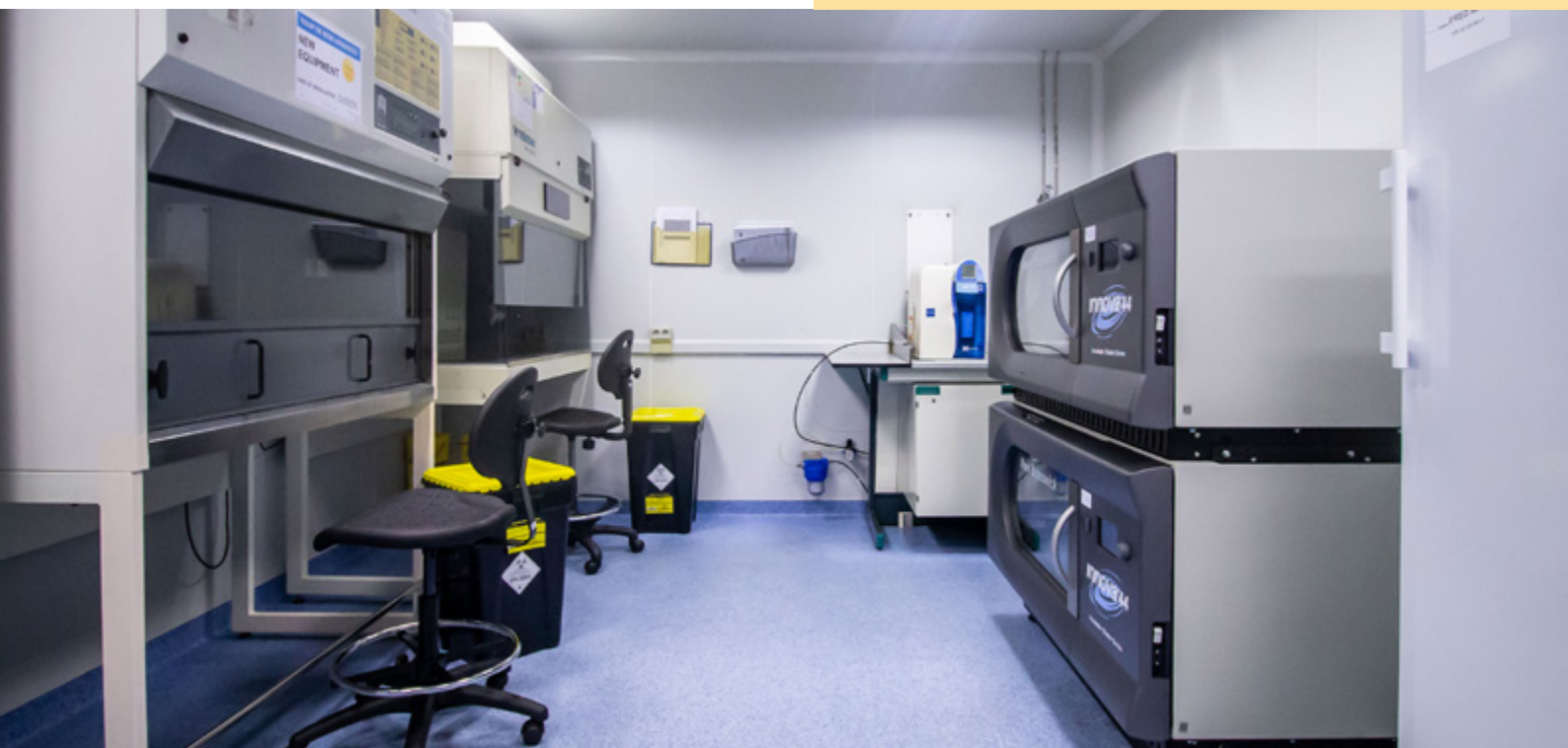
## Expansion of the Common Scientific Services rooms in the Clúster II Building

A new 125 m<sup>2</sup> space on the third floor of the Clúster II building has been adapted to provide services to new laboratories based in the Park. A fully equipped cell cultivation room with biological safety cabinets, CO<sub>2</sub> incubators, microscopes and centrifuges has been enabled, among others. There is also a properly conditioned room with seven -80 °C freezers attached to a remote alarm and a cold chamber with small pieces of equipment. The cell culture room has controlled access for users.



## New Microbiology Room in the Clúster I Building

The microbiology room has been expanded in a new location of 19 m<sup>2</sup> to respond to the increase of users from the Common Scientific Services. The room has the facilities necessary to work with bacteria: cabinets, shaker-incubators, refrigerated incubator and spectrophotometer.





## Radioactive Facility

- Two fully equipped central radioisotope laboratories with qualified technical support are available to users for handling molecules marked with radioactive isotopes.
- Optimum safety and radiation protection measures
- Authorisation of the Radioactive Activities Coordination Service from the Government of Catalonia and the Spanish Nuclear Safety Council
- Access restricted to authorised users
- 143 unique users throughout the year
- 190 m<sup>2</sup> of shared-use laboratories
- 300 m<sup>2</sup> of laboratories for authorised users only

€26 m  
investment

- Refrigerators and freezers
- Refrigerated centrifuges
- Pipettes
- Orbital Shaker



## Infrastructure and Equipment

- Cell culture area
- Animal experimentation area
- Counter room: beta and gamma counters
- System for capturing digital images using radioactive sample lasers
- Waste storage area
- Cold chambers
- X-ray radiator for biological samples

## Drosophila

Two equipped fly rooms allow users to conduct research with *Drosophila melanogaster* as an experimental model. There are also climate chambers and cabinets for growing flies and a preparation room for the fly culture medium.

+ 27.000 feed  
tubes per month

## Infrastructure and Equipment

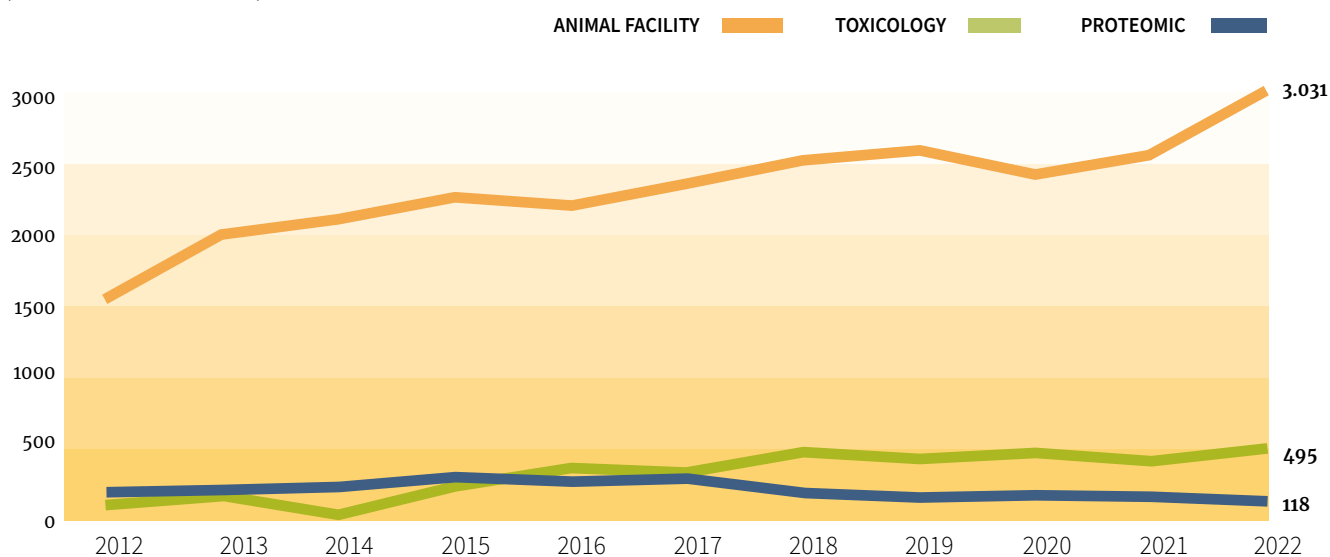
- Episcopic magnifying glasses
- CO<sub>2</sub> installation
- Climatic chambers and cabinets (at 18 °C and 25 °C)
- 4 °C chambers to preserve prepared food
- Preparation kitchen of the growth medium and supply of the porridge mixture

# Scientific Platforms

The Park has four scientific platforms featuring scientific and technical staff and their own equipment which provide services to organisations inside and outside the Park. These platforms give users access to cutting-edge scientific services which are essential to the research they carry out. Being part of the Park ecosystem encourages interaction between internal staff and users, optimising joint research.

## Evolution of the Scientific Platforms

(INCOME IN THOUSANDS OF €)



## Animal Facility

- The Park manages its zoology facilities to provide a benchmark platform for research using live models.
- 2,600 m<sup>2</sup>
- 2 SPF animal facilities for rodents (rats, mice, hamsters and guinea pigs)
- 1 animal facility for *Xenopus laevis* models
- 12.000 animals housed
- 395 accredited users

## Investment in the Renovation of Equipment

**€144 m**  
investment in  
equipment renewal

- Matachana industrial cage washer
- Biosis ventilation units
- Biosis ventilated racks with mini-insulators
- Steriltech laminar flow booths
- Anesthesia equipment
- Clothes washing machine and tumble dryer for the SPF
- Modifications and improvements to the ANIBIO software
- Consultancy for the preparation of the AAALAC accreditation project



## Guarantee and Quality

The Park is a signatory of the Transparency Agreement on Animal Research promoted by the Spanish Confederation of Scientific Societies in collaboration with the European Association for Animal Research.

We have an Ethics Committee for Animal Research, designated as an Authorised Body for evaluating animal research projects by the Government of Catalonia with 69 projects and pilot tests evaluated in 2022.

### The process to obtain additional accreditations related to animal quality and well-being has begun

The preparation project for obtaining the international Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) has begun. This is the highest standard of quality existing for institutions working with laboratory animals.

This Project is being developed with the help of an external consultancy. The descriptive project to be presented to AAALAC auditors has started to be implemented. All the changes and improvements required by this international standard will be incorporated into this project, relating to the maximum guarantee of animal welfare and occupational safety within the field of preclinical *in vivo* research.

## Integration of the Proteomics Platform into the CCIUTB

The Proteomics Platform became operational in September 2002 with the aim of providing proteomic-related services aimed at research groups and companies in the pharmaceutical and biotechnology sectors.

Following the Government of Catalonia's guidelines to unify efforts and provide Catalonia with more powerful, efficient and competitive centralised proteomics units, the Park's proteomics platform is integrated in January 2023 at the Scientific and Technological Centres (CCIUTB) in order to reinforce the offer of (bio)molecular analysis services. In 2022 the platform was prepared to carry out this integration from January 2023 onwards.

The Park's strategic location allows the laboratories to integrate with one another offering these services in a single location allowing better synergies between them and thus offer a close and efficient service both in the academic and



business world, mainly in the health sector. This reinforced offer includes proteomic services, but also studies of molecular interactions and small molecule analysis in order to carry out more comprehensive studies depending on the nature of the compounds to be studied.

These laboratories have a team of specialised technicians with wide experience in the fields of proteomics, molecular interactions and small molecule analysis.

## Toxicology Platform

The Toxicology Platform provides services for innovation, research and development, effective evaluation, ADME, experimental in vitro and in vivo toxicology, and ecotoxicology and microbiology, to guarantee the safety of a wide range of products from both pharmaceutical, biotech, cosmetic, veterinary, food, healthcare, personal hygiene, chemical, nano-material and environmental organisations and companies.



## Guarantee and Quality

The facilities, equipment and qualified personnel enable experimental studies, analysis, histotechniques and expert reports to be carried out under Good Laboratory Practices (GLP) and sanitary regulations, following the national and international guidelines and requirements in force for each of the sectors and regulatory agencies.

The UTOX team, together with Creatio (UB), are part of the avantdrug platform, and some members of the UTOX team are part of the Research Group in Toxicology (GRET) along with the Toxicology unit of the Faculty of Pharmacy of the UB.

## Research Projects

### **COLLABORATION CHALLENGES RTC2019-007070-1**

titled “Researching the potential of new molecules to treat fibrotic diseases II (DEFIBER II)” for the evaluation of a pre-clinical package for the safety of a new anti-fibrotic drug to achieve the clinical phase, 2020-2022.

### **MIG-20201012: CULTUREDMEAT**

titled “Researching meats of the future aimed at the prevention of colon cancer and dyslipidaemias” project aimed at evaluating the safety of new foods necessary for it to be marketed, 2020-2023.



# General Services

The Park manages its General Services to ensure that users can focus on their added value: innovation, research and training, among others.

## Meeting Rooms and Events



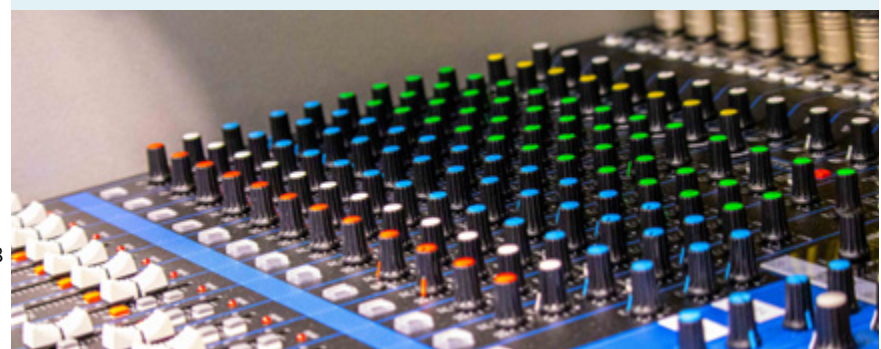
### Other Rooms and Facilities

Quiet room

Breastfeeding RoomNurse's RoomDressing Rooms

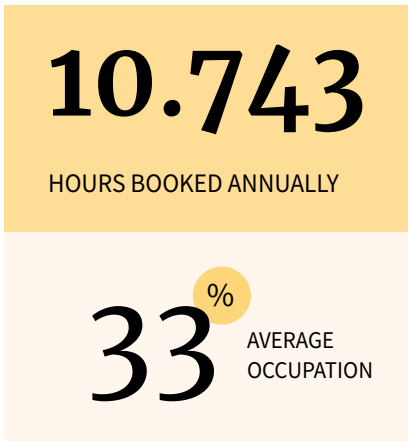
## New audio-visual equipment in the Fèlix Serratosa Hall

The sound system in the Fèlix Serratosa Hall has been improved with the installation and better distribution of new speakers and new microphone equipment and a sound board have been incorporated. The lighting has also been improved for better image quality when the room is used for streaming events.



## The Clúster I Reception Area is Revamped

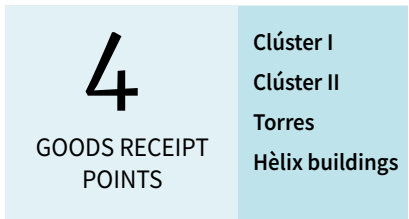
This year the first phase of renovation of the Clúster I reception area has been carried out with both aesthetic and functional reform to improve both the attention provided to users as well as the work carried out by receptionists at one of the main entrances of the Park.



## Goods Receipt and the Management of Correspondence

8:00 am – 7:00 pm

- Reception and user and visitor information point
- Management of meeting spaces
- Daily management of mail and courier deliveries



## 24/7 Security

- Access control and CCTV perimeter surveillance
- Fire and intrusion detection
- Centralised alarms for general air conditioning, freezers and cold chambers, main power and UPS power

## Telephony and IT Network

- Access to the scientific ring for public organisations. Internet connection for companies
- Ibercom corporate telephone network with Telefonica with the possibility of contracting other companies
- IP Services
- Shared-use Wi-Fi Networks, VPN and printers
- Server hosting service at the data processing centre
- Secured systems to minimise risks related to the use of communication networks

## Investment in Renovation and New Equipment

One of the UPS of the Data Centre has been replaced by another with a 33% higher capacity and the network equipment (host, physical, switching equipment) has also been replaced.

## Goods Distribution

Daily service for goods receipt and distribution

**36.618**  
ANNUAL  
RECEPTIONS

## Cleaning

Daily cleaning of common areas and spaces for users only 61 daily routines

**61**  
DAILY ROUTINES

## Maintenance and Works

- Designing and coordinating of the refurbishment of user space
- Facility maintenance, conservation, improvement and operation
- Supply of electricity and softened, deionised water
- Supply of laboratory gasses. Dispensing of liquid nitrogen and dry ice

### Annual interventions:

**8.167** PREVENTIVE  
MAINTENANCE ACTIONS

**8.657** CORRECTIVE  
MAINTENANCE ACTIONS

**3.021** MAINTENANCE ACTIONS  
REQUESTED BY USERS

## Investment in Renovation and New Equipment

An additional vacuum equipment and a new air compressor room have been installed to improve network availability.

## Laundry Service for Laboratory Clothing

Service includes the rental of 3 personalised lab coats per user, cleaned weekly.

## Shop

Consumable laboratory and office materials.

## Food Services

2

RESTAURANTS

>300

DINERS IN A  
SINGLE SITTING

7

ZONES WITH  
VENDING  
MACHINES

8

ZONES PREPARED  
FOR THE  
CONSUMPTION OF  
PACKED LUNCHES

## Supply and Management of Technical Gases

Usual technical gas supply: nitrogen, CO<sub>2</sub>, oxygen, argon, helium, hydrogen, synthetic air, compressed and vacuum air.

## Waste Management



62

TONNES OF BIOLOGICAL  
WASTE PER YEAR



102

TONNES OF CHEMICAL  
WASTE PER YEAR

- Selective door-to-door collection of laboratory waste
- User training
- Centralised management of office waste and other types of waste

### CLÚSTER I Cafeteria, outdoors

HÈLIX PTerrace, outdoors Multi-purpose Room, indoors

TORRE R Floor 1, indoors

TORRE I Floor 1, indoors

TORRE D Garden, outdoors

CLÚSTER II Room Fifteen, indoors, PCBeach, outdoors

## New equipment for video conferences and online seminars in the meeting and events rooms

New audio-visual resources have been set up in several meeting and conference rooms to enable videos of meetings or seminars to be broadcast on the internet or through the usual video conferencing programmes: Teams and Zoom. Video cameras have been installed in the ceilings and they have been integrated into the audio-visual systems of the halls in order to have this new service on the computers of the said halls and allowing the celebration of hybrid, in person and online acts. The megaphony equipment of the rooms is integrated into the new system so that people who are connected remotely can intervene in the same way as if they were present. The action was carried out at the Antoni Caparrós Auditorium, the Dolors Aleu Hall, the Fèlix Serratosa Hall, Room 3 of Torre I, and rooms 3 and 4 of the Hèlix Building. The monitors in rooms 3 and 4 of the Hèlix building have been renovated by replacing them with new 75", 4K resolution ones, thus substantially improving the quality of projections and videoconferences.

## Parking

- Monthly credits reimbursed to Park users
- Charging point for 11 electric cars and 2 electric motorcycles
- 24/7 security



512

PARKING SPACES FOR CARS



14

PARKING SPACES FOR ADAPTED CARS



54

PARKING SPACES FOR MOTORBIKES



21

PARKING SPACES FOR BICYCLES



10

SECURE PARKING SPACES FOR BICYCLES ON THE STREET





# Spaces

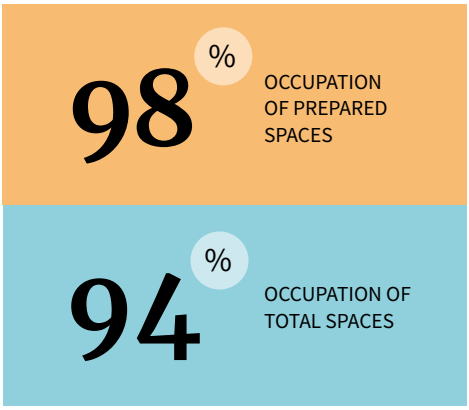
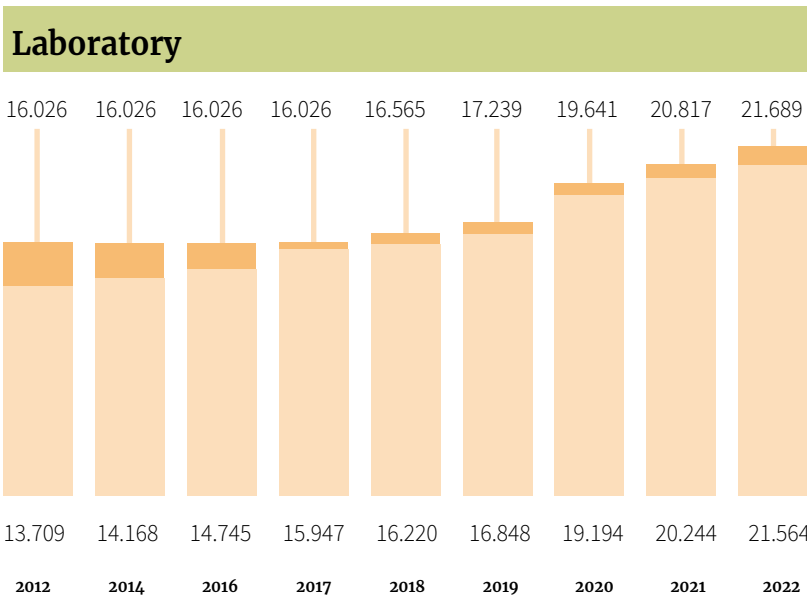
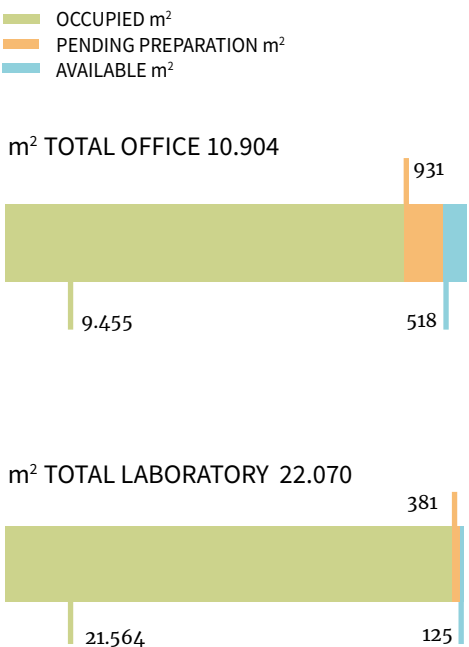
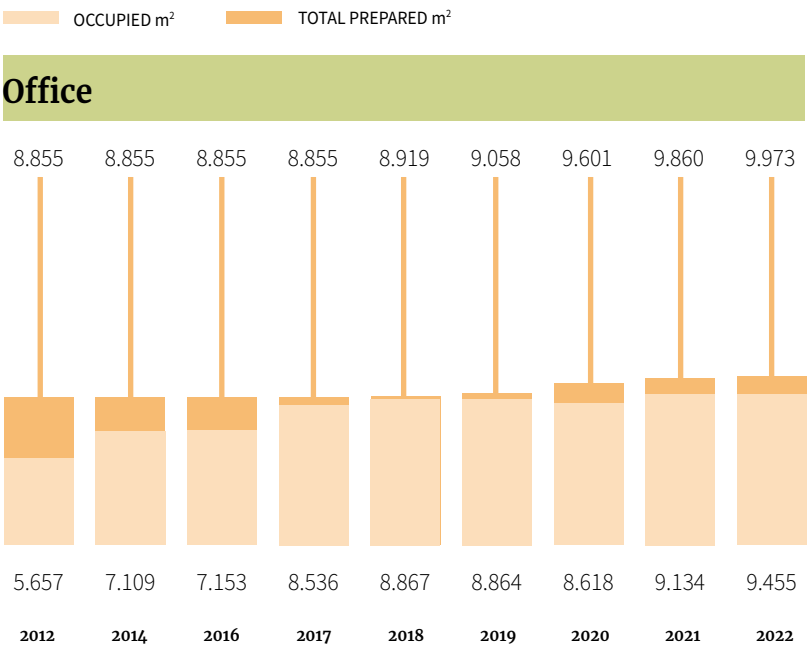


## Full Occupation of the Park

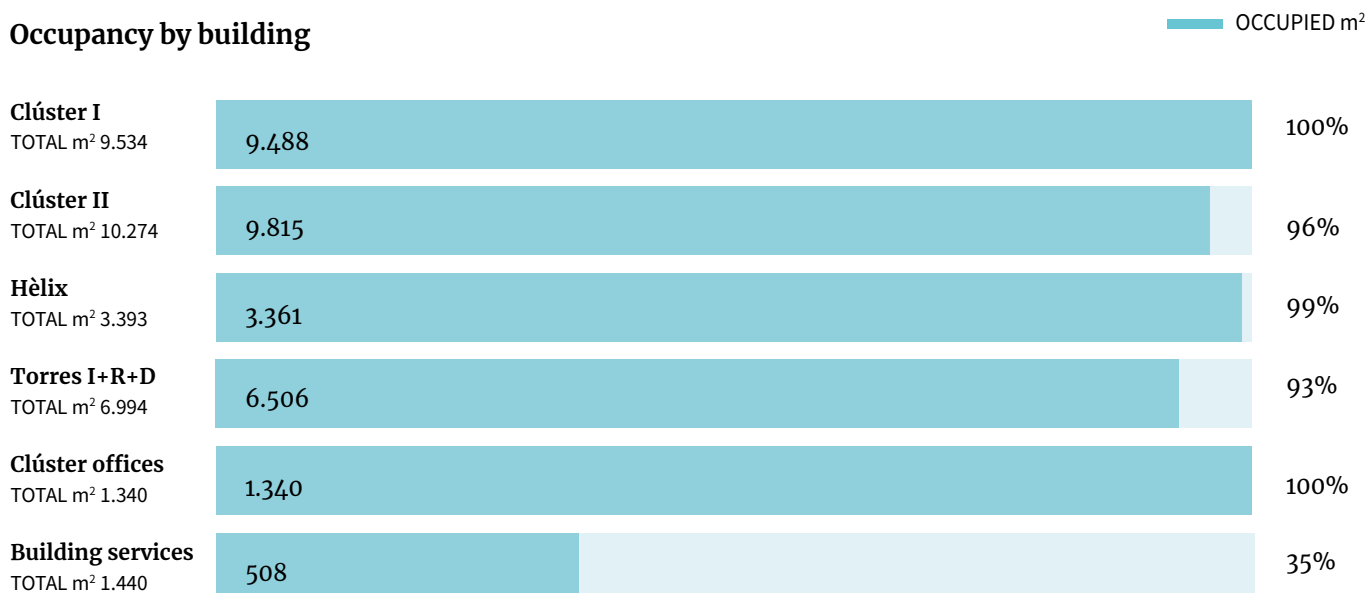
By the end of 2022, the Park has reached full occupation, with a total of 31,019 m<sup>2</sup> of office and laboratory space being occupied, 98% occupation of the prepared spaces and 94% of the total available space. This occupation represents a 6% growth compared to last year and during the year approximately 1,000 m<sup>2</sup> of new spaces, mostly laboratories, have been prepared.

Regarding office spaces, occupation is at 87%, with about 500 m<sup>2</sup> of office space in the Torres and the Cub buildings pending preparation. As for the laboratories, occupation is at 98% and the remaining 2% has already been rented with occupations that will be carried out during 2023.

## Change in use of office and laboratory spaces (useful m<sup>2</sup>)



## Occupancy by building



## Interventions carried out in the spaces

### Improvements to Torres R, D and I Buildings

Climate control has been installed in the corridor that connects the Torres R, D and I buildings. With this intervention, a pleasant temperature can be achieved for both the regular users as well as when catering events are held related to events taking place in the Auditorium.

The climate control and flooring of several floors in Torre D have also been renewed.

The adaptation of the exterior evacuation stairway of the Torre D building.

Painting of the lobbies of Torre R and Torre I.

### Improvements to the Hèlix Building

The floors of all the corridors of the Hèlix building has been repainted.

A plant area has been placed in the Hèlix patio.

Solar filters have been replaced on the south façade of the Hèlix building.

There is a new perimeter enclosure around the laboratory gas tank area.

### Improvements to the Clúster I Building

The lighting of the Clúster I corridors has been replaced with LED technology with motion and luminosity sensors.

The data network conduits have been doubled to allow for the growth in demand for services.

A high-speed automatic door has been installed at the entrance to the animal facility washing area.

### Improvements to the Clúster II Building

Two new work points with tables and chairs have been set up in the corridors on Floor 3 of the Clúster II Building. These spaces are designed for individual work or informal meetings. As it is not a closed space, it is essential to talk quietly during its use so as not to disturb the adjacent spaces.

New spaces for cleaning and waste management have been enabled on floor 3.

New warehouses for customers in the basement were enabled during 2022.

### Improvements to the Clúster Offices

New LED lighting in the corridors on the first floor.

Replacement flooring and painting of the meeting rooms.

Installation of parking spaces for bicycles on the street.



# BCN Health Booster

The objective of the BCN Health Booster accelerator is to strengthen the life sciences sector through the acceleration of eleven newly created innovative business projects, which demonstrate potential and financial viability. The 3-year programme allows access to a partially subsidised laboratory in the Park and a specialised acceleration programme provided by Biocat.

BCN Health Booster is an initiative of Barcelona City Council, Barcelona Science Park, Barcelona Activa and Biocat.

## Selected Companies



## Main indicators 1st year of acceleration

START OF THE PROGRAMME	END OF 1ST YEAR	INCREASE
<b>66</b> PEOPLE	<b>98</b> PEOPLE	<b>48%</b>

## Female presence in the founding or management team

START OF THE PROGRAMME	END OF 1ST YEAR	INCREASE
<b>14</b> WOMEN	<b>20</b> WOMEN	<b>43%</b>

## International presence in the founding or management team

START OF THE PROGRAMME	END OF 1ST YEAR	INCREASE
<b>7</b> INTERNACIONAL WORKERS	<b>9</b> INTERNACIONAL WORKERS	<b>29%</b>

## Nationalities

Germany	Colombia	South Korea	Poland	Belgium	United States	Italy
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## The main R+D+i indicators

The main indicators in which research and innovation is being carried out have not changed during the first annuity. Thus, seven of them are in the therapeutic product discovery phase, three in the development of diagnostic tools for different diseases and one in the design of biomaterials for the health sector. 64% of companies work in the field of oncology, either in finding treatment solutions or in the early detection of cancer. The rest develop products for the detection of infectious diseases, drug release systems for chronic diseases, and drug discovery for different fibrotic diseases.

## Funding achieved during the first annuity

During the first annuity, the 11 companies have achieved €51.8 M in funding, 106% more than they had already raised before joining the programme. Of this €51.8 M, €15.8 M have been achieved through investment rounds, €15.4 M through competitive projects and €20.6 million from other financing sources.

**€51,8 M**  
ACHIEVED

## Patents

START OF THE PROGRAMME	END OF 1ST YEAR	IN PROCESS	INCREASE
<b>17</b> PATENTS	<b>19</b> PATENTS	<b>30</b> PATENTS	<b>12%</b>



# Research in Society Programme

The Barcelona Science Park Foundation promotes a knowledge-based society through the Research in Society Programme, which aims to promote scientific vocations and the critical spirit of students from the ages of 10 to 18 based in Catalonia.

100	>6.500	150	15	151
ACTIVITIES PER YEAR	PARTICIPANTS PER YEAR (BETWEEN THE AGES OF 10-18)	EDUCATIONAL CENTRES	RESEARCH CENTRES	RESEARCHERS

## Discover Research

5th and 6th year primary school students

872	STUDENTS
21	EDUCATIONAL CENTRES
61	TEACHERS
35	ACTIVITIES
2	THEMED WORKSHOPS

## Do Research

Secondary school, Baccalaureate and vocational training students

1.100	STUDENTS
53	EDUCATIONAL CENTRES
89	TEACHERS
43	ACTIVITIES
8	THEMED WORKSHOPS

## Workshops

Each year, the PCB organises 90 workshops for students from the 5th year of primary school (aged 10) to the 2nd year of Baccalaureate in secondary school and those doing vocational training courses (aged 18). This activity has been carried out since 2007 and consists of a guided tour of the Park plus a scientific workshop in OpenLab, a laboratory located in the Park intended for science dissemination activities.

The workshop, which lasts for about two hours, is taught by a scientist from one of the research centres located in the Park (IRB Barcelona, IBEC, CNAG-CRG and IBMB-CSIC) and can host around 25-30 students per workshop.

Participants can experience what research is all about in the flesh by participating in experiments in fields such as genetic engineering, biotechnology, biomedicine, nanoscience or mathematics.

This year's "Do Research" workshop offer expands its subjects with the new workshop: "Research the Biomechanics of Cancer!" introducing biomechanics so that students can conduct an experiment which shows how the mechanical abilities of cancer cells are investigated to learn and determine how aggressive the cancer process is or to evaluate possible treatments.

## BATX2LAB

Since 2005, BATX2LAB has been organised to tutor and implement 40 research projects in the fields of life sciences for baccalaureate students. The activity allows 40-45 first year baccalaureate students to start their research project by doing work experience in PCB laboratories whilst being tutored by research staff at both the research and the business centres. Each year, 3 awards are given to the best research projects. The winners have the opportunity to present their research at the Live Research Fair activity.

## 18th edition

40 TUTORED RESEARCH PROJECTS  
CARRIED OUT BY 45 STUDENTS



30  
GIRLS



15  
BOYS

21 RESEARCH STAFF



14  
WOMEN



7  
MEN

## Live Research Fair

The Live Research Fair has been being held for 19 years with the aim of publicising the life science projects which are currently being developed in the research centres throughout Catalonia through a fair held at Cosmocaixa with 11 exhibitors, each dedicated to a different research topic.

The Fair takes place over 4 days and each exhibitor and working researchers present their research to secondary school and Baccalaureate students. On Saturdays the Fair opens to the general public. One of the exhibition areas is reserved for the Baccalaureate students who have won the BATX2LAB activity, and it displays the results of their research project.

**Memory Game "Referencia't!** This is the parallel interactive activity that is created in the "100% of the talent is necessary!" space. A video demonstrates evidence of gender equality in the research and the knowledge is put into practice with the Memory game! Challenging the participants, through a memory or pairs game, to find out who the renowned male and female scientists are in the fields of research that are exhibited at the Fair as well as what milestones they have achieved, with the intention of breaking sexist stereotypes and gender roles in science.

41

EDUCATIONAL CENTRES

105

RESEARCH STAFF

1.973

STUDENTS

104

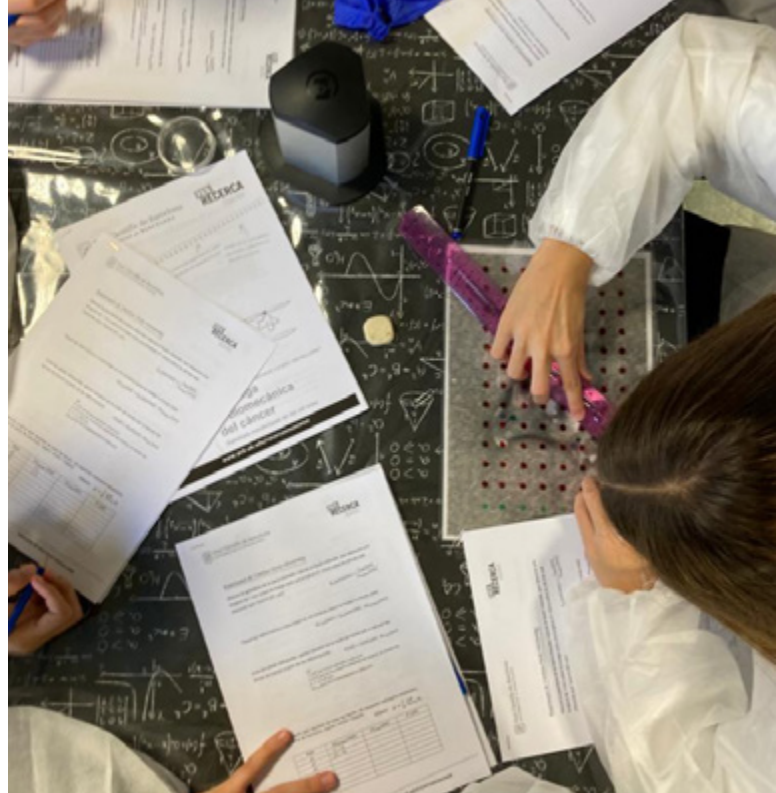
TEACHERS

## Reimagine Science: Clinical Trials, Research and Medicines!

Scientific monologues have been carried out for three years which aim to reflect and generate opinion on scientific advances and their impact on current society through humour, irony and the performing arts.

Together with Novartis and Big Van Ciencia, workshops aimed at 3rd and 4th-year secondary school and Baccalaureate students are organised to reflect on the importance of clinical trials, disprove false myths and highlight the need for society to participate in them in order to develop new medicines.

Once they have participated in the workshop at the Park, the students have the opportunity to create an artistic representation in video format together with their teachers and participate in a final contest in which schools throughout Catalonia compete.



## Collaborations

Exporecerca Jove - Organised by: Magma

*Les cares de la meningitis* (The faces of meningitis) - Organised by: Spanish Association against Meningitis and New Born Solutions. Science Festival - Organised by: Barcelona City Council. European Researchers' Night - Promoted by: The European Commission within the Marie Skłodowska-Curie programme.

Our thanks to all our partners:



Our thanks for the financial support from:



1.935 STUDENTS

52

EDUCATIONAL CENTRES

81 TEACHERS

67

VIDEOS RECEIVED

# The Ecosystem

The Park Community is made up of almost 3,500 researchers, technicians, entrepreneurs and businesspeople in a total of 126 organisations. These professionals mainly work in the health sector: pharmaceuticals, biotechnology, medical devices, nutrition and cosmetics.

## 7 research centres

**Institute for Research in Biomedicine of Barcelona (IRB Barcelona)**, created in 2005 and located at the Park from the very beginning. It has 27 research groups and 457 research staff.

**Institute for Bioengineering of Catalonia (IBEC)**, created in 2005 and based at the Park from the beginning, carries out multi-disciplinary research of excellence on the frontiers of engineering and the life sciences to generate knowledge and help solve health issues. It has 22 research groups and 372 research staff.

**Molecular Biology Institute of Barcelona (IBMB-CSIC)**, created in 1998 and located at the Park since 2003. It has 28 research groups and over 174 research staff.

**National Centre for Genomic Analysis (CNAG-CRG)**, created in 2009 and located at the Park from the very beginning. It has a sequencing unit and a bioinformatics unit, plus 6 research groups carrying out genomic analysis projects. A total of around 100 staff work in the centre.

Research groups from the **University of Barcelona** and the **Institute of Cosmos Sciences of the UB (ICCUB)**.

The Research Group of the VHI **Clinic Foundation for Biomedical Research**.

The Rheumatology Research Group is a research group of the **Vall d'Hebron Research Institute Hospital University Foundation (VHIR)**.

126

ORGANISATIONS  
ESTABLISHED AT THE PARK

7

RESEARCH CENTRES

100

COMPANIES: SPIN-OFFS; STARTUPS;  
SMES; LARGE, NATIONAL AND  
MULTINATIONAL COMPANIES

12

NON-PROFIT ORGANISATIONS:  
FOUNDATIONS, BUSINESS  
ASSOCIATIONS, PATIENT  
ASSOCIATIONS AND  
TECHNOLOGY CENTRES

7

GROUPS, UNITS AND SERVICES OF THE  
UNIVERSITY OF BARCELONA

## New companies based in the Park



## New associated companies



## Companies

### Biotechnology – Therapeutics and Diagnostics





## Pharma



## Cosmetics



## Food



## Medical Technology



## Digital Health



## Biotechnology – R&D Services



## Professional Services and Consulting



## Supplier and Engineering



## Other Business Sectors



## Research Centres



## Non-profit Organisations

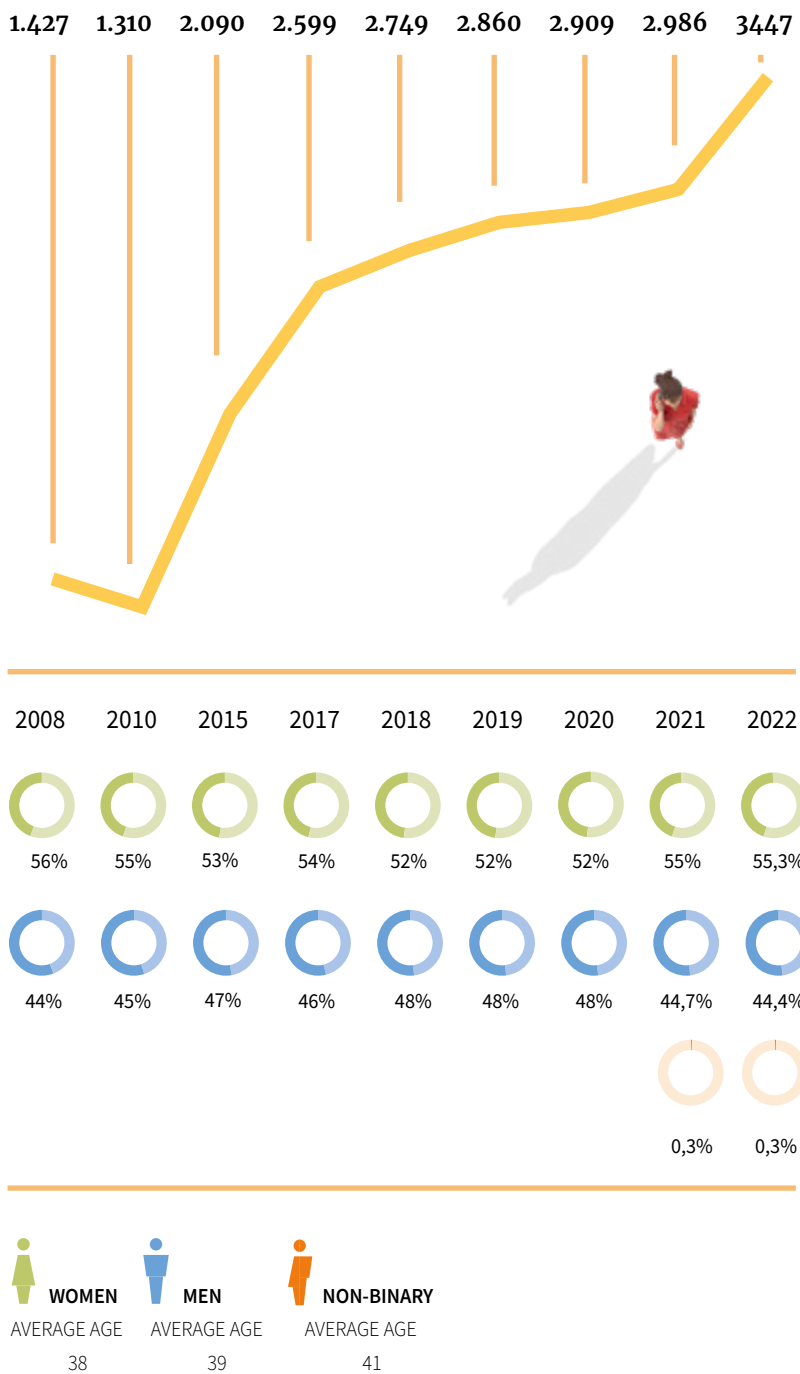


## University of Barcelona Groups, Units and Services



# Evolution of the Park Community

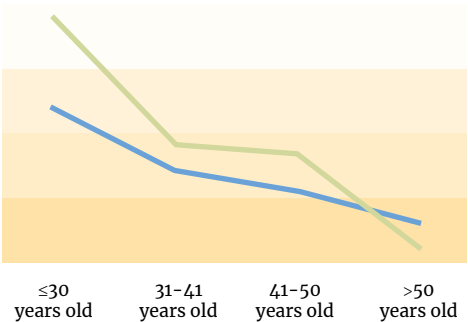
The Park Community has grown by 15% from 2,986 professionals at the end of 2021 to 3,447 at the end of 2022. The gender ratio remains the same as the last 15 years with 55% female presence, 44% male and less than 1% non-binary people. The average age is 39 and the presence of international employees also remains stable, representing 19% of the population with a total of 59 different nationalities represented.



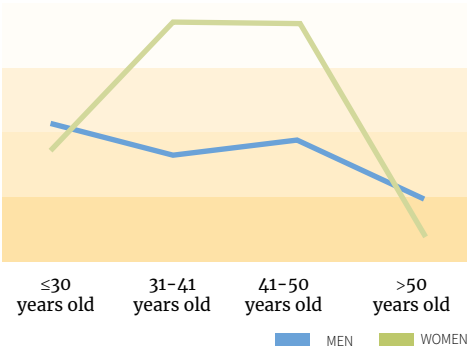
## Distribution of genders depending on age

Below is the distribution of the number of users depending on their age and by sectors. As the percentage of non-binary people is less than 1% they could not be represented in this classification.

### Public sector professionals



### Private sector professionals



The following institutions have been classified as being in the public sector: IRB Barcelona, IBEC, IBMB-CSIC, CNAG-CRG, Vall d'Hebron, Hospital Clínic, University of Barcelona research groups and the CCiTUB centres. The other organisations have been included in the private sector graphics.

In the distribution of the public sector, the typical scissor-shape graph where the professionals of a younger age are mostly female, in contrast, as the age of the professionals and their career progresses, the gender ratio declines and actually reverses, with there being more men than women in the over 50 age range.

This trend is not observed in private sector distribution. In the under 30 and over 50 age ranges there are slightly more men than women and in the 30 to 50 age range, the proportion of women is higher.

Although there is a different tendency between the two sectors, overall, the Park's community is experiencing a loss of female professionals as they get older. There is still a lot of work to be done.

## 59 Nationalities



## Top 5 nationalities



The number of nationalities represented has decreased, going down to 59. Those in the top four positions remain the same, Italy, France, Portugal and Germany and in fifth position this year is Argentina instead of India which occupied this position last year.





# Activity Reports of the Park Community

In the next few pages, you will find two activity reports which bring together all the important milestones achieved by the public research centres and the companies located in the Park. The reports are compiled during 2022 and look retrospectively over the whole 2021 financial year.

## The Barcelona Science Park, a Strategic Hub of Excellence for Public R+D+i

The progress in financing, knowledge generation, technology transfer and innovation management achieved in 2021 by the centres, institutes and research groups present at the Barcelona Science Park reaffirm it, for another year running as a strategic hub of excellence for public R+D+i. Together, they mobilised about €66 million, resources that allowed them to promote, in a very proactive way, the valuation and exploitation of the results of their research to bring innovation in health to the market and contribute to the economic growth of the country.

2021 has been a year full of challenges and milestones achieved by the centres, institutes and public research groups which develop their activity at the Barcelona Science Park. All of them make up a leading scientific community, one that is very dynamic and constantly growing, made up of two Severo Ochoa Centres of Excellence: the Institute for Bioengineering of Catalonia (IBEC) and the Biomedical Research Institute of Barcelona (IRB Barcelona); the Institute of Molecular Biology of Barcelona (IBMB-CSIC), with a María de Maeztu Unit of Excellence; and the National Center for Genomic Analysis (CNAG-CRG), part of the Spanish Map of Scientific and Technical Infrastructure (ICTS).

The Technological Unit of the Institute of Cosmos Sciences of the University of Barcelona (ICCUB-Tech), the VHIR Rheumatology Research Group, and five laboratories and research groups of the UB also integrate this public R+D+i ecosystem, to which the AIDS and HIV infection Group of the IDIBAPS-Hospital Clínic was recently incorporated, set up in 2022.

All the activity generated by these centres consolidate the PCB as one of the most powerful spaces in the country in the field of health research and position it as a strategic hub of excellence for public R+D+i.



**According to the Park's Director, Maria Terrades, "in the highly stimulating environment for research, technology transfer and innovation in life sciences that the Park offers, in 2021 these leading centres and public groups have expanded the borders of scientific and technological knowledge to contribute to the improvement of the health and quality of life of society for another year running."**

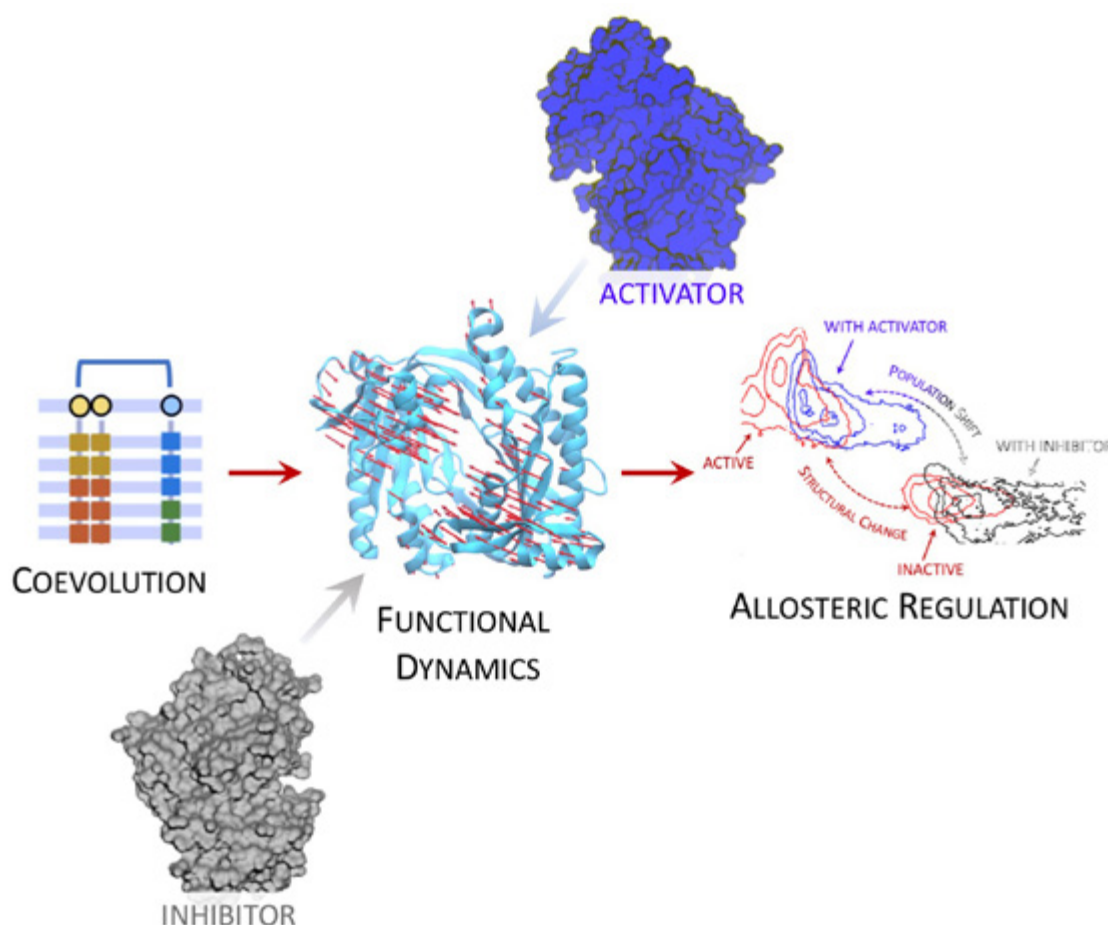


Image: IRB Barcelona

## Gaining Funding to Grow

2021 was a big year, in terms of attracting financing, for the institutes, centres and public research groups present in the Park, which mobilised around €66 M between public (€56.4 M) and private (€9.5 M) capital.

IRB Barcelona, occupying 5,365 m<sup>2</sup> at the Park in 2021, with 28 research groups, 8 scientific platforms and over 410 people working in research, executed a total of €28.7 M (€23.5 M from public financing and € 5.2 M from private financing).

IBEC, occupying 3,551 m<sup>2</sup>, with 23 research groups and 320 researchers - achieved a total of €14.1 M (€11.2 M from public financing and €2.9 M from private financing). CNAG-CRG, occupying 1,401 m<sup>2</sup>, with 16 groups, and a scientific team of 90 professionals, obtained €10 M (€8.7 M from public financing and €1.3 M from private financing).

IBMB-CSIC, occupying 2,020 m<sup>2</sup>, with 30 research groups and 146 researchers raised a total of €3.6 M (€3.5 M from public financing and €0.1 M from private financing).

Within the groups, laboratories and research units of the University of Barcelona (UB) located in the Park, noteworthy is the NMR of Biomolecules (BioNMR Group), recognised by the Government of Catalonia, which was the beneficiary of the €8.9 M grant, awarded to the UB by the Ministry of Science and Innovation, to install the first ultra-high-field nuclear magnetic resonance device in the Barcelona Science Park in Spain. The equipment, which will be incorporated into the ICTS NMR of Biomolecules Laboratory Network, will be managed by the Scientific and Technological Centres (CCiTUB). In total, the investment gained by the BioNMR Group in 2021 was €9.1 M from public funds.

The UB's Metabolic Dynamics in Cancer Laboratory obtained €0.2 M, and the Technological Unit of the Institute of Cosmos Sciences (ICCUB-Tech) gained another €0.2 M from competitive public calls.

**"The research centres and public groups in the Park mobilised around €66 M in 2021"**

## Bringing Innovation in Health to Society

Regarding the management of innovation, during 2021, the PCB Community's centres and public groups maintained their firm commitment to the protection of research results, knowledge valuation, and technology transfer, driving economic growth and the quality of life of society.

Its R+D+i activity was mainly aimed at managing its projects from a market perspective, through technology licensing agreements, the creation of derivative companies, contract research, and the establishment of partnerships with institutions and companies around the world so that the results of their research can be made profitable through the creation of new products or processes. Its indicators prove this.

With regards to intellectual property, the centres and public groups present at the Park presented a total of 17 applications and extensions of priority patents: the IBEC (10); the IRB Barcelona (3); the IBMB-CSIC (3) and the ICCUB-Tech (1). Managing patent-derived information is a key element in the innovation process. In 2021, IRB Barcelona signed a total of five licensing contracts for its patented technologies, and the IBEC signed one.

In terms of entrepreneurship, the IBEC created a new spin-off company, Vitala, which combines innovative bioengineering technologies such as 'organs on chips' and advanced imaging techniques, to offer unprecedented value in the pursuit of therapeutic compounds in their preclinical phase, as well as in the selection of the best clinical medicine.

**"The centres and public groups in the Park presented 17 applications and extensions of priority patents"**

The discoveries with the market potential of IRB Barcelona have also given rise to another spin-off company, Nuage Therapeutics, which focuses its activity on the discovery of new medicines aimed at therapeutic targets that, due to their structural properties, have been difficult to reach until now.

Cooperation with public institutions and national and international private companies, was also a key chapter for the Park's public centres and groups in the process of assessing knowledge and technology transfer to resolve current and future health challenges from a global perspective. During 2021, the park as a whole launched a total of 1,124 collaborative projects with various public and private organisations

around the world: CNAG (691), IRB Barcelona (215), IBEC (140); IBMB-CSIC (57), ICCUB-Tech (15) UB Group - Metabolic Dynamics in Cancer (1) and the UB-NMR of Biomolecules group (5).

## A Commitment to Attracting Talent and State-of-the-Art Equipment

The public centres and groups of the Park also committed to the attraction of young scientific talent with international projection.

In 2021, three scientists joined IRB Barcelona, to direct three new research groups, Cristina Mayor-Ruiz - Protein Degradation and Drug Discovery; Alejo Rodríguez-Fraticelli - Quantitative Stem Cell Dynamics; and Dìrena Alonso-Curbelo - Inflammation, Tissue Plasticity & Cancer. The IBEC also incorporated the Molecular Imaging for Precision Medicine Research Group, led by Irene Marco-Rius. Finally, the IBMB-CSIC also contracted Marc Liesa to direct the new group, Mitochondria, Redox and Metabolic Diseases.

To enhance its excellence, and to continue at the forefront of innovation, in 2021 the public R+D+i community of the Park also invested in state-of-the-art equipment, developing powerful tools and techniques to accelerate and enhance new research lines and promote the attraction of talent.

The UB's NMR of Biomolecules Group incorporated the first 1 GHz NMR equipment in the whole of Spain, and a new helium liquefaction system; IRB Barcelona created the Drug Screening Platform; the CNAG-CRG acquired two new sequencers, a third Illumina NovaSeq 6000 and the Oxford Nanopore Technologies PromethION 24; the IBMB-CSIC incorporated the Glacios Cryo Transmission Electron Microscope for its new Cryo-Electron Microscopy Platform to the ALBA Synchrotron, a vibratome for the Histology Service platform and a Cryoconserver; and the IBEC launched a high-performance analytical platform for nanoparticle and macromolecule characterisation.

## Leading Frontier Research

With regards to bibliographic production, for another year running, the indicators of the institutes, centres and public groups present in the Park made their commitment to pioneering Frontier Research and to that of a high global impact clear, with a total of 625 publications in international scientific journals: the IBEC (230), the IRB Barcelona (188), CNAG (107), IBMB-CSIC (51), ICCUB-Tech (44), the UB-NMN of Biomolecules Group (3) and the UB Group - Metabolic Dynamics in Cancer (2).

This frontier research was reflected in a large number of disruptive projects which aim to provide answers to the great challenges of science and world health.

### **"The centres and public groups in the Park published a total of 625 articles in international scientific journals"**

- The main advances of the CNAG-CRG were linked to the development of tools that facilitate the identification of variants and gene mutations responsible for multiple diseases. The results obtained by the RD-Connect GPAP were announced in 2021. It is the largest platform for the discovery of genes and the diagnosis of rare diseases financed by the European Commission and which are developed, hosted and coordinated by the centre, which accumulated more than 20,000 genomic profiles and anonymised phenotypes, facilitating the diagnosis of almost 1,000 patients, and used by over 500 researchers. It also partnered with some US institutions to form the Center for Genome Imaging, an infrastructure located at Harvard University to design technologies that enable visualisation, analysis, and modelling of the entire human genome at an incredibly high resolution. Moreover, members of the centre's scientific team created the First Atlas of immune cells from human cancers for precision oncology; their findings revealed that different types of tumours show surprisingly similar patterns to that of the immune cells residing inside them, and with this knowledge they created a classification system to help predict the response to immunotherapy and the prognosis of cancer to a level that far exceeds current methods. Also noteworthy is its participation in the IMPaCT platform, set up in 2021 in order to provide the Spanish National Health System with a collaborative structure for the implantation of genomic medicine in health care.

The quality of IBEC's research of excellence in bioengineering was reflected in the achievement of milestones of various research projects in advanced therapies. For the first time ever, the collective movement of millions of nanorobots could be observed in vivo. It was the research for the intelligent biological device group, a pivotal advance in the race of nanorobots to become the protagonists of highly accurate therapies and treatments. From the Biosensors Research Group for Bioengineering, the first 3D model using cells from myotonic muscular dystrophy patients was created which will allow the design of personalised and more effective treatments. In the field of targeted drugs, for the first time, the IBEC Nanoprobes and Nanoswitches group managed to develop molecules that allow activating and

deactivating neuronal circuits using light, in a non-invasive way and which will facilitate the specific action of drugs. In their fight against bacterial infections, the Bacterial infection: antimicrobial therapies group in collaboration with the Nanobioengineering Group designed a new device to make a personalised and precise diagnosis of chronic bacterial infections; the BiofilmChip will be used to identify the most appropriate treatment. The Pluripotency for organ regeneration group developed kidney organoids that presented mutations for kidney cell carcinoma, in order to observe how tissue develops in the kidney and identify the early signs of the development of the disease. A team from the Integrative cell and tissue dynamics group developed mini-intestines, organoids that reproduce the three-dimensional structure and recapitulate the functions of the living tissue, were able to perform, for the first time, high-resolution experiments that have allowed 3D maps to be obtained showing the forces exerted by each cell.

The IBMB-CSIC remained at the highest international level of scientific excellence in 2021 with regards to the study of the main molecular and genetic mechanisms involved in physiology and the development of living organisms. Scientists at the institute deciphered the structure and function of a key enzyme of the bacterium *P.gingivalis*, the main cause of periodontitis. They managed to reveal a mechanism, essential in cell signalling, whose dysfunction could contribute to the development of neurodegenerative diseases such as Alzheimer's, fibrosis, nephritis and cancer. They also led a study describing a molecular mechanism which coordinates key processes for synaptic plasticity, essential for learning and memory. Moreover, they discovered a molecular mechanism, whereby bacteria adhere to cells to infect them, which could facilitate the development of a new generation of antibacterial drugs, with a mechanism of action which works differently to antibiotics, to fight against resistant bacteria.

In 2021, the main impacts in the research conducted by IRB Barcelona were associated to major discoveries by the centre's researchers on cancer, infectious diseases and respiratory pathologies. In a study published in *Nature* they revealed the mechanism through which palmitic acid encourages cancer metastasis and grants a more aggressive 'memory' to tumour cells. In a work published in *Cell Stem Cell* they demonstrated that the expression of ancestral fragments of viral DNA results in a strong inflammatory response and dysfunction of breast tissue, and that this accumulation of viral DNA can play a key role in metastatic potential. They also described in the journal *Nucleic Acids Research* an essential mechanism in the evolution of unicellular organisms to more complex life forms, which opens up a new research route for the treatment of diseases related to extracellular proteins, such as asthma and chronic pulmonary obstructive



ve disease. And as a result of an international collaboration, they found that candidiasis caused by various fungus species follow different mechanisms of infection. When developing new technologies to accelerate research, they highlight the design of a tool based on machine learning methods which identify cancer-causing mutations for each type of tumour, published in *Nature*, which will allow a strong boost to personalised oncological medicine. In *Science Advances* they proposed another computational procedure to understand protein dynamics and the regulation of cellular processes, including the effects of various hormones and the regulation of energy metabolism, with far-reaching consequences for pharmaceutical and biotechnology applications.

The most relevant scientific milestones of the technological unit of the Institute of Cosmos Sciences (ICCUB-Tech) were linked to their participation in global scope projects that will revolutionise our knowledge of the universe and frontier research in fundamental physics, astrophysics and cosmology. The inclusion in the 2021 ESFRI Roadmap of the Einstein Telescope, an international programme for the construction of a future underground observatory for gravitational waves, has been one of the great achievements of 2021. For the first time, this infrastructure will allow us to take a look at the “dark ages” of the universe, and lead to unimaginable discoveries in this field of research; the ICCUB-Tech will contribute to its e-Infrastructure Board (eIB), especially in the definition of general IT and the handling of mass data. In 2021, as part of the Gaia Mission, an unprecedented ESA programme which will enable the largest and most accurate three-dimensional map of our galaxy, began developing two new projects which will allow, on the one hand, large simulations and massive data mining to be run on Gaia’s EDR3 and DR3 catalogues, and on the other hand to measure the light pollution of the night sky. As part of the scientific community that works on the Virgo Project, one of the most important experiments in the field of gravitational waves, for another year running, ICCUB-Tech continued to make improvements to the general IT model, such as the implementation of noise removal methods to increase their sensitivity.

In 2021, the Metabolic Dynamics in Cancer Laboratory, affiliated with the Cellular Biology, Physiology and Immunology Department of the UB, and the Institute of Biomedicine of the UB (IBUB), participated in the key findings regarding the understanding of metabolic regulation of cancer and its crosstalk with genetic and epigenetic factors. It collaborated on the discovery published in *Nature Metabolism*, a unique subset of tumour propagating cells (TPCs), characterised by an elevated glycolytic metabolism, and in its role in the

progression of squamous cell carcinoma (one of the most aggressive cancers), defining cell metabolism as a key characteristic of intra-tumoral heterogeneity. It also participated in another study, published in *Genes*, in which the role of a protein family, sirtuins, in the metabolic control of immune cells and their implications for diseases related to the immune system and cancer were reviewed.

The BioNMR group, affiliated with the Inorganic and Organic Chemistry Department of the UB, has become one of the reference groups to understand the role of the intrinsically disordered region of c-Src, the product of the first oncogene described and a protein involved in a large number of cancers, but of which the importance of the first 85 disordered residues was unknown. In 2021, the group published in the journal *Oncogene* a work in which it showed that mutations in a part of the disordered region initially discovered by NMR decrease the invasiveness, proliferation and growth of tumours implanted in mice by 50%. In *Biosensors*, it also published a method for drug library screening aimed at finding drugs intended for this region and it set up a concept test project to evaluate a drug currently used by other applications that seems to also act on the signalling pathway of c-Src.







Parc Científic de Barcelona



## Innovation with the Barcelona Science Park Seal

2021 has been a key year for companies in the life sciences sector, as noted in the results presented in the Biocat Report. A large number of these companies are located in the Barcelona Science Park, an environment where entrepreneurship, academic research, leading R+D+i and venture capital find common ground to generate social and economic development oriented to innovation in health.

Advances in research, financing and market access of the companies which make up the Park Community reaffirm its role as a catalyst for innovative activity and the transfer of knowledge and technology to society and consolidate it as a benchmark in the European ecosystem.

### Financial Muscle to Advance

2021 has been a key year for the consolidation of the capacity of the PCB Community's businesses to attract both private investment and other financing sources. Of the total investment raised last year by the start-up companies in the Bio-region of Catalonia, €238 M, which according to the Biocat Report has been the highest figure registered to date, more than 16% has been raised by companies based in the Barcelona Science Park with transactions worth €39 M.

Among the transactions carried out by the PCB entrepreneurial community, identified in the 2021 financial year, Inbrain Neuroelectronics is top in the ranking, an ICN2 and ICREA spin-off company, specialising in the development of graphene-based intelligent neuroelectronic therapies for brain disorders. The 'deep-tech' company raised €14.3 M, which was the third highest round of fundraising registered in the BioRegion in 2021 and one of the largest in the Spanish med-tech industry, and it was co-led with Asabys Partners and Alta Life Sciences, along with CDTI Innvierte and two international investors, Vsquared Ventures and TruVenturo GmbH.

That amount is followed by IMIDomics that closed a Series A round of \$16.5 M, (about €14 M), led by the US firm, DNS Capital with the participation of the pharmacist Bristol Myers Squibb, the Pritzker Organization and TAO Capital, among other investors. This spin-off company of the Vall d'Hebron-VHIR University Hospital works on the R+D for new medications in the treatment of immune-mediated inflammatory diseases.

Other notable operations of companies based at the PCB were carried out by Nuage Therapeutics, a spin-off company of IRB Barcelona and ICREA, which began its activity at the Park in 2021 to discover drugs aimed at therapeutic targets that were difficult to obtain, thanks to the funding provided by the Sabadell Asabys Fund of Asabys Partners of around €3.2 M; Aelix Therapeutics, a spin-off company of the Hivacat consortium, focused on the development of a therapeutic HIV vaccine, which received €1.8 M from Caixa Innvierte Start,

Ysios BioFund II Innvierte and CDTI Innvierte; Aptadelel Therapeutics, a preclinical biomedical company focused on the development of a new RNA therapy platform for cancer treatment, which established itself at the PCB in 2021 after the closure of a €1.7 M (\$2.1 M) seed round; and Pharmacelera, a 'deep-tech' company which develops disruptive solutions of computational chemistry for the discovery of new drugs, which closed a €1 M equity crowdfunding campaign through Capital Cell, exceeding its initial objective of €800,000 in just two weeks. Finally, it is worth mentioning the €1.5 M of funding granted to MiMark by the Wild Card programme of EIT Health to promote the WomEC project and to improve the diagnosis of endometrial cancer.

The total sum of investment raising transactions of less than €1 M involved 7 other companies of the Park which have raised about €2 M in total, which means that we reach the total figure of €39 M, indicated above.

2021 was also the Nasdaq debut year for Gain Therapeutics, founded in 2017 by Swiss private investors and the TiVenture fund. Biotechnology, which develops new-generation pharmacological chaperones for the treatment of rare diseases through its own technology, SEE-Tx (licensed to the Catalan company, Minoryx Therapeutics), is based in Lugano (Switzerland) with its R+D department at the Barcelona Science Park.

Another noteworthy operation, coming from public funds, is the loan of €15 M which the CDTI granted to the biotechnology chemist based in Amer (Girona), Hipra, for the development of its recombinant protein vaccine against Covid-19. The multi-national company's team based at its R+D centre at the PCB (where a part of the necessary research is carried out for the design, generation and characterisation of new vaccinal antigens) is actively participating in the project. Currently, the vaccine is in the continuous review process by the European Medicines Agency of the drug, the step prior to receiving marketing authorisation. Furthermore, GENESIS Biomed, a consultant to the biomedical sector specialising

in early-stage R+D+i projects, helped close 3 funding rounds worth €3.8 M in 2021 through its private fundraising service; in addition, its vehicle GENESIS Ventures injected €2.5 M in various start-up and spin-off companies, of which €90,000 correspond to last year and in order to give continuity to this project the consultant has created another vehicle which has begun this year.

As a success case in the sales of companies, noteworthy is Infinitec Activos, focused on R+D+i and the marketing of active principles and liberation systems for the cosmetic industry, which was acquired by Evonik, a German company present in more than 100 countries and sales of €12,200 M. After the purchase transaction, the amount of which has not been made public, the company expanded its facilities in the Park to a total area of 400 m<sup>2</sup> with an investment of €500,000 and an increase in the workforce of 50%.

With regards to licenses, the start-up company, Oncoheroes Biosciences, focusing on the advancement of new therapies for childhood cancer, in 2021 licensed the development and marketing rights of Volasertib for cancer in adults in the US company, Notable Labs, retaining the global license in paediatric oncology.

Finally, Qiagen launched the four-plex respiratory test QIAstat-DX for its QIAstat-DX system, which enables the quick detection of a patient who has a common seasonal respiratory infection (flu A and B, VRS) or SARS-CoV-2 in just one hour.

**"Together, the companies based in the Park raised €39 M in 2021"**

**"In life sciences it takes a long time, even years, as well as money to turn basic research into new products or services that reach society and have an impact on the health of the whole population. However, we have many indicators that show how innovative projects move toward this objective, as they are increasingly able to gain public and private capital, and successfully pass new preclinical and clinical phases and finally reach the market. After 20 years of existence, a community of 3,200 professionals has been created in the PCB, which demonstrates the achievements of these successes, from the most basic research to innovation with new products and services", explains Maria Terrades, Director of the Barcelona Science Park.**

## **Therapies and Diagnostic Solutions Advancing towards the Patient**

Clinical studies are the final essential stages before new drugs, vaccines and diagnosis tools can be approved and released on the market. In the field of advances in new medicines, in 2021 Accure Therapeutics began the ACUITY trial, a phase II clinical study of the ACT-01 neuroprotector in patients with acute optical neuritis; the start-up FemTech company Oxolife initiated another phase IIa trial, OXOART-2, to assess the effectiveness of the OXO-00 drug which acts on the implantation of the embryo to increase the success rate of pregnancy and SOM Biotech presented the results of the SOM3355 phase IIa trial, an innovative treatment for choreic movements associated with Huntington's disease, a designated medication orphaned by the FDA, and currently in phase IIb in Europe with this being its second product that has reached the clinical phase.

With regards to advances in vaccines Aelix Therapeutics announced positive results from the AELIX-002 trial, a phase I/IIa clinical study of its therapeutic HIV vaccine.

Finally in the field of the diagnosis GlyCardial Diagnostics completed the recruitment for the EDICA trial, an international multi-centre study which will validate its innovative in-vitro diagnostic technology (IVD) for the detection of the Apo J-Glyc protein as a blood biomarker for the early diagnosis of myocardial ischemia. As for Qiagen, during 2021 it conducted clinical trials in European hospitals to obtain the CE label certification from its panel for the detection of meningitis and clinical trials in US hospitals so that it can request authorisation from the FDA's gastrointestinal disease testing panel.





## Leading Research

In earlier stages, significant advances have been made in preclinical phases in which solutions in humans have not yet been tested. In collaboration with the US company, Galyan Bio and Chemotargets employed their AI-based novo drug design methods to create the first clinical candidate designed with artificial intelligence for Huntington's disease; and the startup Moirai Biodesign released MoIRNAiFold, an advanced software for the design of complex RNA molecules; Connecta Therapeutics ended the preclinical phase of regulatory drug toxicology CTH120 which received approval for an EMA orphan drug for the treatment of Fragile X Syndrome (FXS) and Oxolife also reached the final stages of the preclinical development of its OXO-001 drug aimed at infertility associated with Polycystic Ovary Syndrome (PCOS). In addition, in woman's health, the FemTech start-up company, MiMark has developed WomEC, an in-vitro, minimally invasive molecular diagnostic test, which allows the detection of endometrial cancer, which has already reached the prototype development phase, and, finally, researchers at the basic research laboratory at Eugén revealed that egg cell quality is related to its mitochondrial activity, an advancement which opens a new way to respond to female fertility problems.

In childhood health, the Ordesa Laboratory R+D centre conducted several research projects which validate the ability of probiotics and prebiotics used in baby formulas to improve the immune and gastrointestinal function of the nursing infant. Finally, also in 2021, the Thai company, SeriTech initiated an ambitious R+D programme in the Park to promote the medicinal applications of silk proteins and accelerate the introduction of an innovative method for the transdermal release of active ingredients into the pharmaceutical and cosmetic industry.

## New Scientific-Technical Capabilities

Research organisations through Contract Research Organisations (CROs) located at the PCB remain strategic partners for biotechnology and pharmaceutical companies in the sector. In 2021, Enantia launched a Kilo Lab for the development, scaling and production of key intermediates and compounds for preclinical phases of medicines, while Bioingenium, specialising in the development of bioprocesses and production of therapeutic recombinant proteins expanded their R+D facilities in the Park and acquired new fermentation and protein purification equipment to improve their capabilities. Dan\*na launched a production pilot plant for the industrial scaling of bioplastics and biomaterials for the biomedical and technological sector. The start-up company is among the top five startups in the world which develop sustainable plastics according to StartUs Insights, and it appears in the ranking of the 50 most innovative Spanish startups of 2021, according to the magazine Emprendedores.

As for Farmaprojets, it inaugurated a laboratory with GMP certification for the import and release of drugs within the European framework; and in the same year, PCB Solitek, a CRO focused on the provision of solid state services for pharmaceutical and biotechnology companies.

Finally, we highlight Leanbio's participation in the European Phoenix project to promote new nanotechnology-based drugs, with a budget of €14.5 M funded by Horizon 2020, and the collaboration between Cytes Biotechnologies and the French company CTIBiotech which initiated the Hepnalysis project, with the aim of producing 3D bioprinted human liver models.









## GENERALITAT DE CATALUNYA

### La Generalitat crea el Centre de Teràpies Avançades de Catalunya

El nou organisme servirà per garantir l'accés dels pacients a medicaments innovadors i comptarà amb una inversió de 60 milions d'euros



La Generalitat de Catalunya ha creat el Centre de Teràpies Avançades de Catalunya (CTAC), un organisme públic amb una inversió inicial de 60 milions d'euros. El CTAC té com a objectiu principal garantir l'accés dels pacients a medicaments innovadors i garantir la seva qualitat i seguretat. El nou organisme està format per experts en àrees com la farmacologia, la toxicologia, la farmacovigilància i la salut pública. El CTAC treballarà en coordinació amb altres organismes de la Generalitat i amb organismes externs per garantir l'accés dels pacients a medicaments innovadors i garantir la seva qualitat i seguretat.

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## Troben la clau de la reactivació del càncer de còlon després de la quimioteràpia

El càncer de còlon és el segon tipus de càncer més freqüent a Espanya i el primer en termes de mortalitat. Els pacients que han estat tractats amb quimioteràpia podrien beneficiar-se d'un nou tractament que reactivi el sistema immunitari.



Un estudi internacional liderat per un grup de científics de la Universitat de Barcelona ha descobert que els pacients que han estat tractats amb quimioteràpia podrien beneficiar-se d'un nou tractament que reactivi el sistema immunitari. Els científics han descobert que els pacients que han estat tractats amb quimioteràpia podrien beneficiar-se d'un nou tractament que reactivi el sistema immunitari. Els científics han descobert que els pacients que han estat tractats amb quimioteràpia podrien beneficiar-se d'un nou tractament que reactivi el sistema immunitari.

## Pangaea ingressa 1,2 milions per un projecte amb Eurofins

Pangaea Oncology ha ingressat 1,2 milions d'euros per un projecte amb Eurofins. El projecte consisteix en el desenvolupament d'un nou tractament per al càncer de còlon. Pangaea Oncology és una empresa de biotecnologia que treballa en el desenvolupament de nous tractaments per al càncer. Eurofins és una empresa de serveis de laboratori que ofereix solucions per a la investigació científica.

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## Oncoheroes llicencia su fármaco con Notable Labs

Oncoheroes, una startup catalana, ha llicenciat el seu fármaco a Notable Labs. El fármaco està dissenyat per tractar el càncer de còlon. Oncoheroes és una startup catalana que treballa en el desenvolupament de nous tractaments per al càncer. Notable Labs és una empresa de serveis de laboratori que ofereix solucions per a la investigació científica.

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## Nuage ficha a Judit Anido como CEO y prepara una gran ronda

Nuage Therapeutics ha contractat a Judit Anido com a CEO i està preparant una gran ronda de finançament. Nuage Therapeutics és una empresa de biotecnologia que treballa en el desenvolupament de nous tractaments per al càncer. Judit Anido és una científica que ha treballat en el desenvolupament de nous tractaments per al càncer.

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## Inbrain obtiene 17,5 millones de euros de financiación europea

Inbrain ha obtingut 17,5 milions d'euros de finançament europeu. Inbrain és una empresa de biotecnologia que treballa en el desenvolupament de nous tractaments per al càncer. La Unió Europea ha finançat aquest projecte per promoure la innovació científica.

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## Plan de Biotecnología: 32 millones de euros para avanzar hacia tratamientos individualizados

El Govern de Catalunya ha aprovat un pla de 32 milions d'euros per avançar cap a tractaments individualitzats. El pla té com a objectiu principal promoure la innovació científica i garantir l'accés dels pacients a medicaments innovadors. El pla està format per diversos projectes de recerca i desenvolupament.

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## La diabetes abre al Covid más 'puertas'

Un estudi internacional liderat per un grup de científics de la Universitat de Barcelona ha descobert que els pacients que tenen diabetes podrien tenir més risc de desenvolupar Covid-19. Els científics han descobert que els pacients que tenen diabetes podrien tenir més risc de desenvolupar Covid-19.

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## Una tecnología para ayudar a tratar el cáncer infantil

Una nova tecnologia pot ajudar a tractar el càncer infantil. La tecnologia consisteix en l'ús de nanotecnologia per administrar medicaments de manera més efectiva. La tecnologia està desenvolupada per un grup de científics de la Universitat de Barcelona.

Una nova tecnologia pot ajudar a tractar el càncer infantil. La tecnologia consisteix en l'ús de nanotecnologia per administrar medicaments de manera més efectiva. La tecnologia està desenvolupada per un grup de científics de la Universitat de Barcelona.

## Una prueba rápida para la endometriosis

Una nova prova ràpida pot ajudar a diagnosticar l'endometriosis. La prova consisteix en l'ús de nanotecnologia per detectar la presència de l'endometriosis. La prova està desenvolupada per un grup de científics de la Universitat de Barcelona.

Una nova prova ràpida pot ajudar a diagnosticar l'endometriosis. La prova consisteix en l'ús de nanotecnologia per detectar la presència de l'endometriosis. La prova està desenvolupada per un grup de científics de la Universitat de Barcelona.

## Colas ya desarrolla un test de biomarcadores en fluido ginecológico para el cáncer de endometrio

Colas ha desenvolupat un test de biomarcadores en fluid ginecològic per al càncer d'endometri. El test consisteix en l'ús de nanotecnologia per detectar la presència de l'endometri. El test està desenvolupat per un grup de científics de la Universitat de Barcelona.

Colas ha desenvolupat un test de biomarcadores en fluid ginecològic per al càncer d'endometri. El test consisteix en l'ús de nanotecnologia per detectar la presència de l'endometri. El test està desenvolupat per un grup de científics de la Universitat de Barcelona.

## La investigadora Eva Colla, en laboratoris que dirigeix en el Vall d'Hebron Institut de Recerca (VHIR)

Eva Colla és una investigadora que dirigeix laboratoris al VHIR. Ella treballa en el desenvolupament de nous tractaments per al càncer. Eva Colla és una científica que ha treballat en el desenvolupament de nous tractaments per al càncer.

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## RECEPCIÓN

Recepció dels premis a la investigació científica. Els premis són concedits per la Generalitat de Catalunya i la Fundació Banc Sabadell. Els premis són concedits per la Generalitat de Catalunya i la Fundació Banc Sabadell.

## El rejuvenimiento celular i els nanorobots, premis de la Fundació Banc Sabadell

La Fundació Banc Sabadell ha concedit premis a la investigació científica. Els premis són concedits per la Fundació Banc Sabadell i la Generalitat de Catalunya. Els premis són concedits per la Fundació Banc Sabadell i la Generalitat de Catalunya.

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## Also in the news



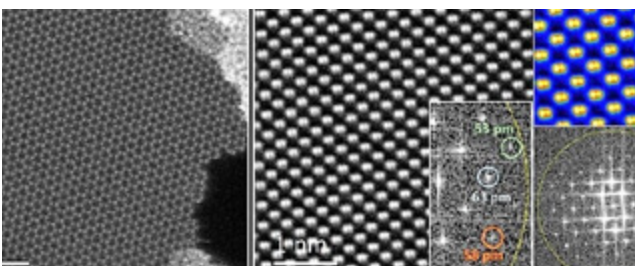
**Biocat to coordinate future Advanced Therapies Hub of Catalonia**



**Joan Puig de Dou, CEO of Kymos, was appointed as a new president of CataloniaBio & HealthTech**



**EIT Health announces Cristina Bescos as a new Director of Innovation**



**The UB incorporates a unique new infrastructure into the CCiTUB facilities at the Barcelona Science Park**



**New method to sequence the human mitochondrial genome**



**Salvador Aznar-Benitah wins the Clinical Biomedical Research Award from the Lilly Foundation**



**Three researchers at IRB Barcelona receive the 2021 City of Barcelona Award**



**European Research Council backs two talented young scientists at IRB Barcelona**



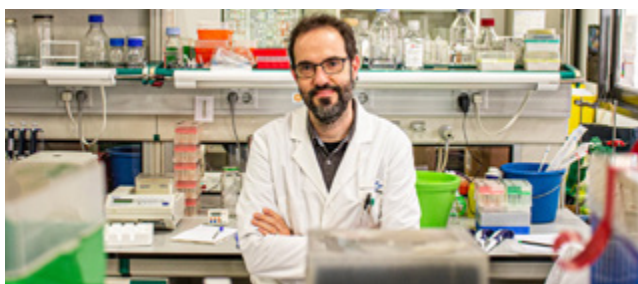
**The EU backs a project at IRB Barcelona to expand tumour genome interpretation**



Gaia Collaboration involving ICCUB-Tech researchers will receive 2023 Berkeley Prize



Scientists create proteins that do not exist in nature that mimic the immunoglobulins of antibodies



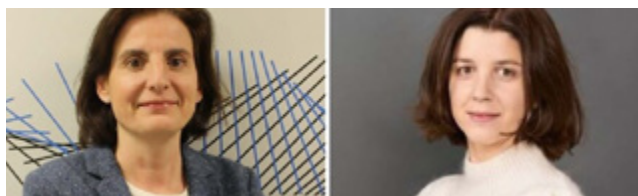
Connection shown between glucose metabolism and colorectal tumorigenesis



Evonik opens a new Care Solutions lab in Barcelona Science Park



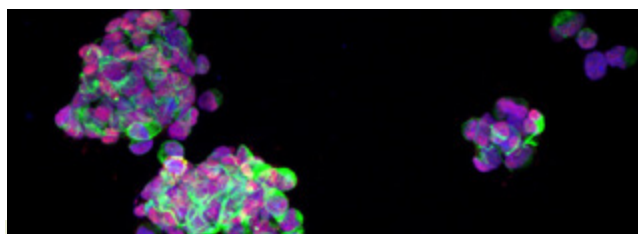
GAEM Foundation: 15 years of science and hope to fight multiple sclerosis



Aromics and Mimark Diagnostics, winners of ChemoStart's 5th Edition



Creu de Sant Jordi awarded to pharmaceutical company Hipra



ISCI and IDP Pharma researchers validate efficacy of a new molecule to treat glioblastoma



IMIDomics wins the Bioèxit Award from CataloniaBio & HealthTech



INBRAIN Neuroelectronics receives €17.5M from the European Commission via the EIC Accelerator

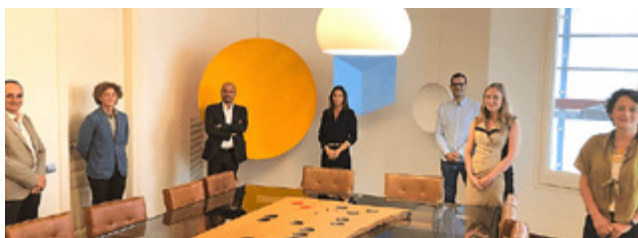


Scientists identify a disordered region of Src protein that regulates its oncogenic capacity





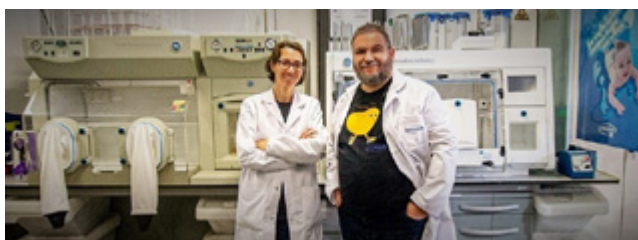
The medical device startup Newborn Solutions raises €5.6 million



Catalan National Innovation Award goes to IRB Barcelona for the foundation of Ona Therapeutics



OneChain leads the world's first clinical trial with CAR-T technology for patients with leukaemia



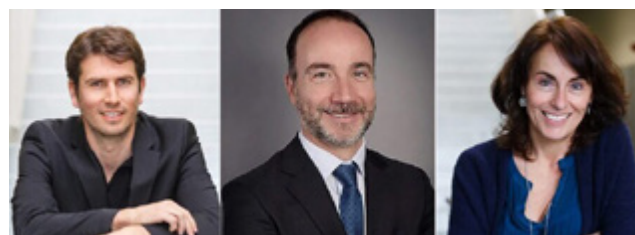
Laboratorios Ordesa leads a 7M€ project to find alternative protein sources



Qiagen expands QIAstat-Dx syndromic testing menu and plans to launch a higher-throughput version



Real Deal Milk won the 'Catalan startup of the year' award



Syna Therapeutics signs an exclusive license agreement with Intas to commercialise biosimilar LB-0702



Bicosome has been awarded with EcoVadis Gold Medal for its sustainability practices



EQA, first entity accredited by ENAC in Spain for the validation of the self-assessment of compliance with the DNSH Principle



NIVD, a startup deeptech in vitro nanodiagnostics, sets up at PCB



**Inbrain, a spin-off company from ICN2 and ICREA, joins Barcelona Science Park**



**MiMARK, VHIR spin-off focused on women's health, moves into Barcelona Science Park**



**Startup Roka Furadada opens new laboratory at Barcelona Science Park**



**oloBion, a cutting-edge omics services laboratory, starts at the Barcelona**



**Labin, a groundbreaking company in plant nutrition, inaugurates new lab at Barcelona Science Park**



**Dekapenta Labs, an analytical services CRO, joins Barcelona Science Park**



**Devsynthesis, a leading Indian CRO, sets up its European headquarters in the Barcelona Science Park**





# Revitalising the Park Community

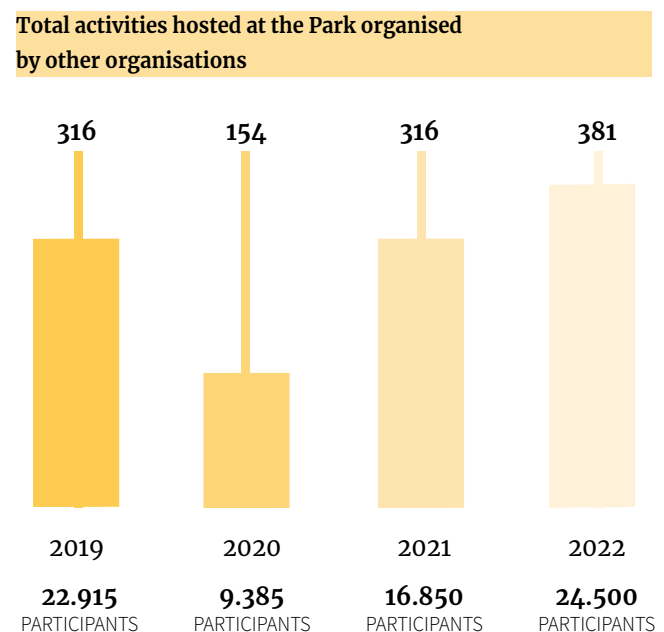
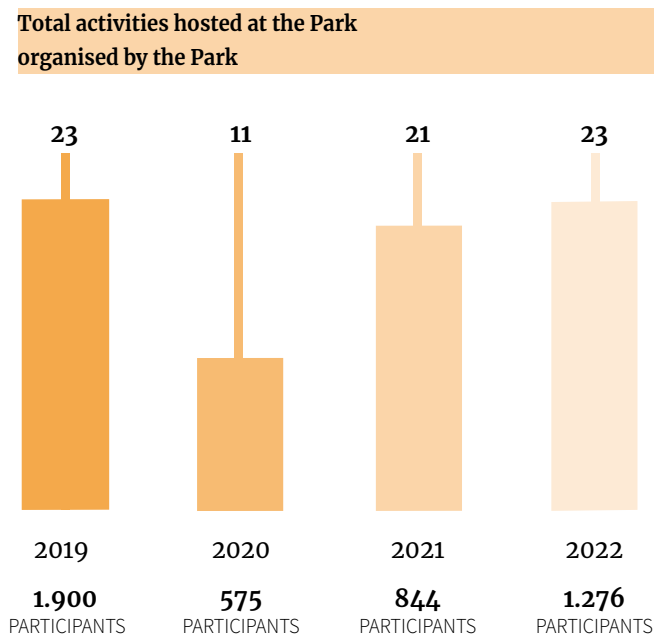
In 2022, we can talk about being back to full normality in the organisation of events at the Park after two years affected by the restrictions of the pandemic. This normality has resulted in a record year in the organisation of events with the more than twenty being held on different subjects: science, finance and legal, among others and always with a common goal: that they are of interest to our Community .

## Events, Conferences and Workshops

The goal is to provide the Community with the opportunity to listen, learn, and discuss subjects of interest to them and encourage networking.

- Oportunidades europeas de financiación para pymes del sector biotec EIC Accelerator
- Ayudas del CDTI Neotec & Neotec Mujeres Emprendedoras
- Innovative FIH clinical trial design and biomarker strategies in oncology
- Clave Capital presenta un fondo de 80 millones para proyectos de salud
- Online training session: Synergy H1 microplate readers. Use and applications.
- Seminario: uso de LinkedIn para científicos y emprendedores
- Seminario: formatos innovadores en divulgación científica para personal investigador
- Formación de Prevención de Riesgos con Radiaciones Ionizantes en la IR-PCB
- Succesful CV and job channels in Spain for ukrainian refugees
- BAT Meeting Biosciences Analysis Tools
- Sincrotró ALBA: eina per a la innovació en empreses Non-clinical development for cell and gene therapies
- BioExpert network, la puerta al mundo del emprendimiento y la inversión
- Clinical trials for prospective validation of biomarkers in oncology
- Merck, Biocat and Barcelona Science Park Cell&Gene therapy day

- Seminar: de la identificación de la invención a la protección por patente
- 8th edition of the “A day at PCB!” photo contest



## Networking

— Coffee Connection in spring and autumn

— Influencers meeting

## Exhibitions

Les cares de la meningitis. Organised by the Spanish Association against Meningitis and New Born Solutions.

### Hoop Carpool: travelling to the Park sharing a vehicle and the expenses

Although there is good public transport available around the Park, some members of the community travel to our facilities in private vehicles and many of these people do so being the only person in the vehicle. To remedy situation, reduce emissions and reduce the number of cars on the road, in 2022 the Park has partnered with Hoop Carpool, an app which, in a simple and intuitive way, allows users who travel by car or motorcycle to share the journey and expenses. The initiative aims to turn carpooling into a new habit. The IRB Biomedical Research Institute, the Institute for Bioengineering of Catalonia IBEC, the Bosch i Gimpera Foundation, the National Center for Genomic Analysis CNAG-CRG, Biocat and Qiagen are collaborating organisations of the project.



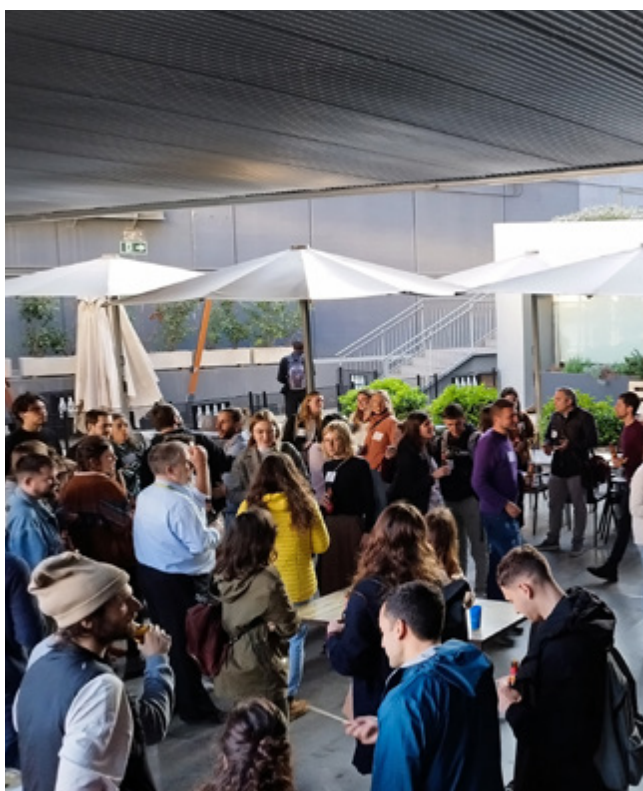
### PCBakers: a new solidarity community is created raising over €5,000 in one year

“PCBakers” was founded last May, it is an informal association made up of people from different groups and institutions of the PCB who enjoy cooking with the aim of helping those most in need. Once a month, this group organises a solidarity breakfast at one of the entrances to the Park with the sale of cakes that they have prepared earlier in exchange for a donation of €3.00. During 2022 they managed to raise over €5,600. In total, they organised 7 solidarity breakfasts to obtain funds for organisations such as the Ukraine Crisis Relief Fund, the Enllaç Foundation, Babies Uganda, the Spanish Association against Meningitis, the Arrels Foundation and La Marató de TV3 Foundation. In total over 150 homemade cakes were baked, and over 1,500 slices were sold.



## PCBeers: a new informal meeting of the PCB Community

At the end of the year, the first edition of PCBeers was held, a new informal meeting organised by the PCB and promoted by some of its organisations. There is no specific format or programme, simply a place and time to meet so that everyone who wants to can go down to the terrace of the Fifteen restaurant to have a drink or a bite to eat and meet up with other members of the Community. The winter edition brought more than 60 people together and everyone appreciated the great opportunity to network with one another.



## “T’interessa” premieres a section to connect organisations and projects with one another

The Park’s internal newsletter, T’interessa, has released a new section of “PCB collaborations” during 2022 so that the Park’s organisations can publish content and needs that help you to establish links and partnerships with other companies and organisations of the Community. The new section has been conceived as a platform to find partnerships to present competitive projects, develop products or services, perform joint marketing actions or search for volunteers for clinical trials.



## Good Health and Well-being

The Park’s Community has continued to benefit from the health and well-being activities offered during 2022; they can enjoy these activities during the working day and contribute to their physical and emotional improvement. 60 people have regularly attended yoga classes, which take place under the guidance of a qualified trainer once a week at two different times during the day. In 2022 the Park also put into operation a physiotherapy service with a qualified therapist who schedules visits every week, treating an average of 7 patients per week.

## “A day at PCB!” photography contest

For another year running, the Park celebrated the "A day at PCB!" photo contest, an event that has reached its eighth edition. The photos, which must reflect life in the Park of its users are published in Instagram with the tag: #UndiaalPCB. The 1st prize was awarded to Verónica Toledo, who works in Bioingenium with the image “Falcon Flowers”, while the jury gave the 2nd prize to the photo “Check”, by Clàudia Franco from Evonik-Infinitec.





# Budget



Description of income	Budget Amounts	Year-end Amounts
RENT	12.499	12.589
SERVICES PROVIDED	9.131	9.262
GRANTS / DONATIONS	101	407
<b>ORDINARY INCOME</b>	<b>21.731</b>	<b>22.258</b>

## Description of expenses

STAFF	-4.121	-4.153
MAINTENANCE AND SERVICES	-10.481	-10.904
<b>ORDINARY EXPENSES</b>	<b>-14.602</b>	<b>-15.057</b>

<b>EBITDA</b>	<b>7.129</b>	<b>7.201</b>
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FINANCIAL EXPENSES	-1.655	-1.743
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<b>EBTDA</b>	<b>5.474</b>	<b>5.458</b>
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AMORTISATION AND DEPRECIATION	-4.431	-4.556
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CAPITAL GRANTS APPLIED	1.365	1.353
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<b>Total</b>	<b>2.408</b>	<b>2.255</b>
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Amounts in thousands €  
Year-end at 31/12/2022





Parc Científic de Barcelona  
UNIVERSITAT DE BARCELONA



# BARCELONA SCIENCE PARK

Where Science Becomes Business

# 25

YEARS



Parc Científic de Barcelona  
UNIVERSITAT DE BARCELONA

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