

Highlights 2015

For me, the year 2015 will always be memorable as the one in which IBEC received the Severo Ochoa Excellence Award, becoming the nineteenth Spanish centre to do so.

The award is a huge milestone in the evolution and consolidation of IBEC, and is the confirmation of a success story that started only a few years ago. This recognition validates our new IBEC Strategy for 2014-2017, with the panel of evaluators giving the go-ahead for our plans.

In fact, the Severo Ochoa was one of many successes in 2015, as you will find out in this booklet. We received the 'Human Resources Excellence in Research' stamp from the European Commission, and three new European Research Council (ERC) grants went to our group leaders. IBEC's collaboration with the Obra Social "La Caixa" has been going from strength to strength, with the launch of a joint programme on Healthy Living and Active Ageing and two projects funded under the first Caixalmpulse call, as well as those funded under the established RecerCaixa one. 2015 also saw IBEC continue to coordinate Nanomed Spain, the Spanish Platform for Nanotechnology; and

the Spanish node of the European Institute of Innovation and Technology's Knowledge and Innovation Community (KIC) for healthy living and active ageing, EIT Health.

During the year we celebrated 5 *Nature* group papers; 107 indexed journal papers in total, 77% of them in the first quartile; a new patent; and 13 PhD theses. 2015 also saw our collection of cutting-edge equipment receive the welcome additions of a BioAFM microscope and a 3D bioprinter for tissue engineering and regeneration. As we move into 2016, it's going to be a hard year to beat – but we're more than ready to try!

For more information about the successes on the following pages and the rest of the year's achievements, consult the full Annual Report 2015 at www.ibecbarcelona.eu/about-us/ documents.

Josep Samitier Director of IBEC

Cover image: Self-assembled fibers from a small peptide generating from a specific point. They form stiff big tubes and thinner flexible fibers. - Nanoscopy for Nanomedicine group

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Prizes in 2015

Severo Ochoa Excellence Award



Identifies and promotes research centres in Spain that stand out as international references in their fields.

IBEC is one of 20 centres to receive it, and the third youngest.

HR Excellence in Research

The EC's 'Human Resources Excellence in Research' stamp recognises IBEC's commitment to improving its policies in line with the European





Samuel Sánchez (Proof of Concept)



Elena Martínez (Consolidator)

Strategic alliances

Major European initiatives

EIT Health

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The participation of IBEC as a core partner in the Knowledge Innovation Community (KIC) on Health of the European Institute of Technology (EIT) represents a recognition of the relevance of the institute in the international arena in health research and innovation, as well as a unique opportunity for its further internationalization.

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Coordinated by IBEC

Research agreements

Fundació "La Caixa"

IBEC and La Caixa developed a Joint programme in Healthy Ageing Research. The four projects selected to be developed in 2016-2017 are expected to contribute to the development of one of IBEC's areas of application, Bioengineering for Active Ageing, and to be the seed for innovations to be further translated through EIT Health.

Joint units with industry

NanoMed Spain

The Spanish Nanomedicine Platform is a forum managed by IBEC that brings together research centres, hospitals, companies and government representatives to unite public and private interests in the development of common strategies.

NAN

Genomica

GENINICF

IBEC and Genomica S.A.U. (Grupo Zeltia), the leading Spanish company in molecular diagnostics, created a Joint Research Unit that will provide an operational framework for close interaction on various R&D activities related to healthcare.

Clinical and translational collaborations



News highlights and press coverage

ICREA research professor Samuel Sánchez appeared in articles in *El Mundo* and *El Periódico* talking about his career so far, his appointment at IBEC and the work he will be continuing on micro- and nanomotors.

Robots del tamaño del virus, una apuesta para combatir el cán





ELMUNDO



La nueva investigadora del IBCC tratará de avanzar en la medicina regenerati mediante la creación de minifiones a partir de células made de pacientes y poblicis trataministo a sus entremedies genéricas. Por David Generero Miniriñones de laboratorio

Nuria Montserrat was featured in an article in *El Mundo* discussing her ERC grant and the work she has been doing generating "minikidneys" from human pluripotent stem cells.

"Estudiamos las infecciones en el intestino de la bacteria E.coli"



Eduard Torrents was the subject of an article in the *Diari de Terrassa* about his work early in the year which identified a important factor in *E. coli* infection, opening the way to developing targeted drugs against the potentially deadly condition.

IBEC group leader and ICREA research professor Xavier Trepat's winning of this year's Banc Sabadell Award for Biomedical Research appeared in *La Vanguardia*, among others. Xavier Trepat, premiado por aplicar la física a las ciencias de la vida El gulardonado investes cómo se desplazan las células que causan metástasis



Two projects led by IBEC researchers Xavier Puñet and Eduard Torrents were selected for funding under the first CaixaImpulse call.

Investigaciones que lleguen al ciudadano

Una iniciativa única en nuestro país destina 1,3 millones a crear empresas biotecnológicas que mejoren el día a día.

L.C.	Dando impulso	Instituto de Bioingeniería de Cataluña (IBEC), Der-
Según el informe Innova- tion Union Scoreboard 2015	empresarial	moglass «es el resultado de un trabaio que ya ha sido
(IUS), España se situla en de- cimonoveno lugar en cuan-	Caixalmpulse ofrece apoyo económico de 50.000 euros	probado en animales con muy buenos resultados».
to a infraestructuras punte-	para la ejecución de planes	Apo-Glyc es un dispositi-
ras, centros de investigación y profesionales de primer	de valoración de proyectos; formación a medida a través	vo que sirve para diagnosti- car qué tipo de afectación
orden, lo que supone una	de acciones de mentoría y	cardíaca padece el paciente
fuente de conocimiento va- liosísima para generar ri-	asesoramiento experto; programa de acompaña-	que va a urgencias con dolor de pecho. «El provecto bus-
queza, pero con una asigna- tura pendiente: su valora-	miento; e inmersión en la realidad del mercado para	ca una solución a una nece- sidad médica no cubierta».
ción y comercialización.	contrastar su propuesta.	explica Lina Badimon, in-
Con el fin de cambiar esa realidad, la Obra social	de los provectos a los que la	vestigadora del Consorcio del Instituto Catalán de
«la Caixa» puso en marcha	entidad financiera ha des-	Ciencias Cardiovasculares.
el programa Caixalmpul- se. En su primera convoca-	tinado 1,3 millones de euros.	Por su parte, Werium So- lution ofrece un nuevo canal
se. En su primera convoca- toria se presentaron 41 pro-	Otros de los proyectos seleccionados han sido una	de acceso al ordenador para
yectos de distintos centros	herramienta para el control	personas con discapacidad,
de investigación, hospitales y universidades de toda Es-	doméstico de la creatinina en enfermos renales, una	además de desarrollar una nueva forma de rehabilita-
paña. Quince de ellos han	nueva estrategia para com-	ción física basada en video-
sido seleccionados, tres en el campo de las ciencias de	batir infecciones bacteria- nas, especialmente pulmo-	juegos. Su responsable, Eduardo Rocon, afirma que

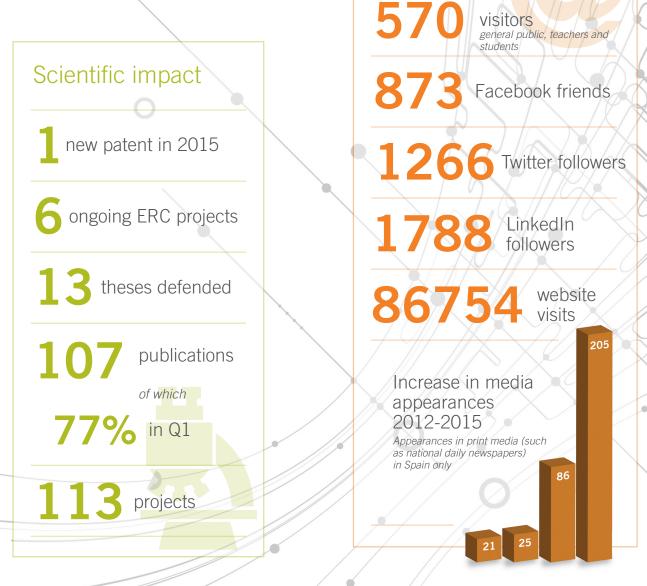


The March edition of *Time Out Barcelona* featured IBEC's spin-off, Rob Surgical Systems.

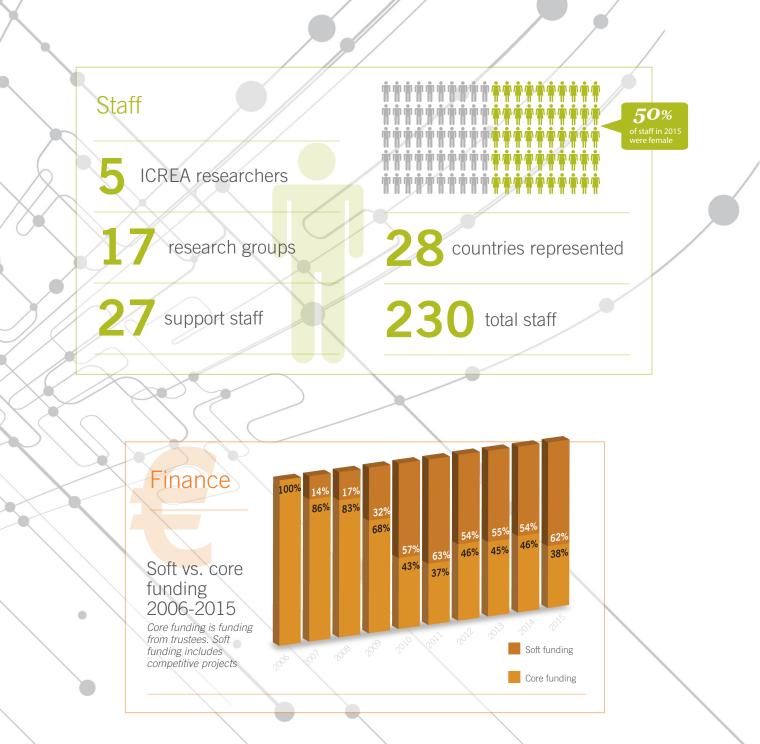


Pau Gorostiza's work was included in a extensive article about the science of light in the magazine *Muy Interesante*.

IBEC in numbers 2015



Outreach and media



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Our new 3D bioprinter...

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...putting IBEC at the cutting-edge of advances in tissue regeneration





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