IRB Barcelona at a glance

The medicine of the future starts here
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“We are at an unprecedented position in history to bring about change in the way we deal with human health and disease.”

The pace of discovery in biomedical research is accelerating. In the past decades, advances in our understanding of the life sciences and the emergence of new technologies have brought us to an unprecedented position in history to bring about change in the way we deal with human health and disease. IRB Barcelona was founded in 2005 to capitalize on this potential.

Over the years we have amassed a unique group of researchers who use their talent, passion and curiosity to increase our understanding of some of society’s most pressing health problems—including diabetes, Alzheimer’s and other neurodegenerative diseases, metabolic disorders and cancer—with the ultimate aim of improving the quality of people’s lives. In just a few short years, IRB Barcelona has gained recognition as a driving force in biomedical research.

Our goal as an institute is to create the best possible conditions for scientific discovery. We encourage our researchers to follow their curiosity, support them with the best technologies, invest in their continued training, and help them translate what they learn into tools and medicines to the benefit of society—all within a dynamic and inspiring setting on the shores of the Mediterranean Sea.

Whether you are a student just stepping into the world of research, a seasoned scientist in search of inspiration and opportunity, or simply looking to learn more information about our lines of investigation and related activities, IRB Barcelona has something for you. We invite you to come and take a look.

Joan J. Guinovart
IRB Barcelona Director
The Institute for Research in Biomedicine is an independent, non-profit research centre engaged in basic and applied biomedical science. It was created by the Government of Catalonia and the University of Barcelona in October 2005.

IRB Barcelona is housed within the Barcelona Science Park on the University of Barcelona Pedralbes Campus. It is an integral part of the ‘Bioregion of Catalonia’, a rich landscape of research centres of excellence, universities, science parks, hospitals, scientific infrastructures and pharmaceutical companies, all with a focus on the life sciences. It is a member of the CERCA network of government research centres.

IRB Barcelona is home to nearly 450 research, technical and support staff from 35 countries who share the common goal of contributing to the advancement of the biomedical sciences through investigator-driven research, and improving quality of life by applying advances in this field.

Our Board of Trustees comprises members of the Catalan Government (from the Department of Economy and Competitiveness and the Department of Health), the University of Barcelona, a representative from the BBVA Foundation as well as internationally renowned scientists.

IRB Barcelona has put in place structures to ensure that the Institute delivers on the full promise of its potential. An External Advisory Board, comprised of leading international researchers in biomedicine, meets regularly to help shape and evaluate IRB Barcelona’s institutional and scientific strategy. A Business Advisory Board of experts from pharma, venture capital and academia also contribute to identify the best strategies to transfer IRB Barcelona research results into real value for industry and society and detect business opportunities.

*IRB Barcelona is gaining a fine international reputation. Since it was founded in 2005, it has attracted talented group leaders, postdocs and graduate students from around the world. Prestigious awards and grants are flowing in and its training programmes are in full bloom. Innovation activities are beginning to pay off and its outreach programmes are extending the institute’s positive influence to the community.* — Sir Tim Hunt, External Advisory Board member and 2001 Nobel Prize Laureate in Physiology or Medicine

**A world-class research institute in Barcelona**
IRB Barcelona is committed to:

1. CONDUCTING INTERNATIONALLY RECOGNISED MULTIDISCIPLINARY RESEARCH AT THE FOREFRONT OF BIOMEDICINE

2. TRAINING AND INSPIRING SCIENTISTS AT ALL STAGES OF THEIR CAREERS

3. DRIVING INNOVATION THROUGH ACTIVE TECHNOLOGY TRANSFER TO THE BENEFIT OF SOCIETY

4. CREATING AN OPEN DIALOGUE WITH THE PUBLIC ABOUT AN AREA OF SCIENCE WITH ENORMOUS POTENTIAL TO TOUCH THEIR LIVES
The convergence of biology, chemistry, and structural and computational biology is unique at IRB Barcelona and opens a strategic window to gain insight into basic molecular processes in health and disease.

Research is conducted by 23 groups organized into 5 interdisciplinary programmes. Each programme includes a diverse faculty of researchers with overlapping scientific interests. The research areas have been structured to be highly interactive, fostering multidisciplinarity by combining modern molecular biology, classical genetics, biochemistry, chemical biology, structural biology, bioinformatics, systems biology, advanced microscopy, and genomic and proteomic approaches.

**Cell and Developmental Biology**

Includes gene expression, developmental molecular biology, cell biology, functional genomics and proteomics of cell and embryo development and tissue regeneration.

- Specific GATA factors act as conserved inducers of an endodermal-EMT. Campbell et al., Dev Cell (2011).

Ferran Azorín
Chromatin Structure and Function (IBMB-CSIC)

Jordi Casanova
Morphogenesis in Drosophila (IBMB-CSIC)

Cayetano González
Cell Division (ICREA, ERC Advanced Grant)

Jens Lüders
Microtubule Organization

Marco Milán
Development and Growth Control (ICREA)
Structural and Computational Biology

Includes the structural analysis of macromolecules and their interactions using a variety of techniques: X-ray, NMR, electron microscopy, macromolecular biophysics, bioinformatics and molecular modelling.

- A Smad action turnover switch operated by WW domain readers of a phosphoserine code. Aragon et al, Genes Dev (2011)

Molecular Medicine

Includes the molecular bases of metabolic and genetic diseases, the study of diagnostic or therapeutic targets and the functional genomics and proteomics of pathologies and translational research.

Chemistry and Molecular Pharmacology

Includes the design and synthesis of small molecules and macromolecules, with special emphasis on building libraries and optimizing synthetic compound production, and biotechnologies for molecular selection to identify therapeutic targets.

- **Fine-tuning the π-π aromatic interactions in peptides: somatostatin analogues containing mesityl alanine.** Martín-Gago et al, Angew Chem Int Edit (2012).
- **Disulfide bonds reduce the toxicity of the amyloid fibrils formed by an extracellular protein.** Mossuto et al, Angew Chem Int Edit (2011).

**Fernando Albericio**
Combinatorial Chemistry (University of Barcelona)

**Ernest Giralt**
Peptides and Proteins (University of Barcelona)

**Antoni Riera**
Asymmetric Synthesis (University of Barcelona)

**Xavier Salvatella**
Molecular Biophysics (ICREA)

Oncology

Includes the study of diverse aspects of tumour initiation and progression, the relationship between stem cells and cancer, and the identification of the programmes that drive tissue-specific metastasis.

- **Colon cancer cells colonize the lung from established liver metastases through p38 MAPK signalling and PTHLH.** Urosevic et al, Nat Cell Biol (2014).
- **Dual function of p38α MAPK in colon cancer: suppression of colitis-associated tumor initiation but requirement for cancer cell survival.** Gupta et al, Cancer Cell (2014).
- **Dependency of colorectal cancer on a TGF-β-driven program in stromal cells for metastasis initiation.** Calón et al, Cancer Cell, (2012).

**Salvador Aznar Benitah**
Stem Cells and Cancer (ICREA, ERC Starting)

**Eduard Batlle**
Colorectal Cancer (ICREA, ERC Advanced)

**Roger Gomis**
Growth Control and Cancer Metastasis (ICREA)

**Ángel R. Nebreda**
Signalling and Cell Cycle (BBVA Foundation Cancer Research Professor, ICREA, ERC Advanced)

**Travis H. Stracker**
Genomic Instability and Cancer
Pushing the limits of technology

Research activities at IRB Barcelona are supported by a wide range of cutting-edge in-house core facilities and services, which include:

**Advanced Digital Microscopy**
Julien Colombelli

A fully complementary range of digital imaging microscopes, including conventional or laser-based microscopes, and advanced image processing tools for data analysis, interpretation and presentation.

- Fully automated brightfield and epifluorescence microscopy, fluorescence macroscopy and spectroscopy
- Spectral confocal microscopy: Laser scanning, Spinning disk, Multiphoton based, FRAP, FRET; photoactivation
- Special techniques: Laser nanosurgery, TIRF, Lightsheet Imaging; SPIM and Ultramicroscopy, High content screening

**Mass Spectrometry**
Marta Vilaseca

Modern chromatographic and mass spectrometric tools for the identification and characterization of a broad range of biological specimens.

- Chip-based nanoelectrospray interfaces
- Ion mobility spectrometry (IM) coupled to high performance tandem MS
- Fourier-transform ion cyclotron resonance MS
- CID (collision induced dissociation), ECD (electron capture dissociation) and IRMPD (infrared multiphoton dissociation) fragmentation techniques

**Biostatistics and Bioinformatics**
Camille Stephan-Otto Attolini (Acting Manager)

Collaborative research, consultation and quantitative research resources.

- Experimental design: sample size, study design, planning of statistical methodology
- Data analysis: omics data, clinical or biomedical databases
- Development of statistical methodology and implementation
- Consultation in software usage and setup

**Functional Genomics**
Annie Rodolosse (Acting Manager)

State-of-the-art tools for genomic analysis and alteration of gene expression.

- Gene expression microarrays from Affymetrix and Agilent platforms
- Pico profiling from very small cell populations
- Genome sequencing for DNA copy number variation, ChIP and methylation analysis
Mouse Mutant

Murine models of disease and development.

- Design and construction of gene targeting/transgenic vectors
- ES cell culture, targeting and screening
- Microinjection of DNA or modified ES cells into pre-implantation embryos
- Surgical transfer of manipulated embryos

Histology

Nuno Vasconcelos

A complete range of histological tools and customized pathology services to meet the needs of scientists involved in basic and clinical research.

- Tissue processing
- Microtomy, cryostat and vibratome sectioning
- Immuno and special stainings

Protein Expression

Nick Berrow

Gene-to-protein services including HTP modes where multiple cloning and expression screening activities can be performed in parallel to investigate many variations of a protein (or many different proteins) simultaneously.

- Wide range of expression vectors
- Expression in E. coli, insect or mammalian cells
- Large scale purification of cytoplasmic or secreted proteins
- Source of laboratory reagents e.g. recombinant proteases

These, in addition to the Service Units and Technology Platforms provided by the Barcelona Science Park and the University of Barcelona, offer cutting edge technologies, some of which are set up to handle high-throughput approaches. IRB Barcelona researchers also enjoy access to a full offering of facilities thanks to agreements among research institutes in the Barcelona area, as well as at the European level through various collaborative initiatives.

Centralizing the facilities encourages interactions between the technical and scientific groups, pushing technology development and giving researchers access to state-of-the-art equipment that provides new insights into the latest scientific questions.
BARCELONA

An ideal setting for collaboration

References on the following page
Scientific institutes need to be tightly linked to the wider research community, and IRB Barcelona has numerous initiatives to ensure that our researchers establish fruitful collaborations with other scientists, research facilities, and hospitals at the local, national and international levels.

Barcelona is host to a wide range of superb scientific infrastructures, including the National Center for Genome Analysis (CNAG), the ALBA synchrotron, and the Barcelona Supercomputing Center, with which IRB Barcelona has had a joint research programme since 2007, recently extended to include the Centre for Genomic Regulation.

Inter-institutional and cross-disciplinary initiatives, like the Metastasis Research Centre (MetCentre), bring together basic research groups from IRB Barcelona and clinical and translational groups from hospitals and technology platforms in Barcelona, with the aim to perform joint research on metastasis. IRB Barcelona also has formal agreements with the Hospital Clinic-IDIBAPS and the Vall d’Hebron Institute for Research to strengthen activities related to specific diseases.

Our collaborations also go beyond borders, with formal links to institutes with similar areas of activity and interests worldwide. These partnerships allow for the exchange of knowledge and expertise, and provide an important chance for researchers from each institute to spend periods of time at other centers.
TECHNOLOGY TRANSFER AT IRB BARCELONA

Biomedical research for a healthier, wealthier society

Great results shouldn’t stay in the lab. They need to get out so that they can benefit others. With this in mind, IRB Barcelona has put in place a proactive strategy to ensure that discoveries made in our labs translate into products and technologies that serve the scientific and healthcare communities, as well as society at large.

Specialists from our Innovation Department, guided by an international Business Advisory Board, work together with our researchers to identify results with commercial potential and protect, develop and commercialize them, resulting in strategic public-private collaborations, licensing agreements and spin-off companies. Our goal is to leverage our research as a powerful motor for the economy, whether in the form of diagnostic tools, new medicines and technologies, or even jobs.

Fostering an entrepreneurial spirit
IRB Barcelona organizes regular training sessions aimed at raising awareness among our young researchers of the potential of their basic research results to develop into something of commercial value. Our goal is to create a culture of entrepreneurship, and help our scientists to develop the skills necessary to achieve success.

Attracting interest from outside
IRB Barcelona research attracts interest from major investors. Through their “Mind the Gap” programme, the Botín Foundation has selected 2 IRB Barcelona research projects to develop into spin-off companies. In addition to an initial injection of funding, the Foundation offers management, coordination and consulting support to ensure that the companies can attract venture capital funding and allow their products to reach the market. IRB Barcelona researchers have also achieved notable success in competitive calls, such as the Catalan Government’s “Prova’t” programme, which aims to transfer results from research centres in Catalonia to the productive sector, and the European Research Council’s Proof of Concept Programme.

Capitalizing on opportunity
Networks and collaborations with a wide range of pharma and biotech partners and major international events provide numerous possibilities for the Innovation team to actively promote IRB Barcelona’s portfolio of technologies to potential partners, licensees and investors.

Promoting success from within
IRB Barcelona appreciates the importance of investing in its own researchers and providing them with opportunity. Internal initiatives such as the BioMedTec programme, supported by “la Caixa” Foundation, channel special accelerator funding into promising early stage research projects within our research labs in order to bring them crucial steps forward toward the market.
IRB Barcelona’s Innovation portfolio includes more than:

100 COLLABORATION AGREEMENTS WITH COMPANIES AND OTHER PARTNERS

35 AGREEMENTS FOR CO-OWNERSHIP OF TECHNOLOGIES

60 RESEARCH RESULTS EVALUATED FOR POTENTIAL ‘DEVELOPMENT’

20 PATENTS REGISTERED

8 LICENSING AGREEMENTS

3 SPIN-OFF COMPANIES, WITH MORE IN THE PIPELINE:

OMNIA MOLECULAR
Founded by Lluís Ribas de Pouplana, designs and develops compounds for difficult-to-treat infections.

INBIOMOTION
Founded by Roger Gomis, is a personalized medicine company developing biomarkers to predict bone metastasis to improve quality of life for cancer patients.

IPROTEOS
Founded by Ernest Giralt and Teresa Tarragó, focusses on the research and development of new therapeutic strategies for CNS diseases, based on peptidic protease inhibitors.
A meeting place for researchers in the life sciences

IRB Barcelona fosters close connections with the international scientific community and encourages leading scientists to regularly visit the site, in order to bring the forefront of international biomedical science to Barcelona and to launch collaborative projects with the community.

An equally important priority is to raise international awareness of our Institute and the research carried out here. An effective tool in achieving both these goals is the Barcelona BioMed series of conferences, seminars, workshops and forums.

John Petrini, PhD
Sloan Kettering Institute,
New York (USA)

*The Barcelona BioMed Conference series provide an inspiring forum to discuss great science from a range of fields – in a spectacular setting. The conferences break down traditional boundaries of scientific fields and bring different players together for a new perspective. A great opportunity, especially for younger researchers. Definitely keep an eye on this series.*
Barcelona BioMed Conference Series

Intensive 3-day conferences where leading researchers can meet to present and discuss breakthroughs in several fields of the biomedical sciences. The conferences aim to provide a highly-focused think-tank atmosphere for a select group of participants. About twenty speakers, chosen from among the top international researchers in their field, are joined by a limited number of participants, selected on the basis of their scientific experience, for intensive discussions of latest research in their field.

Over the years, the Barcelona BioMed Conference Series has welcomed nearly 500 speakers and more than 3,500 participants from across the world.

The conference series is made possible thanks to the collaboration of the BBVA Foundation, and is held in the picturesque Institut d’Estudis Catalans, located in the heart of downtown Barcelona.

Barcelona BioMed Workshops

These activities aim to provide an important training mechanism whereby scientists at all levels can keep abreast of the latest tools and techniques used in their fields. The workshops host expert speakers and trainers from basic research and industry who provide theoretical background and hands-on practical training for small groups of participants. Topics cover a wide range of areas in basic and applied research, and related activities, including writing and presentation skills, leadership training and more.

Past Barcelona BioMed Workshops include:

- Effective writing for scientific research
- The art of leadership: Fewer conflicts, more results
- Career progression in science (options beyond the bench)
- How to be successful in your postdoctoral fellowship application
- Media training for scientists
Barcelona BioMed Seminars

Leading international scientists from different areas of the biomedical sciences are invited to present and discuss their results and ideas in a series of seminars which take place several times each week. These activities allow IRB Barcelona researchers and the local scientific community to learn about the latest developments in the life sciences, and provide an opportunity for direct contact with each seminar speaker.

Since the Barcelona BioMed Seminar series began, more than 1,500 researchers from more than 30 countries have visited IRB Barcelona.

Barcelona BioMed Forums

IRB Barcelona believes that institutes that have the potential to change society need to discuss their research with the public and help prepare people for those changes. Barcelona BioMed Forums bring together members of our scientific community, scholars from other disciplines as well as members of the public for multidisciplinary debate about issues related to biomedical science with the ultimate goal of increasing awareness and encouraging a better understanding of progress in the biomedical sciences and its implications for society.

Past Barcelona BioMed Forums include:

- Creativity, Science and Art
- From Woman to Woman: Practical Advice on How to Get and Stay Ahead in Science
- Science, Economy and Society. Invest in Oncology Research
A solid foundation for a successful career in biomedicine

TRAINING IS A WAY OF LIFE AT IRB BARCELONA. WHEN YOUNG SCIENTISTS COME TO IRB BARCELONA, THEY KNOW THEY WILL BE ENTERING INTO A WORLD OF OPPORTUNITY WHERE THEY CAN DO THEIR RESEARCH AND TRAINING IN A UNIQUE INTERNATIONAL AND MULTIDISCIPLINARY SETTING. PHD STUDENTS AND POSTDOCS RECEIVE CLOSE MENTORING, HAVE ACCESS TO A WIDE VARIETY OF SCIENTIFIC ACTIVITIES AND SERVICES, AND ARE ABLE TO TAKE ADVANTAGE OF AN EXTENSIVE NETWORK OF ACADEMIC AND INDUSTRIAL CONTACTS. OUR GOAL IS TO STIMULATE YOUNG PEOPLE TO CARRY OUT CREATIVE SCIENTIFIC PROJECTS AT THE HIGHEST POSSIBLE STANDARD, AND TO BECOME FUTURE LEADERS IN THE ACADEMIC OR INDUSTRIAL WORLD.

Doing your doctorate at IRB Barcelona

More than 120 students, almost half of whom are non-Spanish nationals, are currently working toward their PhD thesis at IRB Barcelona.

123 STUDENTS
20 COUNTRIES
57% SPANISH STUDENTS
43% NON-SPANISH STUDENTS
What fellowships are available?

IRB Barcelona offers three separate calls for PhD students:

1. The "la Caixa"-Severo Ochoa/IRB Barcelona International PhD Programme offers a number of highly competitive fellowships.
2. IRB Barcelona International Predoctoral Fellowships

Who can apply?

We encourage applications from highly motivated young researchers studying biology, biochemistry, chemistry, physics, pharmacology, computational science or related fields, with outstanding qualifications.

Students who qualify to be admitted into a doctorate programme according to the European Higher Education Area Legislation are eligible to apply to do their PhD research training at IRB Barcelona.

How do I get selected?

After the application deadlines, internal committees short list candidates to be invited to interview at IRB Barcelona. Offers of admission are made to the successful candidates shortly thereafter. Students should expect to take up their positions at IRB Barcelona by September of the same year.

How does getting a degree work?

Students spend up to four years working in an IRB Barcelona research lab to complete their project. They enroll in a university of their choice, normally the University of Barcelona, the Autonomous University of Barcelona, Pompeu Fabra University, or the Polytechnic University of Catalonia. The University, not IRB Barcelona, is the degree-granting body.

Students at IRB Barcelona receive close mentoring throughout the programme. In addition to day-to-day supervision by their Group Leader, they are guided throughout the course of their studies by a 3-member Thesis Advisory Committee. Upon completion of their laboratory work, students write their thesis and defend it at their University.

What can I expect once I accept my place as a PhD student at IRB Barcelona?

Our experienced staff in the Academic Office and Human Resources Department sort out visas and provide housing advice to those relocating to Barcelona, helping to ease their transition. They also provide assistance with university enrolment for all students.

PhD activities kick off with an introductory course, followed by lab rotations, where students get a taste of the different areas of research being conducted in IRB Barcelona labs, and meet other young scientists with which they can form lasting friendships that will stay with them throughout their time at IRB Barcelona and beyond. Through the Footsteps Programme, newcomers are paired with second-year students who show them the ropes at IRB Barcelona, and help them get settled.

*Our goal is to give IRB Barcelona PhD students the quality training and support they need to become independent thinkers, setting a solid basis for their scientific careers.*

“OUR WIDE RANGE OF PROGRAMMES AND ACTIVITIES ENSURE THAT IRB BARCELONA PHD STUDENTS DO GREAT SCIENCE AND HAVE FUN AT THE SAME TIME.”
A broad range of activities

IRB Barcelona PhD students have the opportunity to participate in a wide range of activities to complement their lab work. These include:

GROUP AND PROGRAMME RETREATS
IRB Barcelona scientists regularly participate in retreats, both at the group and programme level. These activities, held at picturesque off-site venues, provide an opportunity for intense scientific discussion and social interaction, and aim to foster collaboration among groups and programmes.

INTERNATIONAL PHD STUDENT SYMPOSIUM
A large-scale multidisciplinary scientific symposium that takes place every 2 years, organized from start to finish by PhD students.

STUDENTS’ DAY
An event celebrating research by IRB Barcelona PhD Students, organized every 2 years. Activities include talks by current and former PhD students, poster sessions, and plenty of opportunity for exchange.

STUDENT SEMINAR SERIES
Bimonthly seminars given by PhD students for the student community. A great way to learn about research from your peers in other fields of science.

IRB BARCELONA PHD STUDENT COUNCIL
This group of students elected from their peers is in charge of organizing activities and initiatives of interest to the IRB Barcelona PhD student community, such as bimonthly “cool-off” sessions. They also serve as a liaison between students and the Institute’s directorate.

In addition, students can take advantage of the numerous complementary training opportunities in the Barcelona BioMed series of Conferences, Seminars Workshops and Forums.

A wide palette of public engagement and education activities also provides a welcome opportunity for our young researchers to share their science with a variety of audiences, and to gain valuable communication skills.

“IRB Barcelona is a place where research is done at an internationally competitive level, and strong collaborations are forged through shared ideas and efforts. It’s full of innovative and ambitious minds supported by the latest technologies in biomedical research. Add the friendly atmosphere, opportunities for social and scientific exchange, and the irresistible culture, food and weather of Catalonia, and you’ve got the perfect mix.”

Francisca Peixoto
Guimarães, Portugal
PhD Student
Once you step outside the lab

IRB BARCELONA OFFERS A NUMBER OF SOCIAL ACTIVITIES, OPEN TO THE ENTIRE COMMUNITY, THAT SERVE TO BRING YOUNG RESEARCHERS TOGETHER AND CREATE OPPORTUNITY FOR INTERACTION OUTSIDE THE LAB. THESE INCLUDE BIMONTHLY ‘COOL-OFF’ SESSIONS WHERE RESEARCHERS WIND DOWN OVER REFRESHMENTS ON THE TERRACE AFTER A LONG DAY IN THE LAB AND SEVERAL SPORTING INITIATIVES, SUCH AS THE IRB BARCELONA FOOTBALL LEAGUE, AND RUNNING AND MOUNTAINEERING CLUBS.
Support and opportunity for postdocs

IRB Barcelona's postdoc community hosts more than 100 postdoctoral fellows, 58% of whom are non-Spanish nationals.

Postdoctoral fellows joining IRB Barcelona gain access to the Institute's advanced research training and career development opportunities, all within a competitive international environment. IRB Barcelona is conscious that this is a critical stage of their careers, and aim to provide them with the scientific, technical and administrative support that they need to excel. Postdocs generally join IRB Barcelona on an external grant obtained through national and international agencies.
A focus on interdisciplinarity

The Institute also offers its own fellowships through the EU’s Marie Skłodowska-Curie COFUND programme. These 2-year grants are specifically geared toward fostering interdisciplinary research at IRB Barcelona, and successful applicants normally hold joint positions in 2 research groups belonging to different programmes.

Courses and workshops on themes of particular interest to postdocs are offered regularly. These include lab management, communication, science and grant writing, and more. Postdocs can also take advantage of the numerous conferences, seminars and other events in the Barcelona BioMed series.

Like the PhD student body, postdocs at IRB Barcelona take an active interest in promoting cohesion interaction among their community. The IRB Barcelona Postdoctoral Council organizes events and activities, both scientific and social, and liaises with IRB Barcelona administration. One example is the annual Postdoc Day, which aims to bring together scientists from across the research programmes to showcase their latest results and explore possibilities for collaboration.
Establish your group in our singular environment

IRB Barcelona is continuously on the lookout for outstanding independent investigators seeking an opportunity to set up shop in an inspiring and rewarding environment. Applications are accepted from ambitious scientists with the capacity to develop cutting-edge multidisciplinary research in areas complementary to the research topics addressed by the institute. Enquiries from both senior and junior scientists are welcome.

We provide successful candidates with a generous start-up package, uncomplicated and comprehensive administrative support, and access to state-of-the-art facilities, including high-throughput protein expression, advanced digital microscopy, functional genomics, mass spectrometry, mouse mutant, histology, automated crystallography, NMR and electron microscopy platforms. IRB Barcelona researchers also have access to the ALBA Synchrotron, the National Center for Genomic Analysis, and the Barcelona Supercomputing Center, as well as a number of world-class research hospitals, all located nearby.

Visiting scholars

Looking for an inspiring setting to spend a sabbatical visit? Want to learn a specific technique? Interested in joining a research group to pursue your own project, study, or simply gain exposure to our ongoing research? IRB Barcelona welcomes visits from established scientists from across the world so that they can enter into collaborations with our scientists, benefit from the dynamic and stimulating atmosphere in our labs, and have access to our cutting-edge technologies, equipment and training.

Requests for such visits should be made directly to the Group Leader of interest, and acceptance depends on mutual interest, ongoing projects and availability of resources. Funding for visits is the responsibility of the visiting scientist. IRB Barcelona will provide the administrative and organizational support to ensure that your stay is a pleasant and productive experience.
Since IRB Barcelona was founded in 2005, hundreds of scientists, students, technical and support staff have passed through our doors. Many of these people have gone on to take the next step in their scientific careers in leading institutes across the nation and across the world. IRB Barcelona alumni have several things in common—they have spent a significant part of their careers at the Institute, and many feel a special connection to it. Upon leaving, many have also found themselves setting up a new life, scientifically and personally, in a new environment—a task which brings with it a number of challenges and opportunities.

Together, the IRB Barcelona alumni represent an important and growing group, equipped with invaluable expertise and experience. They have enormous potential to create a useful network of support for IRB Barcelona and for science and the scientific community in Barcelona, Spain and throughout the world. Once their stay at IRB Barcelona comes to an end, our researchers and support staff are invited to join this growing network and remain part of the IRB Barcelona extended community.
Our science hand-in-hand with our society

IRB Barcelona strongly believes that scientific institutes have an obligation to inform the public of our work and to encourage an open dialogue about an area of science that is likely to have a huge impact on people’s lives. We are also conscious of the fact that we must play a critical role to ensure a new generation of talented and passionate scientists, and to foster students’ interest in careers in science and technology. To this end, we organize and participate in a wide range of science outreach and training activities aimed at students at each stage in their education, teachers, and also the general public.

For elementary school students

RESEARCH IN PRIMARY SCHOOL (Recerca en Primària)
A bimonthly research activity to bring science closer to primary school students through guided tours and active participation in experiments.
PARC CIENTIFIC DE BARCELONA
FUNDACIÓ CATALUNYA-LA PEDRERA

For high school students

CRAZY ABOUT BIOMEDICINE
This flagship year-long mentoring programme brings 24 high school students into the lab for hands-on learning. Theoretical and practical sessions are led by IRB Barcelona students on Saturday mornings, with a goal to fostering passion and vocation for scientific careers.
PARC CIENTIFIC DE BARCELONA
FUNDACIÓ CATALUNYA-LA PEDRERA

RESEARCH IN SECONDARY SCHOOL (Recerca en Secundària)
A mentoring programme to assist secondary school students with their research projects. Students are paired with IRB Barcelona researchers who help them with background information and literature searches, guide them through practical experiments in an IRB Barcelona lab, and provide them with feedback on their written project.
PARC CIENTIFIC DE BARCELONA
FUNDACIÓ CATALUNYA-LA PEDRERA

SCIENCE WEEK OPEN DAYS (Jornades de Portes Obertes)
Day-long visits designed to bring science closer to secondary school students, organized as part of Catalonia’s Science Week.
PARC CIENTIFIC DE BARCELONA

“Crazy about Biomedicine is an incredible opportunity for young students like me to explore some of the most fascinating discoveries in life sciences, alongside inspiring teachers who truly love what they do. It’s all about passion, exchange and disruptive innovation. Thanks for igniting the spark of our dreams.”

Martí Jiménez
High school student. Crazy about Biomedicine, Class of 2013
For undergraduate students

SPEND THE SUMMER IN THE PARK!
(Passa l’Estiu al Parc!)
An internship programme for undergraduate students involving active participation in research projects at institutes within the PCB. Students are mentored for a period of up to 3 months by our young scientists.

PARC CIENTIFIC DE BARCELONA

MATHS 4 LIFE
A summer programme for maths and statistics students who wish to participate in multidisciplinary research at the interface between maths, statistics, informatics, and biomedicine.

For teachers

HANDS-ON TEACHERS WORKSHOPS
A yearly programme of hands-on activities for high-school science teachers. Courses include scientific lectures on cutting-edge biomedical topics by our scientists, practical lab activities and exercises. These activities aim to get teachers working side-by-side with our scientists to produce educational materials that can then be taken back to the classroom, and to create useful and lasting networks between scientists and teachers to the ultimate benefit of their students.

For everyone

DO RESEARCH! (Fes Recerca!)
A series of weekly hands-on workshops for students and the general public. Sessions are held several times throughout the year in Barcelona’s iconic “Pedrera” building, and also in the Barcelona Science Park’s Open Lab.

RESEARCH LIVE FAIR (Fira Recerca en Directe)
AND THE SCIENCE AND TECHNOLOGY FAIR (Fira de la Ciencia i la Tecnología)
Science fairs organized in local venues to showcase the latest research taking place in some of the city’s foremost research institutes.

“I’m always looking for new ways to motivate my students and one of the most effective ways is to teach them what today’s researchers are really doing in the lab. The course at IRB Barcelona not only improved my own knowledge about Drosophila, but has provided me with great material for the classroom. My kids have never participated so actively in class!”

Imma Abad
High school biology teacher.
Col·legi Cor de Maria de Valls
Support IRB Barcelona research

IRB Barcelona has ambitious goals in making crucial steps forward in the fight against diseases, including cancer and metastasis, Alzheimer’s and neurodegenerative disorders, diabetes, and many others. Our hope is that our research will one day make a difference in your life and the lives of your loved ones.

But to do so, we need your support.

IRB Barcelona welcomes contributions from individuals, private corporations, non-profit foundations and patients associations. To learn more about philanthropic opportunities, please contact Anna Merlos at donations@irbarcelona.org, or by telephone at +34 93 403 11 62.