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IN BIOMEDICINE

NEWSLETTER

in vivo

INSTITUTE FOR RESEARCH IN BIOMEDICINE

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APRIL 2017

TOP NEWS

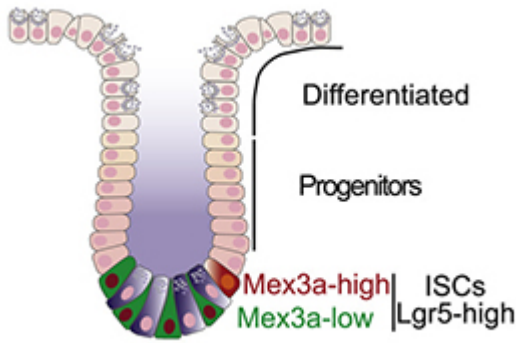


TALENT ATTRACTION

Croatian scientist Fran Supek opens new laboratory for analysis of genomic 'big data' at IRB Barcelona

The 37-year-old bioinformatics and genomics researcher is starting his new laboratory, [Genome Data Science \(aGENDAS\)](#), within the Structural and Computational Biology Research Programme. Supek's new group will tackle important biological challenges by analysing massive data sets produced from human cancer cells, human populations, environmental DNA sequencing (metagenomics), and fully sequenced microbial genomes. Supek's recruitment also fits into the Big Data strategic research mission that the Barcelona Institute of Science and Technology (BIST) will be promoting over the next few years.





CELL STEM CELL

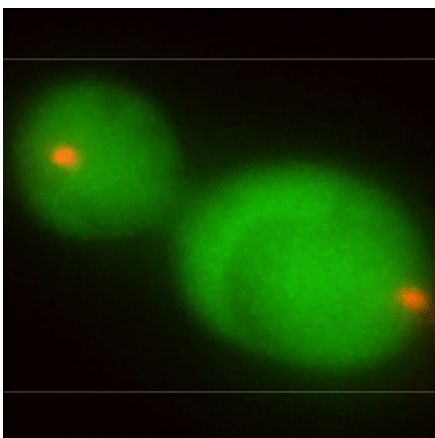
The intestine has a reservoir of stem cells that are resistant to chemotherapy

A reservoir of previously unknown quiescent stem cells in the intestine intervenes in stressful situations such as chemotherapy, inflammatory processes, and tissue infections — situations where the normal stem cell population is depleted. The discovery, published in March in [Cell Stem Cell](#), comes from Eduard Batlle's Colorectal Cancer Lab. "These cells are resistant to many types of chemotherapy," explains Batlle. Read about the [discovery](#) and [meet](#) alumnus Francisco Barriga, current postdoctoral fellow at the Memorial Sloan Kettering Cancer Center in New York and first author of the article.

NATURE COMMUNICATIONS

A new engineered virus can recognise and attack cancer cells

Researchers from IDIBAPS and IRB Barcelona have developed a new approach to make an adenovirus target tumor cells with high specificity. "We have taken advantage of the different expression of a type of protein, CPEBs, in normal and tumor tissues," explains Group Leader Raúl Méndez. CPEB is a family of four RNA-binding proteins that regulate the expression of hundreds of genes, including those that maintain and repair tissues under normal conditions. The research was published in [Nature Communication](#) in March.



ELIFE

Researchers trace how protein synthesis halts when cells are starved

Researchers at the Consejo Superior de Investigaciones Científicas (CSIC) and at IRB Barcelona have unveiled how the RNA polymerase I enzyme is activated and deactivated. The enzyme synthesises the molecular machinery needed to produce all cellular proteins, and thus is closely associated with cell growth. "Using the technology developed by our group and the microscopy facility at IRB Barcelona, we have been able to identify how a cell switches off the machinery responsible for its growth, a formerly unknown mechanism," explains Oriol Gallego, Research Associate in the Translational Control of Cell Cycle and Differentiation Lab. The paper is published in [eLife](#).





ENTREPRENEURSHIP/1

Storytelling is one of scientists' greatest assets, says Novartis Oncology Brand Manager Albert Farré

How do you make a successful move from academia to industry? In March, Albert Farré, Brand Manager at Novartis Oncology, explained to scientists at the “Building Bridges in your Network” workshop how he did it. He has some good advice for budding entrepreneurs.



ENTREPRENEURSHIP/2

The #IRBstartup programme nurtures future entrepreneurs

A new programme from IRB Barcelona's Innovation Department shows researchers how to implement their entrepreneurial ideas. “Thanks to #IRBstartup, our scientists can broaden their network and get valuable extra training that gives them the skills and tools to explore an entrepreneurial career,” Technology Transfer Officer Alba Olivares explains. We spoke with future entrepreneurs Sanja Zivanovic and Gonzalo Fernández Miranda.

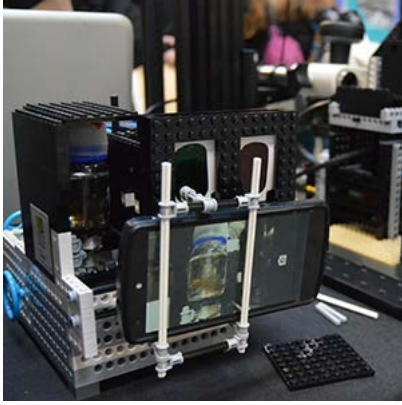


ENTREPRENEURSHIP/3

Young researchers volunteer in the biotechnology partnering conference BIO-Europe Spring

A group of 19 IRB Barcelona scientists eager to share experiences attended the three-day international partnering conference [BIO-Europe Spring 2017](#), from 20-22 March. The researcher met with companies across the life science value chain, from large biotech and pharma companies to financiers and innovative start-ups. They accessed the three-day conference in exchange for serving as volunteer staffers for one day of the event.





YOUTH MOBILE FESTIVAL IRB Barcelona's LegoLish-Mot at YoMo

On 1 March, Julien Colombelli, co-inventor of the fluorescence microscope named LegoLish-Mot (Lego Light Sheet Microscopy-Motorized) and Core Facility Manager of the Advanced Digital Microscopy Laboratory, coordinated a workshop at the first Youth Mobile Festival Barcelona ([YoMo Barcelona](#)). The event was included in the programme of the 2017 Mobile World Congress.



BIYSC Flies for diseases

IRB Barcelona will participate in the second edition of the Barcelona International Youth Science Challenge ([BIYSC](#)), to be held from 10 to 21 July. The event aims to stimulate scientific talent among young students from all over the world. The Catalunya-La Pedrera Foundation in collaboration with first-class research centres across Catalonia is organising the programme. IRB Barcelona will present the project "*Drosophila melanogaster*: a model to study human disease."



PROFESSORS I CIÈNCIA School teachers "learning to fly"

On 17 and 18 March, 15 secondary school teachers from around Catalonia had the opportunity to learn about the fruit fly *Drosophila melanogaster*, an animal model used to study developmental processes. This was the 12th edition of the Catalunya-La Pedrera Foundation's [Teachers and Science Programme](#).

YOUNG RESEARCHERS NEWS



Doctors and scientists need to speak the same language, say two new PhD4MD fellows

What prompts two medical doctors, after six years of training and five years of specialisation, to pursue a PhD? It's simple: Translational medicine. Csaba Fehér and Elisa Pose, awardees in the programme's second year in 2016, join Juan Miguel Cejalvo, the first IRB Barcelona [PhD4MD](#) fellow, who began his studies in 2015.



SPOTLIGHT



NEW TECHNOLOGY

Western blots enter the digital age at the PCB

Two new [Odyssey Fc](#) imaging systems, recently installed by the Barcelona Science Park (PCB), promise to be a valuable tool to help scientists produce stronger data. Maria del Mar García, Research Associate in Joan J. Guinovart's Metabolic Engineering and Diabetes Therapy Lab, frequently uses the new equipment. "Thanks to Odyssey Fc, our scientific results will be stronger and more reliable," she says.



ALUMNI NEWS



IRB BARCELONA ALUMNI OF EXCELLENCE AWARD

This year's winner is Assistant Professor at the University of California Los Angeles Marc Liesa

Alumnus Marc Liesa, Assistant Professor-in-residence at the Department of Medicine at the University of California, Los Angeles (UCLA), has been presented the 2017 IRB Barcelona Alumni of Excellence Award. This is the second edition of the recognition. The jury acknowledged Marc's "important contributions to mitochondrial biology, in particular the study of the functional relationships between organelle morphology and cellular energetics, and the identification of ABCB10 as the first mitochondrial ATP binding cassette transporter essential in heme-mediated oxidative stress protection".



PHILANTHROPY NEWS



#IRBFUTUR

Donations fund a new IRB Barcelona PhD fellowship

The positive public response to the “[Futur](#)” fund-raising campaign launched by IRB Barcelona towards the end of 2016 sets the stage for a new “IRB Barcelona ‘Futur’ PhD Fellowship”. The fellowship will allow a young researcher to join an IRB Barcelona lab to complete a 4-year doctoral thesis.



VI PER VIDA

8th charity wine-tasting for cancer research

The 8th “[Vi per Vida](#)” (or “Wine for Life”) will be held for 300 participants on Sunday 7 May in Mollerussa. The event will raise funds to support research at IRB Barcelona into cancer and metastasis while also drawing public attention to the importance of scientific research. This “generous and exemplary initiative,” as described by IRB Barcelona Director Joan J. Guinovart, was established in 2014 by sommelier Xavier Ayala.



OTHER NEWS

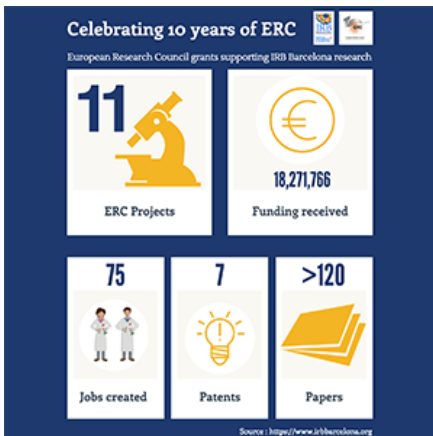


BLOOD BRAIN BARRIER

IRB Barcelona scientists start a project to tackle Friedreich’s Ataxia

The associations of patients and families [Babel Family](#) and the Asociación Granadina de la Ataxia de Friedreich ([ASOGAF](#)) are channelling 80,000 euros of their donations (50% from each organisation) into a new 18-month project at IRB Barcelona. The project specifically aims to complete a step necessary in order to develop a possible future frataxin replacement therapy for the brain. Reduced levels of this protein cause the most damage in patients with Friedreich’s Ataxia.





ERC 10-YEAR ANNIVERSARY

Promoting cutting-edge research

This year, the European Research Council (ERC) is celebrating its 10th anniversary. Since its launch in 2007, IRB Barcelona has received funding for 11 projects in the fields of Life Sciences and Physics and Engineering. The support from 4 ERC Advanced Grants, 2 Starting Grants, 3 Consolidator Grants and 2 ERC Proof of Concept has brought more than 18M € of funding to the institute, produced 7 patents and more than 120 papers, and led to 75 employment contracts.



MEET OUR SCIENTISTS

Marco Milán

In the eighth installment of the series, Group Leader and ICREA research professor Marco Milán explains that “to study how cells communicate with each other, perhaps the best model organism is the fruit fly.” [Meet Our Scientists](#) is a series of 3-minute videos that present IRB Barcelona's leading scientists.

Merus battling cancer



MERUS N.V.

Eduard Batlle

The Colorectal Cancer Lab and [Merus](#), a clinical-stage immunoncology company developing bispecific antibody therapeutics, have announced a collaboration to jointly develop novel agents that target the tumor microenvironment. The venture will combine Merus' Biclomics technology with unique cell and animal models in Batlle's lab.



RAMÓN ARECES

Antonio Zorzano

The [Ramón Areces Foundation](#) has awarded funding to Antonio Zorzano, Group Leader of the Complex Metabolic Diseases and Mitochondria Laboratory and full professor the University of Barcelona. His project, receiving 120,000€ over three years, is called “Investigating the molecular mechanisms of exosome production under cellular stress.”



BARCELONA INSTITUTE OF SCIENCE AND TECHNOLOGY

At the BIST Founding Conference, five “Ignite” multidisciplinary projects receive funding

On 31 March, BIST celebrated its founding with 300 participants including leading scientists from its six centers. Nobel Laureate Jean-Pierre Sauvage opened the conference, which continued with a series of dialogues in four strategic multidisciplinary areas: chemical biology, graphene, big data and microscopy. During the conference, BIST announced the five winning proposals from the first [Ignite call](#), an initiative to promote multidisciplinary research through the collaboration of teams from at least two BIST centres and external organisations. Among the winning projects were the proposals CALIX4TRANS and GENSTORM, which involve IRB Barcelona scientists.



COMING UP

5 MAY

IRB Barcelona Alumni of Excellence Award 2017

12.00H, AULA DOLORS ALEU, PARC CIENTÍFIC DE BARCELONA

Mechanisms of mitochondrial adaptability to oxidative stress and metabolic diseases.

Speaker: Marc Liesa Roig, Assistant Professor UCLA David Geffen School of Medicine Department of Medicine, Endocrinology (Los Angeles, CA, USA)

13 MAY

IRB Barcelona Open Doors Day

PARC CIENTÍFIC DE BARCELONA (AV. DOCTOR MARAÑÓN, 8)

Come and experiment at IRB Barcelona! Register for talks about cancer and diabetes, and take part in the interactive workshops at our Science Fair. We'll be expecting you!

Jornada de Portes Obertes



VINE A EXPERIMENTAR L'IRB BARCELONA!

DISSABTE 13 MAIG 2017

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